

Professional.

SCIENTIFIC AND SANITARY.

THE JUDGES Of the  
WORLD'S COLUMBIAN EXPOSITION  
Have made the  
HIGHEST AWARDS  
(Medals and Diplomas) to

WALTER BAKER & CO.

On each of the following named articles:

BREAKFAST COCOA, . . . .
Premium No. 1, Chocolate, . .
Vanilla Chocolate, . . . . .
German Sweet Chocolate, . .
Cocoa Butter, . . . . .

For "purity of material," "excellent flavor,"  
and "uniform even composition."

WALTER BAKER & CO., DORCHESTER, MASS.

R. R. R.

**RADWAY'S**  
READY RELIEF.

CURES AND PREVENTS

Coughs, Colds, Sore Throat, Influenza, Bronchitis, Pneumonia, Swelling of the Joints, Lumbago, Inflammations, RHEUMATISM NEURALGIA, Frost-bites, Chilblains, Headache, Toothache, Asthma,

DIFFICULT BREATHING.

CURES THE WORST PAINS in from one to twenty minutes. NOT ONE HOUR after reading this advertisement need any one SUFFER WITH PAIN.

Radway's Ready Relief is a Sure Cure for Every Pain, Sprains, Bruises, Pains in the Back, Chest or Limbs.

It was the First and is the Only  
**PAIN REMEDY**

That instantly stops the most excruciating pains, allays inflammation and cures Congestions, whether of the Lungs, Stomach, Bowels, or other glands or organs, by one application.

ALL INTERNAL PAINS, Cramps in the Bowels or Stomach, Spasms, Sour Stomach, Nausea, Vomiting, Heartburn, Diarrhoea, Colic, Flatulency, Fainting Spells, are relieved instantly and quickly cured by taking internally as directed.

There is not a remedial agent in the world that will cure Fever and Ague and all other malarious, bilious and other fevers, aided by RADWAY'S PILLS, so quickly as RADWAY'S RELIEF.

25 cents per bottle. Sold by all Druggists.

**RADWAY & CO.,**

419 St. James Street, Montreal.

**RADWAY'S**  
PILLS,

Always Reliable.

Purely Vegetable.

Possess properties the most extraordinary in restoring health. They stimulate to healthy action the various organs, the natural conditions of which are so necessary for health, grapple with and neutralize the impurities, driving them completely out of the system.

**RADWAY'S PILLS**

Have long been acknowledged as the  
Best Cure for

SICK HEADACHE, FEMALE COMPLAINTS, INDIGESTION, BILIOUSNESS, CONSTIPATION, DYSPEPSIA, AND ALL DISORDERS OF THE LIVER.

Price 25c. per Bottle. Sold by Druggists.

Winard's Liniment for sale everywhere.

The first lighthouse in the United States was built on Little Brewster Island, Boston, 1715.

The most powerful dynamo ever constructed are the 5,000 horse-power dynamos for the Cataract Construction Company, Niagara. The dynamos in question will provide a two-phase alternating current, having a frequency of 25 alternations per second, and the voltage is to be 2,000.

Propeller shafts, where they pass through the stern of a vessel into the water, often rest in a tube which is lined with lignum vitae. Several attempts have been made, not with very good success, to substitute metal for this wooden bushing. Fresh experiments with an alloy called "Magnolia metal," very recently made by a British firm, are said to have resulted much more satisfactorily.

A clock tower which has been erected by the Chamber of Commerce of Rouen gives the time on three sides, and the height of the tide on the fourth, which fronts the harbor. The tide indicator consists essentially of a float, which, by means of a cord and counterweight hung on a drum, actuates a series of shafts with bevel wheel-gearing, and moves a hand or pointer on a dial like that of a clock, marked with the usual figures to show the level of the tide.—*Invention.*

For withstanding heat, the bars of a furnace grate made by an English firm, Caddy & Co., Limited, and exhibited at Chicago, are tubular; and the air which passes through them not only cools the metal, but itself becomes heated, and thus is enabled to perform another function also; when it comes in contact with the unconsumed gases and carbons, it affords oxygen for their consumption, and thereby reduces the smoke. The upper face of the bar is hardened by "chilling."

An apparatus designs to report the approach of a hostile vessel to a port in a dense fog has been perfected in France lately. It is called the "hydesphone," and consists of a bell buoyed out in the sea just below the surface, and so sensitive as to feel and telegraphically record the vibrations of a vessel's screw a mile off. An alarm on shore is operated by this mechanism, and it is believed that a person familiar with its workings can thereby discover the position of an enemy's ship accurately enough to explode a torpedo near the latter effectively.

An interesting study of the horse power of the whale has been made by the eminent anatomist, Sir William Turner, of the University of Edinburgh, Scotland, in conjunction with Mr. John Henderson, the equally eminent Glasgow shipbuilder. The size and dimensions of a great whale stranded several years ago on the shore at Longniddry furnished the necessary data for a computation of the power necessary to propel it at the rate of twelve miles an hour. This whale measured 80 feet in length, 20 feet across the flanges of the tail, and weighed 74 tons. It was calculated that 145 horse power was necessary to attain the speed mentioned.

Operating lock gates electrically is proposed by Thomas Munro, M. Inst. C.E., Superintendent of the Soulanges Canal in the Province of Quebec. Mr. Munro writes us that an electric motor transmits power through a train of gears to a pinion which works into a rack placed on the side of a 6 inch 1 beam. The end of this beam is attached to the top of a lock gate which it pushes shut or pulls open as may be required. The operation takes about 55 seconds, and is performed with perfect ease. It is proposed to operate two pairs of gates and four filling and emptying sluices from one point in the centre of the lock and upon which ever side may appear advisable.—*Engineering Record.*

Thin and impure blood is made rich and healthful by taking Hood's Sarsaparilla. It braces up the nerves and gives renewed strength.

**D. R. C. J. RODGERS,**  
DENTIST  
Suite 5, Oddfellows' Building, Corner  
Yonge and College Sts.  
TORONTO.  
Telephone 3904.

**M. R. A. S. VOGT,**  
ORGANIST AND CHOIRMASTER JARVIS  
STREET BAPTIST CHURCH.  
Teacher of the Pianoforte and Organ at the Toronto  
Conservatory of Music, Dufferin House and Moulton  
College.  
RESIDENCE, 605 CHURCH ST.,  
TORONTO.

**M. R. J. D. A. TRIPP,**  
CONCERT PIANIST and TEACHER.  
Only Canadian pupil of the great composer and  
pianist, MOSZYKOWSKI. Concert engagements and  
pupils accepted.  
TORONTO CONSERVATORY OF MUSIC  
AND 20 SEATON ST.

**M. R. W. E. FAIRCLOUGH, F.C.O., ENG.**  
ORGANIST AND CHOIRMASTER ALL SAINTS'  
CHURCH, TORONTO.  
Teacher of Organ, Piano and Theory  
Exceptional facilities for Organ students. Pupils  
prepared for musical examinations. Harmony and  
counterpoint taught by correspondence.  
6 GLEN ROAD OR TORONTO COLLEGE OF MUSIC.

**W. O. FORSYTH,**  
Lessons in Piano Playing and Theory. Private  
pupil of the great and eminent teachers, Prof. Martin  
Krause, Dr. S. Jadassohn, of Leipzig, and Prof. Julius  
Epstein of Vienna.  
Applications can be made by letter or in person to  
Address, 112 College Street, - TORONTO.

**W. KUCHENMEISTER,**  
VIOLIN SOLOIST AND TEACHER.  
Late a pupil of the Raff Conservatory at Frankfort-  
on-Main, and of Professors H. E. Kayser, Hugo Heer-  
mann and C. Bergheer, formerly a member of the  
Philharmonic Orchestra at Hamburg, (Dr. Hans von  
Bulow, conductor.)  
Studio, Odd Fellows' Building, cor. Yonge and Colleg  
Streets, Room 13, or College of Music  
Residence, Corner Gerrard and Victoria Sts.  
Telephone 980.

**SIGNOR LEONARDO VEGARA**  
Of the Royal Italian Opera, Convent Garden, Lon-  
don, Eng., Professor of Singing at the Loreto Abbey  
and Toronto College of Music.

SINGING.

Grand Opera, Opera Comique, Oratorios, Songs  
taught in English, Italian, French, German, Span-  
ish. Public introduction to Operatic and Concert  
Stage in United States and Europe.

VOICES TRIED FREE.

Apply to residence, 586 Spadina avenue mornings  
and evenings.  
City Office.—Williams & Son, 143 Yonge Street and  
Toronto College of Music.

**MISS FALLAS, Mus. Bac.**  
Fellow of the Toronto Conservatory of  
Music, Organist Central Presbyterian Church, PIANO,  
ORGAN AND THEORY. Toronto Conservatory of Music  
and 99 Bloor Street West.

**MRS. & MISS DRECHSLER-ADAMSON,**  
VIOLINISTS.  
Will receive a limited number of pupils at  
their residence, 67 BLOOR ST. EAST.

**J. LEWIS BROWNE,**  
(Organist and Choirmaster Bond St. Cong. Church)  
CONCERT ORGANIST  
Pupils received in Organ, Piano, Harmony and  
Instrumentation. 72 SHUTER STREET.  
Reception hours 3 to 5 p.m. daily.