Scientific and Useful.

As a result of careful experiments in feeding stock, it has been found that in moderate weather they require about two and a-half pounds of hay per day, or its equivalent in other fodder, for every 100 pounds of their live weight to sustain the vital functions and prevent them from losing flesh. All that is gained in the way of milk, flesh, or wool, is derived from the food consumed beyond this amount.

BOILED BREAD PUDDING.—Crumb your stale bread in a pudding-pail and cover with sweet milk and set by the stove to warm and soften. Then to every quart of the mixture add two well-beaten eggs, a cup of sugar, and a handful of raisins, or sweet dried fruit of any kind. Do not have your pail full, as it needs some room to rise. Put the cover on tightly, and set it in boiling water, and do not allow it to stop boiling till done. If you try that once you will never make a boiled pudding again.

CIDER VINEGAR.—Expose a large surface of the cider to the action of the atmosphere; it will turn rapidly to vinegar; for instance, if the cider is put into buckets or tubs in the sun, and a mosquito netting is laid over the top of it, so that the flies will not touch it, and it is shielded from rain by boards, in three or four weeks you will have strong vinegar. The larger the surface exposed to the air, the sooner the fermentation will take place and the vinegar be formed. Place a bucket of cider behind a cooking stove constantly in use, and you will soon have vinegar. Warmth and air are all that are needful.

IMMENSITY OF SPACE.—In a recent lecture delivered in Edinburgh, on the "Stars," Prof. Grant gave a graphic idea of the immensity of space. He said a railway train travelling night and day, at the rate of fifty miles an hour, would reach the moon in six months, the sun in 200 years, and Alpha Centauri, the nearest of the fixed stars, in 42,000,000 of years. A ball from a gun, travelling at the rate of 900 miles an hour, would reach Alpha Centauri in 2,700,000 years; while light, travelling at the rate of 185,000 miles a second, would not reach it in less than three years. Light from some of the telescopic stars would take 5,760 years to reach the earth, and from some of these clusters, the distance is so great that light would take 500,000 years to pass to the earth; so that we see objects not as they really are, but as they were 500,000 years ago.

COLOUR BLINDNESS.—Dr. P. D. Heyser, of Philadelphia, has been making some interesting investigations concerning the capacity of the average railway employee to distinguish between the ordinary colours used for signaling on railways. Last summer he wrote to the managers of the different lines centering in Philadelphia, and proposed to begin a systematic examination of train-men, with a view to ascertaining to what extent colour-blindness prevailed among them. In October last he began operations, and has already examined the eyes of several hundred men. No official report has as yet been made, but it is understood that he has found a number of men who are utterly incapable of distinguishing between the different colours. Dr. Heyser's investigations are really more practical than those of Dr. Jeffries of Boston, who is examining the eyes of children in the public schools, for the lives of many passengers may at any time depend upon a man's ability to distinguish red from green.

USE OF WHEAT IN ENGLAND AND SCOTLAND.—Very little wheat was used during the earlier periods of English history by the poor in England and none in Scotland. Rye bread and oatmeal in 1596 were the staple diet of the servants in great families. In the reign of Henry VIII. the gentry kept the wheat for their own tables; their households were usually obliged to content themselves with rye, barley, and oats. In a monopoly granted by Charles II. in 1626, barley bread is stated to be the usual food for the ordinary sort of people. In 1727 a field of eight acres sown with wheat in the vicinity of Edinburgh was reckoned so great a curiosity, that it excited the attention of the whole neighbourhood. In 1770, no loaf bread was to be met with in the villages and country places of Scotland, oat cake and barley bannocks being universally used; but about the commencement of the nineteenth century a change began. Every village began to have its public baker of wheaten bread. In England, private baking was the rule; and even up to 1814, there was not a single baker in Manchester. All the chief towns of Great Britain have now several bakers' shops, and baking in private houses has very much diminished.

ROLLESTON HOUSE,

186 JOHN ST., TORONTO. BOARDING & DAY SCHOOL. MRS. NEVILLE.
Spring Term commences in April.

CANADA College

HAMILTON, ONT.

THE LEADING BUSINESS COLLEGE OF CANADA.

The proprietors of this popular Institution are determined to spare neither pains nor expense to give every student thorough satisfaction, and to maintain it on its present high standing as that of the leading Business College of Canada.

Our teachers are thoroughly practical, our course is practical, and our graduates are practical accountants.

Young men, patronize the best and most successful Business College in the Dominion, by taking a course in the Canada Business College, which is acknowledged by all to be the most complete school of business training in the country. Send for circular.

TENNANT & McLACHLAN.

SUPPLEMENTED

INTERNATIONAL

LESSON SCHEME.

Mailed free at 60 cents per 100.

The Supplemented Lesson Scheme is edited by the Rev. T. F. Fotheringham, M.A., and is well adapted for use in Presbyterian Schools. The printing is neatly executed; and the Schemes for 1879 are now ready for delivery.

Orders by mail promptly filled.

C. BLACKETT ROBINSON,
5 Jordan Street, Toronto. *Publisher.*

NEW BOOKS.

"Religion in England under Queen Anne and the Georges, 1702-1800." By John Stoughton, D.D. 2 vols. $4 50
"Brownlow North; Records and Recollections." By the Rev. Kenneth Moody-Stuart. 2 00
"The Last Scenes in the Life of our Lord." By the late Rev. D. T. K. Drummond, B.A. 2 25
"South Africa and its Mission Field." By the Rev. J. E. Carlyle, late of Natal 1 50
"The Superhuman Origin of the Bible inferred from itself." By Henry Rogers. 5th edition 2 25
"Through Bible Lands; Notes of Travel in Egypt, the Desert, and Palestine. By Philip Schaff, D.D. 1 75
"Saintly Workers; Five Lenten Lectures." By Fred. W. Farrar, D.D. 1 25
"The Bible and Criticism; Four Lectures." By Robert Rainy, D.D. 1 00
"The Inner Life as revealed in the Correspondence of Celebrated Christians." By Rev. T. Erskine 1 00
"Savonarola, His Life and Times." By Wm. R. Clark, M.A. 1 00
"The House of God the Home of Man." By the Rev. G. E. Jelf, M.A. 1 00
"Christ and the Christian in Temptation." By Octavius Winslow, D.D. 75

Mailed, postpaid, at prices quoted, by

JOHN YOUNG,
U. C. Tract Society,
102 Yonge Street.

February 19th, 1879.

JUST PUBLISHED.

44 pp. Price 10 Cents.

DOCTRINES OF THE

PLYMOUTH BRETHREN.

By Rev. Professor Croskery, M.A., Magee College, Londonderry.

A comprehensive and very complete exposition in short space of the Errors of Plymouthism.

Mailed to any address, postage prepaid, on receipt of price,

Wherever Plymouthism is trying to get a foot-hold within the bounds of Presbyterian congregations, parties would do well to circulate copies of this pamphlet.

In quantities, $8 per 100.

C. BLACKETT ROBINSON,
Jordan Street, Toronto. *Publisher.*

JOHN M. O'LOUGHLIN,

IMPORTER OF

Theological and Standard Books.

Agent for British, American, and Foreign Newspapers and Magazines,

Winsor & Newton's Artists' Materials.
243 ST. JAMES STREET, MONTREAL.
Orders by mail promptly filled.

JONES & McQUESTEN,

BARRISTERS & ATTORNEYS-AT-LAW,
HAMILTON, ONTARIO.

JNO. W. JONES, LL.B. I. B. M'QUESTEN, M.A.

ROBINSON & KENT,

(Late Duggan & Robinson.)

BARRISTERS-AT-LAW, ATTORNEYS, SOLICITORS, CONVEYANCERS, ETC.

OFFICE:—*Provincial Assurance Buildings, Court Street, Toronto.*

J. G. ROBINSON, M.A. HERBERT A. E. KENT

GORDON & HELLIWELL,

Architects and Civil Engineers,

23 Scott Street, Toronto.

Acoustics and Ventilation a Syecialty.

H. B. GORDON. GRANT HELLIWELL.

WM. H. SPARROW,

Importer and Dealer in

House Furnishing Goods,

Dealer and Jobber in Perambulators, Illuminating & Lubricating Oils, Lamps, Chandeliers, and all kinds of Kerosene Goods, manufacturer of Water Filters, Refrigerators, and every description of Tin, Sheet Iron and Copper Ware. Wolverhampton House, No 87 Yonge St., Toronto.

GRAIG'S CABINET FACTORY,

473 to 483 St. Bonaventure Street, Montreal.

PARLOR, DINING & BEDROOM SUITES in all modern styles.

CHURCH FURNITURE MADE TO ORDER

Retail Warerooms 468 Notre Dame St., Montreal.

WINDOW SHADES

AND

AWNINGS.

R. H. SMITH,
22 Wellington, Street, West.

GAS FIXTURES.

Ecclesiastical & Architectural Designs

made to order in a superior manner.

Dealers and Manufacturers of all kinds of

Gas Fittings, Brass Railings,
and Metal Ornaments.

D. S. KEITH & CO.,

109 KING ST. WEST, TORONTO

D. S. KEITH. J. B. FITZSIMONS.

R. MERRYFIELD,

PRACTICAL BOOT & SHOE MAKER,

THE OLD STAND

190 YONGE STREET.

Order Work a Specialty.

ESTABLISHED 1854.

A. McDONALD,

Renovator and Dyer

Of Gentlemen's Wearing Apparel,

24 ALBERT ST., corner of James, TORONTO.

ONTARIO STEAM DYE WORKS,

334 Yonge Street, Toronto,

THOMAS SQUIRE, - PROPRIETOR,

is now complete and in full working order. Fitted up with later improved machinery than any in Canada for finishing Silks, Ribbons, Dress Goods &c,

Silks and Ribbons a Specialty.

JAMES THOMSON,

IMPORTER AND DEALER IN

WALL PAPERS & STATIONERY.

Calcimining, Painting, Glazing, Paper Hanging and Tinting done to order.

Country orders promptly attended to.

64 Yonge St., Toronto. *P.O. Address Box 185*

THE PEOPLE'S FAVORITE

THE OLD ESTABLISHED

Cook's Friend Baking Powder.

PURE, HEALTHY, RELIABLE.

Manufactured only by
W. D. McLAREN,
Retailed Everywhere. 55 & 57 College St.

D. PRENTICE,

MERCHANT TAILOR,

257 YONGE ST., TORONTO.

J. GORMLEY,

WHOLESALE AND RETAIL

FAMILY GROCER!

North East Corner Jarvis and Duke Streets, Toronto.

A choice stock of Groceries and Provisions always on hand at reasonable prices for Cash. Fine Teas a specialty. City housekeepers will always find choice lots of

Roll and Tub Butter

from which to select.

The highest market price paid for good Butter and fresh Eggs.

GRANITE MONUMENTS

and Headstones, Red or Grey, unequalled for beauty and durability. Elegant Monuments always on hand.

We do not employ Agents, therefore purchasers will save their commission by ordering direct from

Fred. B. Gullett, Sculptor,

office and works corner of Church and Lombard Sts. Toronto.

CANADA

Stained Glass Works,

Established 1856.

Ecclesiastical and Domestic Stained Glass Windows executed in the best style.

Banners and Flags Painted to Order.

JOSEPH McCAUSLAND,
Proprietor

8 KING ST. WEST, TORONTO.

CANCERS CURED.

DON MOUNT, October 2nd, 1875.

O. C. WOOD, ESQ., M.D.

DEAR DOCTOR,—You enquired after my health and views relative to your treatment of the cancer or cancerous affection in my lip—now just eleven years ago—in reference to which I have to express my gratitude to an overruling Providence that I was led to an acquaintance with you, and became a subject of treatment by you. My lip had been sore at least seven years (7) years, exceedingly painful, and for two or three years before you took it in hand, almost unendurable. All sorts of experiments had been submitted to by me, embracing caustics, excoriation—everything indeed but the surgical knife—and in vain; for it always returned, and worse than before. Your treatment effected a speedy, complete and permanent cure. The cancerous humour seems thoroughly expurgated from my blood. I have now for a long time used nothing antagonistic as at first, nor any stimulant or tonic to keep up my system; and yet my health is perfect, and, at the age of sixty-six, I am laboring with a vigor equal, if not superior, to any other part of my laborious life. You are at liberty, to make any use of this you may judge proper. Yours gratefully, JOHN CARROLL, *Methodist Minister.*

Address, DR. WOOD, 167 and 169 Maria street Ottawa.

Golden Hours

FOR THE YOUNG.

A BEAUTIFULLY ILLUSTRATED

NON-DENOMINATIONAL

Sunday School Paper,

PUBLISHED MONTHLY.

It is sure to prove a great favourite with the children of

CANADIAN SABBATH SCHOOLS.

TERMS FOR THE CURRENT YEAR:

4 Copies to one address	.....	$1.00
10 " " "	.....	2.00
20 " " "	.....	3.00
50 " " "	.....	7.50
100 " " "	.....	15.00

Any number exceeding one hundred at same rate

C. BLACKETT ROBINSON,
No. 5 Jordan Street, Toronto.