

Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.
- Additional comments /
Commentaires supplémentaires:

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.



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

8478
833

Subscription, \$1.50 a year.
In advance.

TORONTO, APRIL 15, 1893.

Vol. VII.
No. 1.

DO YOU WANT A

SHORTHAND
OR
BUSINESS
EDUCATION?

THE LARGEST
Shorthand and
Business School
in Canada
is undoubtedly
BARKER & SPENCE'S
12 King West - TORONTO

Nearly all Shorthand Teachers in Canada are pupils of theirs.

Their pupils ALL get positions. Their Business Department is second to none.

Their highest recommendation is, nearly all their pupils belong to Toronto, where their School is so well known.

WRITE OR CALL FOR PARTICULARS : Enter for Term commencing April 4th.

Attend
WARRINER'S
COLLEGE OF COMMERCE
TORONTO

For modern, thorough
SHORTHAND
AND
BUSINESS
EDUCATION

Write to W. A. WARRINER, 1 Bloor East, Toronto, for Prospectus.
Open all the year.

TEACHERS and AGENTS.
THE MEMORIAL STORY OF AMERICA
From 1492 to 1892

A record of 400 years. Covering nearly 900 quarto pages, over 350 new engravings. Every chapter original. Pronounced by the press and the ablest critics the best written and most reliable work of the kind issued. It tells with thrilling interest an unparalleled story of discovery and adventure in the finding and settlement of America, and illustrates that which is best, noblest, most interesting and inspiring in the land we live in. Exclusive territory given and guaranteed. Write for illustrated circular and terms.

WINSTON, PHILLIPS & CO., Toronto, Ont.

Practical Writing

ALSO TAUGHT AT THE OTTAWA
Business College.
Formerly NATIONAL BUSINESS COLLEGE.
Catalogues free.
Address, JOHN KEITH, Principal, OTTAWA, ONT

Woman's Medical College
In affiliation with Trinity and Toronto Universities : TORONTO

1893 Summer Session Opens April 24th
ELEVENTH Winter Session Opens October 2nd

Apply for announcement, giving full information, to
Dr. D. J. GIBB WISHART, Secy., 47 Grosvenor St., Toronto

WHEN YOU WANT
SCHOOL SUPPLIES
Write **SELBY & CO.**
42 Church Street - TORONTO

Ask for Illustrated Catalogue of Bradley's School Aids and Kindergarten Materials.

FIFTH EDITION
Indispensable to every live Teacher

Practical * Problems
IN **Arithmetic**

For First, Second, and Third Classes

By **JAMES WHITE, Public School Teacher**
EDMONTON - ONT.

Shoemaker's Best Selections

For Readings and Recitations. Numbers 1 to 20 now issued.

Teachers, Readers, Students, and all persons who have occasion to use books of this kind, concede this to be the best series of speakers published. The different numbers are compiled by leading elocutionists of the country, who have exceptional facilities for securing selections, and whose judgment as to their merits is invaluable.

Paper binding, each 30 cts.; cloth, 50 cts.

NORTHERN Business College

OWEN SOUND, ONTARIO
Is the Very Best Place in Canada to get a Thorough Business Education

TAKE A ROUND TRIP and visit all other Business Colleges and Commercial Departments in Canada, then visit the Northern Business College; examine everything thoroughly. If we fail to produce the most thorough, complete, practical, and extensive course of study; the best college premises, and the best and most complete and most suitable furniture and appliances, we will give you a full course, FREE. For annual announcement, giving full particulars, free.

Address, **C. A. FLEMING, Principal**

March's Original Dialogues and Speeches for Wee Tots.—Comprising a variety of short speeches and dialogues suitable to children from three to ten years old, and adapted to public and private exhibitions, school entertainments, and other entertainments. The aim has also been to make the exercises of the most interesting and enlivening nature, thereby eliciting the scholars' utmost endeavor, and creating anew a desire on their part for the betterment of themselves and of the school. The exercises will be found to be brief, characterized by good taste, and pervaded throughout by a pure, moral tone.

Boards..... 35 cts.
Paper cover..... 25 cts.

SHORTHAND Taught by Mail Send for Circular to **S. T. WILLIS, Carleton Place, Ont.**

SUMMER SESSION
During July

CENTRAL Business College

Cor. Yonge and Gerrard | Cor. Market and Erie
TORONTO | **STRATFORD**

A Special Session for Teachers and High School Students will be held in these colleges during the month of July. It will pay you well to take a short course at one of these popular schools. Students in one college transact business with the pupils in the other institution. Our Schools are the largest, best equipped, and most practical in Canada. We invite inspection and comparison with similar institutions. Write for particulars.

SHAW and ELLIOTT, PRINCIPALS.

A TRIP TO THE WORLD'S FAIR FREE

TO ANY TEACHER OR STUDENT:
If you wish to visit the **GREAT WORLD'S FAIR** at Chicago without costing you one cent of money, on easy conditions, write at once. Enclose reference and self-addressed stamped envelope to
WORLD'S FAIR ENTERTAINMENT CO.,
1602 Menadnock Bldg., - CHICAGO, ILL.

PEACH BLOOM THE CHIEF CHARM OF A REFINED WOMAN

is her complexion. Why have Pimples Freckles spots or any blemish when Peach Bloom Skin Food will remove them all, and leave the Skin transparent, soft and beautiful.

PEACH BLOOM contains nothing that can injure the skin. It is clear as water, and leaves no trace of the application one minute after use.

PEACH BLOOM differs from any known preparation, in that it cleanses the pores of the skin from injurious accumulations, imparts health to the inner as well as to the outer cuticle, dissolving and removing Pimples, Blackheads, Liver Spots and Blemishes, and gradually brings about that transparent state of the skin that makes a perfect complexion.

PEACH BLOOM is in demand ahead of all cheap preparations, because it has merit, and because it produces the results we claim for it.

Sold by Druggists, price \$1.00, or sent on receipt of price by addressing
Western Chemical Co. 186 Adelaide St. West TORONTO

This book has been prepared specially to suit the convenience of Public School Teachers. It contains about 700 Practical Problems suitable for First, Second and Third Classes in Public Schools. It is very carefully graded, and each principle required to be taught is introduced in logical order. It receives the hearty approval of Teachers and Inspectors.

Read their Opinions.

From **ALLAN EMBURY, Esq., Inspector, Peel.**
I have examined this little book of Arithmetical Problems, and can give it an unqualified endorsement. The questions are carefully graded, and are specially suited to the wants of our over-worked teachers who have not always the time to devote to the preparation of exercises upon the various subjects of the school curriculum. The questions are not stated in the form of propositions; but their statement is incidental, leaving the inner connection of the problems to be discovered by the pupil himself; and in this important feature lies their special adaptability as an educational force. I heartily recommend this book to all teachers wishing to economize time and labor in their preparation for ordinary school work.

From **E. TROUGHT, Esq., Teacher, Member County Board of Examiners, Inglewood.**
I have examined with some care Practical Problems in Arithmetic for First, Second and Third Classes, by Mr. White, Edmonton. Without the slightest hesitation I say that they are the best I have ever seen—the best in selection, the best in grading, and above all, the best for developing the reasoning powers of the child, and for exercising his ingenuity. A special feature of the grading is that principles which have been introduced are being constantly made use of in the succeeding problems which are in their turn introducing new principles, so that the whole work may be said to be one unconscious review. It is a great boon to Teachers.

Price, Bound in Cloth, 25 cts.

Grip Printing and Publishing Co.

Grip Printing and Publishing Co.

OFFICIAL CALENDAR

- OF THE -

EDUCATION DEPARTMENT

EXAMINATIONS 1893.

April:

24. Written Examination of School of Pedagogy begins (First session.)
Toronto University Examinations in Law begin.

May:

1. Examinations for Specialist's certificates (except Commercial) at the University of Toronto, begin.
Notice by candidates for the High School Entrance, and Public School Leaving Examinations to Inspectors, due.
By-law to alter school boundaries—last day of passing. [P. S. Act, sec. 81 (3).]

3. Inspectors to report Department number of papers required for the High School Entrance and Public School Leaving Examinations.
Inspectors' nomination of Presiding Examiners for High School Entrance and Public School Leaving Examinations, due.

5. ARBOR DAY.
24 Notice by candidates for the Primary High School Leaving, and University Matriculation Examinations, to Inspectors, due.

June:

1. Applications for Kindergarten Examinations, due.
5. Normal School Examinations begin.
26. Examinations in Oral Reading, Drawing and the Commercial course in High, Public and Separate Schools begin.
28. High School Entrance Examinations begin.
Public School Leaving Examinations begin.
29. Kindergarten Examinations at Hamilton, Ottawa and Toronto.

July:

4. Primary and High School Junior Leaving and University Pass Matriculation Examinations begin.
5. Examination for Commercial Specialists' Certificates at Toronto.
13. High School Senior Leaving and University Honor Matriculation Examinations begin.

Ye Olde Booke Shoppe

Inspectors, Teachers, and Students can have any Book they require by return mail, by dropping me a card.

University, College and High School Books, new and used. Books for the School of Pedagogy, Normal School, and Preparatory Normal School Course.

Classical Teachers send for that admirable little book of "Latin for Sight Translation."

Books for School Entertainments. In fact any Educational work.

ADDRESS

FRANK PORTER, 353 Yonge St., Toronto.

ESTABLISHED BY A. PIDDINGTON.

MAMMOTH BOOK STORE

We have constantly in stock Educational Books of all kinds. Also the late works in Science and General Literature. Any book, not in stock, supplied on short notice, if in print. All mail orders filled promptly.

RISSER & CO., Successors to R. W. DOUGLAS & CO.
248 YONGE STREET, TORONTO, ONT.

PRICE LIST OF MODEL AND NORMAL SCHOOL BOOKS. Postage prepaid 15% off regular price.

Baldwin's Art of School Management.....	\$o 64	Spencer's Education.....	\$o 28
Hopkin's Outline Study of Man.....	1 07	Landon's School Management.....	1 43
Fitche's Lectures on Teaching.....	o 85	Manual of Hygiene.....	o 43
Quick's Educational Reformers.....	1 07	Houghton's Physical Culture.....	o 43
McLellan's Applied Psychology.....	o 85	Public and High School Books at same rate.	

JOHNSTON & MUSSON BROS., 245 Yonge Street, TORONTO

The Temperance and General Life Assurance Co.

IS MAKING STEADY SOLID GROWTH

YEAR	Number of Policies in force at end of year.	Insurance in force at end of each year.	Assets at end of each year, not including Capital uncalled
1888	1,462	\$2,371,200	\$86,558
1889	1,957	\$2,984,972	\$114,588
1890	2,445	\$3,484,003	\$155,055
1891	3,000	\$4,068,271	\$196,641
1892	3,474	\$4,543,176	\$237,344
Gains from end of '88 to end of '92	2,012	\$2,173,976	\$150,976

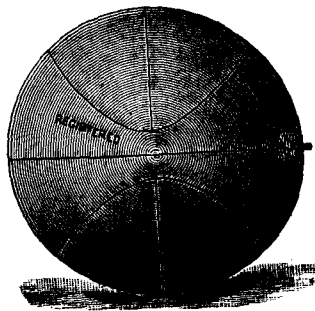
Live men wanted from the Teachers' Ranks to act as Agents

MONEY TO LOAN On Easy Terms

HON. GEO. W. ROSS, President. H. SUTHERLAND, Manager.

HEAD OFFICE, Manning Arcade - TORONTO

The Patent



Buttless

HAS NO { Intersecting Seams Sharp Angles Weak Points } IT HAS { Out-classed Every Other Line No Equal for Durability }

It is fitted with the peerless Red Rubber, and every ball is stamped and guaranteed. Naturally, it has many imitators. Each genuine buttless is stamped with our "Forsyth" trade-mark, and sold for exactly the same Price as other lines.

A new edition of the Canadian Football Annual is now going through the press. It will contain all the changes made in the rules at the annual meeting of the Western Football Association on Good Friday. It is almost needless to add that it is Official and is the only Canadian publication giving everything in connection with the game. Price, 25 cents each, or \$2.00 per dozen. One copy free with each match ball sold.

D. FORSYTH & CO.

BOSTON, Mass.

BERLIN, Canada

Slate . . .

Blackboard

OUR SPECIALTY

They will last forever, They have no gloss, They produce no dust, They are the cheapest board.

Don't waste any more money on any other Board. Get our prices and you will get our Board.

Hard Times and we Need Money

And for the next 60 days will cut our price for Globes, Maps, and Dictionaries nearly in the middle. N.B.—Do not miss this opportunity. Satisfaction guaranteed.

E. N. MOYER & CO.

School Furnishers

60 Yonge Street, Toronto



The Cyclostyle Duplicating Apparatus—For Duplicating Writing, Drawing, Music or Typewriting

Two thousand exact copies from one writing, each copy having all the appearance of an original. Simple, rapid, clean and durable. Endorsed by upwards of 3,000 firms, corporations and institutions throughout the Dominion. Invaluable for teachers and schools for reports, examination papers, circulars, blank forms, instructions, notices, maps, and all classical work. Used in most all our colleges, and rapidly being taken up by our principal schools. Write for circulars and testimonials.

CYCLOSTYLE CO.,

16 KING ST EAST - TORONTO.

SUMMER SESSION OF

National School of Elocution AND ORATORY

At Grimsby Park, Canada

On Lake Ontario, near Niagara

JULY 3 TO AUG. 12

Write for Prospectus

GEO. B. HYNSON

1020 Arch Street, Phila.

Manual of Punctuation

AND SOME

TYPOGRAPHICAL MATTERS

Designed for Printers, Students, Teachers, and Writers, by

JAMES P. TAYLOR

This little book of eighty-two pages aims to make every student of it an adept in the art of punctuation, and we do not think we claim too much for it when we say that it will accomplish all it aims to. The exercises, one or two excepted, have not been taken from any work on the subject, but from every outside source that provided the best for illustrating the subject. Many have been taken from the School Readers; and it is believed that they are sufficiently numerous and well chosen to afford all necessary assistance to aspirants for proficiency in this much neglected art.

Paper - 25 Cents

Mailed, post-paid, on receipt of price.

GRIP PRINTING & PUBLISHING CO.

The Educational Journal.

CONSOLIDATING

"The Educational Weekly" and "The Canada School Journal."

Subscription, \$1.50 a year.
In advance.

TORONTO, APRIL 15, 1893.

Vol. VII.
No. 1.

Table of Contents.

	PAGE.		PAGE.
EDITORIAL NOTES.....	3	PRIMARY (Continued).....	
ARBOR DAY PAPERS—		Suggestions for Addition.....	12
Arbor Day Suggestions.....	4	A Language Lesson.....	12
"Talk It Up".....	4	Remember Spring Time.....	13
A Window Garden in the		HINTS AND HELPS—	
School-Room.....	5	The Playhour in a Coun-	
Ethics of Arbor Day.....	5	try School.....	13
EDITORIALS—		Because His Teacher Be-	
The Educational Associa-		lieved in Him.....	14
tion.....	6	ARBOR DAY EXERCISES—	
A Practical Question.....	7	Waking Up (Poetry)....	14
Pedagogical Mannerism.....	7	Planting Trees (Poetry).....	14
EDUCATIONAL MEETINGS—		The Flowers with Faces	
Ontario Educational Associa-		(Poetry).....	14
tion.....	8	The Class Tree (Poetry).....	14
SCIENCE—		Arbor Day Hymn (Poetry).....	14
Arbor Day.....	11	Arbor Day March (Poetry).....	14
Correspondence.....	11	Our Feathered Friends	
PRIMARY DEPARTMENT—		(Music).....	4
My Kitty (Poetry).....	12	Bright Arbor Day (Music).....	5
		Return of Spring (Poetry).....	5

All subscribers **MUST** send their old as well as their new address when renewing their subscription.

* Editorial Notes. *

WE are sorry that "copy" for the English Department reached us too late for this number. We are, consequently, obliged to hold over interesting "Correspondence" and other matter for next number. Printers, like time and tide, wait for no man. We shall try to keep ahead of them in future.

WE hope that teachers in town and country will be able to find in the articles and exercises in this number, a supply of matter which they can turn to good account for Arbor Day purposes. We have tried to furnish them with a variety, both of useful hints and of usable material, which may help them to make the day both pleasant and profitable to all concerned.

THE Report of the Minister of Education, brought down in the Legislature the other day, shows that the total number of children registered in the schools for 1891 was 491,741, a little over half that number being boys. This is nearly 5,000 less than the previous year, and is the lowest total attendance since 1886. The actual school population was 615,781.

FINE schoolhouses and grand college buildings do not guarantee good schools and colleges. Of course it is always desirable to

have the best buildings and the finest apparatus that can be afforded. Nothing is more worthy of liberal expenditure or will better repay it. But to lavish money on bricks and mortar and mechanical appliances, and then feel unable to afford liberal salaries for first-class teachers and plenty of them, is a huge mistake. The living teacher alone can make a living school.

A PAPER which aroused a good deal of interest in the Public School Section during the Teacher's Convention, was that by Mr. Newlands, director of penmanship in the Kingston Public Schools, on "Vertical vs. Oblique Penmanship." We are glad to be able to announce that this paper will appear in our next number. Each teacher will, on reading it, be able to judge for himself of the force of the reasons which are leading to the adoption of the vertical system in many schools in England and Europe. The question is a practical one of considerable importance.

SPEAKING of the recent meeting of the Ontario Educational Association, the *Toronto Mail* says; after describing the evolution of the present very comprehensive organization:

The new Association has a great work before it. A glance at the programme gives some idea of the extent and complexity of our educational system and of the vast variety of topics which demand attention, if progress is to be made. Upwards of sixty papers were laid before the General Association or its departments at the recent meeting. A few of these were of academic interest, but the vast majority of them dealt with questions in practical pedagogy. The value of these papers, and the discussions to which they give occasion, can hardly be over-estimated.

WITH this number commences the seventh volume of the EDUCATIONAL JOURNAL. Though we are, perhaps, the wrong persons to say it, we venture to say that those who have preserved the numbers from the first, or from year to year after becoming subscribers, have a mass of educational material, of almost every helpful and practical kind, such as it would be difficult if not impossible to procure otherwise. We hope that our subscribers generally are preserving their copies on file or in binding. We feel sure that every earnest and progressive teacher will find himself richly repaid for

the trouble. As to the binding we have no doubt that the publishers would prepare and furnish at trifling cost, if there were evidence of a demand for it, a plain binding which could easily be put on, and which would serve every purpose.

THE last annual report shows a gratifying increase in the better class of certificates. Second-class provincials have advanced from 1,304 to 2,999, equal to 1,695 in fifteen years, other and inferior certificates declining. The number of teachers taking advantage of the Normal Schools is 2,898, or 814 more than in 1877, and is 35 per cent. of the total number engaged in teaching the Public Schools. Of rural schools, Waterloo pays the highest average salary, \$442 to male teachers; Essex leads for female teachers with \$324; Frontenac the lowest, \$288 for male, and Haliburton \$203, for female teachers. Of city schools, Toronto, pays \$1,098 to male; \$430 to female teachers. Of town schools, Brockville, Owen Sound, Prescott, \$1,000 to male teachers; Walkerville, \$387 to female teachers. While salaries in cities and towns have gone up considerably, in the rural districts there is no improvement. Female teachers still continue to gain on male teachers, being in 1891, 68 per cent. of the whole number.

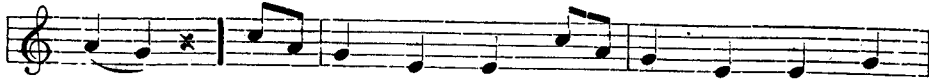
A MARKED feature of the Educational report is the growth of High Schools both in numbers and in attendance. For eight years the number of High Schools (including Collegiate Institutes), stood at 104; in 1884 there was an increase of two; now they number 126. Collegiate Institutes have advanced to thirty-three in 1891. The total attendance has more than doubled in fifteen years. The total cost per pupil is much less than it was fifteen years ago. The High Schools, including Collegiate Institutes, are classified as follows:—Schools with two masters, 27; schools with three masters or over, 99. The largest Collegiate Institute is Toronto (Jarvis street), with an enrolment of 688; then Hamilton with 686; London, 557; Toronto (Jameson Avenue), with 466; Owen Sound with 438. There is an average of nearly seven teachers to each of the Collegiate Institutes. The average number of pupils to each High School teacher in the province is forty-six. The percentage of average to total attendance is sixty.

OUR FEATHERED FRIENDS.

G. A. VEAZIE, JR.



1. The birds of spring Are on the wing; How bu - sy they ap -
2. If you will rise Be - fore the skies With ro - sy hues so
3. Each lit - tle bird Wants to be heard, And chat - ters to his



pear! The boughs are bare, Chill is the air, And
bright, O you shall hear, From far and near, A
neighbor, "Bring wood! bring straw!" Who ev - er saw Such



yet the birds are here, And yet the birds are here.
twit - ter of de - light, A twit - ter of de - light.
cheer - ful, cheer - ful lab - or, Such cheer - ful, cheer - ful la - bor!

4 "Our nests prepare!
Come, hurry there!
How lazy you are growing!"
Perhaps the birds
Would speak such words
||: If they were only knowing. ||:

5 Dear little friends!
'Tis mercy sends
You here to teach and cheer us:
Then work away,
And sing and play,
||: And do not, do not fear us. ||:

—The Coda.

* Arbor Day Papers. *

ARBOR DAY SUGGESTIONS.

BY RICHARD LEES, M.A., SCIENCE MASTER, BRAMPTON H.S.

THAT the setting apart of an Arbor Day in connection with the schools of this province was a wise step, is conceded by every one. That as much has been made of the privilege thus granted as might have been, is open to question. It is a fact, unfortunately, that there still remain in many parts of the province a few schools with small, unkept yards, occupied chiefly by a straggling wood pile, with perhaps a dissipated and unsteady pump in one corner, near which is often a pool of dirty water—the waste from the pump—that serves as a cooling place for a flock of geese, or perhaps pigs. The fence, if present at all, is dilapidated and useless, such things as shade trees or garden shrubs being out of the question. Conditions of things like these are happily now rare, though still to be met with. The observance of Arbor Day has done much to bring about a better order of things in this respect.

At the time of the institution of an Arbor Day valuable hints were given as to the best kind of trees to plant, methods of caring for them, etc. As a result much progress has been made in that line. In the vast majority of our schools something has been done on the first Friday in May for a number of years past in the way of cleaning up, and often planting a few trees. As a result a good many schools now possess some shade trees at least, and in cases where the work has been taken up with enthusiasm, much has been accomplished. School premises that make a very pleasing contrast with the one described above are plentiful in many parts of the country. In most cases, however, little more has been done than to clean up and plant some trees, and as the number of trees that is needful or even desirable in a quarter-acre school lot is limited, schools have come to feel that about all has been done that is possible, so that less progress has been made in recent years than formerly. Gardening has been tried in some cases but with indifferent success. There are reasons for this of which two deserve notice: First, when the seeds, roots and bulbs are planted the work is only partially done. Constant care and attention are necessary to secure ultimate success. This is not often given. The enthusiasm of Arbor Day dies out and things are neglected. Then the holiday season comes on with its heat and withering drought and completes the destruction. A second cause of failure is the unsuitable character of the soil. This difficulty can be

removed by time and effort, but both are necessary. It is a work that cannot be done in a day or in one season, hence the reluctance of teachers to undertake it in schools where for aught they know some one else may have charge next year and may not carry out the work begun this year. Besides, we all have a sort of natural reluctance to laying foundations for others to build on.

In places where a number of trees have been planted and are doing well, and where something has been done in the way of preparing the soil for gardening, would it not be well to make an effort to keep alive in school grounds some of the wild plants whose beauty has added so much to the attractiveness of the Ontario woods in spring and early summer, and which are becoming, unfortunately, more and more rare as the woods gradually disappear? The conditions necessary for their healthy growth can be learned from the habitat in which they naturally grow, and can in many cases be easily reproduced where there are a number of flourishing trees.

It is hardly possible to give specific hints, for everyone must be governed by the character of the soil and the flora of his neighborhood. A few suggestions, however, may be thrown out as to what is suitable. Take the ferns to begin with. A heap of stones, loosely covered with some rich soil, will serve for many species, those that require rocky conditions being placed on the heap and the others around it. The writer has seen a heap of this kind with eleven native species growing on it, and growing well. It requires to be in a shady and rather moist location.

There are a number of shrubs to which attention might be given, among these might be mentioned, sumach (*rhus typhina*), which is very abundant in some parts of the country and grows well almost anywhere; a couple of native species of honeysuckle (*lomceaiaceliata* and *L. glanea*, hill); meadow sweet (*spuciansalicifolia*, and *S. tomentosa*). The latter is a very beautiful bush, but more difficulty may be expected with these than others mentioned, as they prefer damp ground. Then there are the roses, heaths, and many others.

Of early flowering plants there are a great many, easily secured and not difficult to cultivate. For instance, trillium, cellwort (*hoularia*), hepatica, blood-root (*saugumoria*), dicentera and spring beauty (*claytonia*). A little later we have mitrewort (*mitella* and *fiarella*), phlox, pepper-root (*deutoria-dephylla* and *D. lacimata*), spring cress (*cardamine* and *rhomboida*), wind flower (*anemou-nemorose*), and milkwort (*polygala paucifolia*). The two last mentioned are among the most beautiful of wild flowers.

There are a number of plants that bloom about the time of the close of school, whose beauty of flower or foliage is sufficient to entitle them to consideration. For instance, prince's pine (*chimaphylla*), two or three species of winter green (*pyrola*), honeywort (*cryptotaenia*), sweet cicely (*osmorrhiza*), and the various species of everlasting.

For the fall there are the native asters and the golden-rods, many of which are very beautiful and will grow anywhere.

This list is not expected to be exhaustive or even to contain a majority of the plants that might be introduced into our school grounds, but is intended chiefly to be suggestive. The advantages of something of the kind will be apparent to every one. This will be especially the case where some attempt is made at teaching Botany.

"TALK IT UP."

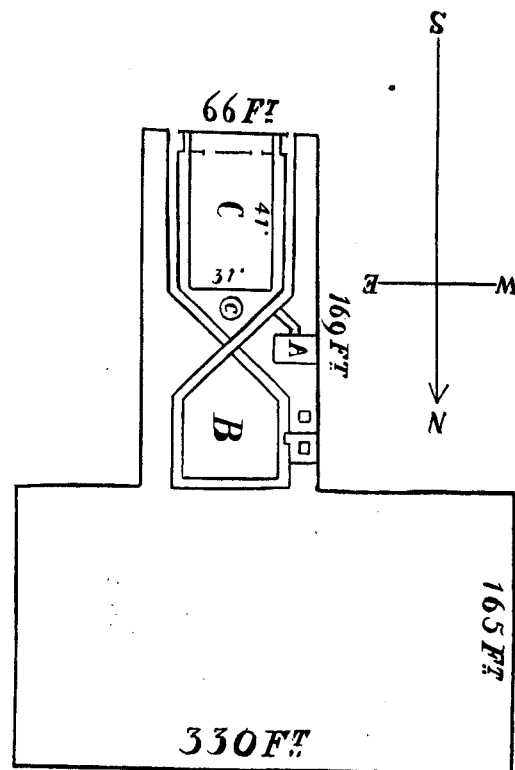
BY R. A. W.

LAST year we began to talk about Arbor Day more than six weeks before "the first Friday in May." We did more than talk; we planned. I organized the girls and boys into committees. All were to have their eyes open for "pointers." The programme was gradually unfolding, so that the week previous to Arbor Day all was in readiness except the arranging of the final details. We enlisted volunteers from the adults of the section.

Our programme was as follows: Ground cleaned, school cleansed, one hundred trees planted, about 200 ft. of plank walk laid, a half dozen loads of gravel drawn, several of the trees dedicated, an appropriate entertainment in the evening by the school children. Did we accomplish it? Yes. How? This way.

Our Committee on Implements had in readiness, spades, rakes, wheel-barrow, pails, cloths, scrub-brushes; our Tree Committee had in readiness for an early start two waggons, teams and drivers, to go for the trees—maples, elms, spruce and cedar; our Side-Walk Committee had all in readiness for the laying of our walks—men, lumber, nails, hammers, etc.; our Programme Committee had a select and appropriate programme prepared for the evening; besides, a short essay, on the life of each of the celebrities to whom a tree was dedicated, was prepared by each of a number of pupils to be read on the occasion of the dedication.

We have a good play-ground. But our school-house is sadly out of date, and it is somewhat difficult to make it present a seemly appearance, either inside or out. Let me give a diagram of our grounds and buildings:



The play-ground contains an acre and a quarter; the plot in which the school (C) stands contains a quarter of an acre; A, is the wood-shed; B, the

plot between the walks, is ploughed, and will this spring be levelled and seeded for an ornamental lawn, with one or two ornamental trees, shrubs, etc.; c, is a circular flower-bed.

We are already again planning for Arbor Day. A few of our trees have died and are to be replaced; flowers and foliage plants are to be collected; and there are many other little details that will work themselves out as the time passes by. We hope to make the surroundings of our school so neat and beautiful that "the section" will be ashamed of our "old-time" school-house and give us another—"with all modern conveniences."

A WINDOW GARDEN IN THE SCHOOL ROOM.

WHETHER grown in the window garden or greenhouse, plants should at all times be kept in good condition by removing promptly all decaying leaves and flowers, supporting such as require it by neat stakes, and the soil should be top-dressed occasionally. It is advisable to turn the plants frequently, so as to keep them in proper shape, and the leading shoots of all rank-growing specimens should be nipped back occasionally to promote a bushy growth. All plants whose pots are well filled with roots, as well as those which are commencing to bloom, should be given occasional waterings of liquid manure. The Excelsior Plant Fertilizer is excellent for this purpose, and can be purchased at any seed store or of any florist for about twenty-five cents a package, post-paid. If one does not care to purchase, an excellent fertilizer can be made by mixing a tablespoonful of soot in a quart of hot water; when cold it is ready for use. Stir up well while hot, and just before using.

Spray or syringe the plants frequently to keep the foliage clean, but in doing this use water of the same temperature as the room or greenhouse, if at all possible, and always early in the morning and in bright, sunny weather, so that the plants may have an opportunity to dry off before night. In sprinkling plants in the window garden, nothing is better than the elastic plant sprinkler.

Abutilons will grow rapidly in winter. Pinch back the leading shoots occasionally, and give liquid manure to those whose pots are well filled with roots. Varieties with variegated foliage should be given as sunny a situation as possible, and, if one has the necessary facilities, seed may be sown and cuttings rooted for summer blooming.

Azaleas in bloom, if properly watered and placed in a cool situation, will remain in perfection a long time. A. Indica alba is one of the best for a window garden. Begonias should be placed in the warmest part of the house and very carefully watered.

Camellias require liberal supplies of water. Cinerarias and calceolarias require close attention at this season of the year. Keep the plants as close to the glass and as cool as possible, and give them plenty of room to avoid injury from damp and the attacks of insect pests. Water carefully. Plants coming into bloom may be shifted into larger pots. Carnations should be given liquid manure occasionally. Keep the shoots neatly tied up. Callas grow rapidly and should be given an abundant supply of water. Dutch bulbs, such as hyacinths, tulips, crocus, etc., should be brought to the light as soon as their pots become well filled with roots and indications of top growth are noticed. To secure a succession of bloom a few of the most forward should be started into growth every week.

Fuschias should be given liberal supplies of liquid manure. Geraniums.—Plants for winter blooming should not be crowded, but allowed space to develop themselves. Give liquid manure at times. Plants intended for summer blooming should be kept cool and dry. Hollyhock seed, if sown at once, and the young plants potted off as soon as rooted, and grown on slowly in a cool temperature, will produce fine plants for late blooming.

Justicia carnea, an old but neglected plant, may be treated as advised for geraniums. Myrtles and oleanders should be kept cool and in a state of rest.

Pelargoniums should be grown in a cool temperature, and very carefully watered; top rapid growing shoots, air abundantly, and train so as to obtain handsome specimens. Roses will require close attention to keep the plants in a healthy con-

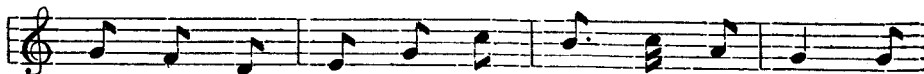
BRIGHT ARBOR DAY.

Briskly, but not too quick.

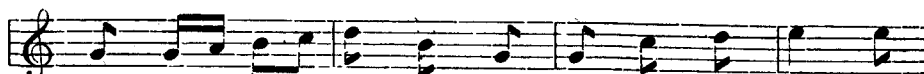
Arr. from KAROW.



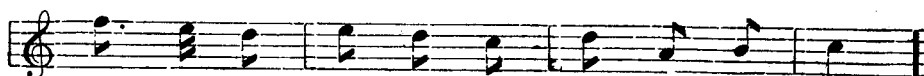
1. To - geth - er our voi - ces In thank - ful - ness rise To
2. We love ev - 'ry blos - som And fresh ver - dant blade That



Him who has giv'n us The earth and the skies, The
blooms in the mead - ow - Or wood - land's deep shade; The



soft gen - tle breez - es, And each sun - light ray That
wild - birds are sing - ing— O sweet is their lay— All



wak - eus to glad - ness Our bright Ar - bor day.
na - ture re - joic - es, 'Tis bright Ar - bor day.

—The Coda.

dition. Liquid manure should be given occasionally, and the attacks of mildew, green fly, and red spider should be carefully guarded against.

Pansies and violets in cold frames should be given an abundance of air whenever the weather will permit. Keep the plants clean and free from dead leaves weeds, etc., and stir the ground between the plants occasionally. Protect the plants well at night during severe weather.—*Vick's Magazine.*

ETHICS OF ARBOR DAY.

THE fact that this rushing American life can be checked and slackened for a single day by a sentiment alone is a subject for gratulation, and holds a hope for the future.

The children in the school rooms feel this sudden halt in the monotonous whirl of life,—this voluntary pause without an apparent reason—more than any others who participate in the annual Arbor Day occasion. They are at the age to feel every breath of change most keenly. They are in the impressive mental stage where every marked event is an epoch. For this reason, the observance of Arbor Day should be fraught with the deepest and truest meaning for the moulding of the character of these children, as well as for the cultivation of the æsthetic sense.

It was a thought as happy as wise, to appoint this day in a month when the children were together in the school-room and when the natural longing for the return of Spring, prepares them to welcome and observe any signs of awakening nature. It must seem to them like helping the summer glories to come sooner, to plant trees, and to be co-workers in the field of nature.

The teachers have entered upon the annual observance of Arbor Day with a most delightful spirit of sympathy and helpfulness. They have not begrudged the work of preparation and have given generously of time and effort to render the day's exercises a fitting tribute to nature.

Let the children be taught what we wish our future men and women to do. To quicken the love of nature and open eyes still wider upon the marvellous beauty of plant life is a benefaction in the life of any child and a stimulant to moral growth, but combined with this æsthetic training should be imparted the real object of the Arbor Day observance—the preservation of the forests.

Children in the lowest primary rooms are not too young to understand a few facts connected with the utility side of this subject, such as these.

Forests affect the climate of a country. Let the teacher explain "climate" and how it is influenced by forest growth. Nobody can tell the primary teacher how to do this. She knows the capacity of

her children and will do it better than anyone can tell her.

Forests influence the rain of a country. This can be explained by simple illustrations of the cause of rain.

Forests build up a wall and protect the farmers' crops. The children will need very little help in grasping this fact.

Forests keep the air pure. The smallest children get these facts so early in their botany work, that they will understand this readily.

The leaf-mold in forests holds back the rains and gives refreshing springs in place of floods. The sponge will explain the principle of absorption involved in this statement.

These are but a few of the facts that should be given to the older pupils, but these are enough to call out the ethical side of Arbor Day—to teach the selfishness and wrong of cutting down trees. Regard for the rights of others; a generous spirit of benevolence to man and beast and a reverence for trees, should be the direct results of Arbor Day teaching in the primary rooms as well as in higher grades.—*Primary Education.*

RETURN OF SPRING.

(Written by a blind girl, Mollie Stumbaugh, 11 years of age.)

I.

LOVELY spring-time now is here,
Dance and sing, dance and sing,
Happiest time of all the year
Is the lovely spring.
Soon will come the month of May,
Best of all, best of all,
With its fragrant flowers so gay,
And its birds so small.
When we spend the long bright hours,
'Neath the green and shady bow'rs,
Oh how merry we will sing,
Of the sweet and lovely spring.

II.

When the grass and leaves are green,
Spring is fair, spring is fair,
When the little birds are seen
Flying in the air,
When the gentle breezes blow,
'Mong the flow'rs, 'mong the flow'rs,
When the heav'ns in splendor glow
O'er this world of ours;
When the roses bloom so fair,
When their fragrance fills the air,
When the larks and robins sing,
Oh, how fair is lovely spring.

The Educational Journal.

Published Semi-monthly.

A JOURNAL DEVOTED TO LITERATURE, SCIENCE, ART
AND THE ADVANCEMENT OF THE TEACHING
PROFESSION IN CANADA.

J. E. WELLS, M.A. Editor.

Terms:—One dollar and fifty cents per annum, payable strictly in advance. Clubs of three, \$4.25; clubs of five, \$6.75. Larger clubs, in associations, sent through association officials, \$1.25. Individual members, subscribing at a different time from that of the formation of the Club, may send their subscriptions to this office. Their orders will be taken at club rates.

New subscriptions may begin at any time. Payment, when by mail, should be made by post-office order or registered letter. Money sent in unregistered letters will be at the risk of the senders.

In case it may be necessary to make change, please send it in two-cent stamps.

The date at the right of the name on the address-label shows to what date the subscription is paid. The change of this date to a later one is a receipt for remittance.

Renewals of all subscriptions should be made promptly. Subscribers addressing the office on any business will, in all cases, please give the names of the post-offices to which their papers are being sent at the time of writing.

Rates of advertising will be sent on application. Business communications should be addressed to the publishers; those relating to matter for insertion in the paper to the editor. These distinct matters should always be treated on separate sheets of paper.

PUBLISHED BY

The Grip Printing and Publishing Co.

T. G. WILSON, Manager.

GEO. A. HOWELL, Business Manager.

Offices:—201 and 203 Yonge Street, Toronto.

PUBLISHERS' DEPARTMENT.

The names continue to come in, and the choice is pretty evenly divided. All the premiums offered are cheap at the selling price given, and as they are offered free, or nearly so, it's no wonder that a big lot of people take advantage of our offers. When you get tired of these we'll offer others, but from now until further notice every one who sends his or her subscription for the EDUCATIONAL JOURNAL for one year in advance, whether a new or old subscriber, will receive

“The Educational Journal” one year, and the “Farm Journal” one year free.

“The Educational Journal” one year, and “Woman's Work” one year free.

“The Educational Journal” one year, and the Excelsior Webster Pocket Speller and Definer free.

“The Educational Journal” one year, and a Revolving Planisphere free.

One year's subscription to “The Journal” and 50c. additional will secure the “Home Maker” one year free.

Below we give fuller particulars as to these offers.

The Farm Journal. Every farmer, gardener, stock-breeder, orchardist, dairyman, poultryman, their wives, and even the boys and girls will find *Farm Journal* crowded full of helpful information. It aims to be practical rather than theoretical, to be brief and to the point, in fact to be *cream*, not *skim milk*. It is adapted to all parts of the country, North, South, East and West. If you are not acquainted with it, send a postal card to *Farm Journal*, Philadelphia, Pa., for a sample copy. It has already more subscribers than any other monthly agricultural paper in America.

Woman's Work. A literary and domestic magazine—deservedly one of the most popular published. It is pure, entertaining and helpful in every department. Its pages are filled with high-class original reading matter and illustrations suited to all ages; it is published to satisfy the great need for good home literature, and no other periodical meets it so well.

The Home-Maker. A handsome 200 page illustrated magazine edited by Mrs. Croly (Jenny June). The *Home-Maker* is, without doubt, in quality and quantity of reading matter, the lowest-priced magazine published. It is a wonder at \$2.00 a year, the subscription price, and as it only costs our subscribers 50c. we feel sure they will appreciate this offer and take advantage of it in large numbers.

TEACHERS' CONVENTIONS.

West Bruce, April 27th and 28th, at Chesley.
East Bruce, May 4th and 5th, at Kincardine.
Brant County, May 11th and 12th, at Brantford.
Haldimand County, May 22nd and 23rd, at Caledonia.
East Kent, May 25th and 26th.
North Simcoe, May 25th and 26th, at Collingwood.
East Gray, May 25th and 26th.
Haliburton County, May 18th and 19th, at Haliburton.
Prince Edward County, May 18th and 19th, at Picton.
South York County, April 27th and 28th, at Weston.
East Victoria County, May 18th and 19th, Lindsay.

* Editorials. *

TORONTO, APRIL 15, 1893.

THE EDUCATIONAL ASSOCIATION.

THE recent Convention of the Educational Association was in every respect a very successful one. In point of numbers in attendance, of the interest and ability of the papers, addresses and discussions, and of the comprehensiveness and completeness of the organization effected, the indications of healthful enthusiasm and of progress were very pleasing. It is, of course, quite out of our power within the space-limits which we can devote to such matters, to present anything like a full report of the proceedings of the numerous sections which now come within the scope of the Association's programme, but we have done our best to give our readers a bird's eye view of the whole. We hope to be able, as hitherto, to reprint, from time to time, during the ensuing months, such of the papers as seem to us to be likely to be most interesting and helpful to the largest number of our readers.

Nothing but good can, it seems to us result from the coming together once a year of representatives of every class of educators in the Province, from Kindergarten to University, to discuss those broader questions of educational opinion and practice which appeal alike to all. The contact of mind with mind is always refreshing and stimulating, and the teaching profession is necessarily pursued under conditions which render such gatherings specially desirable. Their tendency must always be to check and counteract the tendency to dulness and routine which is inevitable in the pursuit of any calling which to so large an extent isolates those who follow it from daily intercourse with others engaged in similar work. At the same time the admirable arrangement for the coming together in sections of those interested in the same phases of practical work should counteract any danger of jealousies which might otherwise arise through different estimates of the importance of specific questions and the ability of teachers of various grades to discuss them with insight and profit.

We congratulate all our readers on the

success of the first annual meeting of the Educational Association, under its new name and constitution, and predict that it will become more and more a great educational power.

A PRACTICAL QUESTION.

PERHAPS no more important practical question was discussed in any of the sections of the Association at its recent convention than that of the relation between the Public School Leaving and the High School Entrance Examinations. Viewed in the abstract, the most natural plan, and that which seems most in accordance with the idea of a unified and harmonious system, on which the Minister of Education so often dwells, would seem to be that the High School work should begin just where the Public School work leaves off. The double examination appears illogical and anomalous. Few will now doubt that a step in the right direction was taken when the High School Examinations were accepted as equivalents, *pro tanto*, for Departmental and University Examinations. Why should not the same principle be applied in the case of the Public and High Schools? It is clear, as was urged by some of the speakers, that the pupil who has passed the Entrance can scarcely be relied on for any earnestness or enthusiasm in further Public School work. He is pretty sure either to feel that his education is complete and that his school days ought to be over, or that his proper place is now in the High School, which is henceforth the goal of his ambition.

To our thinking the ideal system would be one in which the Public Schools should carry the pupil onward to the point, whether fixed at the end of the fifth-form work or elsewhere, at which he could profitably enter upon the High School course, and there should be no overlapping of the two. The completion of the regular Public School course, as determined by a Leaving Examination or otherwise, should be the ticket of admission to the High School, without further test. But the real difficulty is the financial one, and that is, we fear, for the present insuperable. Not one in ten of the Public Schools, so far as we are able to judge, has the staff and other equipment necessary to enable it to do thoroughly and efficiently the work necessary to carry its pupils successfully to the end of the fifth form, and it would be, there is every reason to fear, impossible at present to induce the parents and trustees to provide the funds necessary to put the schools in a position to do this work. To require a teacher who has already, as the Public School teachers in nine cases out of ten have, his or her hands more than full with the work of the

four forms, to undertake fifth-form work in addition, would be not only unjust and cruel to the teacher, but destructive of thoroughness in the teaching. Not only would additional help be needed but the payment of higher salaries to the teachers as well. In view of the fact that so large a proportion of the children never go beyond the Public School, it would be a grand advance if fifth-form work could be made a regular and integral part of the Public School course. In many cases the fifth or last year would be worth more to the pupil than any two years preceding, because he would have reached a stage of maturity and of mental power which would enable him to turn his time to vastly better account than at any previous stage.

Until the tax-payers are willing to contribute much more largely for educational purposes, we fear the present illogical overlapping system is the best practicable. Meanwhile it is a legitimate and praiseworthy thing to work with a view to a better.

PEDAGOGICAL MANNERISM.

"I CAN tell a schoolmaster, or school-marm, as far as I can see them." Who has not often heard this declaration from persons engaged in other, and in their own estimation, evidently, more desirable occupations, or possibly in no particular occupation at all. The remark is the ungrammatical expression of a too common fact. It may be, it is true, the mere meaningless repetition of a saying which has become almost proverbial. It may be, and doubtless often is, the speaker's method of giving you an inkling of the keenness of his own powers of observation. But, on the principle that there is always some truth in what everybody says, there must be some ground for this almost universal consensus of opinion. For some cause it must be that the Public School teacher bears about to a greater degree than most others, the stamp of his profession.

Admit it and what follows? Surely the profession is not one to be ashamed of. It is worthy to take rank beside the very highest. What then if it creates an indescribable something in speech, gait, or manner, which advertises to all close observers that one's business in life is to teach the young? Is any harm done?

Yes, there is harm done. The profession is discredited and the teacher's influence lessened. This effect, in fact always follows any marked singularity in dress, voice, or manner, which proclaims the individual's business. In our social intercourse we don't care to have the accidents or peculiarities of one's position or mode of life, thrust

constantly before our faces. We want to know our friends as friends, as men and women, like ourselves, not as merchants, or milliners, lawyers, doctors, or school teachers. The person who talks "shop," on all occasions is universally pronounced a bore. The one who acts "shop," who indicates it in face or gesture, or tone of voice, is scarcely less out of place in the social circle. We meet there on common ground, and all our words and acts should be suggestive of, or in harmony with, such thoughts, feelings, and interests as may be supposed to be shared in common by those around us.

But granting that the teacher ordinarily, or at least often, wears the symbol of his profession on his sleeve, so to speak, why is it? To discover the cause of an undesirable mannerism is to advance half way towards its cure. The result is in this case due, probably, to a combination of causes, but one or two of the chief ones may be indicated. First, no doubt, is the tone and manner of command unconsciously used. The average teacher is accustomed to autocracy. His word is law in the school-room. He brooks not contradiction, and too often is intolerant even of difference of opinion. In the effort to become firm he becomes imperious. The language of reproof is so often on his lips that the tone becomes habitual. In many cases the nervous tension is so great and constant, that a state of irritability and worry becomes almost chronic, and writes its language in every lineament and motion. These belong, of course, to the worst class of causes. There are many others of a much less disagreeable character which operate no less powerfully and leave marks no less clear and characteristic.

But the cure? If the causes are unavoidable how are the effects to be escaped? We answer, the causes are not unavoidable. The cure can come only by avoiding them. There is, for instance, no necessity for imperious tones or even ordinarily, imperious words in the school-room. The teacher who permits himself to fall into the habit of using either, makes a mistake from every point of view. They are indications of weakness. Conscious strength finds no use for them. The words and tones of cheerful, kindly request or direction, from the lips of the teacher who has true influence and weight of character, will be obeyed with equal certainty and tenfold alacrity. Like begets like. Nervousness or irritability in teacher reacts upon the pupil. There is an instinct of self-respect in every child which revolts from the obedience of slavish fear. The teacher who has the happy faculty of clothing every mandate in the language of request, and speaking it in the tone which takes

ready obedience for granted, will very seldom be disappointed, especially if the commands are invariably reasonable and right.

We need not multiply illustrations. The above will probably make our meaning clear. The way to avoid carrying the disagreeable habits of the school-room into social intercourse is to bring the cheery tone, the kindly manners, and all the pleasant amenities of social intercourse into the school-room. This can be done. It is being done with the happiest effect by many—we know by many readers of this journal. We congratulate those who know how to do it. They are sure to be both useful and happy in their work. But the knitted eyebrows, the scowling faces, the martyr-like tones and sighs, are also still too common. They mark the feeble, the irritable, the unhappy teacher. We pity those who carry those marks, from the bottom of our heart, but we pity the poor victims, their pupils, still more.

INQUIRY is sometimes made for an index tables of contents of the yearly volume of THE JOURNAL. This would, no doubt, be of great advantage to teachers who file their papers. If there is evidence of sufficient demand these could be supplied by the publishers, either with or without the binding, referred to elsewhere.

WE have just observed, too late for correction in this number, that by some oversight our report contains no account of the public meeting of the Association on Thursday evening, when the teachers were addressed by President Loudon, of the University of Toronto. We will try to supply the deficiency in next number.

THE average attendance of rural pupils in Ontario in 1891, was 48 per cent. of the registered attendance, while in towns it was 61 per cent. and in cities 67 per cent. The county of Waterloo shows the highest average—57 per cent.—for the rural districts; the town of Brampton furnishes the highest average—73 per cent.—for the towns, and the city of Hamilton the highest average—73 per cent.—for the cities. The other extremes are reached by Haliburton with 33 per cent.; Dufferin and districts 38; Belleville 58 per cent.; Bracebridge 42; Little Current, North Bay and Penetanguishene 44. The average for the province as a whole is 52 per cent., an increase of 1 per cent. on that of the preceding year. The divisor used to ascertain the average attendance is, in all cases, the legal number of teaching days.

Educational Meetings.

ONTARIO EDUCATIONAL ASSOCIATION.

THE thirty-second annual convention of what is now the Ontario Educational Association, was held, according to announcement, in the Education Department buildings on Tuesday, Wednesday and Thursday, April 4th, 5th and 6th. The attendance was large, larger we believe than on any previous occasion, at least for some years. The papers and other exercises were generally of a high order, and the quiet enthusiasm which pervaded the meetings augurs well for the advancement of the profession in Ontario.

In accordance with an arrangement which is necessary in view of the large number of sections which now form integral parts of the Association, the day-time was given up to the sections, the public meetings of the Association being held only in the evenings.

On Tuesday evening the first general meeting of the Association was called to order in the theatre of the Normal School buildings, by the President, S. B. Sinclair, B.A., who, after roll-call, presented an address on the "Unification of the Ontario Educational System." The President congratulated the Association on the progress which had been made in the work of unification so far as the Association was concerned, by the affiliation of the Trustees Association and the virtual affiliation—which he hoped would become actual before the close of the session—of the various University Associations. The objects of the General Association he described as being "to impress upon ourselves, the country and our legislators the great truth that every child born into this world possesses the inalienable right of the advantages of a free, thorough, liberal education. To point out ways and means of perfecting and improving our present educational system and methods. To render more universal the knowledge of the fact that the salvation of our schools and universities lies at the portals of the teaching profession. To see that in every case the best available men and women are chosen, especially to positions of prominence and leadership. And lastly, to take a wider outlook and seek for truth along lines not purely pedagogical."

The general tone and spirit of the address may be pretty well understood from the closing paragraph:

"And now I shall close by a brief reference to what, to my mind, is the greatest advantage to be derived from all this organization. I cannot do better than quote the words of Dr. Fitch, who says:—'There is a sphere in our life in which it is desirable to cultivate independence and freedom, and there is another in which it is essential that we should learn to part with that independence for the sake of attaining some end which is desirable for others as well as for ourselves.' In the development of individual character and intelligence, the more room we can leave for spontaneous action the better; but when we are members of a community the healthy corporate life of that community requires of us an abnegation of self. There are times in life for asserting our individuality and times for effacing it, and a good school should provide means whereby it may be seen when and how we may do both. Nothing can take the place of this spirit of sympathy and self-sacrifice. In the class-room, where the pupils have learned the great fact that the highest object of all education is to gain power to help others, and where the teacher lives so near the pupils that she can hear their hearts beat, in-subordination and other evils find no resting place. Neither should such a spirit be confined to the class-room: it should pervade the whole system. It is of vast consequence that all educational workers should feel that their work is one, and should be knit together as the heart of one man by bonds of sympathy, of mutual appreciation of each other's work, and of a spirit of hearty co-operation for the same great end. Such an alliance imparts zest and pride to all, and strength and beauty to a whole educational system of a country."

Mrs. Ada Marion Hughes then read a paper on the Kindergarten, "A Natural Method of Education." The paper was a very interesting and convincing vindication of the merits of the Kindergarten system. A hearty vote of thanks was tendered Mrs. Hughes for her valuable contribution.

The report of the Treasurer, Mr. W. J. Hendry, was next taken. The receipts for the year were shown to be \$616.16 and the expenditure \$361.35, leaving a balance on hand of \$254.82. The report was referred to the Auditing Committee, nominated by the President.

WEDNESDAY EVENING.

The attendance was large and the proceedings highly interesting.

Prof. Mills, of McGill University, treated the Association to an interesting and able paper upon the subject, "Hereditry in Relation to Education."

The educator, he said, is concerned with human nature, and must endeavor to study it in as broad a way as possible. But equally important was the study of the individual. If he were asked to state what he considered the greatest evil threatening education, or actually existing in education, he would reply that it was the neglect to study the individual, and the tendency of the age to aggregations of men, and to adaptation of methods to the masses. The teacher who knew nothing of the parents of a child, its environment and hereditary tendencies was but poorly prepared to do the best possible in developing that child. The question with the teacher should be how to develop each nature committed to his charge so as to strengthen its weak parts, physical, intellectual and moral, so that no faculty shall be unduly developed, and that the balance of the whole shall be good, not overworking those faculties that were strong, and upon which the success of the individual would so much depend. It was clear, he said, that after the parents the teacher might become the most potent factor in the development of the human being. Hereditary hindrances could not be radically altered, but it was the teacher's great privilege to guide and modify them. To do this the teacher must be himself very much of a man, and the public would do well if it would stop long enough in the race for wealth, power or distinction to consider whether it was taking the right means to find and retain such people. Mankind must observe the laws of the hereditaries of the race to make the greatest possible progress, and next to that must seek out and cherish in every way those who, after the parents, have the greatest influence in moulding and developing youth.

Mr. Henry Reazin, P.S.I. for Victoria, followed with a paper on "High School Entrance and Public School Leaving Examinations."

The chief object of this paper, he said, was to show that the Entrance Examinations were established in the interests of the High Schools, and not in the interests of the Public Schools; that they have been mainly instrumental in raising up the High Schools to their present very exalted rank; that this has been largely at the expense of the Public Schools; that the Entrance Examinations have outlived their usefulness; and in the interests of both High and Public Schools, and more especially of the latter, they should now be abolished, and the Public School Leaving Examination substituted in their stead. The object of the Entrance Examinations, when they were first taken charge of by the Department in the year 1877, was to fill the High Schools with pupils, to rescue the Junior High Schools from dying a natural death. Had the Public School interest been considered they would have been placed at the end of the Public School course, and not in the middle of that course. In furtherance of the objects for which they were established they had been a very decided success. They rescued the Junior High Schools and filled all to overflowing with pupils, but, for the greater part, with ill-prepared pupils, whose Public School education had not been completed, and who would have been better to have remained two years longer in the Public School. This large class of ill-qualified recruits entering the High Schools had the effect of handicapping the master, and was largely the cause of so much unsuccessful teaching being done there. For proof of the statement that there was poor teaching he pointed to the Primary Examinations and the astounding number of candidates plucked at them. The result was due to the low standard of admission—to the High School masters attempting unsuccessfully to do Public School work. It was the robbing of the Public Schools of a class and a half for the benefit of the High School. He went on to show that the result of the Entrance Examinations upon the Public Schools had been baneful, because by process of time they had virtually become their Leaving Examination.

At a subsequent stage of the proceedings of the Association, Hon. G. W. Ross, the Minister of Education, made an address, in which he took occasion to defend the High Schools against the idea that their interests were in any way antagonistic to those of the Public School. The High Schools, he said, had twice as many scholars as when he had taken office, and he was glad of it. They were doing a grand work, and were not injuring, but aiding, the Public Schools. Don't let jealousy come between the High and Public Schools, he said. The system was a unit from the Kindergarten to the University. If the Entrance Examination was too low, he promised to raise it to-morrow if the teachers would agree about it. He thought it would require to be done some day, and that there was higher work for the High Schools to do than they were doing. But they should be careful not to add to the Public Schools the fifth form if the result would be, as he believed it now would be, to prejudice the lower forms and take from the pupils any of the care and attention which was so necessary for their after education.

The following were elected as the officers for the ensuing year:

President, Alexander Steele, M.A., Orangeville.

Secretary, R. W. Doan, Toronto, (re-elected).

Treasurer, W. J. Hendry, Toronto, (re-elected).

TRUSTEES DEPARTMENT.

Mr. S. Lazier, LL.B., Q.C., President, took the chair, and about fifty delegates were present at the first session on Tuesday afternoon. The first business before the body was the reading and subsequent adoption of the report of the Executive Committee. The constitution was amended so as to bring it into conformity with the altered position of the body as a part of the amalgamated Association.

The paper of the Rev. J. Somerville, Owen Sound, read before the November meeting of this department was taken up for discussion and occupied the remainder of the session.

At the conclusion of the union meeting the Trustees' Department referred back the whole of a report brought in by the Model School Committee. Mr. John Ball Dow, B.A., Whitby, read a paper on "The High School Law of 1891," and the essay was referred back to be printed. A discussion followed on a paper read by Mr. Burritt, of Pembroke, on "The Public School Law of 1891," before the last meeting of the section. Mr. Wm. Houston, M.A., Toronto, presented the report of the Committee on "Agriculture in Public Schools." A paper was read by Rev. Dr. Jackson, of Galt, on "The High School Entrance Examination and Fourth Form Work in the Public Schools." Mr. John Hoodless, chairman of the Board of Education, Hamilton, read an essay on "Public School Leaving Examination and Fifth Form Work in Public Schools." The last two papers were received with thanks and referred back to be printed. The discussion on Mr. Burritt's paper was then resumed and a debate, probably the most interesting of the session, followed. The section on a vote showed itself by a large majority in favor of removing fifth form work entirely from the High Schools and confining it to the Public Schools. The report of the Committee on Agriculture in schools concluded by declaring that in their opinion no change is required in the law relating to this subject except one permitting Agriculture to be taught in the third and fifth forms, as well as in the fourth. They expressed approval of the proposed summer course in Agriculture for the advantage of teachers who desire to equip themselves for the more effective teaching of Agriculture. And they called the attention of School Boards in rural districts to the fact that the law has placed this matter entirely in their hands, that they may have Agriculture taught in their schools if they wish it; that it is not a drawback but an advantage to leave Agriculture out of the list of obligatory subjects for the High School Entrance Examination, and that it will retard rather than promote the object in view in the introduction of Agriculture in Public Schools to make the use of the present or of any authorized treatise on the subject compulsory on the pupils.

At the final meeting on Thursday, a resolution recommending supplementary examinations for candidates plucked at departmental examinations was discussed, and will be dealt with at the next meeting of the department. In the meantime it was referred to a committee, and will be printed in the minutes. Another resolution dealing with a reduction in the number of subjects in the High School curriculum was also discussed and referred

to a committee. The rest of the session was devoted chiefly to a further discussion on Mr. Burritt's paper on "The Public School Law of 1891."

INSPECTORS' SECTION.

The Public School Inspectors met in the north library at 10 a.m. on Tuesday; W. Atkin, Chairman; J. S. Deacon, Secretary, and F. L. Michell, Assistant Secretary. After the President's address there were very animated and profitable discussions. "The Limitation of Third Class Certificates" was introduced by Dr. McDiarmid. Discussion not finished. "The Public School Leaving Examination" was brought up by J. E. Tom, P.S.I., Port Huron. The opinion was freely expressed that the examination is valuable and should be continued; that it should include Algebra and Euclid, and be made the basis of entrance to the second form of High Schools; that the fifth form work is more properly done in the Public Schools.

Messrs. Tom, Moses, Brebner, Carlyle and Dr. McDiarmid were appointed a committee to report on the subject.

W. Carlyle, I.P.S. (Oxford), made a strong plea for "Raising the Standard for the High School Entrance." He contended that the Public Schools are too much limited in usefulness by the present standard; that pupils lose interest after passing the High School Entrance Examination; that pupils leave school earlier by having a low standard; that a higher standard would improve the Public Schools and benefit the High Schools as well.

At the afternoon session, J. H. Smith, P.S.I., Wentworth, introduced the "Teaching of English in Public Schools." He favored the teaching of language instead of formal grammar, to first, second and third classes, and contended that technical grammar created a distaste for the entire subject. "What Constitutes an Inspection of a Rural Public School?" was fully and profitably discussed.

The section resumed at 9.30 a.m. on Wednesday. Dr. Kelly and Mr. Knight criticized rather unfavorably the professional training of teachers at present given as compared with that of former years. A conference with the Trustees' Section was arranged to discuss Model School changes proposed by the latter. At said conference, Messrs. Carlyle and Dr. Kelly strongly opposed the changes. On returning to their section it was unanimously resolved, "That in the very decided opinion of the Inspectors' Department of the Ontario Educational Association, the adoption of any such sweeping changes in the Model School system as are recommended by the Trustees' Department would be prejudicial to the educational interests of the country." At the afternoon session Mr. J. E. Tom presented the report of the committee re Public School Leaving and High School Entrance Examination, as follows:—

(1) That it is not in the interest of education to raise the standard of the High School Entrance to that prescribed for the Public School Leaving; (2) that both these examinations should be retained; (3) that Euclid and Algebra be added to the subjects required at the Public School Leaving; (4) that complete selections, instead of extracts, be assigned in literature for the Public School Leaving, and the amount materially reduced; (5) that the High School regulations be so amended as to admit without examinations the holders of Public School Leaving certificates to the second form of any High School or Collegiate Institute. The report was laid on the table for further consideration.

Mr. A. Brown, I.P.S., Dundas, resumed the discussion re the present management of the non-professional examination and its results. Mr. Brebner, Mr. J. C. Brown and others supported his contention that it was less satisfactory than when it was controlled by the County Boards. The Inspectors held a conference with the Model School Principals, where Mr. Dearness, P.S.I., East Middlesex, discussed "Examining and Valuing the Work of Candidates in Teaching at the Final Examination of the Model." He showed that of 1,400 candidates only sixty failed to obtain certificates, that examiners tended to leniency chiefly because third-class certificates are provincial, that further literary tests should be applied.

After the Inspectors resumed it was resolved, on motion of Mr. Dearness, that all candidates for

entrance to the Model School be required to take the Science option, that the County Board and the Principal of the Model School examine candidates for the Model School in reading, spelling, penmanship and mental arithmetic at the beginning of the term, and that the Minister of Education be requested to devise some better scheme than the present for examining in reading, drawing and book-keeping.

The following officers were elected for the ensuing year:—President, Arthur Brown, Morrisburg; Secretary, J. E. Tom, Goderich; Director, J. S. Deacon, Milton.

At the Thursday morning session, Mr. W. Houston, M.A., Director of Institutes, presented a topical limit table suitable for Public Schools. He suggested many changes, most of which were well received by the Inspectors. Mr. Campbell, P.S.I., South Grey, then took up the subject of promotion and examinations. Mr. Reazin, P.S.I., West Victoria, read a paper on the restriction of inexperienced teachers to the lowest grade of schools, as classified by the Public School Inspector. He suggested that Inspectors be authorized and required to classify their schools into three classes: first, all graded schools; second, the larger rural schools; third, the weaker rural schools. Dr. Curry, P.S.I., Haliburton, discussed the evils of unequal taxation and the remedy sought. On motion of Dr. Curry, seconded by Mr. Dearness, it was resolved to recommend that Section 109 of the Public School Act be amended by making the grant \$100 for each department instead of \$50 as at present. Mr. C. A. Barnes, M.A., P.S.I., Lambton, discussed "Additional Inspection of Model Schools." The report re the Public Schools Leaving Examination was adopted after the fifth clause had been struck out. On motion of Mr. Carlyle, seconded by Mr. Dearness, it was recommended that pupils of rural schools be eligible as candidates at the Public School Leaving without previously passing the High School Entrance, provided their application be sanctioned by their teacher and inspector.

HIGH SCHOOL SECTION.

The High School Department, which, according to an arrangement made at a meeting on Tuesday evening, includes also the representatives of the University, met on Wednesday forenoon. Mr. Steele was chairman and Mr. Birchard, Secretary.

Mr. Merchant introduced the subject of "Considering the Student's School Record at the Departmental Examinations." Mr. Steele also spoke on the subject, and was followed by Messrs. Strang, Waugh and others. After some discussion, the following committee was appointed to bring the matter before the Education Department:—Messrs. Levan, Steele, McBride, and Elliott.

R. A. Thompson, Principal of Hamilton Collegiate Institute, read a valuable paper on "The Effect upon the High Schools of the Present System of Professional Training." He advocated a better system of professional training for High School teachers, and suggested that the Government erect a School of Pedagogy and Collegiate Institute, to be used exclusively as a training school. He also strongly condemned the practice of granting interim certificates, allowing University students to teach in High Schools. The question was referred to a committee.

At a subsequent meeting, the report of the Committee on Matriculation was adopted. A good deal of discussion took place on Mr. Seath's paper on Matriculation. Dr. Birchard, of Brantford, was elected President, and Mr. J. Squair, Secretary.

PUBLIC SCHOOL SECTION.

The Public School Department met in the Normal School buildings at 10 a.m. on Wednesday. The first paper was an excellent address on "Information in Education," by the Chairman, Mr. H. Wilkinson, Brantford. Mr. Wilkinson said that in these days, when the cry comes from one end of the land to the other for "development," i.e., the new education, he would enter a plea for development through information. In making this statement he said he endorsed the new ideas as far as they were not "fads," and to the best of his ability he taught them; but as physical strength can be obtained as well by productive labor as by mere gymnastics, so mental development can in a very large degree be produced by a practical everyday education. Mr. Wilkinson summarized an

excellent address by stating that information should be imparted by (1) current events, (2) reading of the daily bulletins by a pupil, and this followed by a short talk by the teacher, (3) reading a school newspaper on Friday afternoon containing a summary of the week's news, (4) short essays on current events, (5) short discussions on Friday afternoon upon topics of interest.

At the afternoon session, Miss Russell, Hamilton, read a very instructive paper on "Supplementary Reading in the Primary Department." She took the ground that reading is the most important subject in the primary school curriculum, because, rightly viewed, it includes writing, spelling, and voice culture; also that it is the means of investigating knowledge, and it is a valuable accomplishment in life. Natural objects coming within the range of the pupils' observation were mentioned as furnishing means for language lessons.

At the Thursday morning session Mr. A. F. Newlands, Director of Penmanship, Kingston Public Schools, read a paper, which aroused considerable interest, on "Vertical vs. Oblique Penmanship." He favored the adoption of the vertical method, which saved time and energy, and was fast superseding the oblique method in Germany, France and Great Britain. Mr. W. H. Davis, Principal Ryerson School, Hamilton, followed with an essay on "Commercial Work in Public Schools," urging that careful attention should be paid to this department of a pupil's education.

At the afternoon session a resolution was adopted, recommending that pupils be allowed to write at Public School Leaving Examinations without passing Entrance, and that pupils who passed this examination be not required to pass the Entrance before being admitted to the High School. The following officers were elected:—President, A. McMillan, Toronto; Secretary, A. McQueen, London; Director, C. Campbell, Ottawa; Treasurer, Mr. Hariton.

Mr. J. A. Hill, Ph.B., Dundas, read a paper on "Educational Value of Form and Drawing." Mr. S. McAllister, Toronto, read a paper on "Super-annuations."

At the Friday session Mrs. J. S. Arthurs read a paper on "Phonic Reading," in which she demonstrated the advantages of the phonic method over the alphabetic and word methods. These were claimed to be that it is (1), more easy to learn; (2) develops the pupil's mind more thoroughly; (3) is more in accord with modern educational principles; (4) produces better results. At the afternoon session a set of by-laws was adopted and a committee appointed to consider a revision of the Public School programme. Mr. McQueen, Principal of London South Public Schools, read a paper on "Public Schools and the Future of the Race." Dr. O'Hagan, of Waterdown High School, read a paper on the "Study of Literature," which was instructive and well-timed. A vote of thanks was accorded to the retiring president, Mr. W. Wilkinson, M.A., Principal of Brantford Public School, who appropriately acknowledged the same, after which the proceedings terminated with the singing of the National Anthem.

KINDERGARTEN.

Mrs. Ada M. Hughes presided at the meeting of the Kindergarten Department, on Wednesday morning. There were about fifty present. The meeting was opened with the song, "Up to Us Sweet Childhood Looketh." The roll was then called and the minutes of the last meeting read and adopted. Mrs. Hughes gave a short address and expressed her regret at the absence of Miss Agnes Mackenzie, who was on the programme for the subject, "Training of Assistants." This subject was taken up for discussion at the round table, led by Miss Laidlaw, who was followed by Miss Newcomb, Miss Mackenzie, of Brantford; Miss Young, of Aylmer; Miss Currie and Miss Lawson. All were of the opinion that this was a problem to be met by the directors in small towns and villages. Mr. Carson, Inspector of London schools, who was invited to take part in this discussion, laid the claims of the directors before the meeting in a very clear and concise manner, and was accorded a vote of thanks. The second subject discussed was, "Expression by Representation." Drawing was taken up, and "Network or Without" was discussed.

The Department met again at 9.30, on Thursday. The programme provided for a symposium or

"Nature Study in the Kindergarten," (a), what should be taught; (b), what are its advantages, and (c), how can it be systematically introduced. The following read papers and took part in the discussions: Misses Heaks, Russell, Smith, Bolton, Currie, Patterson, Lawson and Duff, Toronto; Miss Young, Aylmer; Miss Laidlaw, London; Miss Mackenzie, Brantford, and Mrs. Newcomb, Hamilton. Mrs. Newcomb, of Hamilton, gave a paper on "How Vital Principles when Misused may Fetter Spontaneity." A reading circle was organized on Mrs. Hughes' suggestion, with the object of elevating and unifying Kindergarten work.

The following officers were elected: President, Miss Laidlaw, London; Secretary, Miss Bowditch, Hamilton; Directress, Mrs. Newcomb, Hamilton. The Department adjourned, and a meeting of the reading circle committee was held with Mrs. Newcomb convener, and Miss Lawson, secretary. It was decided to have libraries of Kindergarten literature in Toronto, Hamilton, London and Ottawa, outside kindergarteners being allowed the privilege of drawing from them by becoming members of the circle.

MODEL SCHOOL SECTION.

Mr. Alexander, of Galt, was chairman of the meeting of the Model School section, on Tuesday. The section resolved itself into a committee of the whole to discuss recommendations made by the Public and High School trustees.

(1) The section decided against the reduction in the number of Model Schools, as, in its opinion, such an arrangement would only intensify the evils, by throwing a larger number of students into one session. (2) The number of students in attendance at each Model School should not exceed twenty-five. (3) The opinion of the section was that while an ungraded school may be used with profit occasionally, yet it is not a necessary adjunct to the Model School. (4) That the present qualifications of head masters are sufficient, as the position of Model School principal is one of the most important incentives left in the hands of Public School men. (5) The grant to Model Schools should be increased, as a large part of the work done in the training of teachers is utilized in the country. (6) That there be two terms of four months, as eight months is not too long to cover the ground required by the regulations to be done by each student.

At subsequent meetings of this section the paper of the Rev. J. Somerville, B.A., of Owen Sound, read before the November meeting of this Department, was discussed at considerable length. We regret that we are unable to give the conclusions, if any, which were reached, having failed to obtain a report of the last meeting.

TRAINING DEPARTMENT.

The Training Department met at 10.30 a.m. on Tuesday, Mr. Kirkland, Principal of Toronto Normal School, in the chair. After organization, Mr. Kirkland read a very excellent paper on "Professional Training," which, on motion, was referred to a committee, consisting of Messrs. Barber, Rennie and Scott.

At a subsequent meeting Dr. McLellan, Principal of the School of Pedagogy, delivered an address in the Training School Department on "The Function of Oral Reading in the Teaching of Literature."

CLASSICAL SECTION.

The president, Professor Fletcher, occupied the chair at both morning and afternoon sessions on Tuesday. In the absence of the Honorary President, Dr. Goldwin Smith, he read the address which that gentleman had forwarded to the Secretary of the Association. The subject was "The Study of Classics," and the writer gave an account of the curriculum of studies followed in his youth at Eton, and afterwards at Oxford. In both cases this was almost exclusively classical, yet it was no illiberal training; it not only exercised industry and called forth intellectual effort, but it excited an interest in the great questions of humanity. Miss E. S. Fitzgerald, of Lindsay, presented an essay on "Light Reading," in which she urged that more prominence should be given this mode of teaching classics. In a paper on the "Ajax" of Sophocles, Mr. G. W. Mitchell, M.A., upheld the unity of the play. At the afternoon session Prof. Hutton read a paper on a comparison between Rome and England on the one hand and Athens and France on the other. Prof. A. G. Bell, Ph.D., of Victoria College, read a paper on "Syncretism of Cases in

Latin," and Prof. Wm. Dale, M.A., one on "The Study of Classics."

On Wednesday Mr. J. E. Hodgson, Inspector of High Schools, read a valuable paper on the "Position of Classics in some American Schools." He gave a report of his visit to prominent secondary schools at Albany, New York, Brooklyn, Erie and Boston, and compared the teaching of classics in these schools with that in our own. In some respects our neighbors have the advantage over us, being enabled to give more time to the subject.

Mr. J. W. Connor, of Berlin, followed with a paper on the "Simplifying of the Teaching of Greek Verbs," in which some important suggestions were made.

Mr. A. Carruthers, classical master in the Parkdale Collegiate institute, read an extremely good and interesting paper on "Tennyson's Use of the Classics." He showed how important for a teacher of English literature is a knowledge of Latin and Greek, and quoted opinions to that effect from Burke, Sir Walter Scott, Wordsworth, Jowett, Bishop Temple, Matthew Arnold, Froude, Gladstone and others. An animated discussion followed, in which Mr. Libby, Mr. Steele and other English masters expressed their agreement with the essayist upon this important question.

On Thursday afternoon Mr. A. A. Macdonald, of Upper Canada College, read a paper on "The Conditional Sentence in Homer," an instructive and scholarly essay on a difficult subject. The following officers were elected:—Hon. President, Prof. Hutton; President, Prof. Dale; Vice-President, J. E. Hodgson, M.A.; Secretary-Treasurer, H. R. Fairclough, M.A.; Councillors—Profs. Fletcher, Bell and Campbell, Miss Fitzgerald and Messrs. Mayberry, O'Connor, McGregor and Morgan.

THE MATHEMATICAL SECTION.

The Mathematical and Physical section met at two o'clock. Dr. McLellan gave his inaugural address, on "The Advantage of the Study of Mathematics," to a large audience. The lecture was a very able one, and was highly appreciated by the meeting. The section adjourned to the University building, where Prof. Baker showed and explained the apparatus recently received from Germany for his department.

At the Wednesday meeting Mr. W. J. Robertson read a paper on "The Present Condition of Mathematical Studies in our High Schools." He described the kind of mathematical work which was done in the schools and colleges twenty-five years ago, when there was a minimum of theory and a maximum of practice, and compared it with the thoroughness with which the study was pursued during the inspectorates of the late Prof. Young and Dr. McLellan. That was the golden age of mathematical studies in Ontario, but a change came. Under the new administration and the new regulations there had been a gradual deterioration in the mathematical work done in the schools, and as a mathematical master he felt it his duty to call attention to that fact, which he proceeded to do, pointing out defects and suggesting remedies and improvements.

Next in order was Mr. J. C. Glashan's paper on "Elementary Operations in Arithmetic." The paper was more abstruse than its name would imply, but the mathematician appeared equal to the occasion. Mr. C. A. Chant then read his paper on "The Development of Electricity."

The section met at 1.30 o'clock on Thursday. Dr. McLellan in the chair. Dr. Birchard read his paper on "Elementary Geometry," in which he said he thought considerable change might be made in Euclid, and suggested the dropping of portions of the original text. After some discussion the meeting decided that little improvement could be made in the subject as a means of developing the mental powers. Major Manley then read his paper on "Algebraic Solutions in Arithmetic," illustrating it by several problems previously prepared in crayons and placed against the blackboard. The paper gave rise to considerable discussion. Some contended that no algebraic solution should be permitted in arithmetic problems, while others held that it might be left optional. Prof. McKay then addressed the meeting on "Algebra in High Schools." As the professor is one of the examiners in Algebra in the coming Departmental and University Examinations, his remarks were carefully noted.

The election of officers resulted as follows: Hon. President, Prof. Loudon; President, Prof. McKay;

Vice-President, W. J. Robertson, M.A.; Sec.-Treas., Fred. J. Manley, M.A.; Executive Committee, A. T. Delury, M.A., R. A. Thompson, B.A., C. L. Craswell, S. Martin, B.A., and I. J. Birchard, M.A. Dr. McLellan was appointed representative on the Board of Directors of the general Association.

MODERN LANGUAGE SECTION.

The modern language section of the Educational Association met at 10 a.m. Tuesday, with the president, Mr. George A. Chase, B.A., in the chair. After reading of minutes and other preliminary business, the president delivered an address on "The Associative Principle in Language." Mr. Chase dealt in a masterly manner with certain parts of speech, such as pronouns and conjunctions, which illustrated what he called the associative principle. Mr. J. N. Dalles, B.A., followed with a paper on "Modern Language Reading from a Literary Standpoint," in which he advocated that more attention should be given to literary effect than is now given and less to grammatical construction in the study of French and German. At the afternoon session Mr. E. A. Hardy, B.A., presented a paper on "Local Peculiarities in Everyday Language," noting many interesting and amusing variations from orthodox forms in the speech of the day. Mr. J. H. Cameron, B.A., and Mr. G. H. Needler, Ph.D., concluded the day's proceeding with essays on the topic "The Year Among the French and German Reviews."

In the afternoon the first paper was one by J. Squair, B.A., on "A Contrast Between Shakespeare and Malesherbes." The object of the essay was to show that the great influence exercised by Shakespeare and Malesherbes on English and French literature respectively was due to their characters fitting so harmoniously into the conditions existing at the period of their lives. The auditors presented their report, showing a balance on hand of \$85.25. The election of officers was then proceeded with the following being chosen: President, W. J. Alexander, Ph.D.; Vice-President, J. Squair, B.A.; Secretary-Treasurer, W. H. Fraser, B.A.; Councillors, G. A. Chase, B.A.; L. E. Horning, Ph.D.; M. F. Libby, M.A.; Miss H. Charles, B.A.; George E. Shaw, B.A.; J. N. Dalles, B.A.; J. M. Loran, B.A.; W. H. Vandersmissen, B.A.

The first article on the programme at the Thursday meeting was a discussion on the modern language curriculum at matriculation, introduced by Professor Alexander. It was decided to prepare a circular to be sent to all modern language teachers in the Province, asking them to make suggestions regarding the details of the curriculum. Messrs. W. H. Fraser, G. A. Chase, A. H. Gibbard, and A. Stevenson were appointed the representatives of the Association on the Committee of the College and High School Department to consider the University matriculation. The following resolutions were also adopted: That no specialist certificate be granted until after, at least, two years' successful teaching. That the time has come when the First Class C Certificate shall no longer be regarded as sufficient qualification for High School assistants, such regulation not to apply to any assistants now regularly qualified. Mr. W. J. Sykes followed with his paper on "History of English Literature in Schools." The Association then adjourned.

SCIENCE SECTION.

The Science section met at 2 p.m., on Tuesday, and listened to a paper by J. J. Mackenzie, M.A., on "The Standard and Character of Botany Papers for the Last Five Years." A lively discussion followed the paper. The next paper was by S. P. Coleman, Ph.D., on "The Educational Value of Geology." He pointed out the great value of the study of Geology as a means of training the faculties of observation and reasoning. The pursuit of this study would prove a help to the pupil in the study of the sister Sciences, Chemistry, Physics, Zoology and Botany.

The first paper at the Wednesday session was on "A General High School Course," by President W. S. Ellis, M.A., of Cobourg. The writer advocated the formation of a course adapted to High School work, where instruction would be given that would be of practical benefit to the agricultural and mechanical part of the population, the course to be made up largely of English and Science. In the afternoon, Mr. G. A. Smith, B.A., of Parkdale, discussed the question of examination papers in

Science. Mr. Jenkins, B.A., of Owen Sound, read a paper on "Microscopic Work for Botany and Zoology." The following officers were elected: Hon. President, Prof. Ramsay Wright, B.A.; President, H. B. Spotton, M.A.; Vice-President; J. B. Turner, M.A.; Secretary-Treasurer, T. H. Smyth, B.A., B.Sc.; Councillors, Dr. J. J. Hare, Whitby; Mr. Hamilton, M.A., Collingwood; Dr. McCallum, G. A. Smith, B.A., Toronto; Mr. Jenkins, B.A., Owen Sound.

A UNION SESSION.

During the meetings a union meeting of the Trustees Department, the Public School Inspectors' Department, and the Model School Principals' section was held. Hon. G. W. Ross, Minister of Education, addressed the gathering, upholding the present Model School system. He declared the Model Schools a benefit and not an injury, stating that the Inspectors' report showed this; that the Masters' reports showed this, and the fact that Model Schools did best in Entrance Examinations proved this. He thought it best to let well alone, and to make any radical changes always went against his "Conservative" tendencies. He did not believe, however, in calling teachers qualified before they were really so, and thought that the time of Model School terms should be extended to six months, that of Normal Schools to one year, and that of the School of Pedagogy to eight months. But until the teachers were better paid he could not extend the time.

* Science. *

Edited by W. H. Jenkins, B.A., Science Master,
Owen Sound Collegiate Institute.

ARBOR DAY.

ONCE more Arbor Day comes round. Do you see room for any improvements? Is everything so bright and attractive that the pupils feel pleased on entering their playgrounds? Why do boys and girls scamper off to the woods in early spring to search for the wild flowers? Is it not a genuine pleasure to them to present their teacher with the earliest nosegay? What is the secret of the attractiveness of Nature? In part, at least, is it not her beauty and variety? Is there not something which, while it exhilarates, also brings gladness and restfulness? Are these elements of happiness to be eliminated from school life? If so, leave your grounds with their mud and stones, their weeds and litter, and let the hot summer sun parch the grass and beat, with its scorching rays, upon the tired feet and heads of the little ones. Let chaos reign without and it will enter the door of your schoolroom.

No. You do not like the picture, but what can you do? Rather what can you not do?

PREVIOUS PREPARATIONS.

Do you believe in home preparation of lessons? This is to be a lesson for many generations of school children. It must have a plan and careful study. Do not think you need no assistance in arranging what you shall do and how it shall be done. Enlist the sympathies of all. Get the opinions of all. Make a start. Some teachers have carefully drawn up a plan of their grounds, laid out the necessary paths and walks, and have before them a clear ideal of what they want to accomplish. So far, so good; but you may be miles away next year, and the new teacher has new ideals. Consult, then, your trustees. Arrange with them what space shall be devoted to such things as are required for the general convenience of the pupils, such as walks, roadway, etc. These once laid down cannot be removed. See that they are tastefully arranged. If certain parts require sodding, try to get them to do it. If not, at least get their consent to having it done in the way you propose. When they once express a favorable opinion they become interested in seeing it carried out. All this will require much careful thought and consultation. If in one year you cannot accomplish all you wish, leave your plan with the trustees for your successor. Beware of too much mathematical exactness. Nature has few perfect curves and rectangles. If you are to plant trees, shrubs and flowers, take precautions that you may not be disappointed in their supply. Some who cannot bring plants can bring tools.

WHAT TO PLANT.

First, have you plenty of shade? If not you cannot err in setting out trees. Some of last year's may have died, you must fill their places. In choosing the varieties you must be guided by a variety of circumstances: their beauty, the soil, hardness, quickness of growth, and so on. Have, if possible, variety.

While the maple will always afford a welcome shade, it is a slow grower. Yet we could not do without our national emblem.

Horse-chestnuts, balsams, elms, locusts, are all suitable, and when skilfully arranged show well in contrast.

HOW TO TRANSPLANT.

In taking up young trees try, if possible, to superintend the work. Boys are too apt to injure them unless watched. An axe, a spade and a pickaxe will be all the tools necessary. If possible get the young saplings from a soil similar to that in which they are to grow. If your grounds are exposed do not go to the depths of the woods for the trees. The hardier ones will be found near the edge. Having found suitable specimens probe for the main roots with the pick and when found sever about eighteen inches from the trunk. Then dig carefully all around and gradually loosen the tree so that it can be lifted vertically from its bed. Be sure to keep as large a quantity of root fibres as possible attached and a considerable quantity of earth. It is better to remove three carefully than to tear out a dozen which are all likely to die. Having removed the plant carefully cut away the larger branches and the top and convey to the grounds with as little jolting as possible. It is better to have the trees on the ground the evening before. In placing them in the ground do not pack the earth around too tightly.

SHRUBS.

In the matter of shrubbery consider carefully your plan. These must be placed where they will lend relief to vacant patches, yet must be protected from the students at play. A few lilacs, snowballs and rose bushes, with their varied flowers, will lend animation to the plot. These are all easily procured and transplanted, grow quickly and bloom early. In no point, perhaps, will your taste be more severely taxed than in skilfully arranging your shrubs; for the same amount of work you cannot derive more satisfaction.

FLOWERS.

Your plan will show a few flower beds. These can be filled with plants brought from the homes of the pupils. Phlox, stocks, geraniums and pansies are all bright, variegated and showy, and are quite suitable for transplanting. If you give the children seeds about the New Year they will plant them in pots at their houses and care for them until Arbor Day. In transplanting do not drown with water. A rockery in some suitable corner will always be a point of interest, and it can be draped with trailing and twining stemmed plants.

Arbor Day should be a busy day; the more complete the previous preparations the easier will the work be accomplished. After all the planting is over comes the cleaning up. Many and willing hands make light work. All will be eager to see how it will all look when done.

A suitable closing for the day's work might consist of reading choice extracts about flowers and plants and a talk on how best to take care of them. Another important point is the appointment of committees, each entrusted with the care of a certain portion of the grounds; to look after the weeding, to report any damage, and to repair it.

Do you love order? Let there be order outside and it will come in with the children from their play.

CORRESPONDENCE.

A SUBSCRIBER—Albert.—Q. Would you kindly give a full explanation of Northern Lights?

Ans. No full explanation of the cause of auroræ, with our present knowledge, can be given. A few facts only can in this column be cited, suggesting the nature of the cause. Auroral displays are often seen to be accompanied by clouds of the cirro-stratus variety. Silbermann asserts that auroræ are in general preceded by much the same conditions as thunder-storms. Professor P. Smyth has shown that the frequency of the auroræ is inversely with

that of thunder-storms. The spectroscope shows that auroral displays are very similar to those of electrical discharges in rarefied gases. Magnetic needles are much affected during these displays, showing disturbance of terrestrial magnetism. The outbreaks of "sun-spots" are almost invariably accompanied by magnetic disturbances and auroral phenomena.

From these you will observe that auroræ are the outcome of electrical and magnetic disturbances which appear to be intimately associated with solar disturbances. How the cause acts is, as above stated, unknown.

A.B.C.—Q. Who are the publishers of Colton's Zoology?

Ans. D. C. Heath & Co., Boston.

NUMBER LESSONS IN SECOND GRADES.

NUMBER lessons should be language exercises in all grades not using a book. It may be necessary to use objects at first; but gradually accustom pupils to think out processes, or learn mathematical facts independent of association with objects. The power of association, as has been said of literature as a profession, "is a good staff, but a bad crutch." Begin in Grade II. to throw away the crutch in object-lessons in number. Teach numbers from ten to twenty or thirty, so that all their possible combinations will present themselves without hesitation as facts when called for, with a certainty that three sevens are twenty-one, and cannot by any possibility be twenty or twenty-two. If this is not thoroughly learned in Grade II., it will be necessary for some other teacher to do your work for you. Be careful to do your own work thoroughly, and do not attempt the next teacher's. Sufficient unto the grade is the work thereof. You will never be in danger of teaching what belongs to you too well.

Do not on the other hand, make number-work too abstract. Children like to "keep store." Enliven number-work by concrete examples given by pupils. See that the sentences used are correct and the mathematical combinations possible. Do not in this or any other grade "multiply cats by dogs." The combinations of abstract numbers are always abstract. In multiplication the multiplier must be abstract, and in division the divisor. The product will be of the same kind as the multiplicand, and the quotient like the dividend. Dollars divided by dollars will not give sheep, so that it is better in all grades to apply concrete expressions, by way of explanation, to the results of abstract operations. That the class may be supplied with concrete examples when their own stock is exhausted, teachers should have upon their desks several primary arithmetics composed of practical every-day examples. When the teacher puts an example to the class, the answer should be a number simply, without repetition of the problem, but the examples given by pupils should be fully and correctly expressed by them. In one case you are calling for a mathematical fact, in the other for a language exercise in mathematical form. The more you develop this power of expression, the greater scope and play you give to the imagination and the thinking powers. In no other subject is it possible to lead children to do, to talk, and to think, as in number.—S. Arthur Bent, in *Intelligence*.

YOUR VOICE.

Do you ever hear the sound of your own voice? Have you, while teaching, noted the tone of your voice, its pitch, its quality? If not, give a moment's attention to it. When you visit schools you not infrequently find a teacher who changes the pitch of her tone upon your entrance into her room. She was only aware of the wrong tone by your presence. A bright teacher said that she never heard the sound of her voice until a fellow-teacher came into her room. Then she became self-conscious, and every defect in the tone was immediately apparent. The quiet toned, firm, smooth, clear voice is a powerful factor in a school-room. The best teachers are those who have perfect self-mastery in this essential. The loud-mouthed, ranting, scolding teacher holds her position at the bottom of the list, be her methods and knowledge well approved and extensive.—*Teachers' World*.

Primary Department

MY KITTY.

TUNE--My Bonnie.

My kitty has gone from her basket,
My kitty has gone up the tree,
Oh, who will go up 'midst the branches
And bring back my kitty to me?

CHORUS—Bring back, bring back,
Oh, bring back my kitty to me, to me,
Bring back, bring back,
Oh, bring back my kitty to me.

The dog that lives down by the river,
That dog with the very loud bark,
Has frightened poor kitty so dreadfully
Up there she is mewling. Just hark!

CHORUS—Bring back, bring back, etc.

They say that when some folks are frightened,
Their hair will turn perfectly white,
And if kitty stays up there all morning
She won't have a black hair by night.

CHORUS—Bring back, bring back, etc.

SUGGESTIONS FOR ADDITION.

RHODA LEE.

HAVING taught a number of the combinations, drilled on endings and obtained a certain degree of accuracy in addition, it is necessary to do something towards getting a little rapidity in work. To this end, we may with advantage devote a few leaves of our general chart.

On the first page it is well to keep all the combinations known, and to drill on the answers for a few minutes every morning. There is no fixed order in which to teach these, but I have found it best to take first, the numbers which added together make 10; next the doubles, such as

4 3 6 8
4 3 6 8 etc.

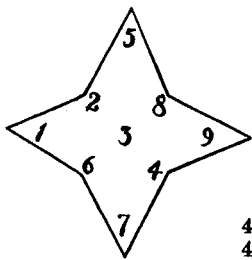
Then the remaining combinations of 2;

2 2 2 2
4 5 7 9 etc.

After this the 3's, and so on until exhausted.

Do not put the answers on the chart, but as you point here, there and everywhere on the page, let the children give you them orally, or on their slates.

The following device is very useful and might be placed on the next page:



32 42
33 43
34 44
35 45
36 39 46
37 40 47
38 41 48

The numbers below the star serve as answers. After pointing to the figures within the star, point to the answers. The children raise the hand when the number corresponding to their answer is reached.

In this practice the teacher must be very careful not to point to any number that involves a combination not taught, as that would assuredly result in counting, not adding.

A suggestion for a third page, is to rule it off into small squares and arrange figures as below:

6	5	9	3	7	6	5	3
3	5	3	3	3	4	6	4
3	3	2	9	6	2	4	8
4	2	6	9	8	2	4	4
8	6	3	6	5	6	8	4
8	6	4	3	3	6	8	2
5	8	7	3	2	3	2	9
5	8	7	4	3	7	6	9

On pointing to any number ask class to give you the sum of that number, and the two immediately above it. To make the exercise a little more difficult require the sum of the number to which you point and three above. As in a former exercise great care must be taken not to go beyond the combinations taught. It will be necessary to plan this page in the same way as examples, beginning at the bottom and going up.

What we term consecutive adding is of untold value in promoting both accuracy and rapidity in the work. It can be done either horizontally or vertically.

For example: (1) adding 2.

7	4	6	5
9	6	8	7
11	8	10	9
13	10	12	11
15	12	14	13
17	14	16	15
19	16	18	17
21	18	20	19
23	20	22	21
25	22	24	23, etc.

(2) Adding 3, horizontally.

6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, etc.
1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, etc.
5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, etc.

(3) Adding 2 to first line, 3 to second, 4 to 3rd.

3, 5, 7, 9, 11, 13, 15, 17, 19, 21, etc.
1, 4, 7, 10, 13, 16, 19, 22, 25, 28, etc.
4, 8, 12, 16, 20, 24, 28, 32, 36, 40, etc.

As soon as possible have adding by 5's, 6's, 8's, 9's, etc. Time the class and see how much can be done in one minute, two minutes, and how many can get to a certain point at the end of a specified time.

Take time-tests as often as possible, and allow those who finish within the stated time to step to the back of the class. There will be a little excitement over this at first, but it need not occasion any disorder. The children enjoy the race, and, indeed, so does the teacher.

A LANGUAGE LESSON.

RHODA LEE.

LESSON.—Proper use of the words *road*, *rowed*, and *rode*.

The teacher is sketching on the black-board a lakeshore scene. A wide carriage road runs along close to the water. Beyond this the ground rises gently, and to the left a little is seen a large house. Boat house and boat are next put in. As she works she tells in a very few words the story of a little boy who had been very sick and had come to this cool spot to get well and strong. "Would you like to see him?" she says. "Here he is coming out of the house." (Makes a straight line for Charley). The cool, fresh lake breezes have done their work well. Charley takes long walks now, and has learnt to row and ride. The people with whom he is staying have a quiet little Shetland pony, and he has become quite a horseman.

Teacher—Tell me in a story what Charley is doing, and where he is at present.

Some of the answers when read are:

Charley is walking along the road.

He is walking down the road.

The little boy is running down the road to the boat house.

Teacher—Who has the word *road* spelled as it is here. (Shows a card 6 by 4 inches, on which is plainly written in colored crayon the word in question.)

In reply to this query, a few hands are raised, but with further investigation considerable variety is found. The teacher explains that although *rowed* and *rode* may be right in some sentences they do not tell us where Charley was walking.

Sentences are then re-written with correct spelling and the teacher selects one sentence which she places on the black-board.

Charley is walking along the *road*. The card is left on the ledge and the story is continued. Another figure is seen. Who is coming now? is the question asked. The children write the answer using the word *road* again. Of course it is the little boy's mother, and by the time she reaches the boat house Charley has the boat ready. She steps in, and the children are questioned as to what Charley then did. Answers are taken and another card, upon which is written the word *rowed*, is shown to the class. Corrections are made and another question asked. Where did he row his mother? Answers:

He *rowed* her across the lake.

He *rowed* her out to the Island.

He *rowed* her along the lake shore, etc.

The spelling of this word was fixed by the form of the letter "w." In this word it appeared to have two arms extended, just like Charley's oars.

On days when it was too rough to row, Charley took out the pony. What did he then do? was asked by the teacher.

Answers given were:

He *rode* along the road.

He *rode* up to town.

He *rode* on the pony.

Then the word *rode* was discussed as the others had been.

On being questioned the children thought

they would not enjoy the riding as much as the rowing, as it would be very quiet—no one to talk to. The spelling of the word *rode* was then impressed by connecting the silent "e" at the end of the word with the silent, quiet ride. The meanings of the three words were then reviewed, and new sentences written. In closing the lesson the teacher asked the children to think about Charley and the three words as she would give them time on Friday afternoon to write the whole story.

REMEMBER SPRING-TIME

Abounds in opportunities for observation and language lessons. Interest your children in watching for the birds. Record the coming of the first dandelion, the first wild flower, etc. Watch the trees, particularly the horse-chestnut. After having a little talk about seeds, plant some peas, beans, and other seeds in a window-box, and watch the growth. Have some growing in water also. Tie a piece of course netting over a glass of water and on this place the seeds. Keep the water just touching the net, and before long the root will begin to descend.

Look over your lists and find your prettiest spring songs and class recitations, and make spring a happy time in school as it is outdoors. There are golden opportunities. Look for and use them.

* Hints and Helps. *

THE PLAYHOUR IN A COUNTRY SCHOOL.

FRED. BROWNSCOMBE, PETROLIA.

IV.—INDOOR GAMES.

TRADES.—One of the two sides (who are at opposite ends of the room), selects a trade whose work they must represent in pantomime. When they have made their selection they place the initial letter upon the blackboard, file down one aisle and begin operations, while the others come up opposite to them to observe their actions. After a few moments the witnessing party confer among themselves, determine what trade was represented, and, through their captain, announce it. If in three guesses they name the trade correctly, they choose a member from their opponents; if unsuccessful they lose a player. The rule in regard to this is the same as in "Animal, Vegetable, and Mineral." The players are not limited to trades alone; almost anything from playing billiards to preaching may be selected. If the work is denominated by two or more words, the initials of each must be given, as P.P. for planting potatoes, M.P. for mixing paints, G.S. for grinding scissors.

JACKSTRAWS.—On wooden toothpicks (ten cents a thousand, and you need them for your "units, tens and hundreds"), write numbers from 1 to 100. Take two pieces of common stove-pipe wire and bend them at an inch from the ends to form hooks. Choose sides, drop the numbered picks in a confused heap on the desk and angle for them with the hooks. Beginning with the captains, a player from each side alternately, has three trials. If in getting a straw out he disturbs any others, he gives up his hook. If he withdraws his hook from any straw he has been angling for, it counts as one trial. That side wins whose numbers added give the greatest sum.

CLOTHESPINS.—The sides sit in two rows facing each other. On the desk by each captain is a dozen clothespins, smooth chips, or blocks. At a given signal each captain seizes his pins and hands them to the next player who passes them to his neighbor, and so on till they come into the possession of the last player, who must place them on the desk next him, hold up both hands, and immediately

pass them back again. The side whose captain first replaces his dozen clothespins in their original position wins the game. All the pins must make the circuit, though it is not necessary that any player have the whole dozen in his hands at once.

HAND.—The opposing sides stand along two of the aisles facing each other and with a row of desks between, the captains being at opposite ends. One side is then given a cent or other coin, which, with hands behind their backs, they pass rapidly from one to another, the captain, meanwhile, watching its progress from behind. When satisfied with its location he cries out "Hands Up," whereupon his party raise their closed hands above the desks. After a few seconds he cries "Hands Down," and all bring down simultaneously their hands, palms under, flat upon the desks. One, then, though the others may advise him, of the opposite party has one guess as to which hand conceals the cent. If correct the guesser takes the coin and his party work it; if wrong, the true holder reveals it and passes it again, his side keeping it each time till guessed correctly. Unless the hands be brought down all at once and the holder be an expert, the noise the coin makes in striking the desk will reveal its position to the guessers.

CHARACTER GUESSING.—One pupil leaves the room, while the others decide upon some character for him. The absent person being recalled each of the others in turn asks him a question referring to the character he has been elected to represent. When he guesses his identity, he chooses some other player to retire in his place. For instance, John leaves the room and the players decide that he shall represent Richard I of England. On his entrance, one asks "Did you really come in sight of Jerusalem?" Another says, "How did you happen to quarrel with King Philip?" Another inquires, "How did you fare in prison?" etc., till he guesses correctly. He then sends Minnie or Andrew, as he chooses, from the room.

Another way. One pupil assumes a character and talks about himself, the others endeavoring from his conversation to guess his identity. The more obscure his statements, the longer, of course, they are baffled. As each guesses he whispers the character to the principal, who continues till all or nearly all have guessed, the first correct guesser doing the talking in the next game. Occasionally, considerable amusement may be caused by choosing some person present, or well-known to all as the character represented. Besides historical characters, fictitious ones known to the pupils may be selected. In this latter case it is perhaps best to confine them to the Readers, where are plenty, as Tom Brown, Daffydowndilly, Casabianca, Little Nell, Portia, King Midas, etc. Character guessing is really an excellent game, and may be made to serve usefully in your history, geography and literature classes. For historical and geographical names the game of Twenty Questions is also very good.

MY UNCLE'S CAT.—The leader begins by announcing, "My uncle has an A cat"; the next player says, "My uncle has an artful cat"; the third declares that his uncle possesses an adventurous cat; the fourth, an affectionate cat, and thus it goes round the circle several times, each member describing his relative's cat by some adjective beginning with *a*. When the adjectives in *a* are about exhausted, the leader begins anew by stating that his uncle has a B cat, and the players in turn must use words beginning with *b*. The game may be continued through the whole alphabet.

CHARACTERS is similar to "My Uncle's Cat" excepting that instead of the cat and its descriptive adjective, the players name persons of note in history or fiction. It is available for the geography, grammar, history, and literature classes. With two sides and the work written it makes a pleasant Friday afternoon exercise.

DUMB CRAMBO.—One side, after selecting a word, as "crest," announce to the others, who are waiting in the lobby, that their word rhymes with, say "best." The outside party think of several words that rhyme with the given word, as rest, chest, nest, and arrange to represent these in pantomime. When ready they file inside and for the first seat themselves in a restful attitude. The inside party observe, and as soon as they understand, cry out, "No, our word is not rest." The actors then tap themselves on the chest; "No, our word is not chest or breast," say the others. They

then represent the finding of a bird's nest, but meet the same rebuff. They go to the lobby once more and arrange other pantomimes, trying again and again till successful, when the two parties exchange positions. Should the inside party fail at any time to interpret the actions of the others, they must tell their word and retire, while the former actors choose a word.

HOW, WHEN, AND WHERE.—One of the players is sent from the room, while the others fix upon a subject which may be anything to which the three questions, "How do you like it?" "Where do you like it?" and "When do you like it?" will apply. On the out-player's return he asks each in succession the first question, the player questioned being required to give an appropriate answer. He then inquires in a similar manner, "Where do you like it?" and if the answer to that question still gives him no clue, proceeds to the third. When he discovers the word, he chooses some one to take his place while he joins the company in selecting a new word. A word of more than one meaning is often taken, which makes the answers quite bewildering, as cord, a small rope; cord, a measure, and chord in music. If the questioner fails to guess the word in his rounds, he may be sent out and a new word selected, or he may be allowed to ask the questions a second time, the players giving answers appropriate but different to their first ones.

THROWING A LIGHT.—Two of the players leave the room, select a word of more than one meaning, and coming back, converse upon the subjects expressed by the word, so as to throw a light upon it, the other players meanwhile endeavoring to guess the word. As each of the two speaks on the meaning he has taken, the conversation may be quite perplexing. When a player thinks he has the word he whispers it in the ear of one of the principals, and if right joins in the conversation; if wrong he leaves a handkerchief over his head till the end of the game, or till he guesses correctly. The game is continued till nearly all are in the secret. The first successful guesser then chooses a partner and the game is renewed.

For example Sarah and Emma have selected "bat."

SARAH—My brother made me a nice one of pine yesterday and painted it.

EMMA—Why, all I've seen were alive.

S.—I shall bring it to school to-morrow.

E.—Oh, don't! I shall be afraid.

S.—Why, you cannot play very well without it.

E.—I would not touch one for the world, etc.

INITIALS.—Players sit in a circle. The leader opens with "I am going to the Amazon," or some other place beginning with *A*. His neighbor to the left inquires "What will you do there?" and the leader answers, taking care that the nouns and verbs of his answer begin with *A*. The questioner then turns to her left hand neighbor and says, "I am going to Boston," and so on through the alphabet, the questioner in each case continuing the game.

JAMES—I am going to the Amazon.

AMELIA—What will you do there?

JAMES—Annihilate the Alligators.

AMELIA (to Bruce)—I am going to Boston.

BRUCE—What will you do there?

AMELIA—Buy birds.

BRUCE—I am going to Cairo.

LETITIA—What will you do there?

BRUCE—Carve chickens.

LETITIA—I am going to Detroit.

GEORGE—What will you do there?

LETITIA—Dress dolls.

GEORGE—I am going to England, etc.

OF WHAT ARE YOU THINKING.—One player leaves the room while the others determine what they will think of. This may be anything whatever, limited only in that each player must be able to tell something it resembles and why. Suppose that Nellie has left the room and that the company have chosen "snow" as their subject. When summoned, Nellie asks Leslie, "What is your thought like?" Leslie replies, "Like the ceiling." She then inquires of Bessie, "What is your thought like?" and receives for answer, "Like an angel." Other answers are "Like ice," "Like a blanket," "Like a pillow," "Like a ship," "Like blessings," "Like yarn," etc. If still in the dark, the questioner now demands of Leslie why his thought is like the ceiling, and Leslie says, "Because it is

white." Bessie say it is like an angel, because it is pure. Walter likens it to a blanket, because it keeps things warm. Louisa compares it to a ship, because it may drift; Willie to yarn, because you may make balls of it; Emily to blessings, because it comes from above, and Dolly to a pillow, because it is soft. Nellie guesses "snow," and chooses out some other player, and a second game is begun.

BECAUSE HIS TEACHER BELIEVED IN HIM.

"Do ye know why I didn't lie out of it?" said Jim "Blue-bottle" to his confidential friend Jake. "Now, mebbe ye'll think I was all-fired silly, but I jest couldn't. She called me up to her, quiet like, and said, 'Now, Jim, I know yer faults and I know yer virtues. Yer ain't no coward, Jim, and yer won't lie, even if yer should have ter take a lickin. Some boys will say the square thing when they think they won't get licked, and some boys will tell the square thing any way. A fellow like you who could grab a little kid out from under a runaway horse like you did poor Sammy Smithers, ain't got to be no coward now. Whatever ye tells me, Jim, I'll believe, and there the thing ends; for I won't ask no one else.' Then I said, 'Why don't yer ask Willie Perkins as allus does what yer say?' But she said *she'd believe me as quick as any feller in the school.* Think of that, Jake! And then I jest up and told her, and she said she was awful sorry I done it, but the principal said he'd lick the boy, and course I'd have to get licked. I said 'course,' and I tuck the lickin. Feel kind o' sore outside, but awful quiet-like inside. I'll do it again, too. You bet she's right when she says 'Jim, yer have yer faults but yer ain't no coward.' Most folks think I'm tough, but she don't. *She knows I won't lie, and I won't lie never no more.*"—*New England Journal of Education.*

Arbor Day Exercises.

WAKING UP.

LIZZIE WILLS.

MILLIONS of cradles up in the trees
Rock to and fro in the gentle breeze;
Tucked in these bud-cradles snug and warm
The little green leaves sleep, safe from harm.

April sings low as she passes by,
"Dear little leaves the summer is nigh;
Open your eyes, from your cradles creep,
Wake up, little leaves, wake up from sleep!"

Millions of leaves from their cradle-beds
Slowly and timidly raise their heads;
They see the sun, and they love it so
They back no more to their cradles go.

Stronger and stronger they grow each hour,
Bathing in sunshine and soft spring shower;
They stretch themselves out on every side
Saying, "Dear me! but this world is wide."

They gaze and gaze on the deep blue sky,
They watch the white clouds go sailing by,
The wind sings songs till for very glee
The leaves are dancing on every tree.

TORONTO.

PLANTING TREES.

FREDDY.

If we are all to choose and say
What trees we'd like to plant to-day,
Seems to me none can be
Half so good as a Christmas tree!
For surely even a baby knows
That's where the nicest candy grows.
Candy on a Christmas tree!
That's what pleases me!

CHARLEY.

Planted out 'twould never bear—
But after all why should we care?
The richest thing is what we bring
From sugar-maples in the spring.

So now I'll set a maple here,
For feast and frolic every year.
Sugar from a maple tree!
That's what pleases me!

WILLIE.

Sweets are good most any day,
But as for trees, I'm bound to say,
A shagbark tall is best of all
When once the nuts begin to fall.
And so a hickory tree I'll set
And piles of fun and nuts I'll get.
Nuts from a hickory tree!
That's what pleases me!

JOHNNY.

I shall plant an apple tree,
That's the best of all for me;
And each kind to suit my mind
On this one with grafts I'll bind,
Ripe or green, the whole year through,
Pie or dumpling, bake or stew,
Every way I like 'em best,
And I'll treat the rest.

—*Youth's Companion.*

THE FLOWERS WITH FACES.

WHAT are your thoughts as you blossom, sweet
flowers,
And bask in the sunshine through bright summer
days?
Smiling and growing through many long hours,
Uplifting your faces to greet the sun's rays.

What do I see in your sweet little faces?
Dainty they are in their tints manifold.
Lessons for all in the world's busy places,
Colors blue, white, royal purple and gold.

Smiling though drear be the weather and cheerless,
Lifting your heads to the rain's cooling shower;
Gem of the flowery creation—thou'rt peerless
Surely has Flora blessed thee with a dower.

Thy resting-place lowly, still upward thou'rt gazing,
Thy magnet the sun, and thy balm freshening
showers;
Fair example of purity! All should be praising
This loveliest one of the summer's fair flowers.

Give me pansies all shades, from the white to the
golden,
The purple and blue and each hue that they
wear;
For no others I care. Oh! their dainty sweet faces
In life and in death my affections shall share.

—*Ladies' Home Journal.*

THE CLASS TREE.

TUNE—*America.*

Grow thou and flourish well
Ever the story tell
Of this glad day;
Long may thy branches raise
To heaven our grateful praise,
Waft them on sunlight rays
To God away.

Deep in the earth to-day,
Safely thy roots we lay.
Tree of our love;
Grow thou and flourish long;
Ever our grateful song
Shall its glad notes prolong
To God above.

Let music swell the breeze,
And ring from all the trees,
On this glad day;
Bless thou each student band
O'er all our happy land;
Teach them Thy love's command
Great God, we pray.

—*Arbor Day Manual.*

ARBOR DAY HYMN.

AIR—*My Maryland.*

Now join we all in gladsome song,
This Arbor Day, glad Arbor Day;
And lift a chorus sweet and strong
To hail the balmy month of May.
The birds are singing in the trees,
The flowers are springing at our feet,
And sunshine tempers every breeze
This Arbor Day, glad Arbor Day.

O nature fair, we sing to thee,
This Arbor Day, glad Arbor Day;
Rich nature, who with hand so free
Hath lavished beauties in our way.
God give us eyes thy works to see,
God give us hearts that know thy love,
And souls that feel thy harmony,
This Arbor Day, glad Arbor Day.
—*Vernon P. Squires in Arbor Day Circular.*

ARBOR DAY MARCH.

AIR—*Marching Through Georgia.*

BY ELLEN BEAUCHAMP.

CELEBRATE the Arbor Day
With march and song and cheer,
For the season comes to us
But once in ev'ry year;
Should we not remember it
And make the mem'ry dear—
Memories sweet for this May day?

CHORUS—Hurrah! hurrah! the Arbor Day is here
Hurrah! hurrah! it gladdens ev'ry year
So we plant a young tree on blithesome
Arbor Day,
While we are singing for gladness.


Flow'rs are blooming all around—
Are blooming on this day,
And the trees with verdure clad,
Welcome the month of May,
Making earth a garden fair
To hail the Arbor Day,
Clothing all nature with gladness.

CHORUS—Hurrah! hurrah! the Arbor Day is here

LET us put an end to this miserable masquerad-
ing in the habiliments of the ancient world, and see
that our youth are clothed upon with the native
fabrics of our own civilization.—*Pres. J. G. Schur-
man, Cornell University.*

THE Remington Standard Typewriter is used exclu-
sively for the official business of the World's Columbia
Exposition.

**The Wealth
of Health**



Is in Pure Rich
Blood; to enrich
the blood is like
putting money out at interest,

**SCOTT'S
EMULSION**

*Of Pure Norwegian Cod Liver Oil
and Hypophosphites*

possesses blood enriching properties in
a remarkable degree. *Are you all run
down? Take Scott's Emulsion. Almost
as Palatable as Milk.* Be sure and
get the genuine.

Prepared only by Scott & Bowne, Belleville.

Educational Supplies

AND SCHOOL REQUISITES

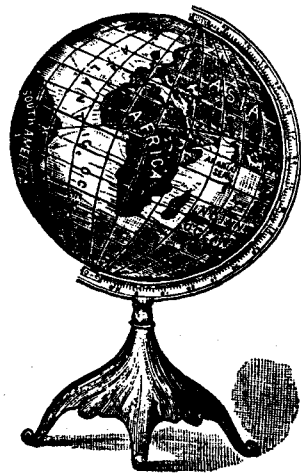
GLOBES

Nickel-Plated Standards



FULL MOUNTED.

No. 14, 18 inches in diameter..	\$35 00
" 17, 12 " "	13 50
" 20, 8 " "	8 50
" 23, 6 " "	5 50

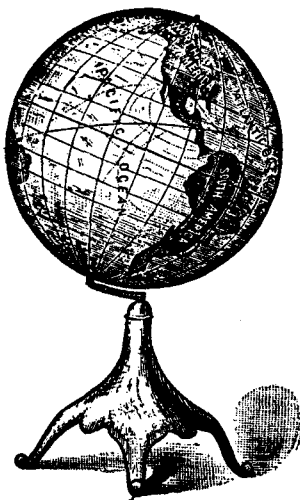


MERIDIAN.

No. 15, 18 inches in diameter.....	\$30 00
" 18, 12 " "	9 00
" 21, 8 " "	5 50
" 24, 6 " "	3 00

PLAIN.

No. 16, 18 inches in diameter.....	\$25 00
" 19, 12 " "	7 50
" 22, 8 " "	5 50
" 25, 6 " "	2 50



PLAIN.

We have, after examining a large number of different maker's globes, decided to use the maps of two makers in covering our globes. One the renowned Keith-Johnston maps, the other, though not of such a world wide reputation, yet considered by many as fully equal for all purposes, known as the Cheney Globe cover.

On the Cheney maps the parts representing water are white, those parts representing the land are in bright colours, thus showing the outlines, names and boundaries distinctly. The print is clear and full, and corrected to 1891.

The Johnston covers are printed for us by W. & A. K. Johnston, Edinburgh, Scotland. These covers are entirely new, exhibiting the most recent geographical discoveries and political changes. The Isothermal Lines for January and July, also the Ocean Currents are clearly shown.

The globes covered with the Cheney maps are generally preferred for school use, as the boundaries are more distinct, while those covered with Johnston maps are preferred for reference globes in offices and homes.

With the exception of the 18 inch globes the prices given are for globes with Cheney maps. For globes with Johnston covers add \$1.50 for 12 inch globes, \$1 for 8 inch and 50c, for 6 inch globes, to the prices given.

GLOBE MANUAL

How to use globes. Fifty pages. By the use of this little volume a globe becomes more than an ornament in a house or school. It opens up a world of knowledge and furnishes a variety of problems for pleasant and profitable mental exercise. Price, post paid, 50 cents. A copy sent free with every globe purchased.

WALL MAPS

The most accurate and best series of Wall Maps published.

DRAWN and ENGRAVED

By the eminent geographer,

J. BARTHOLOMEW, F.R.G.S., Edinburgh

Mounted on strong cloth, with rollers, clearly colored and varnished.

THEY EXCEL IN

Boldness and Clearness, the outlines and physical features being remarkably distinct.

Coloring, making these maps an ornament wherever hung; the body coloring, which always furnishes the tone of a map, though peculiarly vivid, is light, tasteful, and very easy to the eye.

Size, being larger than any other strictly school maps published.

No.	Size. Inches.	Regular Price.
1. Railway Map of Ontario.	43 by 33	\$3 00
2. Ontario.....	67 by 52	4 50
3. Quebec	67 by 52	4 50
4. New Brunswick.....	67 by 52	4 50
5. Nova Scotia and Prince Edward Island.....	67 by 52	4 50
6. North America.....	67 by 52	4 50
7. South America.....	67 by 52	4 50
8. Europe	67 by 52	4 50
9. Asia	67 by 52	4 50
10. Africa.....	67 by 52	4 50
11. British Islands.....	67 by 52	4 50
12. Australia and New Zealand	67 by 52	4 50
13. Palestine	67 by 52	4 50
14. The World in Hemispheres	67 by 52	4 50
15. The World on Mercator's Projection	67 by 52	4 50
16. United States	81 by 52	6 00
17. The Dominion of Canada	80 by 49	6 50

To any Teacher, or Board of Trustees, who has paid one year in advance for THE EDUCATIONAL JOURNAL, we will send one or more of the above maps, each at \$1.00 less than the above quoted price.

This makes the cost of the maps very small, and is an opportunity that should not be neglected. Supply your school at once with first-class maps at wholesale rates.

Remember, those who have paid one year in advance to THE EDUCATIONAL JOURNAL get the reduction of one dollar on each and every map purchased, whether one or the entire series is ordered.

New & Useful Books

Primary Recitations, paper.....	\$0 25
Hints and Expedients for Young Teachers.....	0 25
Armstrong's Arithmetical Problems.....	0 25
Practical Problems in Arithmetic.....	0 25
Excelsior Webster Pocket Speller and Definer.....	0 25
Row's Practical Language Training....	0 25
Strang's English Composition.....	0 25
Prize Problems in Arithmetic.....	0 20
Spotton's Botanical Exercise Book.....	0 25
The Epistles of Hugh Airlie, paper....	0 25
Little People's Dialogues, paper.....	0 25
Humorous Dialogues and Dramas, paper	0 25
Sunday School and Church Entertainments	0 25
Shoemaker's Best Selections, paper....	0 25
Drills and Marches, paper.....	0 25
March's Speeches and Dialogues for Wee Tots.....	0 25
Tableaux, Charades and Pantomimes, paper.....	0 25
Jokes, paper.....	0 25
Ritter's Book of Mock Trials, paper....	0 25
Burdette's Dutch Dialect Recitations, paper.....	0 25
Brudner Gardner's Stump Speeches, paper.....	0 25
Gill's Charming Songs for Little Warblers.....	0 25
Choice Dialogues, paper.....	0 25
Young Folks' Dialogues, paper.....	0 25
Choice Humor, paper.....	0 25
Young Folk's Entertainments, paper...	0 25
Payne's Business Pointers.....	0 25
Correct Manners—How to Behave in Society.....	0 25
Payne's Rules of Order.....	0 25
Secrets Worth Knowing.....	0 25
Elite Letter Writer.....	0 25
Excelsior Webster Pocket Dictionary...	0 25
Plain Talks with Young Home Makers.	0 25
Popular Synonyms.....	0 25
How to Become a Public Speaker.....	0 25

All sent post paid on receipt of price.

We are receiving every day large numbers of requests for our catalogue of Educational Supplies, which we regret to say we cannot comply with, as the entire edition of the catalogue has been exhausted. The demand for copies has been very much larger than we expected, showing how thoroughly this, our second catalogue, has been appreciated. Next season we shall issue double the number, but as this will not appear until September 1st, we shall in the meantime give all information possible in the advertising columns of THE JOURNAL.

Write us for our special rates on all goods to subscribers to THE EDUCATIONAL JOURNAL.

Grip Printing and Publishing Company

201 AND 203 YONGE STREET - TORONTO

Note our Prices for Wall Maps to "Educational Journal" Subscribers.

YOU ARE THE MAN

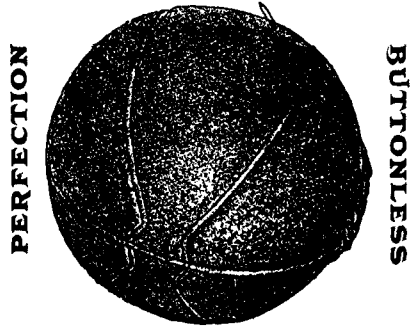
I want, if you are possessed of the ordinary amount of intelligence and perseverance. If you are, you can make money by obtaining the agency for your district of that staunch old Company, The Germania Life Insurance Company, of New York. Present occupation need not be interfered with, nor is previous experience necessary. Write for particulars, giving references, to George W. Rönne, Manager, 46 King Street West, Toronto.

Teachers Wanted

If you intend to fill in the summer holidays by taking an agency of any kind, give us a call before settling on your article. We control an article (made in Canada now) with which many teachers and students, in the States, make big money during vacation. Address:

TARBOX BROS., TORONTO, ONT.

LUMSDEN & WILSON'S



PERFECTION

BUTTONLESS

FOOTBALLS

Made in Glasgow and as used by the Scottish Football Association there is offered in Canada a football made in imitation of the above design. It is very nice to look at, but for wearing qualities it will not compare with these, as many have found by experience. Had we room we could give scores of letters in corroboration of this. Beware of a fancy looking "match" ball. Ours are all filled with Mackintosh's Best Quality Grey Rubbers, stamped and tested.

PRICE LIST

Perfection, Buttonless \$1.50 \$1.60 \$1.75 \$2.25 \$3.00
 Perfection Chrome, Special Buttonless, only one size made \$3.50
 Second Quality, Buttonless \$1.50 \$1.75 \$2.25

Rugby Match Ball, Perfection, \$3.00

Rubbers, Separate \$0.60 \$0.70 \$0.80 \$0.90 \$1.00
 Mackintosh's Best Covers, Separate \$0.95 \$1.00 \$1.10 \$1.50 \$2.15
 No. 1 Buttonless \$0.80 \$1.00 \$1.35
 Chrome Buttonless \$2.55

Inflators, Brass Piston, The Little Wonder, 60 cts.; large size, \$1.50. Football Shin Pads, 2 buckle, leather, and cane, cloth lined, 75 cts. a pair. Best quality, chamois lined, \$1.00 a pair. Ditto with ankle pads attached, \$1.40 per pair. **Football Boots**, best Glasgow make, waterproof, light or heavy, \$3.75 per pair.

"Football and How to Play it," by A KICKER, price, 20 cents, containing the latest rules for playing Association Football and valuable hints to players. One copy will be sent FREE with each order for a complete football.

Any article in above list mailed free on receipt of price to any address in the Dominion of Canada or the United States. Send money or stamps by registered letter; or, if convenient, a post office order is absolutely safe. **LUMSDEN & WILSON**, Importers of Football Goods, Seaforth, Ont.

Just Published

THE PUBLIC SCHOOL Drawing Manual

A COMPLETE GUIDE TO SELF-INSTRUCTION IN DRAWING

BY DR. J. H. McFAUL

Invaluable to teachers attending County Model Schools, Normal Schools, Art Schools, and the School of Pedagogy, both in the preparation of Drawing for the Class-Room and for their

FINAL EXAMINATION

This Manual supplies a long felt want to those engaged in

TEACHING DRAWING

A most helpful work to pupils in High Schools, Private Schools, and the senior departments of Public Schools.

PRICE - - - 75 CENTS

The Canada Publishing Co., Ltd.

9 WELLINGTON ST. WEST, TORONTO

Vannevar & Co.

Can Supply any Book You Want

Books not in stock will be ordered from any part of the world with the Utmost Despatch.

Orders by mail will receive our prompt attention

VANNEVAR & CO., Educational Booksellers, 438 YONGE ST., TORONTO

QUICK STUDY. LATIN and GREEK at sight, use our "Interlinear Classics." Sample pages and Catalogue of School Books, free. C. DeSILVER & SONS, Pubs., Phila., Pa. Address all orders, wholesale or retail to **THE BAKER & TAYLOR CO., 740 Broadway, N.Y.**

Works On Electricity

- Electricity up to Date for Light, Power and Traction. By John B. Verity..... \$0 70
- Electricity and its Uses. By J. Munro. Illustrated..... 1 25
- Electricity, the Science of the Nineteenth Century. By E. M. Calliard..... 1 50
- Electricity and its Discoverers. By M. S. Brennan..... 0 90
- Electricity in Daily Use. A popular account of the applications of Electricity. The different chapters written by electrical experts. 125 illustrations..... 3 60
- Electricity and Magnetism. By Dunman and Jones..... 0 35
- Notes on Electricity. By Prof. Tyndall..... 0 35
- Magnetism and Electricity. By A. W. Poyser, M.A..... 0 90
- Water, Electricity and Light. By Prof. Tyndall..... 1 00
- Pioneers of Electricity. Short lives of the great Electricians. By J. Munro..... 1 25
- Marvels of Electricity and Magnetism. By Henry Frith. Fully illustrated..... 0 50

SPECIAL RATES TO SCHOOLS.

WILLIAM BRIGGS

Librarian House of Commons
 Ottawa
 St. W, Toronto
 May 93

Remington Standard Typewriter

GEORGE BENGOUGH

Tel. 1207. 10-12 Adelaide St. East, TORONTO

THE CANADIAN OFFICE & SCHOOL FURNITURE
PRESTON, ONT.

FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS
 OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
 SEND FOR CATALOGUE.

FOR SALE



High Speed Porter-Allen Automatic Cut-Off

ENGINE

Size of Cylinder, 11 3/4 x 20 inches. with exhaust feed water heater.

ALSO A DOTY BOILER

60 inches diameter by 12 feet long, with 76 three-inch tubes.

Both in Perfect Work Order.

APPLY

The Grip Printing and Publishing Co.

Filled with bright, practical, **USABLE** material. We think you will like it.

MONTHLY, \$1.00 A YEAR.

FREE SAMPLE COPY.

Address **BEMIS PUB. CO., 13 Astor Place, N.Y.**

Mention this paper when you write.

TEACHERS' WORLD

A JOURNAL OF METHODS, AIDS AND DEVICES