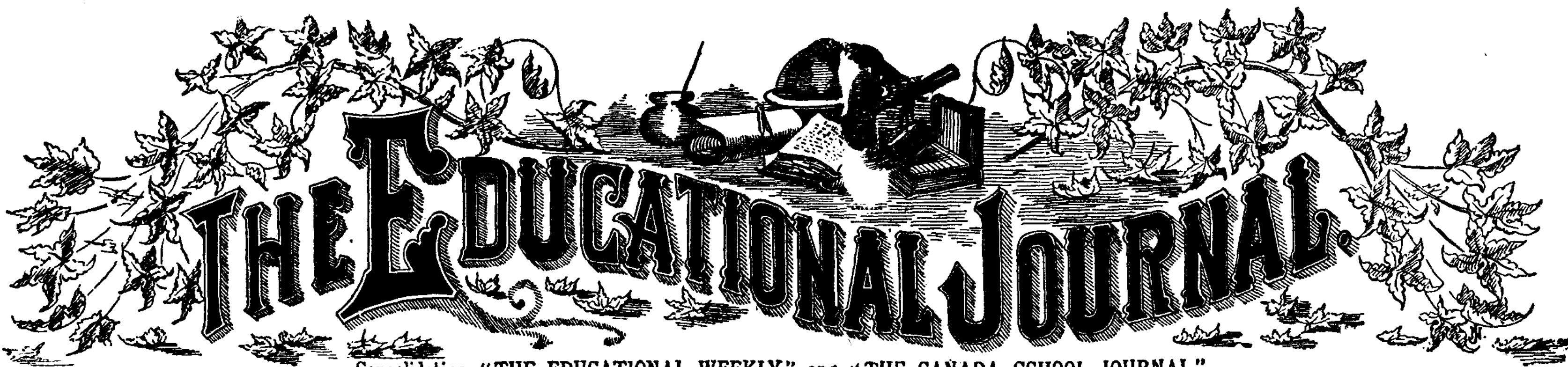
Technical and Bibliographic Notes / Notes techniques et bibliographiques

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.

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 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
- [x] Bound with other material / Relié avec d'autres documents
- [ ] Only edition available / Seule édition disponible
- [x] 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.
- [ ] Coloured pages / Pages de couleur
- [ ] Pages damaged / Pages endommagées
- [ ] Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- [x] Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- [ ] Pages detached / Pages détachées
- [x] Showthrough / Transparence
- [x] 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.

- [x] Additional comments / Commentaires supplémentaires: Continuous pagination.



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

Subscription, $1.50 a year in Advance.

TORONTO, DECEMBER 16, 1895.

Vol. IX. No. 15.

THE DAYS OF AULD LANG SYNE

By Ian McLaren, publisher's price, cloth, $1.25. For cash with order will send this book for **$1**. This book is the sequel to **Bonnie Briar Bush**, also $1.25. Will send either one or both for **$1 each, postpaid.**

J. K. CRANSTON, Galt.

OUR RECENT PUBLICATIONS

Forest, Lake and Prairie:
Twenty years of frontier life in western Canada—1842-62. By Rev. John McDougall. Fully illustrated $1 00

Etchings from a Parsonage Veranda:
By Mrs. E. Jeffers Graham. Illustrated by J. W. Bengough $1 00

Oowikapun:
Or how the Gospel reached the Nelson River Indians. By the Rev. E. R. Young. Illustrated $1 00

Old Man Savarin
and Other Stories. By E. W. Thompson $1 00

The Red, Red Wine:
By J. Jackson Wray. Illustrated $1 00

Barbara Heck:
A Story of Methodism. By W. H. Withrow, D.D. ..... 75c.

A Victory Won:
By Annie S. Swan. Illustrated $1.25

In Press, *ready early in December:—*

Cot and Cradle Stories:
By Mrs. Catharine Parr Traill. With Illustrations by A. Dickson Patterson, R.C.A. $1 00

Canadian Wild Flowers:
With Botanical Descriptions by Mrs. C. P. Traill. Ten full-page plates of native wild flowers, drawn and colored by hand by Mrs. Chamberlin. Fourth edition, from new type $6 00

Here and There in the Home Land
England, Ireland, and Scotland, as seen by a Canadian. By Canniff Haight. With 250 superior photo-engravings. Cloth, $3 00; full sheep, $4 00, half morocco $5 00

History of the County of Lunenburg:
By Judge M. B. DesBrisay. Second edition, greatly enlarged $2 50

Consumption:
Its Nature, Causes, and Prevention. By Edward Playter, M.D. $1 50

WM. BRIGGS, *Publisher.*
29-33 RICHMOND ST. W., TORONTO.
—and all Booksellers—

Attention, Teachers

JUST OUT—Two new school songs (words and full music) for special school days.

No. 1.—GRAND WELCOME SONG BY PUPILS TO FRIENDS

No. 2.—PUPILS' PARTING SONG TO TEACHER

Price of either, **10c.** The two, **15c.** Silver or U.S. stamps.

Will also inform you at what special rates we will be pleased to introduce these to your pupils and allow you to retain a commission on each for your help. Try these and be convinced. Address,

C. F. HEY,
Box 57, Kilmanagh, Mich.

The Teacher's Anatomical Aid

This is a valuable collection of engraved plates and manikins, illustrating human anatomy and physiology, and showing the effects of alcoholic drinks and narcotics on the system. There are also plates showing the evil effects of cigarette smoking, painted from original subjects at post-mortem examinations.

Advantages of The Teacher's Anatomical Aid—It is larger than other anatomical works. Its workmanship is in every way superior. The charts and manikins are enclosed and protected in an elegant wood panel cabinet, that is an ornament to any school room. When enclosed everything is thoroughly protected, and with ordinary care it can be used profitably in any schoolroom for at least ten years. It contains ten large plates, 25 x 42 inches in size. Besides these plates, there are complete manikins of the human body, the head, the eye, the tooth, the lungs and heart, and the larynx. Write for circular and prices on this "Aid."

FRED. G. STEINBERGER & CO.,

SOLE AGENTS FOR CANADA. 37 RICHMOND STREET WEST, TORONTO, ONT.

Send for Complete Catalogue of our Supplies, and Special Discount to Schools.

THE Map and School Supply Co., Ltd.,

31 King Street East, Toronto,

Manufacturers and Importers of Chemical and Physical Apparatus; Apparatus for use in experiments in Text Books; New Series of School Wall Maps. This series excels all other School Maps for educational purposes, and has a great number of advantages over any other Maps published.

Most Complete and Recent Map of the Dominion of Canada.

COMPLETE SERIES OF

Classical Geography, Physical Geography, Scriptural Geography, Elementary Geography, Astronomical Charts, Botanical and Philosophical Charts, Geographical Terms, Outline Maps, Dr. Andrew Wilson's Anatomical Charts, clearly printed and perfectly colored, Liquid Slating Blackboards, and all kinds of School Supplies at lowest prices.

Vertical Writing JACKSON'S NEW STYLE.

COPYBOOK, 14 Nos., 8c. each.

SELBY & CO.
23 Richmond St. W.
TORONTO.

British American Business College

Co., of Toronto, Ltd.

Cor. Yonge and Richmond Sts., Toronto.

THE LEADING COMMERCIAL SCHOOL IN THE DOMINION

DIRECTORS AND SHAREHOLDERS:

EDW. TROUT, President of Monetary Times Printing Co.
E. R. C. CLARKSON, F.C.A., Chartered Accountant.
FRED WYLD, of Wyld, Grasett & Darling.
STAPLETON CALDECOTT, President of Toronto Board of Trade.
WM. McCABE, F.I.A., Manager of North American Life Assurance Co.
S. F. McKINNON, Wholesale Milliner.
D. E. THOMSON, Q.C., of Thomson, Henderson & Bell.

Our system of imparting a business training is modelled after the most approved methods in use in the best regulated business houses. No other school in Canada has such a practical course.

Students in this College are not required to follow the old-fashioned methods of copying work from text-books. They engage in genuine **OFFICE PRACTICE,** and perform the duties of a **BOOKKEEPER from the day they enter.** They deal with **facts not theories.**

ALL ENTRIES MADE FROM THE BUSINESS PAPERS RECEIVED AND ISSUED.
Students learn more in a week than by the old text-book method in a month.

NEW TERM COMMENCES MONDAY, JAN. 6th, 1896.

Send for free prospectus.

EDW. TROUT, President. **DAVID HOSKINS, Secretary.**

TORONTO CONSERVATORY OF MUSIC

FOUNDED IN 1886. HON. G. W. ALLAN, PRES. YONGE ST & WILTON AVE.

EDWARD FISHER, Musical Director.

New Calendar giving full particulars, MAILED FREE.

Thorough Training in all Branches.

H. N. SHAW, B.A., Principal Elocution School

PRACTICAL EDUCATION.

NIMMO - HARRISON

Business College

Cor. Yonge and College Sts., TORONTO.

Absolutely first-class individual instruction in Business Subjects, Shorthand, Civil Service, etc. Thoroughly equipped. Students admitted any time. Catalogues free.

NIMMO & HARRISON, Principals.

Ye Olde Booke Shoppe

Teachers Inspectors and Students

When you want books in the educational line all you have to do is to send a card to

FRANK PORTER, 353 Yonge St., Toronto

and get the books by return mail.

TAYLOR'S MANUAL OF PUNCTUATION, 15c.
TEACHERS' AGREEMENT FORMS, 5c.

18-

THE CANADA Business College

HAMILTON, ONT.

The leading Canadian Business College. 33 years of success. Over 2,000 ex-pupils engaged in the best business houses in this country. Excellent advantages to teachers. Write for prospectus to

R. E. GALLAGHER, Principal.

CANADA'S GREATEST
MUSIC HOUSE

Music Publishers, Manufacturers and Importers OF EVERYTHING MUSICAL

SPECIALTIES:

Our **'Imperial' Band Instruments, Guitars, Mandolins, Banjos, Harmonicas,** and the **Latest Music** Publications. ☞ Don't purchase until you see our prices.

Send for Catalogues mentioning goods required.

WE WANT THE ADDRESS OF EVERY MUSIC TEACHER AND BANDMASTER IN CANADA.

WHALEY, ROYCE & CO.
158 YONGE STREET,
TORONTO, - CANADA

Please mention this Journal.

THE ENTIRE FIRST FLOOR, QUEEN STREET SECTION, (next the Millinery and Mantle Departments) is given up to a display of

'XMAS GOODS

Here are some suggestions:

Fancy Celluloid and Leather Toilet Cases
Dressing Cases, Jewel Cases, Work Boxes
Collar and Cuff Boxes, Veil Boxes

Glove and Handkerchief Boxes
Necktie Boxes, Fan Boxes
Shaving Cases, Manicure Sets
Smokers' Sets, Cigar Boxes

Leather Goods

Ladies' Companions, Gentlemen's Companions, Manicure Sets, Shoe Sets, Card Cases, Purses, Wallets, Hand Bags, Shopping Bags, Music Rolls.

White Metal Photo and Cabinet Frames
Fancy Boxes, Trays, and Jewel Cases
Leatherette Fancy Cases and Boxes
Albums, Books, 'Xmas Cards, Games

Crokinole, 75c.,
Caroni, | the new game | *$1.90*

Dolls, Fancy China, Fancy Japanese Trays
Paper Knives, and Fancy Goods

Japanese Metal Goods, Japanese China Fans, Sterling Silver Chain Bracelets, Stick Pins, Bangle Pins, Brooches, Cuff Links and Studs, Glove Button Hooks.
Ladies' Sterling Silver Mounted Umbrellas
Men's " " " "
Men's Dressing Gowns
Men's Smoking Jackets

Ladies' Dressing Sacques, quilted
Ladies' Japanese Silk Wrappers, quilted
Silk Handkerchiefs, Hem Stitch and Initials
Silk Overcoat Scarfs and Neckwear
Swiss Embroidered Handkerchiefs

Ladies'

Silk Waists, Cashmere Waists
Silk Skirts, Knit Berlin Wool Skirts
Fleece-Lined Lustre and Moreen Skirts
Golf Jerseys, Knit Shawls,
Kid Gloves, Silk Hose, Dress Silks,
Waist Silks, Fur Gauntlets, Capes,
Neckruffs, Caps, Coats, Mantles,
Jackets, Cloaks, and Dress Goods

Men's Furnishings
Men's Clothing
Boys' Clothing

Does this List help you to a thought of what to buy?
Write us for particulars of any line. We're quick to quote prices, because we know we've got things right.

J. SUTCLIFFE & SONS

182, 184 YONGE ST. - 6 and 8 QUEEN ST. W.
TORONTO, ONT.

NOW IS THE TIME TO SUBSCRIBE!

"THE PRINCE OF WEEKLIES,"

The Literary Digest

A Repository of Contemporaneous Thought and Research as Presented in the Periodical Literature of the World, in all Departments of Human Knowledge and Activity.

Issued Weekly — **$3.00 per Year.**

CITY FOLKS AND COUNTRY FOLKS, BUSY FOLKS AND FOLKS OF LEISURE, READ THE LITERARY DIGEST WITH PROFIT AND EQUAL SATISFACTION.

32 QUARTO PAGES. . . . . . EACH WEEK. . . . . . ILLUSTRATED.

FUNK & WAGNALLS COMPANY,
11 Richmond Street West, TORONTO, ONT.

"Best and Cheapest School Inks Known."

INK. DUCKETT'S COLD WATER INK-POWDERS.
Samples for the asking. So TRY before buying.

Send two-cent card for particulars, and you will receive *free* by mail in due course *gratis* samples of Six Inks (*School Black, Business Black, Red, Blue, Green and Violet*), well worth 25 cents, to any teacher. *Address,* DUCKETT'S INKS, SHEFFIELD, ENGLAND.

Chas. J. Musson

BOOKSELLER PUBLISHER AND STATIONER

240 YONGE ST., TORONTO, ONT.

JUST ISSUED
A New and Charming Romance

"ZEROLA OF NAZARETH," By Louie Barron

First Published in New York City.

Already read by over Two Hundred Thousand People in the United States. Without doubt this book is the best of the season. A splendid Christmas Gift. Beautifully bound in Cloth. Gilt Stamping, Illustrated. 50 Cents, Postpaid.

A Full Line of Christmas Books, Cards, and Calendars at Lowest Prices.

CALENDARS

Turnover Calendars, Drop Calendars, Screen Calendars—all lithographed in various and beautiful colors. With selections from the Poets or Scrip ure verses. Prices ranging from 25 cents to $1 50.

CHRISTMAS BOOKLETS

By the best authors—David Lyall, J. R. Miller, D.D., Mary E. Wilkins, Rosa N. Carey, Dr. C. H. Parkhurst, E. S. Elliott, etc. In dainty holiday binding, for 25 cents each.

EDUCATIONAL JOURNAL PUBLISHING COMPANY,
11½ Richmond St. W., TORONTO, Ont.

ONTARIO BUSINESS COLLEGE.

28th Year.

Four graduates have just passed the Intermediate Examinations of the Institute of Chartered Accountants.
Students are now in attendance from the following: Jamaica, Barbados, Bermuda, Nova Scotia, New Brunswick, Quebec, Alberta, British Columbia, and all parts of Ontario—14 from the Ottawa valley.
For catalogue, address

ROBINSON & JOHNSON,
Belleville, Ont.

TWO GREAT SCHOOLS
UNDER ONE MANAGEMENT

CENTRAL Business College

TORONTO and STRATFORD

Unquestionably the Leading Commercial Schools of the Dominion. Advantages best in Canada. Write to either school for catalogues.

SHAW & ELLIOTT,
Mention this paper. Principals

Some Excellent Books

PUBLISHED BY

Fleming H. Revell Company

From Far Formosa: The Island, its People and Missions. By George Leslie Mackay, D.D. For twenty-three years a missionary in Formosa. Edited by Rev. J. A. Macdonald. Maps and Illustrations. 8vo. cloth, $2.00.

Successward: A Young Man's Talks with his Fellows. By Edward W. Bok, Editor *Ladies' Home Journal.* 16mo., cloth, $1.00.

Classified Gems of Thought from the Great Writers and Preachers of all Ages: In convenient form for use as a Dictionary of ready reference on religious subjects. By Rev. F. B. Proctor, M.A. 816 pages $2.50

Turning Points in Successful Careers: By Wm. M. Thayer, author of "Tact, Push and Principle." $1,25.

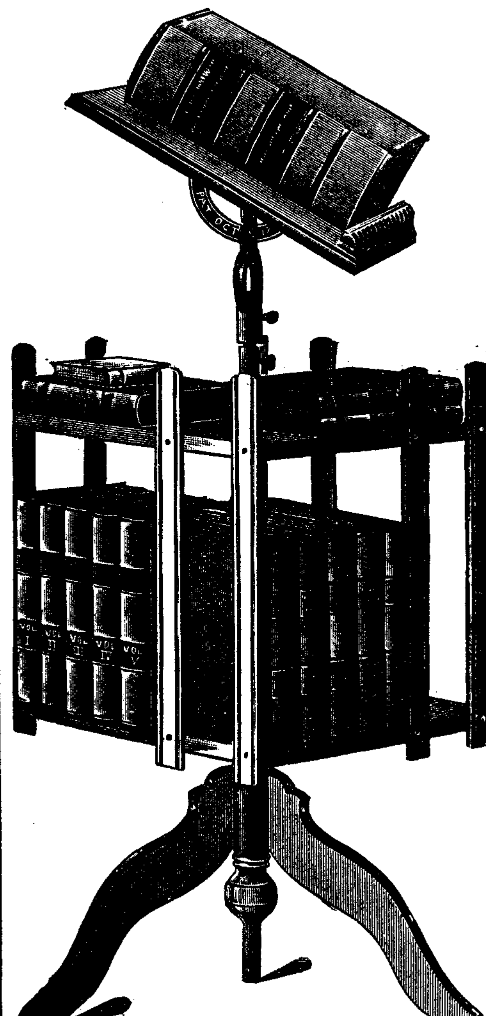
The Personal Life of David Livingstone: Chiefly from his Unpublished Journals and Correspondence in the possession of his family. By W. Garden Blackie, D.D., LL.D. With portrait. 503 pages, 8vo., cloth, $1.50.

Notes From My Bible: By D. L. Moody. Being the marginal notes, comments, illustrations, etc., copied from the author's Bible. 12mo., cloth, $1.00.

For years Mr. Moody has been in the habit of making notes and quotations on the margins and blank leaves of his interleaved Bible, the result being an accumulation of concise, helpful and suggestive notes probably without a parallel.

AGENTS Wanted to sell FROM FAR FORMOSA

Fleming H. Revell Company
140-142 Yonge Street, Toronto.



Marsh Reading Stand and... Revolving Book Case

32 inches high
Extended, 47 inches high

Has hardwood revolving Top, adjustable to any angle desired, 14 x 18 inches, with adjustable Book Rest. Revolving Book Case is 18 x 18 x 13, giving shelf room for twenty-five volumes, size, Chambers' Encyclopædia. Made in Solid Oak, rubbed finish, and guaranteed first class. Now used by 10,000 bankers and lawyers. If not as represented it can be held subject to our order. Expressed knocked down (20 pounds) in package, with plain directions for putting together.

REGULAR PRICE..... $8.00

To "Journal" Subscribers who are paid up to at least July, 1896, the price is

ONLY $5.00 Carriage Paid.

Educational Journal Pub. Co'y
11½ Richmond St. W.,
TORONTO.

The Educational Journal

CONSOLIDATING

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

Subscription, $1.50 a year in Advance. | TORONTO, DECEMBER 16, 1895. | Vol. IX. No. 15.

Table of Contents.

PAGE.
EDITORIAL NOTES......... 227
ENGLISH—
Song of the Grass..... 228
Military Training..... 228
SPECIAL PAPERS—
Gravest of Questions . 228
EDITORIALS—
A Mind Sharpener.... 230
Local Geography...... 230
Dishonorable Tactics. 230
Christ, the Model Teacher.............. 231
SCIENCE—
Science Notes......... 232
Vivisection and Dissection................ 232
Annual Examinations 232
Answers................ 232
EXAMINATION PAPERS—
East Middlesex Promotion and Review Examination........ 233
HINTS AND HELPS—
A Word About Spelling.................. 234
Language Teaching.... 234
Lead Them To Think. 234
TEACHERS' MISCELLANY—
An Idyll of Two Brothers............. 234
Inside New Guinea... 234
PRIMARY DEPARTMENT—
The Old Oak Tree's Christmas Dream.... 235
December in the Primary Room.......... 235
SCHOOLROOM METHODS—
Primary Number Teaching............. 236
LITERARY NOTES....... 238

Editorial Notes.

JOYOUS CHRISTMAS.

All hail the return of the glad Christmas-tide! How many of the sweetest and holiest associations of childhood and youth cluster around it. For years it was to most of us, perhaps to most of us it still is, the day looked back to with fonder recollections, and looked forward to with fonder anticipations, than any other in the year's calendar. It is the day of family reunion, of gift-giving and loving remembrance, of cheerful festivity, and, to the thoughtfully devout, of solemn thanksgiving. May it be to all our readers, in this year of our Lord, 1895, a day of joyous mirth, of sweet peace, and of holy gratitude and joy.

AT the meeting of the West Middlesex Teachers' Association, a few weeks ago, Inspector Dearness paid a high compliment to one of the lady teachers who read a paper, by testifying that the views and recommendations contained in the paper were the reflex of her own school. This fact, of course, affords the best evidence that those views and recommendations are perfectly practical. The young lady was Miss Cousins, and her paper, "How to Make School Life Pleasant," appeared as a "Special Paper" in last number.

MR. WILLIAM HAWLEY SMITH, the author of "The Evolution of Dodd," has written what is described as a "great educational lecture," with the striking title "Born Short." It is said to be "a plea for the stupid children—the children who are stupid in one direction." The writer begs of teachers and parents that they have patience with the "born-shorts," and that they search reverently for the something that the "born-short" can do and do well. Mr. Smith holds that every person in the whole world is "born short" in some one or more directions, and that God meant him to be so, for a purpose. We should not care to vouch for the latter of the two propositions, but we have no hesitation in endorsing the former, and recognizing in the fact the strongest possible plea for infinite patience and carefully developed skill in dealing with those who are a little shorter than the average in some one or more directions.

A CONTEMPORARY, enumerating some unworthy traits and practices of teachers which the pupils are pretty sure to copy, and which are adapted to do them serious moral injury, mentions "connivance at deception (especially in preparing for examinations)." Memory instantly flashes back twenty or thirty years to a case in point, in which a teacher cast himself from the lofty moral pedestal upon which fancy had placed him, into the mire of boyish contempt, by his dishonest method of coaching for an approaching examination. We have since had reason to fear that this criticism touches many a teacher at a very tender spot. The teacher who despises every unworthy expedient and subterfuge in preparing his pupils to make a good show before examiners and the public, is the man who is pretty sure to set them a worthy example in every respect. He who, on the other hand, connives at deception of any kind, is not only earning the contempt of his pupils, but debauching instead of elevating their moral natures.

WE have much pleasure in inviting attention to the following note and request sent us by Mr. Alex. Wherry, Inspector of Public Schools in the city of Peterborough, Ont. We think it easy to see many advantages to be derived from the proposed interchange, under judicious direction. We should be glad to have it discussed briefly in our columns: "The Peterborough Board of Education are trying the experiment of allowing the teachers of the Public Schools to exchange classes, to some extent, each teacher taking the subjects in which she is most proficient. If the plan prove successful, it is the intention to adopt it throughout the schools. It is argued that, since the system has proved successful in the High Schools, there is no reason why it should not be equally advantageous as a means of saving time and energy when applied to the Public Schools. Will those teachers who have had experience, or who have given thought to the matter, give JOURNAL readers the benefit of their experience in the matter?"

IN the reading class the main point is always intelligence. In other words, the teacher's first care must be to have the pupil think the writer's thoughts as he utters his words. We are apt to take too much for granted in regard to this. Many a teacher finds himself surprised on asking even a bright pupil some close questions in regard to the exact meaning of passages which he may have just read with fluency. We may almost say the rule will be that, while the pupil may have a general notion of the author's meaning, he will be found to have utterly failed to catch the finer shades of thought. But without this following of the writer, so to speak, into all the nooks and recesses of his argument, as well as along its main thoroughfares, true expression is impossible. With it, good reading will almost come of itself; and, what is of vastly more importance, the habit of mind thus formed in the pupil will be sure to result in enjoyment. He will learn to delight in good books—books which compel thought and minister to the higher faculties. He will have gained the key to the rich storehouses of literature. He will henceforth all his life have access to avenues of pleasure which are closed to the uninitiated—avenues which lead him away from the haunts of vice which might otherwise tempt him, in vacant hours, into regions of pure and elevated enjoyment.

English.

All articles and communications intended for this department should be addressed to the ENGLISH EDITOR, EDUCATIONAL JOURNAL, Room 5, 11½ Richmond Street West, Toronto.

SONG OF THE GRASS.

M. A. W.

This delicate and sympathetic little song gives an opportunity for training in expressing the spirit of the poem, there being very few difficult words to draw off the attention. The style of writing is so suited to the subject that it attracts no notice, until the beauty of it strikes one suddenly by its appropriateness.

Before studying the poem as a poem, there must be word-recognition and word-meaning thoroughly understood. It is best to have the pupils examine the lines and seek out the difficult words, but a chart, made upon large sheets of paper, the words written clearly in oil-crayon, will be invaluable in review work and in busy work. The chart should not be shown until independent effort has been made, otherwise the full value of the lesson is lost. After the class have indicated their difficulties, the chart may be compared, and the pronunciation carefully shown. Syllables and diacritical marks, say of *accent*, long and short *sounds* of vowels, *silent letters*, and *hard* "*ch*," should be used, but phonetic spelling, as *kot* for *caught*, should never be shown to children, who are apt to adopt the easier and more attractive method of representing thought, thus giving the teacher an unnecessary task. For busy work, the chart may be used in these ways: making a beautiful copy of the words; using the words in sentences; giving synonyms; arranging them alphabetically; arranging them in order of size; arranging them so as to make a beautifully neat slate; writing lines in which they occur. If you have no chart, the blackboard must be freely used, and colored chalk (which, by the way, is very hard on the hands) is a great help in marking silent letters,and drawing interested attention.

There are not many difficult words, but we may be sure of some, at least, as:

Clos(z)e, nois'y, shad'y, a'ged, mer'ry, ev'ery-where, ples'ant, toil'ing, si'lently, star'ry,nit,qui'etly, wel'come, gent'le, num'berd, deck, hum'ble, joy'-fully, rase, whose, command', bu'tify.

The meanings should be impressed by little, bright sentences, made by the children, if possible. The teacher may read the stanzas, replacing all difficult words by synonymous words or phrases, as the sixth stanza:

"Here I come, creeping everywhere;
When you are counted among those who are dead,
(Lying) In your quiet and noiseless grave;
In the happy spring-time I will come
And ornament your silent grave,
Creeping, silently creeping, everywhere."

Seventh stanza:

"I shall raise (or speak forth) my humble (lowly, meek) song of praise to God who has commanded (or ordered) me to make the land (earth) beautiful."

It would seem that the pupils should now thoroughly understand the lesson, but it will be well, yet, to ask if there is any other point upon which they are not certain.

Having settled what we may call the drudgery, the thought claims our attention, and we ask a few questions to get at the spirit of the poem.

"What sort of (I almost said 'person') thing is the grass?" (Modest, unassuming, useful.) "If it could speak, what kind of voice would it have?" (*Quiet, gentle*, but not *mean*, because it knows it is worthy.) "Do you think you could read the first verse as the grass would say it, if it were really speaking?" "Read it over silently, suit your voice to 'creeping,' 'sunny hillside,' 'dusty roadside,' 'noisy brook,' 'shady nook.' Remember the grass all the time. When you think you can read it, let it be known by the uplifted hand."

The class will listen with critical ears to pronunciation, emphasis, rate, and shades of expression, and will be eager to read themselves.

After the reading once through, have a talk about the grass.

"How we begin to love the grass, as it quietly tells its story of perseverance and kindliness! Notice where it goes! Name the places over; begin at the first, and end with the last 'silent home.' Notice how many are glad because of it! Name them, all, from 'the aged poor' to 'the gentle cow' and 'the merry bird,' are glad of its coming.

"Notice how quietly it comes!

"Noiselessly—as the daylight
Comes when the night is done,
And the crimson streak on Ocean's cheek
Grows into the great sun;
Noiselessly—as the springtime
Her crown of verdure weaves,
And all the trees, on all the hills,
Open their thousand leaves,

so quietly, but surely, comes the green mantle of the grass, and so, without a creak, or strain, or jar, moves

'In solemn silence, all'

the works of the Almighty God.

"How wonderful the grass is when we try to count the millions of blades needed to cover one field with green! What a work it would be, and how expensive, if some one had to cut green paper into blades of imitation grass to cover one field! And oh, what disgust and astonishment the horses, cows, sheep, goats, geese, snails, grubs, and insects of every kind would show when they tried to eat such grass! What a great loss it would be to them! How we should prize the grass! What stanza says it is 'more welcome than the flowers'? Why? Which is the stanza you love most? Read it, then learn it off by heart, to say next lesson-day.

"Why should we like to be like the grass? Tell some of the ways in which we may imitate it. (Modesty; usefulness; cheerfulness; perseverance, though small, to do great good; and lastly, gratitude and obedience to God, who sets each person work to do for Him.)

"Read the poem again."

MILITARY TRAINING.

The introduction of military organization and drill has proved a splendid success in the New York Institution for the Instruction of the Deaf and Dumb. Dr. Enoch Henry Currier, the head of this beautiful home, said, in a conversation with the writer, that it is not only an effective aid in securing discipline, but has also, in a remarkably short time, given the boys a good carriage and cured them of their shuffling gait. It has been for years a problem of managers of institutions for the deaf-mutes and the blind how to get their pupils to walk properly and to give them an erect figure. Various plans have been tried, but none has given as much satisfaction as the military drill in the New York institution. Of course, the success of any plan depends entirely upon the manager of it; but all will admit that a poor one must always fail. Dr. Currier's endorsement of military drill, for this reason, has particular weight. He is a thorough schoolman, and has for many years been a devoted investigator of the peculiarly difficult problems involved in the educational work which he has chosen as his life profession.

An example of a successful disciplinary experiment may be interesting. The boys most difficult to govern, owing to the strength of their wilfulness were asked to act as sergeants, and were decorated with the insignia of that office. They were told that as soon as their superiors should have reason to complain of their conduct, they would, according to military rule, be reduced to the rank of privates and lose their decoration. The result is that since the adoption of the plan there has not been a single occasion for disciplinary interference on the part of the head of the school.

Opponents of military drill fail to properly recognize its advantages, which greatly outweigh the points they use as arguments against its introduction. In the hands of trained and experienced educators, it cannot but be most desirable for schools of every kind.—*New York School Journal.*

He prayeth best who loveth best
All things, both great and small,
For the dear God who loveth us,
He made and loveth all.
—*From the Ancient Mariner.*

Special Papers.

GRAVEST OF QUESTIONS.

WHAT DO OUR BOYS AND GIRLS READ?

BY WASHINGTON GLADDEN, D.D.

Several of the teachers in our public schools have appealed to me for counsel and aid with regard to the matter of which I speak this evening; they have placed before me the facts respecting the reading of their pupils; they have marked, with the solicitude of those who watch for souls, the effects of this reading upon the character; and they have put into my hands some melancholy descriptions of the mental and moral decay of these victims of the reading habit. It is in obedience to their earnest request that I endeavor to bring before you some of these facts and observations.

It is probable that the great majority of the parents in this city are imperfectly informed with respect to the books that their children are reading. Many of them care nothing about it; they have the notion that the habit of reading is a good habit, and that when their boys and girls are engaged in reading they must needs be profitably employed. Many others, who know something about the evils of bad reading, are not so vigilant as they ought to be to detect and prevent it, and their children read surreptitiously great numbers of injurious books. The intelligent teacher often knows more about this matter than the parent; the teacher sometimes watches the mental development of the pupil more carefully, and judges respecting it more dispassionately than the parent; and the teacher sometimes notes the symptoms of mental deterioration due to bad reading, when the parent does not observe them. The parent ought to consult with the teacher frequently with regard to all questions of this nature.

I must say, in this connection, that, so far as I have been able to investigate, the public school teachers of this city are fully alive to the importance of this subject, and are doing all they can to encourage good reading habits among the children. Doubtless those who have communicated with me are those most interested in the matter, but inquiry in other schools has disclosed the same intelligent interest. Some of the teachers—very likely all of those in the grammar grades—suggest good books for their pupils to read, aid them in filling out their library cards, and endeavor in various ways to stimulate their love of good reading. I know one teacher in a primary grade who keeps on the blackboard the names of the pupils, with the titles of the books read by each one; and the list of books thus displayed shows wise direction. I know another who has organized in the lowest grammar grade a little society for the observation of nature and the study of natural history.

These periodicals to which I have last alluded, which seem to be very popular, are constructed on a plan which is likely to deceive the very elect. Indeed, I think it likely that it deceives the managers of the periodicals themselves, so that they think themselves to be public benefactors. One of these—and it appears to be the most popular of all the periodicals taken by the boys and girls—contains notes on the Sunday-school lessons, and much useful and pious reading of one sort and another; but its stories are what may be called sugar-coated sensationalism; that is to say, they deal largely with sensational topics, with the loud profession of warning boys and girls against the evils they describe. One of these stories under my eye proceeds to tell how a company of boys formed a secret society for various mischievous operations, and finally ran away and came to grief, of course; but the details of their mischief are worked out with great minuteness, and the practice of the young rascals is sure to make a stronger impression on the reader's mind than the preaching of the author. Very many of the readers will be thinking all the while what stupids these boys were to have been circumvented and caught; how the mischief might have been better managed; and the effect of it all will be very nearly as bad as if there were no such pious purpose as the author professes. The ancient wise man said, "Come, ye children, hearken unto me; I will teach you the fear of the Lord." But these modern wise men say, in effect, "Come, ye children, hearken unto us, and we will show you how bad

boys behave, so that you shall not wish to behave as they do." This kind of teaching generally has the effect of an anti climax; it amounts to showing the boys how nice it would be to be naughty, provided they did not get caught at it! Satan frequently masquerades as an angel of light, and it may be well for parents to convince themselves that certain papers and magazines that look and talk very piously, harbor no evil influences.

It is certain that a great amount of the literary trash of which I have been speaking is consumed by the boys and girls of our city. Bales of it are sold upon the news-stands, and it is often confiscated by the teachers in our schools. Quite a bundle of it has come into my possession from this source, and a precious parcel it is, to be sure! I have added to it by purchases at the news-stands, inquiring what papers and publications were most popular among the boys, and the collection that I have made is simply appalling. I was prepared for a low order of literature, but the depths of coarseness, of absurdity, of sensational horror, to which this stuff descends are deeper than I had imagined.

The titles of these tales are themselves so preposterous that I could never have believed that they were not travesties, if I had not seen them in print. Let me repeat a few of them; "Sunflower Sam of Shasta; or, Deadwood Dick Jr.'s Full Hand: A Tale of You Bet"; "The Double Daggers; or, Deadwood Dick's Defiance"; "Deadwood Dick's Double; or, the Ghost of Gorgon's Gulch"; "Captain Crackshot, the Girl Brigand; or, Gipsy Jack from Jimtown"; "Bonanza Bill, Miner; or, Madame Mystery, the French Forger"; "The Boy Runaway; or, the Buccaneer of the Bay"; "The Boy Bedouins; or, The Brothers of the Plumed Lance"; "The Black Band of New York"; "Bob, the Boy Detective; or, Mystery of the Missing Head"—such are some of the appetizing titles of this class of stories. I ask you to imagine the mental condition of a boy to whom such titles are attractive; and then I ask you to consider that books of this class are produced by the thousand, and exposed for sale in uncounted numbers upon the news-stands of all our cities. One publisher gives in the catalogue printed on the fly-leaves of his publications, the titles of 349 different books of this character which he publishes; another advertises 590 such books; another 197; another 488; and these are only a few of the many publishers of such literature.

I wish it were possible to give you any adequate conception of the mental craze and the moral rottenness of this stuff. Let me indicate by a rapid outline sketch the plot of one of these stories. The scene is laid in New York city, and the first act in the tragedy represents a big negro struggling with a young woman in a back street, when the boy who is the hero of the story appears upon the scene, vanquishes the negro, and releases the girl, who carries a letter addressed to the boy, summoning him to a certain place in Harlem, if he wishes to obtain tidings of his father, who has been missing for three months. He goes with the girl to the place appointed, where he is made prisoner by a company of ruffians in masks, who tell him that they have his father also in durance, and that they will kill both him and his father if he does not reveal to them the whereabout of a certain sealed package. He refuses, and is immediately plunged through a trap-door, with a rope around his neck and his hands tied, into a deep pit beneath the house. Here, the next day, the same negro whom he had worsted in the street encounter, enters and proposes to sear out his eyes with a hot iron; but just as this benign mission is about to be fulfilled, a pistol-shot from some other apartment of the pit puts a bullet through the negro's head, and his eyes are saved. This pistol was fired by the girl whom he rescued, who now comes forward and naively confesses that her struggle with the negro in the street was only a ruse to capture him, but who protests that she was an unwilling party to this iniquity. She now tries to show him a way of escape, but a door mysteriously shuts upon them, the underground passage caves in, and they are left to smother. Meantime, the villains up-stairs have secured the presence of the young man's sister, and are torturing her by hanging her up by her thumbs to make her tell where the package is, when the detective, who is the girl's lover, appears on the scene with a posse of men, shoots the biggest villain, captures the rest, and releases the smothering couple underground, just before they breathe their last. Of course the detective marries the sister, and the young man himself marries his underground partner, who turns out to be an heiress. This is but a meagre outline of the harrowing tale. You will excuse me, I am sure, from filling in details. But conceive, if you can, the mental condition of the boy to whom such a preposterous mess is palatable. Imagine the state of mind which must be produced by a steady diet of this ghastly inanity. The stories, so far as I have looked into them, are not immoral because they teach or praise vice or crime; they simply picture it, not in its naked deformity, but in theatrical paint and feathers, and with a bombastic extravagance. The point is to make every story just as startling and sensational as it can be made;—the most impossible surprises, the most preposterous horrors, the most ridiculous and absurd situations, appear on every page. The boy who rebels against a tyrannical father, runs away from home and becomes a cowboy on the frontier, is a favorite hero; the wild life of the plains is pictured in colors that have no resemblance whatever to the reality; the adventures in which these youths participate are filled with perennial excitements and sensations. In one of these stories, five men are killed on the first half page—one after another, as he is riding by, falling before the deadly aim of a frontiersman's rifle. Such is the mental pabulum with which a great many of our boys and girls are gorging themselves. The effect of such reading upon their minds and their morals may be imagined. It is the simple truth to say that a boy's character would suffer very little more injury if he should attach himself to any company of bandits on the frontier, or any gang of blacklegs in the cities, and live with them, than it suffers when he becomes a habitual reader of this class of books. The actual bandits and blacklegs are not so bad as these imaginary ones; the associations with them would be less depraving.

I have said that you can imagine the effects of such reading upon the minds and the characters of our boys and girls. But I can give you something much more vivid and impressive than any imagination of yours, some careful descriptions of cases in the schools—the clear vision and the sympathetic intuition of some of our conscientious teachers that have been fastened upon these victims of the reading habit, and I have here in their own words the diagnosis of this morbid condition in several specimen instances.

"A. B. reads trashy novels, *Police Gazette*, and nothing else. His mark in algebra was 15 per cent., and in German 17 per cent. in a recent examination. He talks familiarly about 'cops,' and getting 'boozy.' His idea of life is shows, rinks, and the amusement of evading 'cops.' He smokes, chews, plays cards, and shirks all kinds of work."

"C.D., aged 15, dreams away his time in school. I took away from him a novel of the lowest type imaginable in which vicious practices were spoken of with hideous plainness."

"E.F., aged 14, enjoys the *Police Gazette*. His language is foul. His mind, naturally gifted, has no stability. He is always ready to be tempted or to tempt others. He loves roller-skating, shows, and cards; is familiar with gambling; and is said to drink sometimes."

"G.H. has reformed as regards low literature, but the poison is there. His thoughts are not on his work; his mind cannot be acted on, as he seems to be dreaming constantly."

"I.J., a girl, aged 15, reads such books. She went up the Clentangy on a lark on the Fourth of July last, and insisted on amusing people by shooting off a pistol, and evading the policeman. She boasts of this little adventure, and of others of a similar nature. She exchanges reading matter with the boys."

"K.L., one of my pupils three years ago, read such books. Her mind, naturally bright, was utterly ruined. She had an absent-minded look; began to dress slovenly and to deport herself likewise."

"M.N., a girl of loose morals, reads such books. Whether reading the trash was the cause of her morals, or *vice versa*, I could not determine. Her language was vile, and, although she tried occasionally, she could not comprehend her studies. What there was of mind seemed to be utterly destroyed."

"In a school in our city, three years ago," writes a teacher, "nine or ten boys organized a club to go out west, having read glowing accounts of western exploits. They sold the school books of pupils in their room, and one boy stole $17 from his grandmother, while others committed various other thefts. Just as they were leaving the city they were caught and brought back."

Another teacher reports the following case that happened among her pupils in a Western town: "A set of boys, having inflamed their imagination with Indian stories, decided to hold an Indian exhibition in a back alley. The boys fell to quarrelling, and one took up a revolver and shot another through the head. The dead boy's body was found in the alley the next morning. On searching the murderer's trunk a pile of dime novels was discovered, and a new revolver for future use. The murderer was not even arrested."

"Last year in a certain city," writes another teacher, "one of the high school boys, accompanied by two from the lower grades, ran away from home and went out west. Their imaginations were first inflamed by the wild tales of western life which they had read in dime novels and kindred literature. One of them, after undergoing severe physical hardships, was found in a western insane asylum, and brought home a raving maniac. He has recently returned from the state asylum. Another is still roaming the west in parts unknown, while the third has been recaptured and put into school again. A teacher told me that she had known several other cases of runaways, and that all of them had been readers of dime novels."

Addiction to these stories inevitably debauches and debilitates the mind; weakens or destroys the power of sustained attention; makes the reader restless, discontented, insubordinate; fills his head with crazy longings for adventure; renders him moody, irresponsible, worthless for work or study. The parents of the boys and girls who are addicted to this habit have a duty which I will not attempt to define. I have pointed out the peril; it is for them to protect their children against it.

Give heed, then, my friends, to your reading. See to it that the printed page never becomes a torch whose lurid flame lights up for you the path to the pit; never a mirror, reflecting into your life visions of sin and shame; never a narcotic, benumbing your minds and filling you with listlessness and languor; never a fiery stimulant stirring within you discontent with the common duties of your daily life; never a debilitating potion that destroys your mental vigor and unfits you for serious thinking; but always the refreshment of your weariness; the tonic for your wasted energies; the replenishment of your knowledge; the invigoration of your higher purposes; the reinforcement of your virtue.

The Columbus School Board has undertaken to cultivate a taste for good reading in the grammar and higher primary grades of the public schools by adopting for supplementary reading in each of these grades some small but choice book of real literary merit, and requiring the pupils to read it and give some account of it. The two higher primary grades have "Æsop's Fables" and "Robinson Crusoe"; the four grammar grades read, respectively, Montgomery's "Life of Franklin," Church's "Stories of the Old World," Irving's "Sketch Book," and Scott's "Lady of the Lake." Each pupil who passes through the grammar school will therefore have had in his hand at least six good books, and will know something about them. It seems to me that this list is well selected, and that the benefit of such a short course of reading as this may be very great. Plenty of trash finds its way into the hands of these boys and girls; how many of them there are who would never, but for some such requirement as this, make the acquaintance of any good book! If they can be taught to perceive the beauties of these English classics, to relish the great humor of Irving, and to find pleasure in the sound manliness of Scott, many of them may be saved from the mental debauchery which tempts them from the news-stands.—*Pennsylvania School Journal.*

"THE fact is, nobody in the new school seemed to want to lick me, and there was no use in being bad." Such was the explanation of a refractory pupil, who, after having acquired notoriety as an incorrigible, and even as a teacher-fighter, and having been expelled from several schools, had suddenly veered around to good conduct, and brought home an excellent report from a new school to which he had been sent. There is a wealth of philosophy in this.

The Educational Journal

SEMI-MONTHLY.

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

PUBLISHED BY THE

Educational Journal Publishing Company,

11½ RICHMOND ST. W., TORONTO.

J. E. WELLS, M.A., EDITOR.

EVERY SUBSCRIBER SHOULD READ THE FOLLOWING TERMS.

Price—Yearly subscriptions $1.50; renewals $1.50; clubs of three, $4.25; clubs of five, $6.75. Larger clubs, in associations, sent through association officials, $1.25. To Foreign countries included in the Postal Union, $2.00; to all others, $2.50.

Remittances—Cash must accompany each order. Accounts for subscriptions to THE EDUCATIONAL JOURNAL are not opened. Remittances should be made by cheque, registered letter, or po tal or express money order. Stamps or currency can be sent, but at the sender's risk.

Receipts—Pasted on each copy of THE EDUCATIONAL JOURNAL to subscribers is a small label indicating the date to which subscription is paid; thus:

SAMUEL WILCOX Dec. '96.

That means that Mr. Wilcox's subscription has been paid up to December, 1896. When a subscriber remits, the receipt for his remittance will be given by advancing in about two weeks the date of his label, the length of time paid for.

Post-Office Address—In renewing, discontinuing, or changing address, always give the full post-office address to which THE EDUCATIONAL JOURNAL is sent at time of writing. Without such information the name cannot be found on the subscription list.

Discontinuances—Subscriptions are stopped only upon written order. The return of a paper will not secure a discontinuance. Orders to discontinue can be sent in at any time during the year paid for, and will receive attention at the right time.

Communications for the editor must not be written on same sheet of paper containing matter for the business department.

Address all communications to

The Educational Journal Publishing Co.,
No. 11½ RICHMOND ST. WEST,
TORONTO.

ADVERTISING DEPARTMENT.

Rates of advertising will be sent on application to the above address.

Editorials.

CHRIST, THE MODEL TEACHER.

THE *Ohio Educational Monthly* for October had an article on "Christ's Method of Teaching," by C. S. Coler, which contains, as it could hardly fail to do with such a theme, some good suggestions. The "Great Teacher's" method is analyzed as follows: 1. Christ taught by illustration. 2. He first created interest. 3. He appealed more to the heart than to the head. 4. He used positive assertions. 5. He exercised great patience. 6. He showed great originality. 7. He manifested great enthusiasm. 8. He showed great liberality. 9. He had great faith.

In holding up this unique and divine personality as an example for the teacher's study and imitation—and here let us say that He is the only example which it is desirable and safe to imitate unreservedly—it is necessary to discriminate carefully between those of the characteristics described which it is possible for us to imitate, and those which are beyond the power of the will, and so beyond the reach of the imitative faculty. By native endowment, and by dint of patient and persistent effort, every teacher may, in a greater or less degree, acquire power and facility in the use of illustrations, in awakening interest, in reaching the heart, in exercising patience, enthusiasm, liberality, originality, and even faith. But that clear intuitive discernment of truth which alone is the warrant for positiveness of statement, or the pure didactic method, was His peculiar possession, and is not a possible acquirement. Perhaps it is not putting it too strongly to say that He was the only Teacher who ever lived who had a right to teach dogmatically, if we may use that word, stripped of its offensive connotations, to denote the act or habit of declaring the highest or even the simplest truth with the authority of perfect knowledge.

And yet Christ himself did not teach dogmatically. It was only on special and necessary occasions that He spoke as one having authority. In His ordinary discourses with His disciples and with the multitude, He set before us the best of all patterns of the true inductive method. Even His incomparable parables were at bottom adapted and designed to set men thinking, and to lead them to discover for themselves the great truths which He wished to impress upon their minds, while in His wonderful talks with or in the presence of individuals, or of a multitude, how often did He lead them on from point to point until He finally convinced them of the truth which He wished to convey, out of their own mouths, or through the cogitations of their own brains! It is confirmatory of this view that the study of the New Testament has always and everywhere been found to be the precursor of a higher intelligence, and the most potent of all influences leading to the establishment of schools of all grades, and the cultivation and development of the intellectual as well as of the moral and spiritual faculties. We remember to have heard, while a student at college, an able lecturer, dwelling upon this point, use as an illustration that passage in which Christ, denouncing the Pharisees for their dissimulation and hypocrisy, said to them (Matt. xxiii. 31), "Wherefore, ye witness to yourselves that ye are the sons of them that slew the prophets." The learned lecturer suggested that any of his hearers who might be sceptical in regard to the adaptation of Christ's modes of teaching to call forth the intellectual powers of the listener, should search out the exact logical force of the conjunction "wherefore," and trace the subtle course of reasoning warranting the conclusion to which it leads. We have never forgotten the illustration, and we are not sure that we have ever fully mastered the argument by which Christ convicts the Scribes and Pharisees.

We might go on to refer to other characteristics of Christ's modes of teaching which are worthy of all study and imitation. Present-day teachers, for instance, are but just coming to realize that in calling the attention of His hearers at the outset to some visible object or incident, Christ so often proceeded upon the sound pedagogic principle of first arousing interest in the mind of the student, and then leading him on to the consideration of the subject immediately under discussion. The sowing of grain, the blooming lily, the barren fig tree, etc., were enlisted, on occasion, into the service, and made the medium through which the mind was led outwards and upwards to the desired theme. Had we space it would be easy to illustrate this by many instances drawn from the Gospel histories. But the reader who is interested in the subject can easily do this for himself. The main point to be observed is the wonderful thought-compelling power of His words. Christ was, indeed, the Prince of Teachers, and none of us, young or old, can do better than study his methods.

LOCAL GEOGRAPHY.

IN no department of study is the pedagogical maxim, "Proceed from the known to the unknown," more demonstrably sound than in the subject of geography. We suppose that almost every teacher of the subject, at least every one who is abreast of the times, now follows the method of commencing from the schoolhouse as a centre, and interesting the pupils, first of all, in the geography of the district immediately surrounding it. In this way it is not only possible to convey, or, rather, to lead the pupil to acquire, at the very outset, and in a comparatively short space of time, clear and correct ideas of the meaning of the terms and definitions necessarily used in the study, and true conceptions of the diversified natural features of different sections and countries, but even to gain his enduring interest in those peculiarities of soil, climate, and production, and of characteristics and habits of peoples, which constitute the chief living interest of geography as a school study. In pursuing the method of beginning at the point of observation, there can be no difficulty in so far as the locality to be first observed lies within sight, or within easy reach of teacher and pupils. So far the best of all plans is to lead the pupils to study directly from observation, and by directing their efforts and giving them needed help, enabling them to make their own local maps and write their own geographical descriptions. But in proceeding, as it is desirable to do,

to the geographical peculiarities of the surrounding districts and townships, until at least the whole county has been covered, formidable difficulties are sometimes met with, arising from the want of local knowledge and of convenient means of obtaining it. It is often more difficult to obtain exact and reliable information in respect to matters of geographical interest touching one's own county, than touching any civilized country in Europe or Asia.

Our attention has been called to this subject by the appearance on our desk of a neat pamphlet of between thirty and forty pages, entitled "Geographical Handbook, County of Grey." This little book has been prepared by Mr. N. W. Campbell, inspector of public schools for South Grey, to meet the special want of which we have spoken. The handbook contains clear and concise descriptions of the county in respect to its position and boundaries; its physical features and scenery; its early settlement and history; its rivers, railways, and municipalities; its local courts; and other matters of interest. A feature of special value is the information it gives with reference to the county officials, and the mode of appointment of its various public officers—a kind of information in respect to which public and even high school pupils are often sadly ignorant. It may be that Grey is not the only county which has been supplied with manuals of this description, but as this happens to be the first of the kind which we remember to have seen, we take pleasure in calling attention to the excellent service which Inspector Campbell has thereby rendered to the schools and to the public. We hear a good deal about the necessity of school training in patriotism in these days. In our opinion, one of the very best methods of promoting good citizenship is thus to aid the pupils in the schools in acquiring an intelligent understanding of the natural features and democratic institutions and modes of government of their own country.

DISHONORABLE TACTICS.

WE have received from Mr. I. E. Funk, senior member of the great publishing house of Funk & Wagnalls, publishers of the Standard Dictionary, a letter describing a device which has been resorted to by a business rival, and which is so mean, as well as unjust, that we should have been glad to aid in exposing it, even had we not put on our premium list the great Standard Dictionary, which it is the aim of the rivals in question to discredit. Mr. Funk says:

"As is well known, in all unabridged dictionaries it is necessary to give the definitions of certain indelicate words. Eighteen of these words (selected out of a vocabulary of over 300,000 terms in the Standard) have been collated and printed with their definitions by the reprinter of this English dictionary, and circulars containing them are being distributed among teachers, school trustees, and parents, all through the country, stirring up a filthy agitation that will end, unless frowned down by the public press and other leaders of public opinion, in setting people of prurient minds and children everywhere to ransacking dictionaries for this class of words."

The very nature of the attack discloses its weakness. What possible motive could the publishers of such a work have in staining its pages and blasting its reputation by the unnecessary introduction of a single unnecessary term of the class described? The editors who passed upon the admission of words numbered over one hundred of the best known writers and scholars in America and England. What *possible motive* could induce such men to admit any indelicate word not absolutely required by the very nature of an unabridged dictionary? Could it have been to "pad" the dictionary? A simple fact, mentioned by Mr. Funk, disposed of the supposition: "Of the more than 500,000 words collected by the hundreds of readers employed to search all books of merit, from Chaucer's time to the present, over 200,000 were excluded wholly from the vocabulary." Evidently, it would have been easy to "pad," had that been the aim. As a matter of fact, we are told, and the rejection of so many words confirms the statement, the real difficulty was, not to swell but to condense the vocabulary.

Further defense is obviously needless. Were it required, it could be found in the fact that fifteen of the eighteen words objected to are in the Century Dictionary, and that they are to be found, almost without exception, in every other reputable unabridged dictionary. It can easily be understood that the question whether such and such a word should be regarded as having a place in the language, and so being entitled to a place in the unabridged dictionary, is often an extremely difficult and delicate one. But it is not easy to see what more could have been done than was done to insure the wisest and best selections for the Standard Dictionary. Moreover, it should be noted that whenever it was deemed necessary to admit an improper or indelicate word into this great work, it was branded as *low*, or *vulgar*, or *slang*, and printed in small type. The arrow rebounds against the persons who, by their own showing, must have devoted their attention to ferreting out such words.

We may just add, for the information of our readers, many of whom will, no doubt, wish to know all that can be learned with reference to the book which we are offering them on so favorable terms, that the Funk & Wagnalls Company celebrated, on November 27th, the first anniversary of the completion of their "Standard Dictionary," by putting to press the 90th thousand of this great work. This is a very large number of dictionaries to print in a single year. The publishers' mathematician has figured out that if these 90,000 sets were piled flat, one upon another, they would reach nearly seven miles in height; and the printed pages, if laid end to end, would extend over 40,000 miles, one and three-fifths times around the globe!

A MIND-SHARPENER.

MANY of our readers, we dare say, are fond of trying their mental acumen, occasionally, in their moments of leisure, upon intricate problems and puzzles. The Philadelphia *Press* gives the following, from Sir Walter Besant:

"I have found the following interesting problem in an old notebook. I have no recollection at all of its origin. Perhaps everybody knows it. Perhaps everybody does not. Those who do not will find it, I think, unless they bring algebra to bear upon it, rather a hard nut to crack. Here it is: Once there were three niggers—their wickedness is a negligible quantity; it does not enter into the problem—who robbed an orchard, carried away the apples in a sack, laid them up in a barn for the night, and went to bed. One of them woke up before dawn, and, being distrustful of his friends, thought he would make sure of his share at once. He therefore went to the barn, divided the apples into three equal heaps—there was one over, which he threw away—and carried off his share. Another nigger then woke up with the same uneasiness and the same resolution. He, too, divided the apples into three heaps—there was one over, which he threw away—took his share and carried it off. And then the third nigger woke up with the same emotions; he, too, divided the remaining apples into three portions—there was one over, which he threw away—took his share and departed. In the morning everyone preserved silence over his doings of the night; they divided the apples which were left into three heaps—one was over, which they threw away—and so took each his share. How many apples were there in the sack? There are many possible answers—a whole series of numbers—but let us have the lowest number of apples possible. Senior wranglers must be good enough not to answer this question. Moralists, if they please, may narrate the subsequent history of these three niggers, apart from the problem of their apples."

Science.

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

SCIENCE NOTES.

The brain is not affected by the movements of the body even though these are sometimes violent, because it rests on a basis of soft cushions between bones of the spine.

The smallest bird is a species of humming-bird common in Mexico. It is about as large as a blue-bottle fly.

It is estimated that there are 512,000,000 cells in a cubic inch of maple wood.

Acetylene, the new illuminating gas, is a compound of carbon and hydrogen. It may be prepared by putting a lump of calcium carbide in a glass of water when the gas will be evolved rapidly.

The red corpuscles of the blood of an habitual tobacco user exhibit cremated edges.

The huge guns of modern navies, it is said, can be fired only seventy-five times, when they become worn out.

Aluminium neckties are the latest German novelties. They are light, easily cleaned, and can be frosted so as to appear like satin.

What is the cause of the roar of a waterfall?

VIVISECTION AND DISSECTION.

Under the heading, "Childhood Brutalized," the Boston *Beacon* has a vigorous article protesting against the practice of vivisection and dissection of some of the lower animal life for the purpose of illustrating the lessons in physiology. A horrible picture is conjured up—"the delicate, sensitive pupil is irreparably wounded in his sensibilities, shocked into utter loathing, and his heart is hardened." This is the Boston *Beacon's* opinion, formed by careful observation, no doubt, from the windows of the editor's sanctum. There is no desire here to uphold the practice of vivisection in ordinary school work. Vivisection may be necessary for the original investigator in medicine, may often lead to the acquisition of knowledge of the most vital importance to mankind, but its practice should be left to experts, and not to bungling and ignorant incompetents, who will often brutalize and wound the sensibilities of the young. But a distinct line should be drawn between vivisection and dissection. The latter implies that the subject is beyond the influence of pain—is, in fact, killed.

The question as to whether pictures or charts will produce a lasting impression, or produce even an approximately exact impression, in not here discussed. There are, however, a few considerations which might be urged before joining in a sweeping condemnation of the whole plan of dissection as an aid in the subject of physiology.

Humane Societies and Societies for the Prevention of Cruelty to Animals have existed for years; laws have been enacted and enforced. Why all these? Because children are naturally so extremely sensitive, so soft and tender-hearted, so acutely sympathetic? Hardly. These societies existed before dissection was ever thought of being introduced into the school courses. Now let us see what one who has had much actual experience has to say. Mr. H. N. Martin, D.Sc., F.R.S., Professor of Biology in the Johns Hopkins University, says, in speaking of a course in practical physiology:

"The demonstrations and experiments described necessitate the infliction of *pain* on no animal, and require the death of no creature higher than a frog, except such superfluous kittens, puppies, and rats as would be killed in any case, and usually by methods *much less merciful than those prescribed in the following pages.*" Again the same author says, "A few persons, some of them worthy of respect, assert that no experiments on an animal can be shown to a class without hardening the hearts of operator and spectators. . . . This, from an experience of more than fifteen years in the teaching of practical physiology, I know to be not so. Young people are apt to be, not callous, but thoughtless as to the infliction of pain. When they see their teacher take trouble to kill even a frog painlessly, they have brought to their attention in a way sure to impress them, the fact that the susceptibility of the lower animals to pain is a reality and its infliction something to be avoided whenever possible." Do you find your mother or sister any less tender-hearted, "more brutalized," "irreparably wounded in their sensibilities," on account of having carved and dressed the fowl or hare prepared for your supersensitive taste? Don't let hysterical sentiment run away with common sense.

EDUCATION DEPARTMENT, ONTARIO.—ANNUAL EXAMINATIONS, 1895.

THE HIGH SCHOOL SENIOR LEAVING AND UNIVERSITY HONOR MATRICULATION.

CHEMISTRY.

NOTE.—*An option is allowed between questions 8 and 9.*

1. Compare the hydrides of the members of the nitrogen group.

2. (*a*) Two-tenths gram of a compound having the composition $C_{12} H_{22} O_{11}$ is burnt in air. Explain the chemical changes that take place, using equations. Calculate the volume of the products of combustion at 100°C and 740mm.

(*b*) .18 gram of a compound containing carbon, hydrogen, and oxygen, is found to contain on analysis .072 gram of carbon, .012 gram of hydrogen, .096 gram of oxygen. Calculate the simplest formula of the substance.

3. Define the terms "oxidizing agent" and "reducing agent," and illustrate your definitions by reference to the experiments:

(*a*) Sulphuretted hydrogen gas is passed into a solution of ferric chloride.

(*b*) Carbon is heated to a high temperature with ferric oxide.

(*c*) Sulphur dioxide is passed into a solution of permanganate of potash.

Give equations.

4. (*a*) Dalton's gravimetric analysis of two compounds yielded the following results:

Nitrogen 63.64,	Nitrogen 46.67,
Oxygen 36.36,	Oxygen 53.33.

Show the relation of these data to Dalton's formulæ for these substances (NO and NO_2).

(*b*) Gay Lussac's volumetric analysis of the mixture resulting from the decomposition of these same compounds gave the following results:

Nitrogen 66⅔ vols.	Nitrogen 50 vols.
Oxygen 33⅓ vols.	Oxygen 50 vols.

Show the relation of these data to the present formulæ for these substances, and to Avogadro's law.

5. (*a*) Describe what takes place when:

(i) Iron is immersed in a solution of sulphate of copper.

(ii) Copper, in a solution of bichloride of mercury,

(iii) Zinc, in a solution of nitrate of silver,

(iv) Magnesium, in a solution of nitrate of silver.

(*b*) Explain how quantitative results in these experiments can be used as an aid in determining atomic weights.

6. Describe simply laboratory methods of preparing small quantities of (*a*) metallic arsenic from the trioxide, (*b*) trichloride of antimony, (*c*) ferrous sulphate.

7. Sketch the chemistry of lead.

8. What is meant by the "Periodic Law"? Illustrate its significance by reference to the members of group iv. (Carbon=12, silicon=28, tin=118, lead=207.)

9. Determine the acid and the base in the salt submitted.

ANSWERS.

1. The chief members of the nitrogen group are nitrogen, phosphorous, arsenic, antimony, and bismuth. Their hydrides have the formulas

NH_3, PH_3, AsH_3, SbH_3.
Bi forms no hydride.

The hydrogen compounds are all gases; colorless; all but SbH_3 have marked odors. They all may be burnt NH_3 with difficulty, the others readily, PH_3 more easily than AsH_3; the products of combustion are respectively N and H_2O, P_2O_5 and H_2O, As_2O_3 and H_2O, Sb_2O_3 and H_2O.

NH_3 is basic, PH_3 weakly basic, the others are not. NH_3, PH_3 combine directly with the halogen acids to form marked compounds of the formulæ RHCE, RHBr, RHI, where R represents the respective hydrides; AsH_3, SbH_3 do not do this. AsH_3 and SbH_3 are prepared by analogous methods, *i.e.* the reduction of the oxides by nascent H. NH_3 is markedly soluble in water, PH_3 is not, nor AsH_3, nor SbH_3.

NH_3, when combined with acids, form more stable compounds than the others.

2. (*a*) $C_{12}H_{22}O_{11} + 12O_2 = 11H_2O + 12CO_2$

342 grs. $C_{12}H_{22}O_{11}$ yield 198 grs. H_2O and 528 grs. CO_2

$\frac{2}{10}$ grs. sugar yield $\frac{198}{342} \times \frac{2}{10}$ grs. H_2O and $\frac{528}{342} \times \frac{2}{10}$ grs. CO_2.

(1) 18 grs. H_2O at 100°C. and 760^{mm} occupy 22.4 litres

$\frac{198}{342} \times \frac{2}{10}$ grs H_2O at 100°C. and 740^{mm} occupy

$$\frac{22.4}{18} \times \frac{198}{342} \times \frac{2}{10} \times \frac{760}{740} \text{ litres.}$$

(2) 44 grs. CO_2 at 0°C. and 760_{mm} occupy 22.4 litres

$\frac{528}{342} \times \frac{2}{10}$ grs. CO_2 at 100°C. and 740^{mm} occupy

$$\frac{22.4}{44} \times \frac{528}{342} \times \frac{2}{10} \times \frac{373}{273} \times \frac{760}{740} \text{ litres.}$$

The sum of (1) and (2) gives the required volume.

(*b*) .18 gram of the compound yield .072 gram C
100 " " " " 40 " C

Similarly it yields $6\frac{2}{3}$ grams 4 and $53\frac{1}{3}$ grams O.

∴ percentage weights are

C = 40 %
H = $6\frac{2}{3}$%
O = $53\frac{1}{3}$ %

Divide the percentage weights by their atomic weights and you get the numbers

C – $3\frac{1}{3}$
H – $6\frac{2}{3}$
O – $3\frac{1}{3}$

The simplest proportions are C_1 H_2 O.

∴ simplest formula is CH_2O.

3. $Fe_2Cl_6 + H_2S = 2FeCl_2 + 2HCl + S$.

Here the instability of H_2S and the attraction of H for Cl, causes the ferric chloride to part with some of its Cl to the hydrogen. While S is set free the ferric chloride is changed to a compound of Fe and Cl, in which the percentage of Cl present is less than in the former compound, which is said to be reduced.

$Fe_2O_3 + 3C = Fe_2 + 3CO$.

Here the high temperature lessens the attraction of Fe for O, and the affinity of C for O hastens the decomposition so that Fe loses its O and the C gains it. Fe_2O_3 is reduced by C, and C oxidized by Fe_2O_3.

C is the reducing agent, Fe_2O_3 is the oxidizing agent.

$2\ KMnO_4 + 5SO_2 + 2H_2O = K_2SO_4 + 2MnSO_4 + 2H_2SO_4$

Here the SO_2 becomes converted partly to H_2SO_4, a compound in which the percentage of O is greater than in SO_2. This has been brought about by the abstraction of O by SO_2 from the $KMnO_4$, which is thus reduced and the SO_2 oxidized. The latter becomes the reducing agent and the former the oxidizing agent.

4. (*a*) In the first compound

N : O :: 63.64 : 36.36
:: 1.75 : 1
:: 7 : 4

In the second compound

N : O :: 46.67 : 53.33
:: .875 : 1
:: 7 : 8.

The proportion of N remains constant, while the proportions of O are as 1 to 2.

∴ if formula of first compound be NO, as the simplest, that of the second compound becomes NO_2.

(*b*) N : O by vol. in first compound is 2 : 1

By reference to Dalton's result in (*a*), 2 vols. of N weigh 7 and 1 vol. of O weighs 4

∴ weights of equal vols. of N and O are $3\frac{1}{2}$ to 4

N : O by vol. in 2nd compound is 1 : 1.

By reference to Dalton's result in (*a*), 1 vol. of N weighs 7 and 1 vol. of O weighs 8. These proportions are the same as in the first compound.

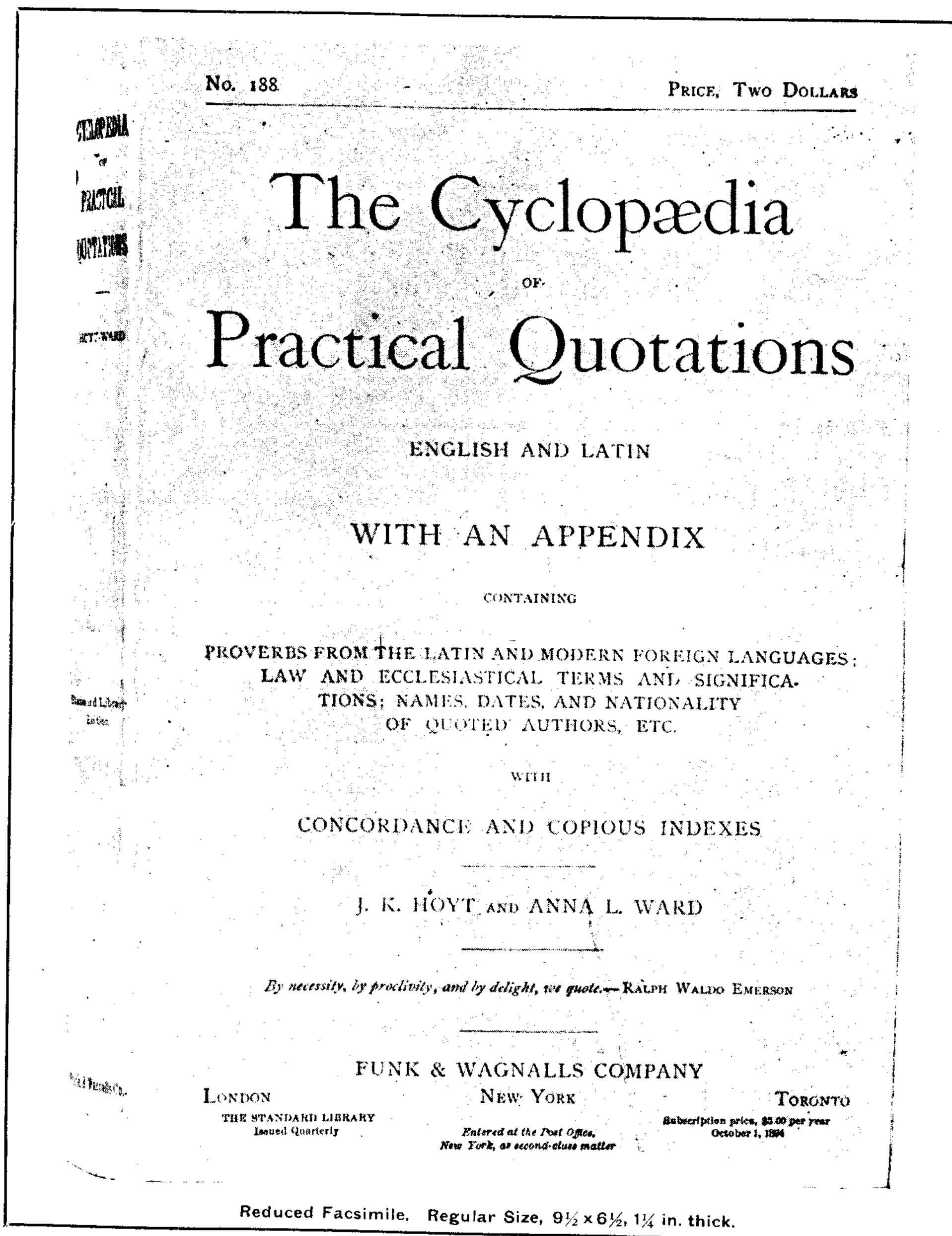
If equal volumes of gases contain equal numbers of molecules, as claimed by Avogadro, the weights of the molecules of N and O become (from the results of *both* volumetric analyses) 7 : 8. If in the

FRANCHISE No. 1

How to Secure A Grand Volume FREE

WE will send THE EDUCATIONAL JOURNAL for one year, and a copy of Hoyt-Ward Cyclopædia for **$2.00**, or remit **$3.00** and we will send the JOURNAL for two years and this Great Reference Book, containing over nine hundred royal 8vo. pages, substantially bound in Card Manilla, FREE.

A WORK THAT SHOULD BE IN EVERY TEACHER'S LIBRARY



No. 188 PRICE, TWO DOLLARS

The Cyclopædia of Practical Quotations

ENGLISH AND LATIN

WITH AN APPENDIX

CONTAINING

PROVERBS FROM THE LATIN AND MODERN FOREIGN LANGUAGES; LAW AND ECCLESIASTICAL TERMS AND SIGNIFICATIONS; NAMES, DATES, AND NATIONALITY OF QUOTED AUTHORS, ETC.

WITH

CONCORDANCE AND COPIOUS INDEXES

J. K. HOYT AND ANNA L. WARD

By necessity, by proclivity, and by delight, we quote.—RALPH WALDO EMERSON

FUNK & WAGNALLS COMPANY

LONDON NEW YORK TORONTO

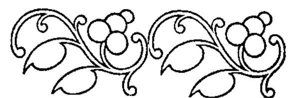
THE STANDARD LIBRARY Issued Quarterly

Entered at the Post Office, New York, as second-class matter

Subscription price, $5.00 per year October 1, 1894

Reduced Facsimile. Regular Size, 9½ x 6½, 1¼ in. thick.

A MONUMENT OF RESEARCH, INDUSTRY, AND LEARNING



FROM THE TABLE OF CONTENTS.

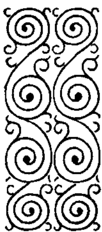
- English Quotations, Classified
- English Quotations, Unclassified
- Latin Quotations
- Latin Proverbs and Mottoes
- French Proverbs and Mottoes
- German Proverbs
- Italian Proverbs
- Portuguese Proverbs
- Spanish Proverbs
- Latin Law Terms and Phrases
- Ecclesiastical Terms and Definitions—Christian Churches—Jewish Church
- Quoted Authors, Nativity, Birth, etc.
- Topical Index—English Subjects
- Topical Index—Latin Subjects
- Concordance to English Quotations
- Concordance to Translations of the Latin
- Index to Latin Quotations

SPECIAL SUBJECTS. Birds. Flowers—Flora, Unclassified; Flora, Classified. Months, Classified. Occupations, Classified. The Seasons, Classified. Trees and Plants—Arbora, Unclassified; Arbora, Classified.

FOR FURTHER DESCRIPTION SEE OTHER SIDE.

FRANCHISE No. 1—Continued

The book we propose to send FREE, providing you subscribe for the "Journal" for two years, remitting $3.00, is listed in the publisher's catalogue at $7.00 when bound in law sheep. Here are some of its salient features:



1. The Cyclopædia of Practical Quotations gives 20,000 Quotations, 50,000 Lines of Concordance.
2. It is not a collection of Poetical Quotations alone, or of Prose Quotations alone, but of both.
3. It is the only *Cyclopædia* of Quotations in the English language.
4. It enables the reader to find any desired quotation, if but a word or two be remembered.
5. It has an index of topics, an index of authors, an index of subjects, an index of Latin quotations and their translations; in fact, the whole book is a series of indices.
6. It contains thousands of quotations from the Latin, also French, German, Italian, Spanish, and other proverbs, all carefully translated.
7. It gives Latin Law Terms and Phrases, all with translations.
8. It indicates the position on each page of any desired quotation, enabling the eye to catch it immediately.
9. It is the most complete collection obtainable, and contains thousands of quotations not to be found in any other work.
10. It denotes the Shakespearean quotations in this Concordance so they are immediately distinguished.
11. It has the accuracy of its quotations carefully verified; the book, chapter, section, and even the very line whence it has been taken, are given when practicable.
12. It enables the reader to examine the context of the quotation, and thus verify it.
13. It is indispensable to any writer or speaker who wishes to find apt quotation for any subject; the topical index pointing them out immediately.
14. It has its 20,000 quotations classified under nearly 1,000 subject-heads.
15. It contains every desirable quotation to be found in any other collection.
16. It gives the date of birth, nationality, etc., of the quoted authors.
17. Besides the above it has other valuable features desirable in a work of reference, all combining to make this Cyclopædia what it is now universally acknowledged to be, "The only Standard Book of quotations."

It is incomparably the best work of the kind in existence.
Have you ever seen this book? Do you really know what it is? If not, then listen. Says

The Journal of Education, Boston: "In scope, variety, accuracy, conciseness, we know of no work which equals it."

Oliver Wendell Holmes: "It is a very handsome and immensely laborious work, has cost years to make it. . . . I shall let it lie near my open dictionaries. . . . It is a massive and teeming volume."

The New York Herald: "This is by long odds the best book of quotations in existence."

William A. Hammond, M.D.: "I would as soon think of doing without my dictionary as trying to get along without the 'Cyclopædia of Practical Quotations.' As a labor-saving machine to the author it has no equal."

The Boston Globe: One of the most valuable books of the time is the comprehensive Cyclopædia of Practical Quotations. There are over 17,000 quotations, including many not included in previous compilations, and unusual care has been shown in making them strictly accurate, as well as in giving the authorship, where that was ascertainable. An admirable system of classification has been adopted, there being nearly a thousand subject-heads; and by the full concordance, which forms such a valuable feature of this book, every one of these quotations is make readily available. The subdivisions of the Cyclopædia will commend themselves to every reader. Special mention seems to be called for regarding such characteristic features of this book as the collection of nearly 2,000 quotations from the Latin, the list of proverbs and familiar sayings in French, German, Italian, and other modern languages, the department of Latin Law terms, which is particularly valuable; and a biographical dictionary of the names of the 1,200 authors quoted in this work. . . . One of the great publications of the day. A monument of industry and well directed work, marked by thorough system. . . . A volume indispensable to the man of letters, and one which should be in the library of every reader."

Such an authority as Bovee, that able author and lawyer, admonishes us that to quote conspicuously and well requires taste, judgment, and erudition, a feeling for the beautiful, an appreciation of the noble, and a sense of the profound. Precisely these very qualities are to be obtained and developed in the use of this work of quotations.

The late Geo. W. Childs, of the *Philadelphia Ledger*, wrote: "I send you $20 for your 'Cyclopædia of Quotations.'" He also encloses a notice of the work from his paper, which we quote: "This is unique among books of quotations. It is impossible to give a full idea of this rich storehouse. One who dips into it will at once make a place for it among well-chosen books."

J. H. Rylance, D.D., New York: "I have carefully looked through and tested the 'Cyclopdæia of Practical Quotations' as a book of reference, and am thankful to have found it so thoroughly reliable. It is the best bit of work of the kind that I know. It will henceforth be to me a friend always at hand. Such helps are increasingly needed as the treasures of literature grow, and as the demands upon a man's time multiply.'

ACCEPTANCE FORM

Please sign this form, or a copy of it, and send it to us.

THE EDUCATIONAL JOURNAL PUBLISHING CO.,
11½ Richmond St. West, Toronto.

GENTLEMEN,—

I herewith send $2.00* for THE EDUCATIONAL JOURNAL for one‡ year, and a copy of HOYT-WARD CYCLOPÆDIA OF PRACTICAL QUOTATIONS which I am to receive without further charge or cost of transportation to me. It is understood that, if for any reason I am dissatisfied with the book, I can return it within three days after I receive it, and you will refund the money and cancel my subscription.

Name ....

Date .... P.O. ....

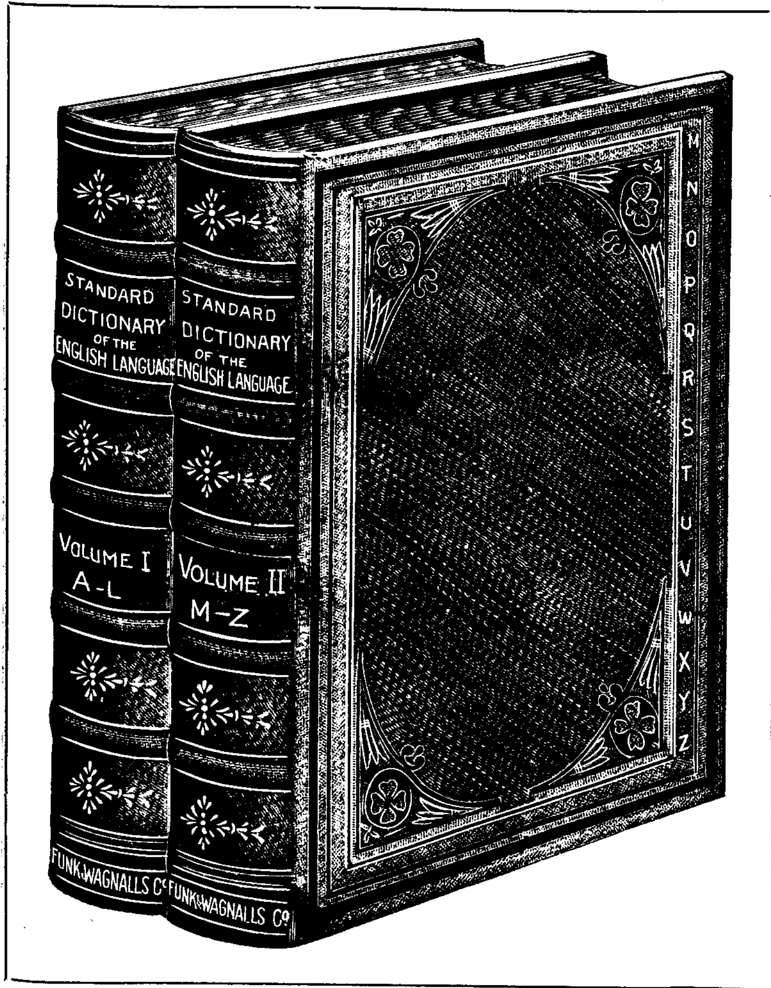
*Erase $2.00 and write $3.00 if desired for two years.
‡Erase one and write two if desired for two years. Co. ....

If already a subscriber, we will extend your subscription from date of expiration.

FRANCHISE No. 2

Price to be Advanced
January 1st, '96.

The Latest and Best of all Dictionaries



The Funk & Wagnalls'

Standard Dictionary

301,865 Vocabulary Terms
247 Editors and Specialists
533 Readers for Quotations
5,000 Illustrations
Appendix of 47,468 Entries Cost over $960,000

Complete - Succinct - Authoritative

FOR ONE MONTH ONLY

AT THE

Special Introduction Price

Descriptive Circulars Mailed Free.

READ WHAT IS SAID ABOUT IT.

Hon. Geo. Ross, Minister of Education, Toronto: "The Standard Dictionary is an admirable work."

J. A. McLellan, M.A., LL.D., Principal of the School of Pedagogy, Toronto, a school for the professional training of first-class Public School-teachers and High School assistants: "I have carefully examined the Standard Dictionary, and compared it with many other dictionaries in my possession with special reference to the points upon which its publishers claim for it a marked superiority over the works now in general use. In my opinion, this claim is thoroughly well founded. It would be no easy task to give all the distinguishing features which will make it MY FAVORITE DICTIONARY. I feel but little doubt that the Standard Dictionary will be preferred to all others by the teacher, the student, the business man, and the man of letters."

Hon. Justin McCarthy, M.P., the eminent Historian, London, April 5th, 1895: "The Standard Dictionary is the most complete work of the kind I have known. It is a whole library in itself. I consult it daily—and I not merely consult it, I read page after page for the mere pleasure of the reading."

John Potts, D.D., General Secretary, Victoria College, Queen's Park, Toronto: "The Standard Dictionary of the English language is simply superb. It is worthy of the enterprise displayed by its publishers and their staff of accomplished literary workers. Persons desiring to master the English language should have the Standard at hand."

Jas. L. Hughes, Esq., Public School Inspector, Toronto, April 4th, 1894: "The Standard Dictionary is one of the greatest surprises of a surprising age."

Prof. H. J. Warner, Alma Ladies' College, St. Thomas, June 19th, 1894: "It must prove indeed the people's great dictionary, and be of highest value to every one availing himself of its advantages."

From the Toronto Globe, March 30th, 1895.

"It is well named the 'Standard,' for it treats with the authority of special knowledge of absolutely everything under the sun. It is the product of the knowledge and scholarship of a host of specialists and authorities, of the work of able editors, and of the enterprise of the Funk and Wagnalls Company, the publishers, who had sufficient faith in the venture to invest $1,000,000 in it. It can be truly said that it is a distinct gain to literature, to science, and to education. With so many admirable publications in the field, such as the Century, Webster's, Worcester's, the Imperial, and Stormonth's, the question might be asked: 'Is there room for another competitor?' The answer is given most conclusively in the statement that the Standard contains 75,000 words more than a dictionary published so recently as the Century. Being the latest in the field, it has also the advantage of the work done by its predecessors."

The New York Tribune says; "A comparison with the Century Dictionary leads to the inference that the present work (the Standard Dictionary) has made a distinct advance in certain fields."

From the Hamilton Spectator, March 26th, 1895.

"Funk & Wagnalls' Standard Dictionary has made its appearance, the two volumes forming the most complete dictionary now in the hands of the public. In paper, printing, and binding the work is 'par excellence,' and make it one of the handsomest of books, the typography being perfect and the illustrations artistically printed."

Prof. A. H. Sayce, the eminent Philologist, Oxford University, Eng., says: "The Standard Dictionary is truly magnificent, and worthy of the great continent which produced it. It is more than complete. It is certain to supersede all other dictionaries of the English language."

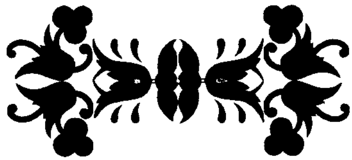
Judge W. K. Townsend, Professor of Law, Yale University, says: "I have carefully compared the Standard with the Century and the Webster International Dictionaries, and as a result have already purchased two copies of the Standard Dictionary, and take pleasure in giving an order for a third copy. The plan, the execution, and the scope of the work make it indispensable."

The Saturday Review, London, says: "In substantial merit we think the Standard Dictionary decidedly preferable to the much-advertised Century."

The New York Herald says: "The Standard Dictionary is a triumph in the art of publication. It is admirable from every point of view. It is the most satisfactory and most complete dictionary yet printed.'

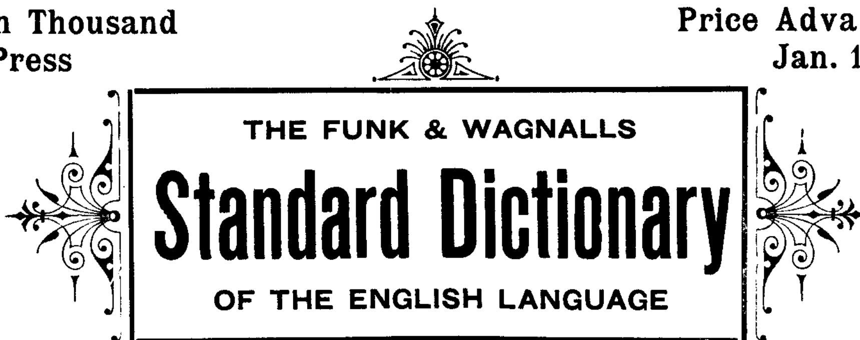
FOR FURTHER PARTICULARS SEE OTHER SIDE.

FRANCHISE No. 2—Continued



A Handsome Holiday Gift

HOW CAN I GET THE GREAT STANDARD DICTIONARY? has been often asked us, and we have not been able to answer satisfactorily until now. For ONE MONTH ONLY we can supply "Journal" subscribers with this great work in two handsome volumes, substantially bound in full Russia, with Dennison's thumb index, at the SPECIAL INTRODUCTION PRICE, viz., $17.00, payable as follows—only $5.00 in cash with order and the balance $2.00 per month. The carriage charges are paid by us. This offer is indeed an opportunity that is an importunity. Remember, acceptance must reach us on or before December 31st, 1895, or order cannot be filled. We should like to give our friends more time, but the publishers will not grant it to us.



"THE PRIDE OF AMERICA—THE ADMIRATION OF ENGLAND"

"To say that it is perfect in form and scope is not extravagance of praise, and to say that it is the most valuable Dictionary of the English language is but to repeat the obvious. The Standard Dictionary should be the pride of literary America, as it is the admiration of literary England."—St. James's Budget (St. James's Gazette, weekly ed.), London, July 27th, 1895.

301,865 Vocabulary Terms
47,468 Entries in the Appendix

Oxford University, England, Prof. A. H. Sayce, the eminent philologist, says—
"The Standard Dictionary is truly magnificent, and worthy of the great continent which has produced it. It is more than complete. . . . . It is certain to supersede all other dictionaries of the English language."

Yale University, Prof. E. J. Phelps, Ex-Minister to Great Britain, says—
"The work is extremely well done throughout. For general and practical purposes it is the best American dictionary now available."

Cambridge University, England, Prof. J. E. Sandys, says—
"It is admirable and deserves to become famous on both sides of the Atlantic."

Harvard University, Prof. A. Preston Peabody, says—
"Will prove invaluable, and will last while the English language remains essentially unchanged."

125,000 Synonyms and Antonyms
45,000 Illustrative Quotations

The New York Herald, says—
"The Standard Dictionary is a triumph in the art of publication. It is admirable from every point of view. It is the most satisfactory and the most complete dictionary yet printed."

The Globe, Toronto, March 30th, 1895, says—
"It is well named the "Standard," for it treats with the authority of special knowledge of absolutely everything under the sun."

The Empire, Toronto, February 3rd, 1894, says—
"Teachers, writers, business men, and students of all classes will welcome this the newest form of dictionary."

The Journal of Education, Boston, says—
"In thoroughness, completeness, accuracy, typography, style, and illustration, it challenges criticism and commands admiration. It will make the world its debtor, and all who write must praise it evermore."

5,000 New Illustrations
8 Elegant Colored Plates

On January 1, 1896, price will be advanced nearly one third. SUBSCRIBE NOW

Sign and return the following Acceptance Blank or a copy of it at once.

ACCEPTANCE BLANK

Educational Journal Publishing Co.
11½ Richmond Street West, Toronto.

I am a subscriber for "The Educational Journal."* I accept your special offer of Funk & Wagnalls' Standard Dictionary in two volumes, full Russia, with Dennison's thumb index, at $17.00, carriage paid, and herewith send you $5.00 and will send $2.00 every month hereafter, until the volume is paid for in full. It is understood and agreed that the title and ownership of said volumes shall not rest in me, but that they shall be and remain the property of the Educational Journal Publishing Co., until paid for in full, as above agreed. It is understood that, if for any reason I am dissatisfied with it, I can return it within three days after I receive it and you will refund all moneys paid thereon.

Name..

Nearest Express.............................. P.O.............................. County..............................

* If you are not a subscriber, remit at same time $1.50 for a year's subscription in advance.

second compound the combination take place atom with atom, the weights of the atoms of N and O become as 7 to 8. In Dalton's gravimetric analysis of the first compound, all that has to be assumed in order to have harmony between the assumptions and the facts is that two atoms of N united with one of O.

The formulæ ∴ become N_2O and NO.

5. (*a*)

i. Iron displaces the copper from the copper sulphate
$Fe + CuSO_4 = FeSO_4 + Cu$.

ii. Copper displaces mercury from bichloride of mercury
$Hg\ Cl_2 + Cu = CuCl_2 + Hg$.

iii. Zinc displaces lead from lead acetate
$Zn + Pb(C_2H_2O_2) = Zn(C_2H_3O_2)_2 + Pb$.

iv. $2AgNO_3 + Mg = Mg(NO_3)_2 + 2Ag$.

(*b*) Take a known weight of iron and immerse in a solution of copper sulphate and allow to stand for some time. Collect, wash, and dry the copper formed and the iron left. The amount of iron disappearing and the amount of copper formed are compared. Now, *if* one atom of iron displace one atom of copper, then the atomic weights of iron and copper will be to one another as the weight of iron disappearing to the weight of copper formed. *If* two atoms of Fe displace one atom of Cu, then their relative atomic weights are as one-half the weight of Fe disappearing is to the weight of Cu formed, and similarly for other cases. It will thus be seen that the results so obtained from this experiment are either the atomic weights or bear some simple relation to them. Other methods of research will fix the choice. Similarly for the cases in ii., iii., and iv.

6. (*a*) Mix As_2O_3 and C and place in a bulb tube and heat. As is sublimed and forms on the cool sides of the tube.

(*b*) Burn finely powdered Sb in Cl gas.

(*c*) Treat pure iron with H_2SO_4 dilute.

7. See any good text-book.

8. There is a relation between the atomic weight and the physical and chemical properties of the element. This is stated in the Periodic Law thus: "The properties of an element are a periodic function of the atomic weight." This manifests itself in increases or decreases in the properties of the element. For example:

	at. wt.	Density	At. vol.
C....	12	3.3	3.6
Si....	28	2.49	11.2
Sn....	118	7.29	16.1
Pb...	207	11.38	18.1

	meet pt.
C......	very high
Si......	" "
Sn......	503
Pb......	599

It will be noticed that the properties mentioned of the elements increase or decrease with the rise in atomic weights. This can be shown true for other properties, but the full significance of the Periodic Law cannot be illustrated to any advantage by an isolated group of elements.

9. This was a practical examination.

Examination Papers.

EAST MIDDLESEX PROMOTION AND REVIEW EXAMINATION.

November, 1895.

ARITHMETIC—2ND TO 3RD CLASS.

Time, 2 hrs. 30 min.

1. A teamster drew 17 loads each having 35 bushels, 15 loads each of 37 bushels, and 15 loads each weighing 39 bushels; how many bushels did he draw altogether?
2. There were 905 cents in the purse. I bought two collars at 15 cents each, a pair of shoes at 275 cents, three books at 8 cents each, and a hat for 28 cents. How much money have I in the purse yet?
3. A contractor paid daily to seven men and eight boys the sum of $14.65. Each man got $1.35 a day; how much did each boy get?
4. Three hens laid one egg every day for 24 weeks; how much were the eggs worth at 12 cents a dozen?
5. Add 4876, 38, 493729, 1009, 859, 679; subtract 8976 from the sum, and double the remainder.
6. Multiply 6795484 by 2506508.
7. Divide 385940001 by 295.
8. Divide 3052857 by 56, using factors, either 7 and 8, or 2, 4 and 7. (3 marks extra if the second set of factors be used).
9. Rapid addition on another page. Time, 2 minutes.
10. Rapid multiplication on another page. Time, 2 minutes.

Value—10, 10, 10, 10, 10, 10, 10, 10, 12, 12.

ARITHMETIC—3RD TO 4TH CLASS.

Time, 3 hours.

1. (*a*) Find the sum of 15 × 11 × 7, 18 × 13 × 11, and 35 × 18 × 13.
   (*b*) One of the factors of 3289 is 23, find two other factors.
   (*c*) By cancelling find the value of 2574 × 1155 × 3289, divided by the product of 7722 and 715.
2. Make a bill of the following items, and put all the work of finding the prices of the several items on your paper: Miss Annie Black bought of Wm. Bright, general storekeeper, 6 quarts of coal oil @16c. per gal., 24 ounces of black tea @ 50c. per lb., and 12 ounces of green tea @32c. per lb., 35 lbs. of flour @ $2.00 per cwt., 10 feet of felt paper @ 6c. per running yard, 8 egg cups @ 30c. a dozen.
3. Find the value of a farmer's produce as follows:
   12735 lbs. of wheat @64c. a bushel.
   19108 lbs. of oats at 22c. a bushel.
   12175 lbs. of hay at $13 per ton.
   480 bushels of potatoes at 30c. a bag.
   A bushel of potatoes weighs 60 lbs., 1½ bushel = 1 bag.
   Put all the work of finding the values on your paper and add the four sums of money.
4. (*a*) How much velvet is required to cover, except on the bottom, a box 4 inches square on each end, and 10 inches long?
   (*b*) The velvet is 15 inches wide. Estimate how much you would have to buy, and the cost at 80c. a yard.
5. A barn is 60 ft. + 36 ft., corner posts are 16 ft. long; allowing 180 sq. ft. for each gable, find the cost of the lumber required for sides and ends at $12.50 per thousand.
6. A mile is divided into 33 equal parts; find the length of each part in rods, yards, feet, etc.
7. F. sold 2 tons 120 lbs. of cheese @ 7½c. per lb.
   2 tons 96 lbs. " @ 8¼c. per lb.
   3 tons 240 lbs. " @ 8½c. per lb.
   Find the average price per lb. of all the cheese.
8. A man paid $5.74 for 20 lbs. 8 oz. of coffee; at the same price how mnch would 13 lbs. cost?

Values—3, 3, 6, 16, 16, 4, 8, 10, 10, 12, 10.

LITERATURE—2ND TO 3RD CLASS.

Time, 2 hours.

With books open write the answers of these questions in complete sentences.

Lesson XI., page 33.

1. What caused the quarrel?
2. Distinguish between quarreling and fighting (line 2).
3. Copy the five kinds of punctuation marks in the second stanza, and tell the name of each.
4. Copy the first half of each of the four lines in the second stanza, and underline the word that is most emphatic in each.
5. "I" is used twice in the second stanza, and once in the third stanza. Who is meant in each case?
6. Page 34, line 7. Which of the following expressions are right, and which wrong, and which one,giving your reason,do you prefer? "They laid themselves down," "they laid down," "they laid them down," "they lay down."

Values—3, 3, 10, 8, 6, 10.

Lesson XLVIII., page 137.

7. Give an example of the action of a person who might be spoken of as a "dog in the manger."
8. Show how one of these fables applies to a man who was succeeding very well in life, but, getting covetous,undertook more work than he had strength for, and injured his health.
9. Harry and Fred were talking about a prize to be given in their class. Fred said, "May be the grapes are sour to you, Harry." What do you think Harry had been saying about the prize?
10. A storekeeper advertised several times, "prices reduced, etc.," but buyers found nearly everything they wanted was at the old price. By-and-by he wished to make a sale, he reduced his prices and advertised as before. Show how one of these fables tells the result.

Values—6, 6, 6, 6.

Lesson LIII., page 157.

11. What word rhymes with "weed"? Which line in the first stanza has no other to rhyme with it?
12. What does the second, third, fourth, fifth, sixth stanza each tell about?
13. Tell three ways that you may know in the picture which is "braggart Bob-o-link," and which the "plain good wife."
14. Explain: "mead," "crest," "broods," "summer wanes," "humdrum crone," "strain."

Values—4, 15, 6, 12.

LITERATURE—3RD TO 4TH CLASS.

Time, 2 hrs. 30 min.

With books open write the answers of these questions in complete sentences.

Lesson XXIX., page 82.

1. What is the subject of each of the first four paragraphs?
2. Second paragraph: Explain the italicized words: "a *bleak* pain," "about *nightfall* they reached an *inn*," "a *relay* of horses," "the wolves are *out*," "the horses to be *put to*."
3. Why did the nobleman not heed the innkeeper's advice?
4. Tell why "*was* travelling" in the second line is better than "*were* travelling."
5. Tell briefly in their order the actions performed to escape the wolves.
6. Who is each of the five persons represented in the picture on page 85? Tell where each is.
7. Page 86. Show the appropriateness of the quotation used for the inscription on the wooden cross.

Values—8, 10, 3, 4, 6, 10, 6.

Lesson XII., page 40.

8. If this lesson XII. were divided into two lessons, where should the division be made, and what would be a suitable title for each?
9. (*a*) Tell something peculiar to each of the *five* kinds of rhinoceros mentioned in the lesson.
   (*b*) Tell four features or characteristics that are common to all.
10. Page 41, 3rd paragraph, what qualities does the fierce rhinoceros possess that make the natives dread it more than they dread the lion?

Values—6, 10, 4, 6.

Lesson LXVII., page 179.

11. Describe two experiments (experiences) to show that we cannot always know by feelings what the temperature of a body is.
12. Relate in your own words how the makers may find out where to mark the degrees on the thermometer, page 181.
13. Give the meaning of the last sentence in the lesson in your own words.

Values—6, 6, 6.

Lesson XLVIII., page 129.

14. Who is meant by "mild offspring," "sullen sire"; "Thee," in line five; "his," in line eight? Explain "cradled in the winds," "sturdy blusterer."

Value—8, 4.

Lesson LXIV., page 171.

15. If you were making a quotation of from four to six lines from this poem for your friend's autograph album, which lines would you choose? Give your reason for thinking them beautiful.
16. Take any stanza in this lesson to show the arrangement of the rhymes.

Values—6, 3.

Hints and Helps.

A WORD ABOUT SPELLING.

In every lesson in spelling there should be two things kept in view: *First*, that children are taught to observe and see words correctly; *second*, that they be taught to reproduce them correctly.

The spelling of the words over, and over, and over, as a method of preparing the lesson, or even writing the words a certain number of times, will not bring about the desired result. The child may begin at the first word and go up and down the columns twenty times and yet not know any of the words when he has done. Such exercises very frequently lead to careless habits. If the children are to write the words as a means of preparation, let it be done in a thoughtful manner. Let the children make an alphabetical list of the words in the lesson, not only with reference to the first letter, but also the second letter in each word. This will lead, not only to a careful observation of all the words, but, by looking at each one several times, children become better acquainted with them. For instance, the words of a lesson are:

alert	bosom	cellar
autumn	butter	converse
arise	breakfast	cupboard
angry	borough	coffin
attic	behind	copy
accrue	bacon	caprice
atlas	bonnet	closet

Now, to arrange the words alphabetically, with reference to the first and second letters of the words, requires the pupil not only to centre his mind upon each word, but to look carefully at each one several times, and, while doing this, the correct mental picture of each one will be retained in the child's mind. If he has arranged them properly, the words will be as follows:

accrue	bacon	caprice
alert	behind	cellar
angry	bonnet	closet
arise	borough	coffin
atlas	bosom	converse
attic	breakfast	copy
autumn	butter	cupboard

The good growing out of such preparation cannot be overestimated, as it trains the child not only in observation, but in attention, cultivation of the sight, in habits of industry, and broadens his knowledge of language.—*Journal of Education.*

LANGUAGE TEACHING.

There seems to be a remarkable amount of senseless twaddle and useless illustration in the latter-day methods of teaching language, especially reading.

In this city language teaching is now the one subject which is receiving special attention, and that is both wise and important, but if the methods we have heard illustrated and debated are the ones to be adopted, we doubt the value of the ultimate results.

There is a class of teachers who seem to believe in sugar-coating all the exercises that are given to the child, and it is these who think that reading and language in general can be taught most effectually by the objective method.

They hold before a child a doll, and have her say "I see a doll"; they place it in her hands and she learns (?) to say "I have a doll"; they change the object, and the exercise continues *ad nauseum*, and they think they are teaching reading or language—which is it? Neither, we should say. All this sort of teaching goes on the presumption that the child has no thoughts before it goes to school, or that it is a simpleton when it gets there. All these words are familiar to the child and have been a part of its vocabulary ever since it first saw a doll, and the fact that the teacher develops (?) an idea long before developed in the mind of the child, simply shows that she knows very little of children and their ways of thought. The fact that she writes the sentence on the board may serve to create a temporary interest and may be beneficial, but it is a vast expenditure of energy to secure a trifling result. It is the firing of a columbiad to kill a mouse.

What the child needs is the power to learn word-forms for itself, not the power to catch them from the hints of the teacher as she develops them. The latter can be only a temporary expedient, which leaves the child helpless when the support is withdrawn.

It may be tedious work to train the child to this self-dependence in learning the forms and powers of letters, but the very struggle which it makes strengthens and developes its powers in such a manner and to such a degree as is impossible by the "I see a doll" developing process. The strength it gets is permanent and useful in all subsequent work. The child and I should carry to it the law of "minding your own business" in the ordering of your households. We should train ourselves that we may train our children.

We must keep calm hearts, unruffled brows, subdued voices, and well chosen words. Then we can expect silence and serenity in our children when these are required of them, and then we can the more easily endure and the more effectually correct impatience and irritability and bad temper in them. What father and mother cannot themselves do, they cannot with grace or consistency insist that their children should do. This also applies to teachers.—*American School and College Journal.*

LEAD THEM TO THINK.

Recently a teacher said to me: "My pupils have a perfect understanding of addition, subtraction, multiplication, and division, but I can't teach them to solve a problem combining two of these rules, let alone all four of them."

"What effort have you made?" I asked.

"Well, I have worked them over and over for the children. I have kept them in and made them study, and I don't know what to do next."

"But have you taught them *how* to study?" I asked.

"I have told them to study."

"Let's try showing them *how* to study," I suggested. Then I put this problem on the board:

"John Jones sold 5,625 bushels of wheat at $2 a bushel, and received in payment 132 acres of land at $50 an acre, 45 head of horses at $65 a head, and 5 town lots at $125 each. With money received he bought sheep at $3 each; how many sheep did he get?"

"They will never do that, for it's twice as difficult as any they have ever failed on," said the teacher.

"Now, children," said I, "here is an example that I want you to work for me from your seats. But first I want to tell you that it is bristling with question marks. Let's read it over carefully, and then we will go hunting for question marks." In a few moments I was greeted with a score of uplifted hands.

John—"What did Mr. Jones get for his wheat?"
Mary—"What did he pay for the land?"
Sarah—"What did he pay for the horses?"
William—"What did he pay for the lots?"
Susan—"What sum of money did he pay for the land, horses, and lots?"
Martha—"How much did he get in money?"
Samuel—"How many sheep did he get for the money he received?"

"Very good. We have found that there are eight question marks hidden in this example, and here we have eight questions. Now, I think we can answer all those questions in fifteen minutes."

Before fifteen minutes had passed several hands were up, and at the end of that time nineteen of the thirty-five had done the work neatly and correctly, and the failure of a majority of the others was due to mistakes in multiplication and division. The teacher was apt and willing, and, after a week's drill in this way, she informed me that they could not only solve an ordinary example combining four fundamentals, but that they had learned to look out for question marks in their other lessons, and also in the actions of themselves and their associates.

Teachers, who are at all worthy to be classed as such, are more and more agreed that good work in the schoolroom does not consist in cramming the child with facts, but in teaching how to think.—*Educational News.*

Teachers' Miscellany.

AN IDYLL OF TWO BROTHERS.

Once upon a time there were two brothers—John and William. John was the elder, and a fine, lusty, lazy animal of a boy he was. William, on the other hand, was as quiet, reserved, and thoughtful a lad as one might meet in a day's march. He had worked through all the miscellaneous examples in Colenso, while big John was still floundering along with long division. So the master of the village school determined that clever little William should be a pupil teacher, which fell about as arranged. And William won great fame at the Queen's Scholarship, got his "D" and two sciences before entering the ——— Training College. And in the fulness of time he came back to the village school as headmaster, with £80 a year and a house. That was a fine distinction for the whilom village lad, and he plodded along meekly and uncomplainingly. True, Sunday was a heavy day, and the choir practices were a trifle wearying after a long day in the troublesome school. But still, William was held by all to have done well. He is now nearly fifty, has a large family, and sometimes falls into a desponding frame of mind in respect to the future. And what about John? Oh! that is John tending those roses in front of that comfortable-looking cottage beyond. John's parents "tried" their burly son at a good many things and ultimately made him a policeman. Stolid, heavy John was well suited to the work, and his smattering of education stood him in good stead. By and by he became a superintendent. He retired five years ago on a pension about twice as big as William's salary. William is thinking of making his eldest son a policeman!

INSIDE NEW GUINEA.

Facts about the interior of New Guinea, "the least known portion of the habitable globe," are so scarce that Jean Theodore Francen Van Gestel's observations there, made in a region untravelled by any other white man, are as valuable as they are interesting. That great land of flowers, destitute of beasts and birds of prey, practically free from poisonous serpents, and lying in tropical beauty along magnificent ranges of mountains almost beneath the equator, seems to woo the pleasure seeker, to invite the explorer, if any land ever did. Strangely enough, although it is the largest island in the world, leaving out Greenland, and considering Australia a continent, New Guinea is as yet in the main *terra incognita*—an unknown land.

Surmise and rumor have supplied a mass of material which the scientist dare not accept, strongly drawn, as he must be, to study a country so unique in fauna and flora. Partial penetration, by D'Albertis, Maklay, Juckes, Wallace, Bernstein, Meyer, Raffray, and Forbes, has thrown just enough light on the interior of Papua to make it most important to have more. The only white man known to have crossed the island from shore to shore, to have actually traversed the vast unknown interior and seen the aboriginal Papuans face to face in their native forests, is Van Gestel, whose additions to the scant sum of what we know of Papua are now for the first time given to the world. Sir William McGregor, now the Governor of British New Guinea, and one of the most progressive men in Polynesia, was, when Van Gestel crossed New Guinea, an obscure Scotch missionary, hovering in a fifteen ton yacht along the south-eastern coast.—*John Paul Bocock, in Lippincott's.*

CRAMMING facts and hearing recitations is not teaching. To teach is to excite the child's mind to activity—*i.e.*, into activity which would not have taken place without being thus evokod.—*Dr. W. O. Krohn.*

Primary Department.

THE OLD OAK TREE'S CHRISTMAS DREAM.

(Arranged from HANS ANDERSEN).

Such a grand old oak! It had stood there for three hundred and sixty-five years. It knew a great deal; but there was one thing it did not know.

"Poor little insect!" it would say when the shining bugs would hum and flutter about its crown.

Why "Poor little insect?" the little summer flies would say; "Do you not see how soft and warm the air is, and how bright the light is! And we are so very happy."

"Yes," the oak tree would answer; "but it is only for a day!"

"But the world will be just as bright and beautiful even if we are not here"; and the little flies would hum and flutter on till sunset; and then tired out from pure happiness they would cuddle down at the foot of the oak and go sound asleep forever.

And the sweet violets and anemones—their bright little faces would smile up at the old oak, their hearts, too, so full of joy. "It's only for a few days," the old oak would sigh.

But the little flowers would say, "Perhaps; but they are such happy days; and by and by, if we go to sleep, very likely we shall dream them all over again"; then the little violet would send its sweetness up to kiss the solemn old oak.

Then there were the little fluttering, singing birches. So happy, so joyous, they could not keep from singing and dancing the hours away.

"It is only for a few years," the old oak would say. "Now I have dwelt in the forest for three hundred years and more."

"But our years are so full of joy! so full of joy!" the little birches would answer back. "Just see the sunlight on our leaves! And see our shadows, how beautiful they are across the grasses!"

At last, one night, it came the old oak's time to sleep. It was Christmas night; and all the children in the village were shouting with joy and singing their carols out across the snow.

The music reached the old oak's ear. There came over his great heart a sense of peace and rest. "Peace on Earth! Peace on Earth!" the children sang; and the oak leaves fluttering softly answered, "Peace on Earth! Peace on Earth!"

And there came into the heart of the old oak a longing that every other tree and flower and insect it had ever known might share this peace and rest that was stealing through its trunk and branches, and even to the brown leaves that trembled now for joy.

"If they were only here!" the happy tree said softly, as he went off to sleep. "My dear little friends that lived so short a time!"

"Here we are!" hummed the tiny insects. "Here we are, everyone! humming and singing above you as happy as happy can be."

"And here are we!" laughed the violets and the anemones. "Look down! here we are close to your own brave roots, as happy as ever we were." And the violet sent up its sweet odor to add its blessing to the dear oak tree.

"And here we are," fluttered the silver birches. "See our leaves! hear our song! O, such a happy, happy world!"

"How beautiful! And I thought you had died!" the old oak said. "O, no," fluttered the birches. "We never die!" laughed the violets.

"We only sleep!" hummed the little insects; "and here we are, all together again, the joyous Christmas time!"

"Peace, peace," whispered the birches; and the children in the village answered, "Peace, peace! Peace on Earth! Good will towards men!"

And the children were happy; the little insects, the flowers, the trees were happy, and all the world was happy.

Perhaps this was only a Christmas dream. But at any rate when next the old oak woke again, there were the flowers, the insects, and the birches all around him exactly as they had been so many times before.

The same ones? Well they looked the same, were happy the same, and sent the same joyous greetings to the old oak.

And never again was the oak known to sigh over their short lives; for now he had learned that together they should all live on forever.—*Primary Education.*

DECEMBER IN THE PRIMARY ROOM.

BY MATTIE PHIPPS TODD.

"The happy Christmas comes once more.
The Heavenly Guest is at the door,
The blessed words, the shepherds' thrill,
The joyous tidings, "Peace, good will."

The happy Christmas is almost here and with it new opportunities of coming closer to the children and of bringing gladness into their lives—perchance to some to whom gladness is almost a stranger.

Not many years ago, and not far away, a primary teacher was gathering up the threads after the Christmas vacation. The children, still filled with the delights of the happy time, were telling her of all they had done. "And what did you do, John?" said she to one of her boys. "I did not have any Christmas," he replied, a sad look stealing into his eyes. Shall that be said of any of ours this year?

Truly the "Heavenly Guest" is at the door. Shall "one of the least of these" be forgotten in the happy time that is coming?

If the only Christmas some of the children will have is to be in our rooms, let us be sure that it is one long to be remembered for the joy that we have helped to bring into the little hearts.

The celebration of festivals tends to foster the unity of life. Refer to the festival just passed when we said "Thank you" to our best Friend. His best gift to us was the Christ Child.

The December lessons on the snow and ice, with the moon and star stories, lead very naturally to the stories of the beautiful Star, which always interests the children. They are delighted with the snow-stars which they catch on a black cloth, and afterwards draw and sew. The moon and star myths have many a hidden lesson, and the songs serve to deepen the impression. The reading lesson will be found in the Primary Leaflet. The seat-work can be correlated also.

Let all help to make the room pretty for Christmas. From one-inch strips of paper cut three-inch lengths and make chains for decorations. Lanterns for the tree are easily made by folding a square to an oblong; cut slits one-fourth inch wide, open the square and paste, in cylindrical form; attach a handle.

Let others string circles and squares of spectrum colors in right order, alternating with straws. Love of the beautiful goes with the lesson in color. The sled may be folded and cut from a manilla card and Piccola's wooden shoe with the bird may be drawn or sewed. The children will be delighted to show you with their sticks and lentils what they would like Santa Claus to bring them; doll houses, furniture, drums, soldier caps, and Christmas trees. Toy dishes and furniture may be made of clay.

For your own part of the schoolroom decoration have pretty poems and mottoes on the blackboard. Frame a snow poem in snowflakes. Make the "Merry Christmas" in snow letters (cotton sprinkled with diamond dust) and mount on a background of crepe paper. Use one roll, ruffled on both edges (this is done by drawing through the fingers). Get a branch and cover with snow (cotton). Hang your nests in it. Where are the birds? Draw some Greenaway children on the blackboard and write:

"If to Santa Claus' town you'll show the way,
Maybe we'll get there before Christmas Day."

Try to have a tree, and send it afterwards to some one who will otherwise have no Christmas.

Write your invitations on a stocking cut by the children, and on the reverse side, a list of games to be played at the celebration. Do not try in the lowest room to have many recitations. Leave that for the older children. Let your children do something. They may recite some of Miss Poulsson's Finger Plays together, including the Santa Claus; then let them sing and march and play games.

"At Christmas, play and make good cheer,
For Christmas comes but once a year."

Whatever you would have your children be, that let them play. The spirit is strengthened by right expression, and we are doing much for our children when we help to develop sympathy, love, and unselfishness in the games. We need more of the spirit of play in our work. Have the children tell you the story of the Christ Child, and sing all of their pretty songs learned in the past few weeks.

The song, "Old Santa Claus in His Den," may be used as a reading lesson. See children's page.

If you can get a big boy to personate Santa Claus, you might have the children go to sleep as they finish the last verse. Let Santa Claus come in quietly, and have the children sing as they wake up:

"Jolly old St. Nicholas,
Turn your ear this way," etc.

Then have the happiest time of all· Take the children's gifts from the tree, each one marked "For Mamma," "For Papa," "For Sister," and give to the little ones to carry at once to the one for which it is intended. Don't be afraid of the noise. The hum of happiness is not disorder.—*School Education.*

MOTHER'S CHRISTMAS GIFT.

We had the loveliest Christmas last year that ever was,
All of us hung up our stockings ready for Santa Claus.
I woke right up in the night time and heard his sleigh bells ring,
And some one running up and down stairs, just like everything.

But I shut my eyes again, and fell asleep right away,
And when I opened them next time, 'twas merry Christmas Day;
Our stockings were full, quite to the top, full and running o'er;
We never had so many things any Christmas before.

Mother's gift was the sweetest thing that Santa Claus could bring,
He brought it to the door that time I heard the sleigh bells ring.
Santa brought us a great many gifts, candies, books and toys,
But he brought mother—just guess what—*a pair of baby boys!*

LIZZIE WILLS.

School-Room Methods

PRIMARY NUMBER TEACHING.

THE NUMBER INSTINCT.—We have seen that number is not something impressed upon the mind by external energies, or given in the mere perception of things, but is a product of the mind's action in the measurement of quantity—that is, in making a vague whole definite. Since this action is the fundamental psychical activity directed upon quantitative relations, the process of numbering should be attended with interest; that is, contrary to the commonly received opinion, the study of arithmetic should be as interesting to the learner as that of any other subject in the curriculum. The training of observation and perception in dealing with nature studies is said to be universally interesting. This is no doubt true, as there is a hunger of the senses—of sight, hearing, touch—which, when gratified by the presentation of sense materials, affords satisfaction to the self. But we may surely say with equal truth that the exercise of the higher energy which works upon these raw materials is attended with at least equal pleasure. The natural action of attention and judgment working upon the sense-facts must be accompanied with as deep and vivid an interest as the normal action of the observing powers through which the sense-facts are acquired.

For numerical ideas involve the simplest forms of this higher process of mental elaboration; they enter into all human activity; they are essential to the proper interpretation of the physical world; they are a necessary condition of man's emancipation from the merely sensuous; they are a powerful instrument in his reaction against his environment; in a word, number and numerical ideas are an indispensable condition of the development of the individual and the progress of the race. It would therefore seem to be contrary to the "beautiful economy of Nature" if the mind had to be forced to the acquisition of that knowledge and power which are essential to individual and racial development; in other words, if the conditions of progress involved other conditions which tended to retard progress.

The position here taken on theoretical grounds, that the normal activity of the mind in constructing number is full of interest, is confirmed by actual experience and observation of the facts in child life. There are but few children who do not at first delight in number. Counting (the fundamental process of arithmetic) is a thing of joy to them. It is the promise and potency of higher things. The one, two, three of the "six-years' darling of a pigmy size" is the expression of a higher energy struggling for complete utterance. It is a proof of his gradual emergence from a merely sensuous state to that higher stage in which he begins to assert his mastery over the physical world. We have seen a first-year class—the whole class—just out of the kindergarten, become so thoroughly interested in arithmetic under a sympathetic and competent teacher, as to prefer an exercise in arithmetic to a kindergarten song or a romp in the playground.

ARRESTED DEVELOPMENT.—Since, then, the natural action of the child's mind in gaining his first ideas of number is attended with interest, it seems clear that when under the formal teaching of number that interest, instead of being quickened and strengthened, actually dies out, the method of teaching must be seriously at fault. The method must lack the essentials of true method. It does not stimulate and co-operate with the rhythmic movement of the mind, but rather impedes and probably distorts it. The natural instinct of number, which is present in every one, is not guided by proper methods till effective development is reached. The native aptitude for number is continually baffled, and an artificial activity, opposed to all rational development of numerical ideas, is forced upon the mind. From this irrational process an arrested development of the number function ensues. An actual distaste for number is created; the child is adjudged to have no interest in number and no taste for mathematics; and to nature is ascribed an incapacity which is solely due to irrational instruction. It is perhaps not too much to say that nine-tenths of those who dislike arithmetic, or who at least feel that they have no aptitude for mathematics, owe this misfortune to wrong teaching at first; to a method which, instead of working in harmony with the number instinct and so making every stage of development a preparation for the next, actually thwarts the natural movement of the mind, and substitutes for its spontaneous and free activity a forced and mechanical action accompanied with no vital interest, and leading neither to acquired knowledge nor developed power.

Characteristics of this defective method have been frequently pointed out in the preceding pages, and it is unnecessary to notice them here further than to caution the teacher against a few of them, which it is especially necessary to avoid.

Avoid what has been called the "fixed-unit" method. No greater mistake can be made than to begin with a single thing and to proceed by aggregating such independent wholes. The method works by fixed and isolated unities towards an undefined limit; that is, it attempts to develop accurate ideas of quantity without the presence of that which is the essence of quantity—namely, the idea of limit. It does not promote, but actually warps, the natural action of the mind in its construction of number; it leaves the fundamental numerical operations meaningless, and fractions a frowning hill of difficulty. No amount of questioning upon one thing in the vain attempt to develop the idea of "one," no amount of drill on two such things or three such things, no amount of artificial analysis on the numbers from one to five, can make good the ineradicable defects of a beginning which actually obstructs the primary mental functions, and all but stifles the number instinct.

Avoid, then, excessive analysis, the necessary consequence of this "rigid unit" method. This analysis, making appeals to an undeveloped power of numerical abstraction, becomes as dull and mechanical and quite as mischievous in its effects as the "figure system," which is considered but little better than a mere jugglery with number symbols.

Avoid the error of assuming that there are exact numerical ideas in the mind as the result of a number of things before the senses. This ignores the fact that number is not a thing, not a property nor a perception of things, but the result of the mind's action in dealing with quantity. Avoid treating numbers as a series of separate and independent entities, each of which is to be thoroughly mastered before the next is taken up. Too much thoroughness in primary number work is as harmful as too little thoroughness in advanced work.

Avoid on the one hand the simultaneous teaching of the fundamental operations, and on the other hand, the teaching which fails to recognize their logical and psychological connection.

Avoid the error which makes the "how many" alone constitute number, and leaves out of account the other co-ordinate factor, "how much." The measuring idea must always be prominent in developing number and numerical operations. Without this idea of measurement no clear conception of number can be developed, and the real meaning of the various operations as simply phases in the development of the measuring idea will never be grasped.

Avoid the fallacy of assuming that the child, to know a number, must be able to picture all the numbered units that make up a given quantity.

Avoid the interest-killing monotony of the Grube grind on the three hundred and odd combinations of half a dozen numbers, which thus substitutes sheer mechanical action for the spontaneous activity that simultaneously develops numerical ideas and the power to retain them.

RATIONAL METHOD.—The defects which have been enumerated as marking the "fixed-unit" method suggest the chief features of the psychological or rational method. This method pursues a diametrically opposite course. It does not introduce one object, then another "closely observed" object, and so on, multiplying interesting questions in the attempt to develop the number one from an accurate observation of a single object. It does as Nature prompts the child to do: it begins with a quantity—a group of things which may be measured—and makes school instruction a continuation of the process by which the child has already acquired vague numerical ideas. Under Nature's teaching the child does not attempt to develop the number one by close observation of a single thing, for this observation, however close, will not yield the number one. He develops the idea of one, and all other numerical ideas, through the measuring activity; he counts, and thus measures apples, oranges, bananas, marbles, and any other things in which he feels some interest. Nature does not set him upon an impossible task —*i.e.*, the getting of an idea under conditions which preclude its acquisition. She does not demand numerical abstraction and generalization when there is nothing before him for this activity to work upon. Let the actual work of the schoolroom, therefore, be consistent with the method under which Nature's teaching the child has already secured some development of the number activity.

In all psychical activity every stage in the development of an instinct prepares the way for the next stage. The child's number instinct begins to show itself in its working upon continuous quantity—that is, a whole requiring measurement. Every successive step in the entire course of development should harmonize with this initial stage. To get exact ideas of quantity the mind must follow Nature's established law; must measure quantity; must break it into parts and unify the parts, till it recognizes the one as many and the many as one. There can be no possible numerical abstraction and generalization without a quantity to be measured. Where, then, does the "single closely-observed object" come in as material for this parting and wholing?

Beginning with a group is in harmony with Nature's method; promotes the normal action of the mind; gives the craving numerical instinct something to work upon, and wisely guides it to its richest development. This psychological method promotes the natural exercise of mental function; leads gradually, but with ease and certainty, to true ideas of number; secures recognition of the unity of the arithmetical operations; gives clear conceptions of the nature of these operations as successive steps in the process of measurement; minimizes the difficulty with which multiplication and division have hitherto been attended; and helps the child to recognize in the dreaded *terra incognita* of fractions a pleasant and familiar land.

FORMING THE HABIT OF PARTING AND WHOLING.—The teacher should from the first keep in view the importance of forming the *habit* of parting and wholing. This is the fundamental psychical activity; its goal is to grasp clearly and definitely by one act of mind a whole of many and defined parts. This primary activity working upon quan-

tity in the process of measurement gives rise to numerical relations ; the incoherent whole is made definite and unified—becomes the conception of a unity composed of units. Every right exercise of this activity gives new knowledge and an increase of analytic power. At last the *habit* of numerical analysis is formed, and when it is found requisite to deal with quantity and quantitative relations, the mind always conceives of quantity as made up of parts—measuring units ; not invariable units, but units chosen at pleasure or convenience ; parts, given by the necessary activity of analysis, a whole from the parts by the necessary activity of synthesis. This means that always and inevitably from first to last the process of fractioning is present.

A CONSTRUCTIVE PROCESS.—This wholing and parting, as far as possible, should be a constructive act. The physical acts of separating a whole into parts and reuniting the parts into a whole lead gradually to the corresponding mental process of number : division of a whole into exact parts, and the reconstruction of the parts to form a whole. It can not be said that even the physical acts are wholly mindless, for even in these acts there must be at least a vague mental awareness of the relation of the parts to one another and to the whole. These physical acts of wholing and parting under wise direction lead quickly, and with the least expenditure of energy, to clear and definite percepts of related things, and finally to definite conceptions of number. The child should be required to exercise his activity, to do as much as possible in the process, and to notice and state what he is really doing. He should actually apply, for instance, the measuring unit to the measured quantity. If the foot is measured by two 6-inch or three 4-inch or four 3-inch units, let him first apply the number of actual units—two 6-inch, three 4-inch, and four 3-inch units—to make up the foot, and so on. By using the actual number of parts required he will have a more definite idea of the construction of a whole than if he simply applies one of the measuring units the necessary number of times. This operation with the actual units should precede the operation by which the whole is mentally constructed by applying or repeating the single unit of measurement the required number of times. It is the more concrete process, and is an effective exercise for the gradual growth of the more abstract times or ratio idea.

When the child actually uses the 1-inch or the 3-inch unit to measure the foot, his ideas of these units as well as of the measured whole are enlarged and defined. He applies the inch to measure the foot, and this to measure the yard, and the yard to measure the length of the room and other quantities. Let him freely practise this constructive activity, thus practically applying the psychological law, " Know by doing, and do by knowing." The 2-inch square is separated into four inch squares, or sixteen half-inch squares, and these measuring units are put together again to form the whole. Similarly a rectangle two inches by three inches, for example, is divided into its constituent inch squares or half-inch squares, and again reconstructed from the parts. A square is divided into four right-angled isosceles triangles, into eight smaller triangles, and the parts rhythmically put together again.

* * * * * * * * *

THE STARTING POINT.—It is commonly assumed that the child is familiar with a few of the smaller numbers—with at least the number three. He has undoubtedly acquired some vague ideas of number, because he has been acting under the number instinct ; he has been counting and measuring. But he does not, because he can not, *know* the number. He knows three things, and five or more things, when he sees them ; he knows that five apples are more than three apples, and three apples less than five apples. But he does not know three in the mathematical or psychological sense as denoting measurement of quantity—the repetition of a unit of measure to equal or make up a magnitude—the ratio of the magnitude to the unit of measure. If he does know the number three, in the strict sense, it is positively cruel to keep him drilling for months upon the number five and " all that can be done with it," and years upon the number twenty.

THE NUMBER TWO.—There can be little doubt that among the early and imperfect ideas of number the idea of two is first to appear. From the first vague feeling of a *this* and a *that* through all stages of growth to the complete mathematical idea of two, his sense experiences are rich in twos: two eyes, two ears, two hands, this side and that, up and down, right and left, etc. The whole structure of things, so to speak, seems to abound in twos. But it is not to be supposed that this common experience has given him the number two as expressing order or relation of measuring units. The two things which he knows are qualitative ones, not units. Two is not recognized as expressing the same relation, however the units may vary in quality or magnitude ; it is not yet one + one, or one taken two times—*two* apples, *two* 5-apples, *two* 10-apples, *two* 100-apples ; or *two* 1-inch, *two* 5-inch, *two* 10-inch, *two* 100-inch units ; in short, *one* unit of measure of any quantity and any value taken *two* times. But his large experience with pairs of things, and the imperfect idea of two that necessarily comes first, prepare him for the ready use of the idea, and the comparatively easy development of it. There must be a test of how far, or to what extent, he knows the number two. This is supplied by constructive exercises with things in which the idea of two is prominent. The child separates a lot of beans (say eight) into two equal parts, and names the number of the parts *two* ; separates each part into two equal parts, and names the number of the parts *two* ; separates each of these parts into two equal parts, and names the number of the single things *two*. Or, arranging in perceptive forms, how many *ones* in ⁚? How many *twos* in ⁚ ⁚? How many pairs of *twos* in ⁚ ⁚ | ⁚ ⁚? Similar exercises and questions may be given with splints formed into two squares, and into two groups of two pickets each ; with twelve splints formed into two squares with diagonals : then each square (group) formed into two triangles ; how many squares ? how many triangles (unit groups) ? how many *pairs* of triangles ? Exact measurements are to accompany such exercises ; the 12-inch length measured by the 6-inch, this again by the 3-inch ; how many 6-inch units in the whole ? 3-inch units in the 6-inch units ? *pairs* of 3-inch units in the whole ? Put 1-inch units together to make the 2-inch unit, the 2-inch units to make the 4-inch unit, two of these to make 8 inches, etc. It is not meant that these exercises are to be continued till the number two is thoroughly mastered ; they carry with them notions of higher numbers, without which a conception of two cannot be reached. Beware of " thoroughness " at a stage when thoroughness (in the sense of complete mastery) is impossible.

THE NUMBER THREE.—The number three is a much more difficult idea for the child. As in the case of two, he knows three objects as more than two and less than four ; three units in exact measurement as more than two, etc. But he does not know three in the strictly numerical sense. He may know two fairly well—as a working notion—without having a clear idea of the ordered or related ones making a whole. In three, the ordering or relating idea must be consciously present. It is not enough to see the three discriminated ones ; they must at the same time be *related*, unified—a first one, a second one, a third one, three *ones*, a one of three. Three must be three *units*—measuring parts of a qualitative whole—units made up, it may be, of two, or three, or four . . . or *n* minor units. If twelve objects are counted off in unit-groups of four each, fifteen objects into unit-groups of five each, eighteen objects into unit-groups of six each, thirty objects into unit-groups of ten each, the number in each and every case must be recognized as *three*. The number three, in fact, may be taken as the test of progress towards the true idea of number, and of the child's ability to proceed rapidly to higher numbers and numerical relations. If he knows three, if he has even an intelligent working conception of three, he can proceed in a few lessons to the number ten, and will thus have all higher numbers within comparatively easy reach.

The child is not to be kept drilling on the number three until it is fully mastered. What was said of two applies equally to three ; it can not be mastered without the implicit *use* of higher numbers. But, while dealing with higher numbers, three may be kept in view as the crucial point in the development of exact ideas of number. There are to be constructive exercises with various measuring units in which the threes are prominent. In getting the number two, there has been practically a use of three ; for where two is pretty clearly in mind, four is not far behind it in definiteness. When, for example, it is clearly seen that *two* 2-inch units make up the 4-inch unit, and two 4-inch units make up eight inches, the two 2-inch units are perceived as *four—i.e.*, ⁚ and ⁚ are seen as ⁚ | ⁚. But for the complete conception of *four* it must be *related* not only to two (⁚), but also to three ⁖ ; in other words, there must be rational counting—we *must pass through the number three* to complete recognition of the number four.

But, as already suggested, there are to be special exercises in *threes*. The dozen splints are to be used in constructing squares and triangles. How many squares ? How many splints needed to make one triangle ? Each of the two 6-splints is to be made into as many triangles as possible. How many triangles in each group ? How many in all ? " *Two* twos, or three triangles and one more." Each of the two 6-splints is to be made into as many pickets (Λ) as possible. How many pickets in each group. How many in all ? " *Two* 3-pickets." In the two 3-pickets how many 2-pickets ? Thus, also, with exact measurements. The 4-inch units in the foot, the 3-inch units in the foot and in the 9-inch measure, the 2 inch units in the 6-inch measure ; the number of three square-inch units in the 3-inch square, the number of 4-inch units in the 3-inch by 4-inch rectangle, the number of 3-centimetre units in the nine centimetres, etc.

OTHER NUMBERS TO TEN.—Just as when the child has a good idea of two he implicitly knows four, so when he has a good idea of three he has a fair idea of six as two threes. In ⁚⁚⁚ (symbolizing any units whatever) the two 3-units are *perceived* as six units. This perception is connected with 1, 2, 3, 4, of which the child has already good working ideas, and has only to be *related* with the number five in order to fix its true place in the sequence of related acts, one, two . . . six, which completes the measurement. In this we pass through five ; five is the connecting link between four and six in the completed sequence. Attention to the perception of *six* units in ⁚⁚⁚ discriminates the five units ⁚⁚· from both the four and the six, and conceives their proper relation to the four units which are a part of them, and to the six units of which they are a part. When there is a fair idea of four it is an easy step to a fair idea of eight ; 4 + 4 = 8. ⁚⁚ | ⁚⁚ is not much more difficult than 2 + 2 = 4— ⁚ | ⁚. From the examination of eight comes the perception of seven, and a conception of its relation as one more than seven and one less than eight. From five, ⁙, it is by no means a difficult step to ten, as two fives, ⁙ | ⁙ ; and a comparison of this with eight readily leads to the perception of nine, ⁙ | ⁚⁚ ; and to a conception of its relation to both eigh and ten.

IS TEN TWICE FIVE ?—From the error of considering the unit as a fixed thing, and number as arising from aggregating one by one other isolated things, arises apparently the fallacious idea that to master ten, for instance, is twice as difficult a task as to master five. Hence the prevailing practice of devoting six months of precious school life in wearying and repulsive " analyses of the number five," and finding " a year all too short " for similar analyses of the number ten. But it must be clear that by proper application of the measuring idea, wisely directed exercises in parting and wholing which promote the original activity of the mind in dealing with quantity, it is easy and pleasant to get elementary conceptions of number in general in the time now given to barren grinds on the number ten ; not scientific conceptions, indeed, but sufficiently clear working conceptions, capable of large and free applications in the measurement of quantity—applications which alone can make the vague definite, and at last evolve a perfect conception of number from its first and necessarily crude beginnings in sense-perception.—*From " Psychology of Number," McLellan and Dewey.*

" The only way to have a friend is to be one."

—*Emerson.*

Literary Notes.

The Arena has reduced its price to twenty-five cents per copy with the December issue, and the current number which opens the new volume is exceptionally strong. Personal Recollections of Lowell, Emerson, Holmes, Whittier, and Bryant, by such thinkers as Rev. Minot J. Savage, Rev. Edward Everett Hale, Rev. Frank B. Sanborn, and Rev. John W. Chadwick, will prove exceedingly interesting to those interested in America's great poets. This symposium is illustrated with good portraits of all the above-named poets. Another very striking feature of this number, which will interest scientific thinkers and especially physicians, is from the pen of the eminent French author, Henry Gaullieur, entitled "The Wonders of Hypnotism as Recently Demonstrated by Leading French Scientists." Prof. Richard T. Ely, of the University of Wisconsin, and Justice Walter Clark, LL. D., argue in favor of Government Control of the Telegraph. Prof. George D. Herron contributes an admirable paper on "The Opportunity of the Church in the Present Social Crisis." Prof. Frank Parsons discusses, in his masterly manner, the problem of municipal lighting. Helen H. Gardener, in a clear, able, and concise manner, argues on the question of Woman Suffrage. The editor of *The Arena* contributes a biographical sketch of the life of Sir Thomas More. Will Allen Dromgoole opens her brilliant serial story of Tennessee life, entitled "The Valley Path," which will run during six issues of *The Arena.* The frontispiece is a fine portrait of Prof. Richard T. Ely. There is also a full page portrait of Miss Dromgoole in her mountain costume—"Out for a Day's Fishing." Altogether, this number of *The Arena* is exceedingly attractive. In the body of the magazine there are one hundred and seventy-six pages, which, with the editorial Notes on Current Events and the World of Books—a review of the important new works of the leading houses of this country—make more than two hundred pages. The reduction of the price of *The Arena* to twenty-five cents per copy, without its diminution in size and with its increased excellence, will unquestionably make it one of the most popular magazines of the country.

Weak Women
and all mothers who are nursing babies derive great benefit from Scott's Emulsion. This preparation serves two purposes. It gives vital strength to mothers and also enriches their milk and thus makes their babies thrive.

Scott's Emulsion

is a constructive food that promotes the making of healthy tissue and bone. It is a wonderful remedy for Emaciation, General Debility, Throat and Lung Complaints, Coughs, Colds, Anaemia, Scrofula and Wasting Diseases of Children.

Send for Pamphlet on Scott's Emulsion. Free.
Scott & Bowne, Belleville. All Druggists. 50c. & $1.

ADDRESS ON IMPROVING THE **MEMORY**
MAILED FOR 10 CENTS
MEMORY LIBRARY 243 BROADWAY NEW YORK

. The . Educational Journal Clubbing List

It has been represented to us that many of the subscribers to THE EDUCATIONAL JOURNAL might be glad of an opportunity to get, in connection with it, one or more of the leading weekly newspapers or magazines of the day at reduced rates for the two or more. We are, therefore, making the best arrangements in our power to supply to every subscriber who wishes it any one or more of a good list of papers and magazines, on the terms given in the following table. Our arrangements are not far enough advanced to enable us to name more than a few Canadian periodicals in this number, but we hope to have the table considerably extended in our next and following numbers. Of course, the advantage of this clubbing arrangement is available only to those who pay cash in advance. Immediately on receipt of the subscription-price named for any paper or magazine on our list, we forward it to the proper office and have the subscriber's name and address put upon the mailing list, after which the subscriber must look to the publishers of the periodical in question for his copy.

The Educational Journal and The Weekly Globe, one year (Regular price, $2.50)	$1 75
The Educational Journal and The Weekly Mail, one year (Regular price, $2.50)	$1 75
The Educational Journal and The Canadian Magazine, one year (Regular price, $4.00)	$3 10
The Educational Journal and The Week, one year (Regular price, $4.50)	$3 25
The Educational Journal and the Toronto Saturday Night, one year (Regular price, $3.50)	$2 75
The Educational Journal and the Atlantic Monthly, one year (Regular price, $5.25)	$4 45
The Educational Journal and Scribner's, one year (Regular price, $4.50)	$3 75
The Educational Journal and The Century Magazine, one year (Regular price, $5.50)	$4.75
The Educational Journal and St. Nicholas, one year (Regular price, $4.50)	$3.75
The Educational Journal and Little Men and Women, one year (Regular price, $2.50)	$2.00
The Educational Journal and Babyland, one year (Regular price, $2.00)	$1.70
The Educational Journal and Littell's Living Age (Regular price, $7.50.)	$7 50
The Educational Journal and the Literary Digest (Regular Price, $4.50.)	$3.75

"We did not have a single Dollar's worth of Real Estate on our hands,
Or a single Dollar of Interest in Arrears."

The foregoing was the pleasing and important statement contained in the Annual Report of

The Temperance and General Life Assurance Company

for the year ending Dec. 31st, 1894.

It is but a sample of the many excellent features contained in this most satisfactory report, which, with a copy of the Company's paper, entitled "*Our Advocate*," is being sent to all applicants.

. . . Correspondence Solicited.

HON. G. W. ROSS, PRESIDENT. H. SUTHERLAND, MANAGER.

Probably You Want a Good Watch!

Positively We Want Money!

THAT'S WHY the people are taking so much interest in our "Special Fall Sale," which at present is a good thing for the purchaser.

Spanner
Dealer in
Good Watches
Think of a Solid Silver Waltham Watch for $6.00
344 Yonge St, Two doors south of Elm St.
Tel. 1396. TORONTO.

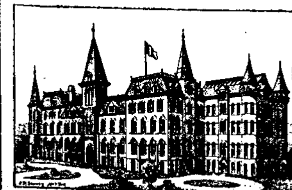
Cheap Dictionaries

Worcester's Unabridged	1877 Edition	$2.50
ditto	1888 Edition	3.50
Webster's Unabridged	1884 Edition	3.00
ditto	1888 Edition	3.50

These are bound in strong sheep binding, practically as good as new. Write quickly if you want one.

Educational Journal Pub. Co.
11½ Richmond St. W., TORONTO.

HYPNOTISM My original method $2. 100 page book 10c. One on Personal Magnetism 10c. Prof. E. J. Anderson, Masonic Temple, Chicago. E.J.10.



BUCKEYE BELL FOUNDRY, —CINCINNATI, O., U. S. A. Best Grade Copper and Tin School, College & Academy BELLS Price and Terms Free. Name this paper.

THE ASSOCIATED PRESS OF THE STATE of New York adopted the
Smith-Premier Typewriter
to take despatches direct from the wire.
PEARS & NEWSOME
Agents 38 Victoria St., Toronto

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

Four Highest Awards (of five made) at Chicago World's Fair, 1893.

Two thousand exact copies from one writing each copy having all the appearance of an original. Simple, rapid, clean, and durable. In valuable to teachers and schools for examination papers, circulars, blank forms, maps, etc. Used and endorsed by all the principal colleges and schools throughout the Dominion. Write for price lists and specimens.

NEOSTYLE CO.,
Simplex and Hektograph Pointers
8½ King St. East, TORONTO

Teachers

WE HAVE GOOD FACILITIES FOR SUPPLYING AT FAVORABLE TERMS
. . Any Book Published . .
ALSO
Maps, Globes . . . .
. . . . and School Apparatus

Send for our prices.

DO not fail, also, to note the clubbing list, which we are enlarging from week to week, and by means of which we can enable our subscribers to obtain a good magazine or weekly, in connection with THE JOURNAL, at a greatly reduced rate—in some cases at half-price.

THE EDUCATIONAL JOURNAL PUBLISHING CO.
11½ Richmond Street W., 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 prompt attention.

VANNEVAR & CO., Educational Booksellers,
438 YONGE STREET, - - - TORONTO.

ALMA
The Leading Canadian College for Young Women
ST. THOMAS, ONT.
Re-opens January 2nd, 1896.

Faculty includes three University Graduates, three first Professional Certificated Teachers, and Specialists in Music, Fine Art, Elocution, and Commercial Science, 20 in all. Courses of Study covering the curriculum for Public School Teachers' Certificates, Junior and Senior Matriculation, and Graduating Courses, (M.L.A. and M.E.L.) and in Piano, Voice, Harmony, Pipe Organ, Violin, etc., Drawing and Painting, Elocution.

☞ Alma's Record in the Departmental Examinations is unsurpassed. Buildings, furnishings and equipment, unequalled in Canada, and record of successful graduates in Music and Art unequalled. Special Rates to Teachers for the period January to June, '96. (Teachers' Certificates are accepted *pro tanto* in our courses.) For Calendar, etc., address, Principal Austin, B.A.

A Great New Book for Christmas

Samantha in Europe

BY

JOSIAH ALLEN'S WIFE

"I made Josiah a han'some dressin' gown out of some sofa covering I had in the house. . . . It was very dressy with its beautiful tossels."

SHE THAT IS JOSIAH ALLEN'S WIFE HAS BEEN TO EUROPE

"The supper that man eat was enormous."

Josiah went along. They went to England, Ireland, Scotland, and Wales, also to France, Germany, etc. The ADVENTURES of this droll pair in strange cities, royal palaces, and out-of-the-way places were most STRIKIN' and SKAIRFUL, and also HUMEROUS IN THE EXTREME. Their trip was one round of excitement. The book that describes it is bound to make a sensation, and all who read it will split their sides laughing

Prices, by mail or through agents,

CLOTH (gold, silver, and black), $2.50

HALF RUSSIA, - - - $4.00

Agents Wanted

Funk & Wagnalls Co. 11 Richmond St. W., TORONTO

The Subscription Price . . . . **REDUCED**

from **$8.00** to **$6.00** a year

Littell's Living Age

A Weekly Magazine of

1844 **Foreign Periodical Literature**

1896 Giving 3,300 Double Column Octavo Pages of Matter Unequalled in Quality and Quantity.

The thoughtful reader will find in THE LIVING AGE Food to Nourish, Stimulate and Inspire Thought.

THE WORLD'S GREATEST INTELLECTS

Contribute to make this periodical

Indispensable

TO EVERY READER OF INTELLIGENCE AND LITERARY TASTE

It has received the commendations of the highest literary authorities, the most distinguished statesmen, the brightest men and women of the country.

"Exhaustive Reviews of recent publications, the latest results of Scientific Research, Biographical Sketches of eminent characters, Travel, Exploration, Literary Criticism, and every phase of Culture and Progress in Europe, Fiction and Choice Poetry—all these make up The Living Age."—*Evening Bulletin, Phila.*

"One may find here all that it is worth his while to know of foreign literature in all its departments."—*Advance, Chicago.*

"It is of more value in a bright home to have Littell's Living Age in weekly visits than to have any two of the brightest and best magazines published in this country."—*Boston Herald.*

Heretofore the price has been **EIGHT DOLLARS** a year. With the first issue of 1896, the price will be . **SIX DOLLARS** a year.

"A vast amount of good reading at a merely nominal price."—*Boston Advertiser.*

To **New Subscribers** for the year 1896, remitting before January 1st, the numbers of 1895 issued after the receipt of their subscription will be sent **gratis.**

Club Rates.—For $9.00 The Living Age and any one of the American $4.00 monthlies; or for $8.00 The Living Age and any one of the $3.00 monthlies will be sent for a year, postpaid. Rates for clubbing The Living Age with other periodicals will be sent on application. Single copies 15c. each. For sale by all booksellers and newsdealers.

Address,

LITTELL & CO., P.O. Box 5206, Boston.

HOLIDAY GIFT BOOKS

THE LIGHT OF THE WORLD; or, THE GREAT CONSUMMATION

By SIR EDWIN ARNOLD. Authorized American edition. Illustrated with portrait and 14 full-page reproductions from Hoffmann's celebrated paintings on the Life of Christ. 286 pp. Price, *Edition de Luxe* (for presentation purposes), cream colored cloth, with illuminated designs in gold, $1.75. Post free.

"The diction is careful, noble, pure, and exquisite, as becomes the subject, the clime, and th characters; it will please all readers of poetry and fill Christian souls with rapture."—*N.Y. Herald*

"It does not urge you to believe something about Jesus, but it makes you feel His spiritual presence."—*Rev. Dr. E. C. Bolles, Brooklyn, N.Y., in sermon preached March 1st.*

HOW TO WIN

By FRANCES E. WILLARD, President of the World's W.C.T.U. With an introduction by Miss Rose E. Cleveland. Square 12mo. Cloth, $1.00.

CONTENTS.—Why I Wrote of Winning; I am Little, but I am I; Aimless Reverie *vs.* A Resolute Aim; The New Ideal of Womanhood; The New Profession; The New Ideal of Manhood; The Beautiful; The Decalogue of Natural Law; The Law of Habit; How do you Treat your Laundress? At what age shall Girls Marry? Woman's Opportunity in Journalism; Novel Reading; To the Young Women's Christian Temperance Unions; Unity of Purpose; Finally, Sisters.

"This book will be eagerly welcomed by a multitude of girls, and cannot fail to do them good."—*Woman's Journal, Boston.*

MY MUSICAL MEMORIES

By REV. H. R. HAWEIS, A.M. A Volume of Reminiscences. 12mo, 283 pp. Cloth, $1.00. Presentation edition, fancy sides, uncut edges, $1.50.

PARTIAL CONTENTS.—Early Life and Recollections; Hearing Music: Old Violins; Paganini; Wagner; Parsifa; Liszt.

"Of all Mr. Haweis' contributions to musical literature, none is richer or more readable than 'My Musical Memories'; in short, it is a treasury of musical intelligence such as only a critical taste and an almost infallible instinct could have gathered."—*The Musical Herald, Boston.*

A BUNDLE OF LETTERS TO BUSY GIRLS

By GRACE H. DODGE. A Book of Practical Sense. Should be in the hands of every girl. As is well known, Miss Dodge is a member of the New York Board of Education. No one knows better than she what girls need to know, and how to tell it to them. 16mo, 139 pp., cloth, 50 cents. Presentation edition, fancy sides, uncut edges, $1.00.

"The letters are written in the frank, familiar style which makes all Miss Dodge's talk so delightful."—*New York Herald.*

"The author, as one of the 'girls,' puts herself on their level, and speaks in their language, and voices their feelings, wants, and trials."—*South Western Presbyterian, New Orleans.*

THE EDUCATIONAL JOURNAL PUBLISHING COMPANY

11½ RICHMOND STREET WEST, TORONTO.

Please Verify this Calculation . . .

FROM	Your Estate without Protection	Your Estate, plus Life Insurance
SUBTRACT (as Death will)	Your SKILL, ENERGY, and BUSINESS REPUTATION	
REMAINDER	INSOLVENCY, Struggle, Humiliation	A COMPETENCY and Family Comfort

SEE AN AGENT OF THE

NORTH AMERICAN LIFE ASSURANCE CO.

or write direct to the Company, 22 to 28 King Street West, Toronto, for particulars of the Compound Investment Policy.

This plan of Insurance is specially adapted to meet the requirements of Teachers.

JOHN L. BLAIKIE, President. **WM. McCABE, F.I.A.,** Managing Director.

THE CANADIAN OFFICE & SCHOOL FURNITURE Co. Ltd. PRESTON, ONT

FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS

OFFICE. SCHOOL. CHURCH & LODGE FURNITURE

SEND FOR CATALOGUE.

The Educational Journal Teachers' Bureau

IMPORTANT NOTICE! BE SURE TO READ IT!

HAVING at length surmounted the initial difficulties connected with the organization of our proposed Agency or Bureau for the mutual benefit of School Boards, Principals, and all others requiring Teachers of any grade, on the one hand, and of Teachers of all classes seeking situations, on the other, we now respectfully invite Boards of Public and High Schools, Governors, Principals, and Managers of Colleges and Private and Proprietary Schools, and all others who are responsible for the choice and appointment of Teachers of any grade, to communicate with us, at the earliest possible date, giving us full particulars with respect to any vacant positions, their duties, the qualifications needed, salary offered, etc.

The cost to the Boards, etc., thus furnishing us with information will be nothing, and we hope to be able in very many cases to render valuable service, by putting them in communication with the most eligible applicants. We shall spare no pains in obtaining the fullest and most reliable information in our power in regard to the characters, qualifications, previous records, and so forth, of all applicants, and will in our own interests, as well as in that of all other parties concerned, use our very best care and judgment in making recommendations.

We also respectfully invite Teachers of all grades, from Public School to University, who may be seeking situations, whether they are for the time being unemployed, or are desirous of bettering present situations, to communicate with us.

If further information is desired, write to the address given below, enclosing a one-cent stamp, and by return mail will be sent you circulars containing full information on all points connected with the operations of the Bureau. Address,

THE EDUCATIONAL JOURNAL TEACHERS' BUREAU,

11½ RICHMOND STREET WEST, TORONTO

Albert College

BELLEVILLE, ONT.

Had three candidates for the Senior Leaving Examination and passed them all; and out of eleven candidates for Senior Matriculation ten were successful.

For Circulars address PRINCIPAL DYER.

LATIN MASTERED IN SIX WEEKS BY The DeBrisay Analytical Method. No rules, no rote-learning; the student is taught to read and write Latin IN THE ROMAN ORDER. Full course by mail, $6.00. Part I. mailed to any address, 25 cents. Pamphlet free. C. T. DEBRISAY, B.A., DeBrisay Latin School, Oddfellows' Hall, College and Yonge Sts., Toronto.

18-r?

The Fisk Teachers' Agency

Bank of Commerce Building, 25 King Street West, Toronto.

WE supply teachers with positions and School Boards with suitable teachers. Terms to teachers on application. No charge to Boards. When in the city call and see us.

W. O. McTAGGART, B.A. (Tor. Univ.), Man.

THE BRAHAM PEN . . .

Will write three to four letters with one dip. Saves blotting and time. We will send three to any address for 10c.

AGENTS' DOMINION SUPPLY CO., TORONTO, Ont.

Wm. E. BESSEY, M.D., C.M., M.C.P.S.

Graduate of McGill University,
SPECIALIST IN ORIFICIAL SURGERY

New Treatment of Chronic Nervous and Wasting Diseases, Piles and Rectal Diseases, Genito Urinary Affections and Diseases of Women, Morphine and Alcohol Habits.

284 Jarvis Street, - TORONTO, Ont.

Private accommodation for Patients.

BISHOP STRACHAN SCHOOL.

FOR GIRLS,
TORONTO, ONT.
(Established 1867.)

Will re-open, after the Christmas holidays, on Monday, January 13th, when new pupils will be received. Apply for Calendar to Miss Grier, Lady Principal.
Wykeham Hall, 31 College St.

A. MACDONALD,

355 YONGE STREET,

Merchant Tailor

Has the most complete and best assorted stock in the city. Your inspection of the following lines is invited: ALL LATEST STYLES IN

Cheviots Worsteds Serges

and a full assortment of Fall and Winter Overcoatings.

CLOSE PRICES. SATISFACTION GUARANTEED.

THE . . . RELIANCE

LOAN AND SAVINGS COMPANY OF ONTARIO,

33 Wellington St. E., - TORONTO.

Directors.—HON. JOHN DRYDEN, President, Minister of Agriculture, Province of Ontario. JAMES GUNN, ESQ., Vice-President, Director and Superintendent Toronto Street Railway. DAVID KEMP, ESQ., Sec.-Treas. Synod Diocese of Toronto. REV. G. I. TAYLOR, M.A., rector of St. Bartholomew's, Toronto. R. TELFER SHEILL, ESQ., B.A., M.B., 173 Carlton Street, Toronto. ALFRED MACDOUGALL, ESQ., Solicitor to Treasury of Ontario.

Payment of 55c. for 120 months will produce $100
Payment of 45c. for 144 months will produce $100
Payment of 35c. for 180 months will produce $100

NO ADMISSION FEE, FINES, FORFEITURES, WITHDRAWAL FEE.

Provides endowments for children.
Relief from payments during sickness or loss of employment.
Loans at lowest rates.

Address,
J. BLACKLOCK, Manager.

FOR mutual advantage, when you write to an advertiser please mention THE EDUCATIONAL JOURNAL.

OFFICIAL CALENDAR

OF THE

Educational Department.

December:

18. Written Examinations at Provincial Normal Schools begin. (*Subject to appointment.*)

19. Last day for notice of formation of new school sections to be posted by Township Clerk. [P. S. Act, sec. 29.] (*6 days before last Wednesday in December.*)

    Provincial Normal Schools close (Second session.) (*Subject to appointment.*)

22. High Schools first term, and Public and Separate Schools close. [H. S. Act, sec. 42; P. S. Act, sec. 173 (1) (2); S. S. Act, sec. 79 (1).] *High and Public Schools end 22nd December; Roman Catholic Separate Schools end 23rd December.*

25. CHRISTMAS DAY (*Wednesday.*)

    New schools and alterations of school boundaries go into operation or take effect. [P.S. Act, sec. 41 (2); sec. 81 (3); sec. 82 (3); sec. 87 (10); S. S. Act, sec. 4.] (*Not to take effect until 25th December.*)

26. Annual Public and Separate School meetings. [P. S. Act, sec. 17; sec. 102 (1); S. S. Act, sec. 27 (1); sec. 31 (1)] (*Last Wednesday in December, or day following if a holiday.*)

    Last day for submitting by-law for establishing Township Boards. [P. S. Act, sec. 54.] (*At Annual meeting of school section.*)

30. Reports of Principals of County Model Schools to Department, due. (*Before 31st December.*)

    Reports of Boards of Examiners on Third Class Professional Examinations, to Department, due. (*Before 31st of December.*)

31. Semi-Annual Reports of High Schools to Department, due. H.S. Act, sec. 14 (12)] (*Close of half year.*)

    Protestant, Separate School Trustees to transmit to County Inspector names and attendance during the last preceding six months. [S. S. Act, sec. 12.] (*On or before 31st December.*)

    Rural Trustees to report average attendance of pupils to Inspector. [P. S. Act, sec. 206.] (*On or before 31st December.*)

    Semi-Annual Reports of Public School Trustees to Inspector, due. P. S. Act, sec. (13).] (*On or before 31st December.*)

    Semi-Annual Report of Separate Schools to Department, due. [S. S. Act, 28 (18); sec 62.] (*On or before 31st December.*)

    Trustees' Report of Truant Officer, due. [Truancy Act, sec. 12.] (*Last Week in December.*)

    Auditors' Report of cities, towns and incorporated villages to be published by Trustees. [P. S. Act, sec. 107 (12).] (*At end of year.*)

Librarian House of Com
Ottawa 1may95