Scientific and Aseful.

ACOUSTICS IN PUBLIC BUILDINGS.

A. W. C., in the Scientific An rican, states the inability to hear distinctly in our public buildings is due to the architects, and that those gentlemen should remember that an ounce of provention is worth more than a ton of cure. "Please advise any of your friends who contemplate building a church, hall, lecture-room, or other public building, to observe the following rule, and they will find the punciples thereof to be true:—" Let the whole structure be held in subservience to the auditorium, regardless of needless ornamen ation, and let the clear inside lines thereof be as follows: Make or take the whole length as one sum in feet, make the whole width one-half that sum. and the whole height, to the center of the coiling, one half of the latter sum."

A PASTE THAT WILL KEEP.

The great difficulty with paste is that it sours and moulds so quickly that it does not pay to mix a large quantity, but the Journal of Applied Chemistry gives a resistence market. cipe for making a perpetual paste, thus: Dissolve a teaspoonful of alum in a quart of water. When cold, stir in as much flour as will give it the consistency of thick cream, being particular to beat up all the lumps; stn in as much powdered resin as lumps; sen in as much powdered resin as will lay on a dime, and throw in half a dozen cloves to give it a pleasant odor. Have on the fire a teacup of boiling water, pour the flour mixture into it, stirring well at the time. In a very few minutes it will be of the consistency of mush. Pour it into an earthen or china vessel; let it cool; lay a cover on and put in a cool place. needed for use, take cut a portion and soften it with warm water. Paste thus made will last twelve months. It is better than gum, as it does not gloss the paper, and can be written on.

SOFT SOAP AND VINEGAR FOR THE HANDS.

A correspondent of the Scientific Amer-"Our men in the shop use soft soap to remove the grease and dut from their hands when they quit work. This, they find, causes cracks to come; but if they dip them in vinegar just after washing with soft soap, their hands will remain soft and smooth, and heal up." The editor says, commenting on the above statement : "In the ordinary careless manufacture of soft soap, there is apt to be sometimes an excess of alkali, or lye, above that necessary for complete saponification. This has a caustic action on the skin, making it rough, and otherwise injuning it. After using soap of this kind washing in yunggar approva of this kind washing in vinegar removes the alkali from the hands. Vinegar, being an acid, combines with the alkali, forming neutral and soluble salt."

THE LANGUAGE OF ANIMALS. -

Certainly all animals have a mode of expressing feelings to others of the same to others of the same species Wolves arrange attacks, hunting together in packs. They are all animated by the same thought, and therefore travel with energy for hours to accomplish a design of which each member of the enterprise hear a rational understanding. prise has a rational understanding. Deer and buffalo act in concert in regard to seeking food or water. Perhaps the govern-ment of wild horses, through signs which any horse in a group of hundreds instantly recognizes as an imperative command of one individual, who prances up and down like one in authority, is about as perfect and as mysterious as anything in natural history. Birds and dogs are exceedingly sociable, enjoying the society of their kith and kin as much as country cousins when they visit city relatives. Rats and mice, too, and even insects are supposed to h ave the faculty of communicating their wishes and opinions to each other.

METALLIC PENS.

Iron and gold have almost entirely dis-placed the "gray-goose quill" as an instru-ment for writing. In Birmingham the number of steel pens made weekly is about 90,000 gross, or 14,120,000 separato pens. Thirty years ago pens were sold at wholesale for five shillings a gross; now, pens as good or better, may be had for three half-pence per gross. When it is remembered that each gross requires 141 pieces of steel to go through at least twolve processes in the course of manufacture, the fact that 144 complete page can be said for three helfcomplete pens can be soft for three nau-pence, after providing for material, paying wages to work-people, and leaving a profit to maker, is a convincing proof of the re-sults attainable by the exercise of mechan-ical ingenrity and division of labor. Gold pens are tipped with iridium, making what are commonly colled "diamond points." pans are tipped with rudium, making what are commonly ca'led "diamond points." The iridium for this purpose is found in small grains in platinum ore, slightly alloyed with the latter metal. In this form it is exceedingly hard, and well adapted to the purpose of the gold-pen maker. The gold for pens is alloyed with silver to about sixteen carate fineness, rolled into thin strips. for pens is alloyed with silver to about sixteen carats fineness, rolled into thin strips, from which the blanks are struck. The under side of the point is notched by a small circular saw to receive the iridium point, which is selected by the aid of a microscope. A flux of borax and a blow-pipe flame secure it to its place, and the point is then ground on a copper wheel with emery.

—Technologist for May.

New Advertsements.

CONSUMPTION CURED.

To the Editor of British Americian Presbyteran ESTERUND PRINNS

Will you Please inform your readers that I have

CURE FOR CONSUMPTION
and all disorders of the Threat and Lungs, and that
by its use in my practice, I have sured hundreds or
cases, and will give

ora case it will not beneath Indeed, so strong is by faith I will as die Sample, free, to any sufferer addressing rac.

Please show this letter to any one you may know who a suffer my from these discusses and obligg.

Billiam No. F. BURT.

OF William St., New York.

Miscellaneous.

FOR THE MOLIDAYS

Pic-Nic, Excursion, and Camping Parties.

(0)

Supplied with all requisites CANNED FRUITS, CANNED FISH,

CANNED VEGETABLES, &c. MILLS BROS. Cor. of King St., and East Market Square,

R. A. REEVE, B.A., M.D.,

OCULIST & AURIST,

22 Shuter Street, corner of Victoria,

TORONTO.

FIT'S CURED FREE!

Any person—ffering from the above diseas quested to address Dr. Price, and a trid bo medicine will be forwarded by Express, FREEL

Dr Price is a regular physician, and has made the treatment of

FITS OR EPILEPSY a study for years, and he will warranta cure by the use of his remedy.

Do not fail to send to him for trial bottle; it costs nothing, and he WILL CURE YOU,

no matter of how long standing your case may be or how many other remedies may have failed. Cuculars and testimonials sent with FREE TRIAL BOTTLE.

DR. CHAS. T. PRICE, 6: William Street, New York

BLAIKIE & ALEXANDER,

WILLIAM ALEXANDER 0 KING ST. EAST, TORONTO.

Members of the Stock Exchange,

STOCK BROKERS & ESTATE AGENTS

Stocks, Bonds, Debentures, Houses, Lands, &c., bought and sold.

MONEY loaned on Mortgage Mortgages negotiated. Investments made

Orders by letter or Telegraph will receive prompt attention.

D. S. KEITH & CO.,

PLUMBERS, GAS & STEAM FITTERS BRASS FOUNDERS AND FINISHERS,

Manufacturers of

PETROLEUM GAS WORKS,

Engineers and Plumbers' Brass Work, &c., Consor vatory and Green House Heating.

Importers and Wholesale Dealers in Iten and Lead Pipes and Plumbers' Materials.

109 KING STREET WEST, TORONTO

SPRING FASHIONS, 1874.

NEW YORK PATTERN HOUSES. 110 Yonge Street, Toronto.

MILLINERY_ DRESS MAKING.

And Ludies' Outfitting Establishment.

Mantles, Staple and Fancy Dry Goods, PRINCE ORGANS, Berlin Wool, &c

UNDER-CLOTHING MADE TO ORDER

J. SUTHERLAND

Agent for Mme. Demorest's Reliable Pattern

The assortment comprises all the standard and useful Styles, together with New and Elegant Designs in Spring Goods.





Just arrived from Europe for sale cheap JOHN WANLESS, 172 Yonge St

TORONTO.

A LARGE ASSORT-KENT_OF

GOLD & SILVER

WATCHES

AND

JEWELERY

TICTORIA WOOD YARD,

Crder Office 40 VICTORIA STREET.
Directly Opposite.

AXD COR. QUEEN and BRIGHT STREETS

All kinds of Coal and Wood on mand and for sale at lowes rates. Wood by the car-load. Orders.
Marrow-mage Wood by the car-load. Orders.
promptly delivered. I. & A. MOINTYRE. J. &IA. MOINTYRE: Groceries.

JAMES SHIELDS & CO.,

IMPORTERS OF

GROCERIES

And Manufacturers [of

BISCUITE AND CONFECTIONERY.

Corner of Yonge and Temperance Sts.,

 ${ t TOFONTO}.$

Music.

MASON & CABINET

For Churches and

THE ONLY American Musical Instrument of such extraordinary at 1 recognized excellence as to command a wide sale in Europe, notwithstanding competition there with products of cheap labor.

ALWAYS awarded highest premiums, including the MEDAL AT THE PARIS EXPOSITION. besides having been preferred above all the other Organs at the Industrial Exhibitions in America.

UNIVERSALLY recommended by eminen Musicians, as possessing excellencies net attained in any others. See opinions of ONE THOUSAND MUSICIANS in Testimonial Circular.

ILLUSTRATED CATALOGUE and TESTIMONIAL ORGANS, which may save purchasers from disless Instruments or payments of high prices,

MASON, RISCH,

GENERAL AGENTS FOR CANADA.

PIANOS.

THE MATHUSHEK

Is endorsed by the most noted artists of the day as the BEST PIANO MADE.

THE FISHER,

Is thoroughly made, and a most; de-lightful Parlour Instrument.

THE BEAUTY

Seven octave, overstrung, rosewood, all round corners, three mouldings, back finished like front, carved legs, at \$425. Endorsed by Jules Benedict, Pianist to the Queen, Thalberg, &c., and awarded gold medal at the Rouselar Institute.

The best in the market. 'All Instru-ments WIOLERALE AND RETAIL, and warranted five years. We are in a position to supply local deulers in every part of the Dominion at manufacturers' lowest wholesale

NORRIS & SOPER

ADELAIDE-ST., TORONTO.



For fattoning and bringing into condition Horses Cows, Calvos, Sheep and Pigs—used and recom-mended by first-class Breeders Milk Cattle pro-duce more milk and butter

It fattens in one fourth the usual time, and saves ood. A DOLLAR BOX CONTAINS TWO HUNDRED

HUGH MILLER & CO., Agricultural Chemist. 167 King St. East, Toronto.

For sale by Druggists everywhere. TICKS ON SHREP

Miller's Tick Destroyer promotes the growth of the wood, destrys the Ticks, and improves the condi-tion of the animal. A 35c, box will clean 20 sheep or 20 ambs. Sold by Druggists and Storekeepers.

HUGH MILLER & CO., Proprietors, Toronto.



CANADA

GLASS WORKS STAINED ESTABLISHED 1856

FIRST PRIZE AT PROVINCIAL EXHIBITION, 1871-72 Ecclesiastical and Domestin Standed Glass Win

DANNERS AND FLAGS PAINTED TO ORDER JOSEPH MCCAUSLAND, PROPRIETOR,

Dyer.

ESTABLISHED 1954.

A MCDOALD,

Renovator and Dyer, of Gentleman's Wearing Apparel,

No. 24 Albert Street, Cor. of James, TORONTO.

HARDWARE.

RODGERS' Ivory handled Table and Dessert Knives RODGERS' Sotts, Carvers and Steels

ELECTRO-PLATE Dessert,

Table Mats, Tea Bells, &c., &c., &c.

and

Tea Spoons.

& SOM, LEWIS RICE HARDWARE MERCHANTS, TORONTO:

Music.

HAMLIN; ORGANS.

the Family Circle,

dealt wit

EXCLUSIVELY employing several important inventions, and emotioning every 1 oal maprovement.

THE MOST EXTENSIVE and complete factoproducing betto, k at less cost than otherwise

PRICES a low[as consistent] with scrupulous employment of only best material and workmanship. Ministers and Churches liberally

CIRCULAR, with Important Information about app:intment in purchase of inferior or worthsent free.

& **NEWCOMBE**

81 KING STREET EAST, TORONTO.

Actuil Dry Goods.

Spring Hosiery.

CRAWFORD & SMITH

Invite special attention to their New Stobk of MRINO AND COTTON HOSIERY!

Cmildren's and Ladies' Scotch Merino Hose, Children's and Ladies' English Merino Hose. Children's Coloured and White Cotton Hose, Ladies' Coloured and White Cotton Hose, Children's and Ladies' Barbriggan Hose. Children, s and Ladies' Lisle Thread Hose L. adie Scotch and English Merino Underclothing nts' Scotch and English Merino Underclothi g

91 KING STREET EAST.

Andertaking.

STONE, H.

UNDERTAKER,

347 Yonge Street, Toronto

The surplied to order. Fisk's Metalic Burial Cases always on hand. Coffins supplied when required.

YOUNG, J.

Late from G. Armstrong's undertaking Establishment

Montreal UNDERTAKER, 351 YONGE ST TORONTO.

427 Funerals turnished with every requisite! Agent for Pisk's Patent Metallic Burnal Cases

Medical and Dental.

R. G. TROTTER, DENTIST,

53 King Streetz East, Opposite Toronto Street

Toronto, Ont.

W. ELLIOT, DENTIST,

Usos his own now PATENT FILLERS,: EXTRACTORS,

and MOULDING-FLASKS. 43 and 45 King-st. West, over E. Hooper & Co Druggists.

JAS. BASTEDO, SURGEON DEN J TIST, 34 King Steet West, Hamilton, Ont. RESIDENCE-73 Bay, Street North' where appoint monts can be made.

\$5 TO \$20 per day. Agonts wanted: All classes of working people, of ofther to me in their spare moments, or all the time, that at anything else. Particulars free. Address. TINSON & CO. Portland, Mgine.

TF YOU WANT THE

BEST AND CHEAPEST

GREEN AND BLACK TEAS,

bold in Canada, call on or send your orders

VICTORIA TEA WAREHOUSE

The oldest and most reliable Tea Store in the Do-

93 King Street East, (SIGN OF THE QUEEN),

ity Square. Where you can select fram a Stock of over 3,000 packages, computing ever 30 varieties, grades and mixtures put up in 5,10-15 and 20 lb. Cannisters and Cattics at the prices given in 1845, and also in original packages of 20,40 and 60 lbs., at the

And 258 Yonge Street, Corner of Trin-

LOWEST WHOLESALE PRICES

GREEN TEAS. No.
1 Hyson Twankay
2 1 me Moyune Young Hyson
3 Supernor do
4 Extra Fine do
6 Company do 4 Extra Fine 5 Curious 6 Exti i Curious 7 Fine Old Hyson 8 Superit do 9 Dxta Fine do 10 Finest do do 10 Finest do
11 Superior Gunpowdor
12 Extra Fine do
13 Extra Curious do
14 Fine Imperial
15 Superior do
16 Extra Movume Imperial
17 Very Superior do
18 Natural Japan
19 Fine Cultivated Japan
20 Superior do
21 Extra Fine do
22 Finest Imported

26 Fine Breakfast Congou 27 Superior do 28 Extra Kussow do do BLACK AND MIXED TEAS. 28 Extra Kussow do
29 Extra Funedo do
30 Frinest do do
30 Frinest do do
30 Frinest do do
31 Extra Funedo do
32 Extra Funedo do
33 Superior do
35 Extra Fine do
36 Frinest Assim
37 Fine Oolong
38 Superior do
39 Ex Frine do
40 Finest Imported
4 Frine Manderin Mixturo
2 Superior do
4 Extra Fine do
4 Extra Fine do
5 Extra fine do
6 Finest Imported
6 Finest Imported
7 Fine Houone do best imported—the

Made in one minute without boiling, put up in 2, 10 and 20 lb. tins, at 25 and 30c. per lb. Guaranteed superior to all others. LSC All orders by mail and otherwise punctually attended to 25 lbs. of Tea and upwards shipped to one address to any Railway Station in Ontario free of charge.

SOLUBLE COFFEES

EDWARD LAWSON,

BRANTFORD YOUNG LADIES' COLLEGE,

IN CONNECTION WITH

THE PRESBYTERIAN CHURCH. The Directors of the Bantford Young Ladies' Colledge are now prepared to receive applications from persons qualified to fill the different positions in the above Institution.

The Educational Staff will probably consist of a Principal, Lady Principal, Teachers of Vocal and Instrumental Music, Piench and German, the Classus and Mathematics, Drawing and Painting Mental and Moral Philosophy, English History and Literature, Natural Sciences, and Biblical Instruc-

A Matron for the College will also be required. A matton for the College will also be required.

Applications should be accompanied with copies of testimonials and any other information the applicant may consider advisable, and should be sont to the Secretary or Rev. Wm Cochrane on or before 25th of July next.

The College is expected to be formally opened on the 1st October no t. Applications for admission of Students may be addressed to the Secretary. Rooms will be alloted in the order of the application.

Further information may be had on application to the Secretary

B. F. FITCH, Secretary, IN THE SURROGATE COURT OF THE COUNTY OF YORK.

In the matter of the guardianship of the infant children of Samuel Higgins late of the City of Toronto, in the country of York, Hotel keeper, deceased.

TAKE NOTICE

That after the expiration of twenty days from the flist insertion letter, application will be made to the Judge of the Surrogate Unit of the County of took by Ann Castle, the mother of said Infant emilien, to be appointed guardian over such in-fants

eminera, to be appointed guardian over such infants.
This notice is given under the provisions of section 3 of t hapter 74 of the consolidated statutes of Upper Canada. CAMERON, McMICHAEL, & HOSKINS,

Solicitors for said a plicant, Ann Castle Dated the 10th day of June, A.D., 1871.

A LEX. GEMMELL,

BOOTMAKER,

Sign of the "Golden Boot,

97 KING STREET, WEST, Has in Stock a very large assortment of Gentlem Sewed Boots, Home Made. First-class English Boots at reasonablelprices:

R. MERRYFIELD

Boot and Shoe Maker.

190 YONGE STREET.

A large and well assorted Stock always on hand

