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Canadian Druggist

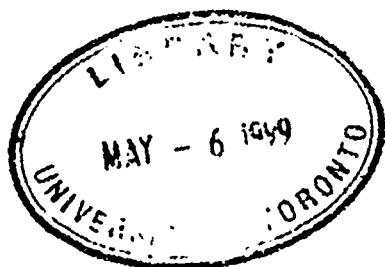
A MONTHLY JOURNAL

Devoted to the Interests of the General Drug Trade and to the
Advancement of Pharmacy.

VOLUME X.

January to December, 1898.

W. J. DYAS,
63 YONGE STREET, TORONTO, CANADA



The Canadian Druggist

INDEX TO VOLUME X.

Amalgamation	7	Development of Serum Therapy	212	L'A Assistance Publique de Paris	179
Advertising	21, 47, 61, 92, 116, 143, 166, 189, 289	Dominion Board of Registration	256	Lanoline, Facts about	88
An Explanation	32, 221	Drug Store Trifles	177	Montreal College of Pharmacy Examinations	8
Amongst our Advertisers	22, 47, 70, 91, 118, 112, 166, 214, 238, 261	Drug Crumbs	183	Miscible Tar Oil	10
An Undesirable Trait	26	Drug Sundries Booklet	191	Myopia	18, 13, 67, 91
Amendments to the Amended Act	26	Dose Table	276	Mesquite Seeds	31
Association W. O. and P. M. D.	31	Drug Trade in France	279	Magazines and Books	23, 72, 95, 119, 143, 167, 229, 233
Acetylene Gas	35, 71	Examinations, College of Pharmacy	10	Montreal Notes	31, 79, 127, 247, 176, 271
Autone as a Resin Solvent	37	Estimation of Aloes, The	10	Measurement of Prisms by the Metric System	38
Answers to Correspondents	55	Examinations, Ontario College of Pharmacy	11, 100, 212	Manitoba Pharmaceutical Association	31
Annual Inventories	58	Elixir and Syrup of Quinine, Iron and Strychnine	14	Meetings held	79, 253
An Official Pronouncement	81	Phosphates	14	Manufacturers of Lime Juice, The	105
Alcoholic Menstrua of the New Pharmacopoeia	102	Estimation of Menthol	14	Microscopical Mounts	111
Among the Buchu Shrubs	101	Emergencies: How to Treat Them	31	Medical Etiquette in China	112
Antiseptic Dressings and Surgical Accessories	110	Editorial Notes	170, 122	Making and Filling Soft Gelatin Capsules	131
Additions	122	Examination Questions, Optical Institute	140, 281	Manitoba Notes	138
Artificial Essences	132	Electro-Chemistry	228	Metric Weights and Measures	133
An Optical Association	146	Eye Massage	245	Missouri Pharmaceutical Association	158
American Pharmaceutical Association	136, 196	Evans-Abbey Affair	244	Methylated Spirits in Photography	218
Apprentice Aphorisms	155	Essences and Artificial Perfumes	185	Matter of Supreme Importance	218
A. Ph. A. Meeting, The	218, 221	Errors in Compounding, To Prevent	31	Making Emulsions	177
Advertising Criticisms	211	England vs. Kerry	292	Maize Oil, The Use of	115
Appeal Dismissed	103	Fehling's Test (Quantitative)	10	Milk Somatose	233
Amylolytic Ferments	178	Five Senses in Pharmacy, The	13	Never Miss an Opportunity to Learn	31
Apprentice Petitions	182	Fish Meat Extract	11	New Bitter Water, A	81
An Interesting Chemical Lecture Experiment	181	Formulary	19, 45, 69, 93, 117, 141, 161, 209, 185, 231, 257, 281	No Doctor There	101
Acquired Hypermetropia	209	Few Hints to Employees, A	62	Nature's Soaps	135
Aromatic Waters	271	Formaldehyde	83	New Oil Color	135
Breathing in Rooms Filled with Noxious Gases	32	Formulae Wanted	56	New Brunswick Pharmaceutical Association	199
Business Helos	70, 78	Fly Pad Case, The	128	New Artificial Ivory, A	206
British Columbia Notes	76, 151, 271	Flash Light Work for Beginners	137	New Edible Oil, A	206
Bacteriology as a Side Line for Chemists	57	Fraser, Mr. A. R.	198	National Wholesale Druggists Association	251
Bicycle Cements	109	Federated Pharmacy	169, 200	Nova Scotia Notes	103, 127, 151, 176, 271
Business Maxims	110	Finest Price List	247	No. 1	211
Baron Lyon Play fair, The Late	122	Gelatin, a New Dressing for Skin Diseases	35	New Alkaloidal Reactions	251
Ball Nozzle Syringe, The	138	Geosore	35	Nonconductive Glass	175
Bachelors of Pharmacy	138	Cleanings	106, 156, 229, 252, 181, 63	New Form of Sieve	177
Brighter Prospects	145	Ginseng	130	Nourishing Part of Meat, The	184
British Optical Association	195	Good Showing, A	135	News Items	223
British Columbia Pharmaceutical Association	148	Grumbles on the British Pharmacopoeia, 1898	116	Optical Department	20, 42, 66, 90, 115, 110, 161, 188, 211, 235, 269, 284
British Pharmaceutical Conference	203	Gospel of Good Goods, The	231	Ontario College of Pharmacy	28, 98, 100, 171, 198, 272
Bacteriological Terms	220	Give Them What They Want	116	Oxalin	37
Business Letters	243	Greater Britain Exhibition, 1899	136	Obituary	39
Business Mistakes	243	Gritter in Pharmacy	191	Orthoform	61
British Pharmacopoeia, The New	98, 122, 116	Handling Photographic Supplies	36	Obligations and Responsibilities of Business Life	112
Brittette, A New ComLustible	247	How Will You Reply?	50	Optical Course, The	225
Burdock as a Vegetable	253	Hygiene of the Eyes	112	O. C. P. Students' Organization	223
Complaint, A	10	How to Mix Colors for Tints	202	O. C. P. Examinations	212
Correspondence	32, 56, 136, 153, 200, 221, 213, 177	How to Buy	181	Optics, The Science of	18, 43, 67, 91, 111
Changing Methods in Drug Trade	34	Hints for Druggists Dealers	165	Oil of Turpentine, To Distinguish	112
Capitol	35	Hot Soda Formulary	257	Outline of a Course	196
Camphor Trade Monopoly	58	Incompatibilities	11	Pharmacy in England	9, 33, 57, 80, 90, 125, 149, 171, 201, 221, 248, 269
Condition of the Drug Trade, The	97	Incompatibility of Calomel with Chlorides, Acids, and Albuminoids	30	Patents Containing Poisons	17
College of Pharmacy	98	Incompatibility Between Fluid and Extracts	33	Profitable Helps	27, 193
Cod Liver Oil and Iron Iodide	148	Iodoform Substitutes	39	Preparation and Coating of Pills	28
Cacao Preparation in Cameroon	152	"Intra Dig"	49	Perfumery Specialties	20
Cocaine Manufacture in India	160	Insecticide Formulae	68	Prince Edward Island Notes	91, 199, 217
Cash Principle in Retail Business	196	Items of Interest	75, 102	Pharmacy Students' Dinner	32
Care and Control of Prescriptions	196	Insects in Medicine	107	Pharmaceutical Examinations	31, 71, 75, 101, 129, 217, 255
Commercial Pharmacy	191	International Congress of Applied Chemistry	146	Prescription Cabinet for Druggists	34
Colored Fires	232	Industrial Exhibition, Toronto	215	Pharmaceutical Education in France	36
Ciliary Spasm	236	Iodised Oils	182	Preparing Inorganic Salts by Electricity	67
Cosmetic Viuegars	232	Insect Products Useful	10	Patents and Trade Marks Relating to Pharmacy	67, 62, 95, 131, 159, 232, 200
Chief Essential to Success	215	Japanese Tatiff, The	105	Pyridine Guanicolati	38
Chinese Prescription, A	256	Jeyes' Sanitary Goods	246	Photographic Notes	11, 65, 89, 113, 137, 165, 186, 210, 231, 258, 282
Coffee, Medical Uses of	81	Japan Wax	251	Practice vs. Theory	43
Carbolic Acid, Preparation of	111	Krypton	133	Pharmacy in South Africa	59, 126
Cellulose, New Solvent for	157	Kolo Preparation	132	Pharmacy in Russia	59
Cascara Sagrada	191	License Law Legislation	2	Pharmacy in Cape Colony	77
Curious and Interesting Experiment	191	Lenses, The Care of	15	Palm Oil	107
Calcium Hydride	270	Legislating Against Department Stores	18	Peppermint Cultivation in Japan	112
Donts for Opticians	16	Liquid Benzoin for Benzoinating Lard	39	Presbyopia	111
Drug Reports	21, 45, 72, 96, 120, 141, 168, 210, 192, 216, 261	Let the Physician Prescribe	56	Pharmaceuticals Which Deteriorate	131
Drugs at the Klondike	28	Late Dr. Zacharin's Peculiarities, The	107	Proper Time to Use Medicines	135
Disinfectant Perfume	38	Liquefaction of Hydrogen and Helium	153	Pharmaceutical Association of the N W T	147
Decalcifying and Desiccating Sponges	76	London Druggists' Picnic	208	P. A. T. A. of Canada	159
Donts for the Eyes	130	Liquid Air as an Appetizer	213	Pills with Woolfat as Excipient	154
Drugs not to be Prescribed in Caches	131	Lyman Bros. Co.'s Bicycle Races	223	Prescription Difficulties	153
Death of William J. Bauld	138			Patent on Antitoxin	191, 235
Diamond Cut Diamond	163				
Doctors and the B. P., 1898	191				
Detested Ricinus	119				
Destruction of Ants	211				

Pharmacy in Germany..... 206
 Preservation of Mace Against Insects..... 208
 Problem of Business..... 218
 Pharmaceutical Association of Quebec..... 218, 257
 Pointers by the Way..... 219
 Prescribers' Guide to the New U.S.P..... 227
 Preservation of Rubber Goods, The..... 228
 Prosecutions Under the Quebec Pharmacy Act..... 231
 Prescriptions..... 231, 273
 Proprietary Association of America..... 251
 Protection Spectacles..... 251
 Popular President, A..... 178
 President's Address to R.C. Pharm. Assoc..... 181
 Pharmacist as a Photographic Dealer, The..... 186
 Photographic Apparatus, The Selection of..... 85
 Photographic Formulas..... 162
 Photographers' Supplies, How to Push..... 234
 Product Formed in Coffee..... 274
 Prescriptions, Care and Control of..... 275
 Powdered Drugs, Study of..... 278
 Powders for Percolation..... 280
 Pharmacy Students' Association..... 270

Quick Work..... 10
 Quebec Pharmacy Act, The..... 17
 Queries and Answers..... 221
 Questions and Answers..... 256
 Quantitative Determination of Alcohol..... 14

Retrospective and Prospective..... 1

Review of the Year, 1897..... 3
 Reduction in Price..... 10
 Rules for Longevity..... 62
 Report on Dussek's Sheep Dip..... 108
 Rules for Amateurs..... 113
 Rules for The Prescription Counter..... 200
 Retail Druggists Organizing..... 202, 219
 Rights of the Manufacturer, The..... 212
 Rebate Plan..... 213
 Rebate Plan and the Cutter..... 213
 Resins, Some Scarce..... 37
 Re-Using Apolloniac Bottles..... 183
 Rubber to Keep Bright..... 254

Sponges..... 21
 Sentiment or Profit..... 25
 Splendid Showing, A..... 27
 Selling Bogus Pills..... 45
 Students' Annual Dinner..... 55
 Sunday Night Service in Norway and Chili..... 61
 Sale of Liquor by Druggists..... 79
 Stamp Taxes on Drug Trade..... 160
 South African Trade..... 164
 Stamp Tax and its Effect on Prices in Canada..... 195
 Some Elements in Pharmaceutical Teaching..... 197
 Science Notes..... 207
 Sulphonal Manufacture..... 208
 System in Business..... 219
 School of Practical Experience, The..... 225
 Selling a Drug Business..... 242
 Ship-Bottom Paint, A..... 245
 Sponges, The Bleaching of..... 57
 Society of Opticians..... 153
 Sweating Hands, For..... 162
 Suppositories, Pesticides, etc..... 178
 Sponge-Fishing in the Bahamas..... 251
 Syllabus of Materia Medica..... 270

Trade Notes..... 271
 7, 32, 55, 79, 103, 127, 151, 176, 190, 223, 247, 18
 True to Principle..... 18
 Toilet Waters..... 53
 Time Must be Served in a Retail Store..... 71
 To Entertain Members of A.Ph.A..... 75
 To Avoid Contagion..... 106
 Trade-Marks in the Patent Office..... 108
 To Prevent Curling of Prints..... 113
 Testing Egg Albumen..... 157
 Toronto Retail Druggists' Association..... 243
 Two Kinds of Men..... 181
 Trifles in Photography..... 259

Very Satisfactory..... 76
 Variety of Teas..... 111
 Varnish for Bookbinders, etc..... 95

Wood Oil..... 1
 Window Advertising..... 74
 World-wide Business, A..... 133
 Wounded Honor Appeared by a Month in Jail..... 208
 What Do You Say?..... 218
 What is an Ad?..... 230
 Will Solve the Problems..... 215
 Will Not Supply Cutters..... 222
 Wholesale Adulteration of Food and Drink..... 183

FORMULARY.

Ami Exterminator..... 161
 Aniline Pad Inks..... 185
 Athens Water..... 257

Barber's Stiptic Powder..... 93
 Bicycle Tire Cement..... 93
 Blackberry Cordial..... 112
 Bleaching Ointment..... 161
 Bed-bug Disturber..... 161
 Bath Salt Sulphur..... 209
 Bath Salt Sodium..... 209
 Bath Powder..... 209
 Blackening Liquid..... 223
 Bluing Tablets..... 257
 Bromofornum Rutt..... 281

Camphor Ice, Benzozated..... 19
 Chilibain Remedies..... 19, 45, 223

Cod Liver Oil Emulsions..... 19
 Catarrh Balms..... 29
 Coryza Remedy..... 20
 Capsico Opodeldoc..... 15
 Cold Cream..... 15, 257
 Cement, China..... 33
 Cascara Sagrada..... 117, 269
 Carbolic Disinfectant..... 117
 Cod Liver Oil Plaster..... 111
 Cod Liver Oil Administration..... 141
 Cement for Rubber..... 189
 Condurango Wine..... 185
 Castor Oil Emulsion..... 223
 Cosmetics..... 257
 Castor Cream..... 257
 Cod Liver and Chocolate Emulsion..... 281

Denitrific for Dark Enamel..... 93
 Disinfectant..... 112, 223
 Digestive Elixir..... 223
 Dialyzed Iron Tinct..... 257

Eau de Cologne..... 15
 Emplastrum Mercuriale..... 69
 Essences..... 185
 Elixir of Salsol..... 281
 Emulsion Cod Liver Oil..... 19

Florida Water..... 19
 Frost-bite..... 69
 Fragrant Cream..... 69
 Freckle Vanisher..... 111
 Floor Wax..... 111
 Flea Exterminator..... 161
 Fly Destroyers..... 209

Glycerine Cream..... 189, 209

Headache Powders..... 161
 Hot Soda Formula..... 257

Ink, A New..... 69
 Inks for School..... 117
 Ink, Marking..... 281
 Insecticides..... 161
 Inhalant..... 185
 Insect-bite Cures..... 223
 Itch Ointment..... 257
 Iodine Ointment, Imp..... 281

Laxative Salt..... 15
 Lanoline Preparation..... 69
 Laxative Tea..... 95
 Lotion for Freckles..... 111
 Leather Varnish..... 185
 Laxative Lozenges..... 223

Mange Remedy..... 19
 Mentholated Creams..... 19
 Mouth Wash Tablets..... 93, 161
 Moth Destroying Solution..... 93
 Malt Preparations..... 117
 Malt with Pepsin and Pancreatin..... 117
 Malt with Yetta Santa..... 117
 Malt with Cod Liver Oil..... 117
 Malt with Hypophosphites..... 117
 Milk Wash..... 131
 Menthol Snuff..... 161
 Mouth Wash..... 161, 281
 Mouth Soap..... 251
 Mucoprotic Elixir..... 257

Nose and Throat Spray..... 161

Kola Wine..... 185

Perfumery Specialties..... 29
 Perfumery Powders..... 231
 Poudre de Riz..... 281
 Paste for Labels..... 69, 185
 Polish for Leather..... 117
 Perfumes..... 185
 Pepsin Solution..... 233, 257
 Poultry Tonic..... 223
 Paint Emulsion..... 281

Root Beer Extract..... 112
 Roach Powder..... 161
 Roach Pastes..... 151

Syrup Camphor Compound..... 19
 Sea Foam Formula..... 19
 Sachets, Perfumed..... 19, 45, 237
 Soft Corns..... 19
 Sulphur Soap..... 19
 Sweating Feet..... 69, 209
 Shampoo Mixtures..... 69, 93
 Shampoo Powder..... 93
 Skin Food..... 93, 111, 257
 Sodium Peroxide..... 93
 Syrup of Senega..... 93
 Sheep Dip..... 117
 Sterilizing Solution..... 117
 Sweating Hands..... 162, 209
 Sealing Wax..... 185
 Shoe-dressing..... 185
 Shoe Polish, Tan..... 185
 Syrup of Iodine of Iron..... 93
 Syrup of Albuminate of Iron..... 223
 Skin Wash..... 257
 Skin Gloss..... 257

Tea Eye Poulitice..... 15
 Tooth Powder..... 141

Toilet Glycerine..... 257
 Witch Hazel Jelly..... 69
 Witch Freckle Lotion..... 69
 Wine of Cinchona..... 93
 Witch Hazel Cream..... 111
 Wine of Cascara..... 281

PHOTOGRAPHIC NOTES.

Aluminium to Replace Magnesia..... 89

Bath, A Fixing..... 113, 162
 Bath, Acid Fixing..... 165
 Blue Prints..... 258

Celluloid Films..... 165
 Copper Intensifier..... 162
 Crystal Varnish..... 165
 Combined Toning and Fixing Baths..... 165
 Chloride Paper..... 210
 Chloral Platinate Bath..... 234

Developer, A New..... 11, 137
 Developer, Colorless..... 41
 Developer for Copying..... 137
 Diamido-Resorcin Developer..... 165
 Developing with Glycin..... 165
 Developer, Vanadium..... 165
 Developer, Ortol..... 162, 231, 258
 Developer for P.O.P..... 165
 Developer for Snap Shots..... 210
 Developing Solution..... 210
 Dark Room Windows..... 210
 Developer, Metol-Hydroquinone..... 258
 Dry Plate Storage..... 282

Foliage in the Studio..... 89
 Formalin, Antidote to Frilling..... 137
 Formalin in Photography..... 137
 Flash-light Work..... 137
 Film Varnish..... 162

Glycerine-Gelatin Paste..... 65
 Glycin Developer..... 162
 Gold Size Varnish..... 162
 Gelatino Chloride Toning Bath..... 165
 Glycerine, A Heat Absorber..... 234

Hints for Druggists' Dealers..... 165

Intensifying Formula..... 113
 Intensification Without Mercury..... 113
 Intensifiers..... 162
 Intensifiers, Copper..... 162
 Intensifiers, Uranium..... 162, 258
 Intensifiers, Monckhoven's..... 162
 Intensification of Prints..... 210

Lanolin, Protector Against Pyro Stains..... 234

Mountants..... 165, 187, 210
 Mountant, Economical..... 210
 Mounting Gelatino Chloride Paper..... 234
 Metol-Hydroquinone Developer..... 258
 Montreal Camera Club..... 282

Negatives, The Drying of..... 113
 Negatives, Varnish..... 165, 196, 210

Ortol Developer..... 162, 231, 258

Pen and Ink Sketches..... 42
 Platinotype Paper..... 65
 Photography for Chemists..... 89
 Prints, To Prevent Curling..... 113, 231
 Paste..... 113
 Paper, Photographic..... 137
 Platinum Toning Baths..... 163
 Pharmacist as a Photo. Dealer..... 186
 Photography Without Silver..... 234
 Photographers' Supplies..... 241
 Persulphate of Ammonia..... 282

Rule for Amateurs..... 113
 Restrainers in Development..... 113
 Reducers..... 162

Silver, Recovery of..... 165
 Substitute for Hypo..... 258
 Sky-blue Tones..... 282
 Toning Lantern Slides..... 41
 Transferring Gelatino Chloride Prints..... 65
 Tonic Gelatino-Chloride Prints..... 89
 Toning Baths..... 163
 Transfer Process..... 210
 Toning Bath, Chloro-Platinate..... 214
 Trifles in Photography..... 259

Uranium Intensifier..... 162, 258

Varnish, Photographers'..... 65, 95
 Vanadium Developer..... 165
 Varnishers..... 162
 Varnish, Negative..... 186
 Varnish, Aqueous Shellac..... 186
 Varnish, Ammoniacal..... 186
 Varnish, Retouching..... 187
 Varnish, Black..... 187
 Varnish, Matt..... 187

Writing on Negatives..... 41
 Warming Developers..... 258

Zapon Varnish..... 162, 186

Canadian Druggist

Devoted to the interests of the General Drug Trade and to the Advancement of Pharmacy.

Vol. X.

TORONTO, JANUARY, 1897.

No. 1

"APENTA"

THE BEST NATURAL APERIENT WATER.

Bottled at the Springs, Buda Pest, Hungary.

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THE BEST NATURAL APERIENT WATER.

"We know of no stronger or more favorably constituted Natural Aperient Water."

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Montreal.

Canadian Druggist

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CONTENTS.

Retrospective and Prospective.

License Law Legislation.

Review of the Year 1897.

TRADE NOTES.

Amalgamation.

Montreal College of Pharmacy Christmas Sessional Examinations.

PHARMACY IN ENGLAND.

College of Pharmacy Examinations.

Reduction in Price.

A Complaint.

Quick Work.

The Estimation of Aloes.

Fehling's Test.

Miscible Tar Oil.

Ontario College of Pharmacy Semi-Annual Examinations.

The Five Senses in Pharmacy.

Quantitative Determination of Alcohol.

SELECTIONS.

The Care of Lenses.

Wood Oil.

Recent Patents Relating to Pharmacy.

The Quebec Pharmacy Act

Ontario College of Pharmacy.

Patents Containing Poisons.

THE SCIENCE OF OPTICS.

Myopia.

Legislation Against Department Stores.

True D Principle.

FORMULARY.

Perfumery Specialties.

OPTICAL DEPARTMENT.

ADVERTISING.

Practical Hints on Advertising.

Sponges.

AMONGST OUR ADVERTISERS.

MAGAZINES.

DRUG REPORTS.

Retrospective and Prospective.

The passing of another year, with its opportunities lost and won, money made and lost, friends severed and others gained, marks an epoch in the life of each of us.

As the time-worn resolve to "turn over a new leaf" comes to us with the dawning of a new year, so do all business plans and prospects present themselves. We naturally look back to see the mistakes made, and to lay down plans to prevent them in future. We sum up our losses, bad debts, imprudent purchases, injudicious business ventures, etc., and look for a more prudent and judicious way of conducting our affairs. We take our annual inventory of stock (or, if all do not, they should commence now), and we sum up our balance sheet, with the hope of finding a favorable showing. We also devise or map out our course for the coming year, and thus enter upon the well-trodden path with sundry experimental ideas and partially matured plans which time alone will tell whether they are workable or not.

For many of the druggists of Canada the year 1897 has not been altogether "a bed of roses" in a business way. The first of the year saw business in all branches in a very depressed condition, money scarce except in the banks, and a feeling of distrust prevailing from the previous year. The latter part of the year, however, brought a more confident tone to the business community, consequent upon the extremely favorable harvest reports from all sections of the country, and the large influx of foreign capital, which was principally confined to the mining centres.

Values of all kinds advanced, and the close of the year witnessed a decided improvement in all commercial lines. Notwithstanding the stringency of money matters, however, and the dullness of times, the failures in the drug trade of Canada have been comparatively few, partially

owing, no doubt, to the fact that the retail trade had been more than usually cautious in their purchases.

For the coming year the prospects are for the most part bright and the outlook promising. In certain localities, notably in Ontario, the unfortunate "cutting" of prices and the inroads on trade made by the department stores are still to be encountered, facts which will have to be considered and some means devised in order to re-imburse the retailer for his losses from these causes.

The retail druggist must now be more aggressive and wide-awake to any opportunities that present themselves for adding to his money-earning devices, not contenting himself with allowing business to be quietly drawn away from him, but in self-defence strive to nullify any designs against the business which he is engaged in, and branch out into whatever will be appropriate and at the same time lucrative additions. Business problems are presenting themselves which time alone will solve, and the drug trade must be wide-awake to the changing condition of affairs and keep in touch with those opportunities that present themselves for the improvement of existing conditions.

License Law Legislation.

As announced last month the response to the petitions asking for an amendment to the License Act was very general, and there is no doubt but to it is due in some measure the Bill which has been presented to the Legislature. A delegation of a large number of Toronto druggists waited on the Premier December 23rd and presented him with facts in reference to the grievances under the amendments of last session. Premier Hardy received the deputation very graciously, and told them that although he could not promise them all they asked for, yet they were willing to meet a special deputation and do what they could to meet their views. Accordingly a deputation consisting of Prof. Heebner, O.C.P., and Messrs. F. Holgate and J. H. Mackenzie with the solicitor, Mr. E. T. Malone, met members of the Cabinet by appointment, the result of which was the submitment to the Legislature of the Bill as given below, and which obtained its first reading December 30th, and its third reading January 12th.

BILL.

An Act respecting the sale of patent and other medicines, and of alcohol for the purposes of the arts and manufactures.

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. The words "pharmaceutical chemist," or the word "chemist," when used in this Act shall mean a duly registered pharmaceutical chemist; the word "alcohol" shall mean "ethylic" or absolute alcohol; the word "spirits" shall mean proof spirits or spirits under proof; the word "liquor" or "liquors" shall mean intoxicating liquor; and the words "original and unbroken package" shall mean the package in which the patent or proprietary medicine is put up by the manufacturer.

2. Nothing in the Liquor License Act contained shall prevent the sale by a pharmaceutical chemist, or a merchant or company who deals in patent or proprietary medicines, of any patent or proprietary medicine in the original and unbroken package, which contains only sufficient alcohol to hold the medicine constituents thereof in solution or to prevent fermentation.

3. Nor shall anything in the said Liquor License Act contained prevent the sale by a chemist, merchant or company dealing in drugs and medicines of any tincture, fluid extract, essence, medicated spirit containing alcohol, prepared according to the formula of the British Pharmacopœia, or other recognized standard work on pharmacy, or medicine or other similar officinal compound or preparation, or perfume, nor the sale by such person or company for purely medicinal purposes of any mixture prepared as aforesaid containing alcohol or other drugs or medicines; nor shall the said Liquor License Act prevent the sale thereof in the original packages, as put up by a chemist, or manufactured by a merchant or company dealing in drugs and medicines; nor shall the said Act prevent the sale by a chemist, merchant or company dealing in drugs and medicines of alcohol in quantities of not more than one gallon at any one time for use in the arts or manufactures or for illuminating purposes.

4. Nor shall anything in the said Liquor License Act contained, apply to or prevent the sale by a pharmaceutical chemist, merchant or company dealing in drugs and medicines of any drug or medicine for strictly medicinal purposes, notwithstanding the mixture with such drug or medicine of alcohol as one of the necessary or *bona fide* ingredients there-

of, provided that the quantity of alcohol so sold at any one time does not exceed six ounces.

5. Nor shall anything in the said Liquor License Act contained prevent such chemist, merchant or company dealing in drugs and medicines from selling, without the certificate of a duly registered medical practitioner, liquor in quantities of not more than six ounces at any one time when the same shall be required owing to a serious injury, or to the fainting of a person who may be brought or shall come into the premises of the chemist, or be in the immediate neighborhood of such premises or into contiguous premises, or in or upon premises adjoining such last mentioned premises, and the same is urgently required for the relief of such person.

6. Sub-section 2 of section 52 of said Liquor License Act is amended by adding immediately after the word "prescription," in the seventh line thereof, the words "when one is required"; but the said sub-section is not by this Act otherwise affected.

7. Where the Stipendary or Police Magistrate or Justice or Justices before whom a complaint is heard, find that any patent or proprietary medicine mentioned or referred to in section 2 of this Act, or any other medicine, preparation or mixture mentioned or referred to in sections 3, 4, or 5 of this Act, has been put up, manufactured or sold as a colorable device for the evasion of The Liquor License Act, the offender shall incur the penalties imposed by The Liquor License Act as in the case of sale of liquor without the license therefor by law required; and it shall not be necessary in the information, summons, warrant, conviction, distress warrant, commitment or other process or proceeding, save only in the finding or judgment, to set out that such patent or other medicine, preparation or mixture was put up, manufactured or sold as a colorable device for the evasion of The Liquor License Act, but it shall be sufficient if the complaint and all other necessary statements of the offence allege or refer to the sale of liquor without the license therefor by law required, as in the case of a prosecution under the said Liquor License Act for the sale of liquor without the license therefor by law required.

8. Nothing in this Act contained shall affect sections 26, 27 and 28, and Schedule A of the Pharmacy Act or the restriction upon the sale of poisons therein imposed.

1898

WE thank our numerous customers throughout the Dominion for their kind patronage during the past year and years, and we can assure them that it will be our aim in the future, as it has been in the past, to keep the best quality of goods in our lines which we can obtain. Our prices will always be found reasonable.

New Goods

BOVOX in 5-oz. (50 cts.) and 11-oz. (\$1.00) bottles.
This is a superior Beef Essence.

LIEBIG'S Extract of Beef, Southwick Brand.
This is the genuine Liebig's Brand.

MOSES' Cough Lozenges, retailing at 5 cts.
24 Lozenges in sliding box; has been on the American market for over 20 years.

THE FOLLOWING ARE ALSO GOOD SELLERS:

HEIDE'S Licorice Pastilles, Mint Jujubes and Assorted Jujubes.

LORING'S Celery Cough Drops, 5 cts. packages.

BILLINGS, CLAPP & CO.'S Slippery Elm Lozenges.

CE-ESS-CO'S Hypophosphite Tablets.

CE-ESS-CO'S Black Ink Tablets.

10 Tablets in glass phial; each tablet makes an ounce of splendid ink.

CHAPIREAU'S Cacheteurs and Cachets.

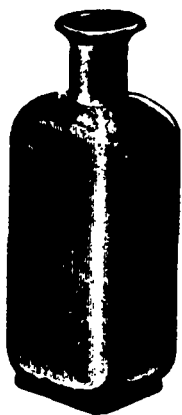
RESTUCCIA'S Pure Cream Salad Olive Oil.

CANADIAN SPECIALTY CO. 38 Front St. E.
Toronto, Ont

Are You

Using our Prescription Bottles, made up in our special *Wallaceburg White Glass*?

IF NOT YOU ARE



Cheating Yourself



HANDLED BY ALL THE LEADING JOBBERS.

SYDENHAM GLASS CO.,
Of Wallaceburg (Limited).

Extemporaneous Emulsions.....

Are rapidly and perfectly made by the use of

Acacine

The Perfect Emulsifier

98% per package (1 lb.)

Cod Liver Oil.....	8 ozs.
Acacine.....	1 1/2 ozs.
Oil Lemon.....	1 dr.
Calc. Hypophos.....	40 grs.
Sod.....	40 grs.
Acid Citric.....	20 grs.
Syrup.....	2 ozs.
Water to make.....	16 ozs.

U.S.A.; or,

Put Acacine into a dry 16-oz. bottle and add 4 ozs. of oil with flavor and hypophosphites; shake well and add 4 ozs. of water in which acid is dissolved; shake, then add the syrup and 4 ozs. more oil; shake well and make up to 16 ozs. with water. **It never fails.**



"Diamond" Powdered Lye

Our "Diamond" Lye is cheaper and better than any other Lye offered. It pays the retailer better and he can recommend it: First, for **Purity**; it is full strength caustic soda. Second, because of **Full Weight**. Third, for **Convenience** and **Economy**. It is sold in sound tin cans having two covers, neither of which are damaged in opening. After using a portion, the can may be perfectly sealed again and its contents preserved.

\$3.60 per case of 4 doz., 5 per cent. 30 days.



Canadian Cattle Spice

The usefulness of a good tonic powder for live stock is too well recognized for it to be necessary that we should endeavour to enlighten any one on the subject. Perhaps, however, there may be room for a little more push in that line. To make this possible we will be pleased to supply you with advertising matter for distribution; and we offer you in our "**Canadian Cattle Spice**" an article of real merit at a low price. Sold in 100 lb. bags at \$4.00 per bag, and in 100c. samples, attractively put up in cartons containing about a quart, at 70c. per dozen.



Crown Gelatine

75c. dozen. 1 package makes 1 quart.



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If you place your order with us, you are sure of having the best.

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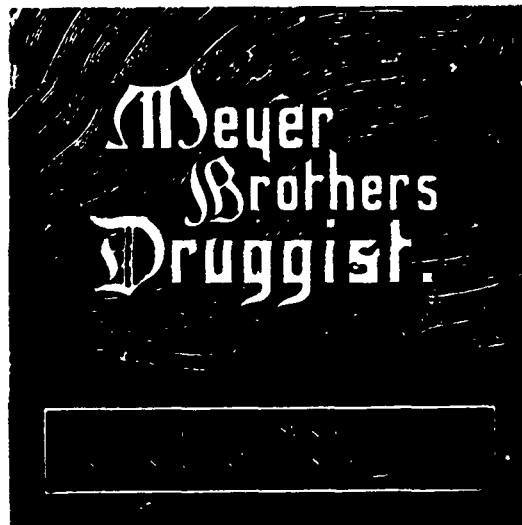


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Manufacturers

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MONEY For Canadian Druggists!



Subscription \$1.00 per year.

Sample Copy Free.

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MEYER BROTHERS DRUGGIST,

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Hygiene Purity Convenience

are the distinguishing features of our

Toilet Papers

The various brands are scientifically made, and high qualities are carefully maintained.

"Convenience" applies to prices too.



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HULL.

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DRUGGISTS, 'TENTION!

Our facilities are the best for turning out the Finest

Lithographed and Printed LABELS

Write for quotations on CONTAINERS



Knowles & Co.

LONDON, ONT.

Review of the Year 1897.

A Canadian Year—Diamond Jubilee—Chemistry—Therapeutics—Pharmacy—Pharmacognosy—New Remedies—Botany.

9. A chemist or other person who keeps patent or proprietary medicines for sale shall upon request made in writing, signed by an officer of the license branch, to be named for that purpose by the Lieutenant-Governor in Council, permit the Inspector of Licenses, or such other person as shall be named therein, to take a sample sufficient for the purpose of analysis of any patent or proprietary medicine kept by him for sale. A refusal to comply with such request shall render the offender liable to a penalty of not less than \$10 nor more than \$40 for such offence.

10. This Act shall be read with and as part of the Liquor License Act.

Section 3 corrects perhaps the most glaring defect of former legislation in prohibiting as it did the sale of tinctures, etc., without a prescription, it also allows the sale of alcohol "for use in the arts or manufactures or for illuminating purposes."

Section 4, it will be observed, allows the sale of a mixture containing not more than six ounces of alcohol, where such is "one of the necessary or *bona fide* ingredients." This applies, of course, to the preparation of what are usually termed family recipes, liniments, etc., and is a very necessary provision in the Act.

Section 7 is what we might term "the penal clause," and is intended to prevent the sale of compounds which, although sold under the name of medicines, are really intended as a guise for the consumption of spirits of some description. This is a very necessary clause and we are sure will be commended by the trade.

Reference is made in section 8 to portions of the Pharmacy Act, viz.:

Sec. 26 is in reference to certain poisons to be sold only in a certain manner as specified in Schedules A and C.

Sec. 27 prescribes penalties for wrongful sales, and Sec. 28 defines the penalties to be inflicted for infringements of the Act.

It should be borne in mind that this Bill does away with all previous bills or amendments to the License Act as referring to druggists. There need now be no registration of sales, as no liquor of any kind can be sold without prescription except as designated in Section 5, and in the case of alcohol mentioned in Section 3.

The Bill as a whole should be satisfactory to the drug trade, as well as being a safeguard against abuses which might creep in.

The year 1897 has been essentially a Canadian year, and the absence of any remarkable discoveries, like that of the "X" rays and of argon, which gave special significance to the two preceding years, accentuated the fact. The Diamond Jubilee of Queen Victoria will, of course, be inseparably connected with 1897 for all time, but it was this event that gave Canada its hour and opportunity.

The first step towards something practical in the shape of Imperial Federation was taken by the Canadian government, and New Zealand is following. Besides this the visits of the British Association and of the British Medical Association have been the occasion of extending knowledge of the institutions and leading men of the Dominion. This prominence, combined with revival in trade, cannot fail to be productive of good, and the prediction of the ex-President of Toronto Board of Trade, that the next three years will bring unexampled prosperity, is in a fair way of being fulfilled.

Although no startling or epoch-making discoveries have been made in the past year, activity has reigned in all branches of science, and many important results have been recorded. Among these the experiment of Brown with seeds at the extraordinary temperature of 190° C calls for special notice, as the result is likely to compel biologists to revise their definition of life. At this low temperature no known animal or vegetable can exist and all chemical action ceases, yet seeds exposed for 110 hours were none the worse and grew as well as seeds not treated. Fluorine has been liquefied and the discoverer of argon and helium has described his ineffectual search for an element with an atomic weight between these two gases.

Organic remedies, similar to thyroid gland, do not appear to have made much progress during the year, but serum therapy or treatment by means of antitoxins is certainly gaining ground. The usual procession of new remedies has appeared and probably 95 per cent will disappear. A few new drugs have been brought forward, but experimental evidence is still wanting of their value, and

chemical examination remains to be made. The inevitable Roentgen Society has been formed and we may therefore expect to learn still more of the nature of the mysterious rays. "Sixty years a Queen" has naturally led to many reviews of the progress made in science and the arts during the period.

CHEMISTRY.

The important experiments of Dewar upon the condensation of gases by means of pressure and great cold have been extended and a system of analysis almost founded upon them. The production of liquid fluorine has already been referred to, and was accomplished at about 185° C, by Moissan (who first isolated the element) and Dewar. It is a clear yellow liquid, and at that low temperature does not attack glass. It will not solidify, even at 210° C. Dewar has also described an apparatus for separating helium from liquid air. Hampson has devised an improved apparatus for producing liquid air under a pressure of 87 atmospheres, without any auxiliary refrigeration, in a few minutes. No well appointed laboratory will in future, it is natural to suppose, be considered complete without having liquid air "on tap." Rayleigh has given further observations on the separation of argon from the nitrogen of air by means of an electric flame when oxidation of nitrogen occurs. Shenstone has carried out further experiments on the production of ozone from dried oxygen, and has shown that moisture is not necessary in all cases of chemical reaction. Munby has invented a Bunsen burner for the use of acetylene, capable of yielding a flame comparable to the ordinary air gas jet, and consuming only a cubic foot of acetylene per hour. Its heating effect is much greater than an ordinary Bunsen. Besides yielding acetylene, calcium carbide has been found by Warren to act as an excellent metallurgical reducing agent. Litharge, for instance, when heated with calcium carbide, yields metallic lead and calcium oxide, accompanied by vivid mesodescence. Keating Stock makes an improved copper-zinc couple by adding acidulated solution of copper sulphate to granulated zinc. After thorough washing it is ready for use, and can be renewed in

the same manner over and over again. Clowes has described the reaction that takes place when couples of zinc-copper, magnesium-copper, etc., are immersed in water. Hydrogen is given off, basic sulphates are deposited, and oxide of copper formed. Sodium peroxide has been suggested as a third group reagent by Parr, who boils the slightly acid solution of metals with a small porcelain teaspoonful of the peroxide. Iron, manganese, cobalt, and nickel are precipitated, whilst aluminium, zinc, and chromium remain soluble. Besson claims to have prepared a new oxide of phosphorus, P_2O_5 , by heating PH_3 Br. to $50^\circ C.$, in a sealed tube with $POCl_3$. It is reddish-yellow solid, behaving similarly to phosphorus. The B.P. requirements of sodium iodide, that it shall contain 99 per cent. purity, is in excess of those of the U.S.P. or P.G., where 5 per cent. of moisture is allowed. Umney seems to suggest that the B.P. standard is too high, whilst he finds commercial iodide only assays about 86 to 91 per cent. of purity. Several new tests have been suggested for nitrous acid and nitrites. Naphthylamine-sulphonic acid with ammonia gives a rose color with nitrites; resorcin has also been recommended, used with sulphuric acid, and the red color estimated quantitatively by comparison. Sulphites materially affect all tests for nitrites, but the brucine test, according to Pickard, is least affected.

Moissan and Williams have effected combinations of iron, calcium, strontium and barium with boron, forming definite borides. This was accomplished by means of the electric furnace. Thus calcium boride was obtained by fusing dry calcium borate, aluminium turnings and sugar charcoal in a carbon crucible. These borides occur as micro-crystalline powder, hard enough to scratch rubies, and having the formula MBo_4 . Dymond and Hughes have shown that dithionic as well as sulphuric acid is a product of the oxidation of sulphurous acid by permanganate of potassium. Evans suggested an improved process for making ferrous phosphate B. P., using decantation instead of washing to get rid of impurities and so avoiding oxidation. In the region of organic chemistry the alkaloids continue to attract attention, and repeated attempts at their synthetical production have been recorded. Chief among these is Fischer's synthesis of theobromine. Cytisine has been found by Gortier in *Baptista tinctoria*, as well as

a glucoside baptisin. Paul and Cownley deny the conversion of cinchonine into cinchonidine as stated by Koenigs and Husmason. The various methods for determining morphine in opium preparations have been discovered by Farr and Wright. Anisol has been recommended by Touquet as a solvent for the purpose of separating codeine from morphine, the latter being practically insoluble. Hilger and Jackenack have described a method of estimating caffeine in tea and coffee in which the base is obtained undecomposed and pure. Hyde finds that solution of bleaching powder (liquor calcis chlorinate) is superior to bromine water in producing the well-known thalleoquin test for quinine. Petit and Polonovski stated that commercial salts of so-called pilocarpine are really salts of pilocarpine and pilocarpidine, which they regard as isomers. Since then some attempt has been made to disprove this assertion. Van Rijn and others have examined carica papaya and isolated carpine. Da Silva described a new reaction for eserine and its salts, depending upon the green color obtained on evaporation of a strong nitric acid solution of the alkaloid. The green residue dissolves in dilute nitric acid giving fluorescent yellow-red solution. Santonin and its derivatives still afford numerous speculations as to its chemical composition. Trevor Laurence has accomplished the synthesis of citric acid by the condensation of ethylic oxalylacetate and bromoacetate in presence of zinc. Coblenz disproved Robbins' assertion as to the identical nature of gelsemic acid and cesculin. An interesting substance provisionally named tuberculinic acid has been obtained by Schweinitz and Dorset from artificial cultures of tubercle bacillus. Camphor is the elusive guest of quite a number of chemists who are anxiously seeking to determine its constitution. An important step has been discovered in the synthetical production of this body by Perkin and Thorpe who have prepared camphoronic acid from trimethylglutamic acid.

Schaffer estimates aloin by precipitation of the aqueous solution of aloes with calcium chloride. Dietrich suggests the detection of vanillin in benzoin, etc., by extracting with equal parts of hydrochloric acid and water, and after filtration through charcoal precipitate with pyrogallol. Koebler determines menthol in oil of peppermint by boiling with alcoholic soda for one hour and titrating with sul-

phuric acid. The iodine value of bees-wax has been shown by Guyer to be about 8.5. *Drmstaedter* and *Lifschute* find myristic acid, carnaubic acid, carnaubyl alcohol, besides cholestirin in wool-fat. The chemistry of *asafoetida* is found by Polasek to include ferulic acid, asaresinol tannol and its ester. A large amount of work has been done upon essential oils, those of otto and geranium coming in for special attention. Umney has described the varieties of oil of fenel. Soldaini and Berte consider the best test for essence of lemon is the rotation observed, after distilling one half of the sample, in both residue and distillate. American petroleum has been analyzed by Mabery and the numerous constituents separated. The increased uses of formaldehyde suggested a better test for estimating this preservative, so Romijn devised two new ones. The first depending on oxidation by iodine in alkaline solution and the second on the combination of formaldehyde with K. C. N.

THERAPEUTICS AND PHYSIOLOGICAL CHEMISTRY.

The progress of serum-therapy, as it is commercially termed, has already been referred to, and even those who at first regarded these serums with something like an anti-vaccinator's scorn have been compelled to admit their efficacy in certain cases. Whether it is true progress on scientific lines or mere extension of empiricism, time alone can determine. The importance of early and correct diagnosis of typhoid fever has led physicians to hail the serum test, known here as Johnston's method, with enthusiasm. Unfortunately, like Ehrlich's diazotest for typhoid, by means of sulphuric acid, it is not infallible. Still the report of the American Medical Association is on the whole distinctly favorable as it is regarded as the most constant and reliable reaction. Serum for erysipelas, snake-bites, diphtheria, tetanus, etc., are also being lauded, and in regard to diphtheria antitoxin statistics have been published showing in many institutions a marked reduction in mortality, especially amongst children since the constant use of the serum. Elsaesser strongly recommends minute doses of atrophine and cocaine in diphtheria, whilst using a gargle of chlorate of potassium or oil of turpentine. The successful treatment of yellow fever by inoculation of serum is reported by Freire in Brazil. Koch is still working away

“FLY PADS.”

ARCHDALE WILSON & CO.

Direct the attention of the Drug Trade to the judgment of Hon. Mr. Justice Rose, restraining The Lyman Brothers and Company (Limited) from imitating “Fly Pads,” and give public

NOTICE

that all parties manufacturing or selling imitations of “Fly Pads” will be proceeded against in the Courts.

In the High Court of Justice.

BETWEEN ARCHDALE WILSON & COMPANY, Plaintiffs,

—AND—

LYMAN BROTHERS & COMPANY (Limited), Defendants.

The 23rd day of June, A.D. 1897.

1. This action having on the 25th and 26th days of January, A.D. 1897, been tried before the Hon. Mr. Justice Rose, and the said the Hon. Mr. Justice Rose on the 23rd day of June, A.D. 1897, having adjudged that the way in which the defendants have put up their fly paper, both as to the form, the envelopes, the packing into boxes and the ornamentation of the boxes, and the advertisements, was calculated to mislead.

2. IT IS THIS DAY ADJUDGED that the defendants, their servants, agents and workmen, be, and they are hereby, restrained from continuing to put up and advertise such matter as to mislead.

3. And this Court doth not think fit to make any other order in the matter.

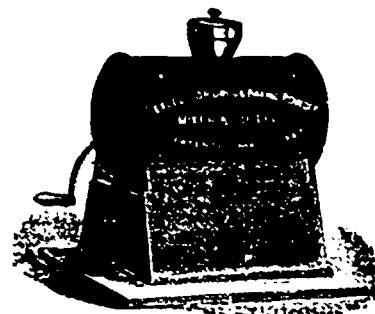
4. And it is further ordered that there be no costs of and incidental to the trial of this action to either party.

Judgment entered 15th October, 1897.

S. H. GHENT, Deputy Clerk at Hamilton.

For Druggists and Manufacturing Chemists.

Excelsior Mixer and Sifter



Changeable Sieves—40 to 60 mesh with each Mixer.

Dust proof and easily cleaned.

Rubber Brush rubs out all lumps before sifting.

UNEQUALLED FOR SIMPLICITY AND DURABILITY.

IN THREE SIZES suitable to mix 5 lbs., 10 lbs., and 25 lbs., at \$6.50, \$10, and \$15 each.

This Machine mixes Powders thoroughly, then forces them through sieves of the proper fineness. The only Mixer and Sifter which holds the Powder until well mixed, then sifts it.

See what they say: W. J. DYAS, Esq. Dear Sir, - Please send us at once one Excelsior Mixer, 10 lb capacity, same kind as we got some years ago. They give every satisfaction. HATTIE & MYLINS, Halifax, N.S.

SOLE AGENTS, The Druggists' Corporation of Canada, Limited

Having all the advantages afforded by the largest Onyx Works in the world, we give our customers the very highest grade of Soda Fountains at lower prices than it is possible for other manufacturers to make. We will save you 20 to 50 per cent. on any style of apparatus you desire.

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Trust Agents will tell you that our Fountains are no good. But we will give you the names of Druggists throughout the country who say our apparatus is the best they ever used. Which will you believe—the interested Trust Agent, or the disinterested Druggist? Why spend a dollar with the Soda Fountain Trust? It was organized to crush competition that it might bleed the Druggists of the country. There are a number of thoroughly responsible houses outside of the Trust, all making fine goods. Patronize any one of them in preference to the Trust. The talk of Trust Agents about the “quality” of Trust goods is bosh—rot—nothing more. They need some kind of an excuse for trying to get big prices—consequently they talk “quality.” The Lantz Co., the largest Onyx firm in the world, is located in Buffalo. They build all of our apparatus. Ask Trust Agents if they ever heard of the Lantz Co.—whether the Lantz Co. does most of the fine work for the Trust houses.

Prices and Terms will always be made to suit. Apparatus sent on approval to responsible parties. Second-hand Fountains, all makes, very cheap. New Catalogue free by express to intending purchasers. Get our prices before placing your order with anyone. We will save you money—20 to 50 per cent.

W. J. McCAHILL & CO.

895 Main Street, = BUFFALO, N.Y.

with tuberculin, and claims to have prepared a glycerin extract which will give immunity against tubercle bacillus as well as against the toxins it generates. He distinguishes the new tuberculin as T.R. Interesting observations upon bacteria and disease have been made by Symes Thompson, showing the dangers from milk, water, etc., as carriers of disease.

The physiological effect of suprarenal capsule extract has been studied by Vincent, who found that large doses injected subcutaneously produced muscular weakness and finally paralysis. Chittenden has shown that permanganate of potassium, borax, quinine, and salts of alkaloids act antagonistically to the peptic ferment; while Weber has proved that many of the so-called harmless dyes retard digestion. Olive oil as a specific in the treatment of typhoid fever has been recommended on the strength of a 100 per cent. successful cases. Digitalis and nitrites are antagonistic, the latter completely arresting the physiological action of digitalis on blood vessels. Extract of chelidonium has been revived as a Russian remedy for cancer, but little success has attended its use. Extract of helianthus (sunflower) has been given as a substitute for quinine in malaria. Practical experiments with toxic doses of Indian hemp have been recorded by Marshall, and the unsatisfactory state of our knowledge of the active principles pointed out. Hydrochlorate of morphine is suggested by Heim as an antidote to potassium cyanide by hypodermic injection. Chlorate of sodium has been recommended by Duorac as a palliative in the treatment of uterine cancer. Bulkley found that 20 to 30 grain doses, every half hour for three doses, was an infallible remedy for cold in the head. Methylene blue has been stated to be a valuable remedy as an injection for gonorrhœa, but Moore recommends it in three grain doses, three times a day, internally. Philpots prescribes the same remedy in two grain doses after food twice daily in obstinate cases of chronic rheumatoid arthritis. The oxygen treatment of wounds is stated to give excellent results, and in the case of gout and rheumatism, hot-air treatment has been highly praised. Natural oil of wintergreen when applied to the skin causes irritation and in some cases eruption, according to Vidal. This does not occur when pure methyl salicylate is employed. It is convenient here to refer to the successful meeting of the British Medical Association held at Montreal, Aug-

ust 30th to Sept. 5th, under the presidency of T. G. Roddick, M.D. The association embraces some sixteen or seventeen thousand members and is a flourishing and powerful medical corporation with its headquarters in London, Eng. The annual museum of drugs and surgical instruments held in Victoria Rink was of special interest, but the other attractions were so numerous that the number of physicians who attended the museum was comparatively small.

PHARMACY.

First of all it is necessary to record that in spite of some expectation the Imperial British Pharmacopœia will not bear the date of 1897. It is expected within the next month, and something like four years will have been spent in its revision. The usual interim revision notes for the next U.S.P. have been published, bearing suggestions for improving the 1890 edition. In France a special commission has been formed to prepare a new edition of the Codex. The new Russian Pharmacopœia is in hand, and a list of deletions and additions has been published. A new supplement to the Belgian Pharmacopœia has appeared, and it is understood that the Pharmacopœia itself is about to undergo revision. In England the metric system is now properly legalized, but is adopted only when and where desired, and not compulsorily. Amongst the numerous suggestions for improved processes, etc., Lucas has given a useful paper on the B. P. ointments. Martindale discussed preservatives, such as salicylic acid, boric acid, chloroform, etc., for pharmaceutical preparations, and pointed out their failings and drawbacks. Remington brought forward an old suggestion that acetic acid should replace alcohol in extracting many drugs, and claimed that nux vomica, kola, ipecacuanha, squill, cochicum, and sanguinaria could be successfully extracted by acetic acid. Under the name of "titroles," combinations of extract of malt with cod liver oil, castor oil, etc., were introduced in Germany as novelties. Pearson recommended the addition of one grain of powdered tragacanth to glycerinum amyli to prevent the deliquescence of this preparation. Essence of vanilla should not be used, according to Williams, until it has been kept at least a year. The latest deodorant for iodocform is stated to be thymol, but proportions are not given, so one may naturally feel sceptical. Mer-

curial ointment may be quickly prepared, according to Barbi, by shaking the mercury with a decoction of saponaria root and adding to a molten mixture of lard and white wax. Lanolin has again been recommended as a basis for this ointment. Picric acid was suggested for burns last year by McLellan, and antiseptic dressings of it in the form of gauze and wool, as well as plaster, have been introduced. Rauschenberg experimented with distilled rose water, and found that a small proportion of oil of cloves gave a superior spirit and rose water. Mustard has been extensively analyzed by McFarlane, and reported the majority of samples as adulterated by the admixture of wheat starch. Farr and Wright condemn the green extracts of the B. P., and suggest the alcoholic extraction of the dry drug and assaying the product. The eighth International Congress of Pharmacy was held at Brussels, and a batch of resolutions, as usual, agreed to. The next meeting is thoughtfully arranged for 1900 at Paris, so as to coincide with the great Exhibition.

PHARMACOGNOSY.

Each year the list of drugs that have been examined by pharmacists and chemists grows larger, and our knowledge of the constituents is rapidly improving. The study of pharmacognosy is widely recognized as the proper subject for pharmacists and new drugs are always readily attacked. Commercial gelsemium has been examined by Sayre and found to consist of rhizome, root and stem, in varying proportions. As the therapeutic properties are supposed to occur in the rhizome and root, the stem should be separated. The two varieties of ipecacuanha have afforded Schneider the opportunity of discovering a method of detecting the presence of carthagen powder in that of rio. He claims that discoid starch grains indicate the presence of the former; but histologists are not unanimous in accepting his description of the angular starch grains, which considerably discounts his claim. Glass examined three kinds of commercial ginger, and pronounced in favor of African as superior in aroma and strength, for the purpose of making a soluble essence, to either Jamaica or Cochin. Sayre has also given the microscopical differences between the barks of *Rhanunculus purshiana*, *R. franguloides* and *R. californica*. Schneider has done similar histological work on true and wild mace. Holmes has described

the cultivation of sumbul root in England, the young plants having been sent from Russia. The histology of belladonna leaf has been exhaustively studied by Dohme, and the different characteristics of datura, duboisia, and other leaves, pointed out. Hill has given a useful comparison between Jamaican and Surinam quassia. An extensive histological survey of commercial jaborandi leaves has been made by Geigor. Powdered drugs are so liable to adulteration that during the past few years many attempts have been made by means of the microscope to show the presence of foreign matter. Kraemer gave some useful formulæ and hints in a paper at the Minnetonka meeting of the A.P.A. The resemblance of the starches from white pine bark and maize is so close that Johnstone has drawn attention to it. The gross adulteration of insect powder is well known, and Durrant has given a useful method of testing same. Schlotterbeck has published hints on the histological study of drugs that cannot fail to be useful to the observant pharmacist. The pharmacology of Kola has been summarized by Corles. According to La Wall, 50 per cent. of the Japan wax of commerce is adulterated with starchy material. Civet has been shown by Braithwaite to be largely adulterated. A German sample of resin of scammony, examined by Thomson, consisted of gum and starch. A spurious balsam of tolu was found by Braithwaite, but its identity was not established. Sander maintains that the proportion of strychnine to brucine in nux vomica and St. Ignatius beans is constant; in the former the proportion is 1 molecule of strychnine to one molecule of brucine; in the latter, 2 molecules of strychnine to 1 of brucine. The characters, and especially the microscopic features, of the various forms of frunel seed have been described by Umney. Aspidin is the name given by Boehm to the crystals isolated from the ethereal extract of male fern. Hatters has described the best method of cutting sections of fruits, such as capsicum, after imbedding in celloidin. Amongst some little known drugs, Kinkelibah was examined by Schlagdenhauffen, as it was stated to stop vomiting; Japanese chillies have been noticed by Umney to be less pungent, although brighter in color, than zanzibar; mescal, or muscale buttons, belonging to the genus anhalonium, and stated to act like cannabis indica; ayapana, consisting of the leaves of a species of eupatorium,

used as a stomachic tonic and domestic remedy in Brazil; the root of balsamorhiza, used as a cure for tobacco craving.

NEW REMEDIES.

Several drugs have already been referred to that might fairly claim to be considered new remedies. But during the past decade the flood of synthetic remedies has monopolized the description. In the diary of an English trade journal nearly 100 new synthetic remedies are mentioned as having seen the light in 1897. Many of these are purely fancy names for chemical or pharmaceutical compounds. Formaldehyde is responsible for *amyloform*, a combination of starch and formaldehyde; *dextroform*, the condensation product of dextrin and formaldehyde; *eka-iodoform*, a mixture of iodoform and formaldehyde; *formaldehyde-casein*, etc. *Benzacetin* is recommended for neuralgia and sleeplessness. *Clinaptal* is a combination of quinine, and B-naphthol sulphionate recommended as an antipyretic and intestinal antiseptic. *Eucaïne B*, closely related to eucaïne, and with the same local anæsthetic properties. *Euchinine* or *euginine*, claimed to be tasteless derivative of quinine. *Guaiacetin*, related to guaiacol, and used in 8 grain doses in phthisis. *Holocaine* and *Orthoform*, new substitutes for cocaine and eucaïne. *Kryofin*, obtained by heating para-phenetidid with methyl glycolic acid, and claimed to be superior to phenacetin in allaying neuralgia. *Malarin*, used for the same purpose, and closely allied to kryofin as well as phenacetin. *Phospho-guaiacol* is a crystalline powder, non-caustic, and tolerated in doses of one to two drachms. *Tannosal*, a tannic acid derivative of creosote which is non-caustic and soluble. Amongst drugs not mentioned before *Monsonia* is a new remedy from the Orange Free State for dysentery. Yohimbe bark, recommended as an aphrodisiac. A new synthetic mydriatic, dilating the pupil as completely as homatropin. It is called *Euphthalmine*.

BOTANY.

One of the most interesting observations recorded during the year has been that relating to the vitality of seeds after immersion in liquid air at the extraordinarily low temperature of 190° C., made by Horace Brown, and already referred to. Holmes has given an exceedingly interesting account of botany as a business investment, which we reproduced in

our October issue. It well repays careful perusal, and the important suggestions respecting the commercial value of a knowledge of microscopy, bacteriology, etc., deserve consideration. An ingenious theory respecting the presence of toxic bodies in plants has been put forward by Cummins. He suggested that these poisons are lethal to the organisms of the soil and produced by the irritation or fermentation caused by these organisms. In this way he built up a system of vegetable antitoxins similar to what is at present accepted regarding animals. The assimilation of nitrogen has always been an interesting phenomenon to botanists, and Laurent showed that for the proper performance of this function the action of ultra-violet rays is essential. Newbigin divided the pigments of plants into soluble lipochromes and insoluble anthocyanins. The poisonous nature of the seeds of *lathyrus sativus* is known to veterinary surgeons, and McDougall showed that the continued use of pulse may lead to paralysis. Morison has described the histological character of the three principal vegetable tissue systems. Green found that light acted injuriously on diastase, especially the violet and green part of the visible spectrum. Rywosch considered that oil in leaves is not a reserve food-material as it is when it occurs in the stems of woody plants. Its function appeared from his observations to be that of taking up the xanthophyll. The alteration of pink hydrangea to blue has been usually attributed to iron in the soil, but Molisch found that only ferric sulphate would act in this way, whilst alum, as aluminium sulphate, is equally as efficient. Mattej investigated the red spots that frequently appear on leaves, petals, etc., and found them to consist of a gum-resin colored by an essential oil. Researches on chlorophyll by Stocklase showed that a great similarity exists between lecithin and chlorophyll, phosphoric acid is always present, but iron is not present. During the year botany has lost one of its foremost teachers, his textbook, lectures and history of botany having been regarded as classics during the past twenty years. He was professor of botany at the University of Wurzburg, and a member of the leading learned societies all over the world.

PHOTOGRAPHY.

The progress in this branch of science is now rapidly clearing away many of the difficulties that beset its infancy. The

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are the handiest, most attractive, and cheapest to use.

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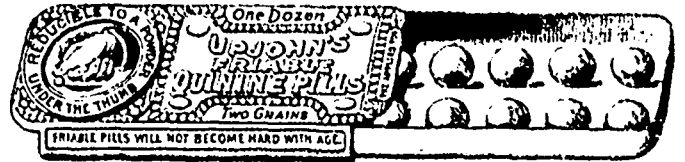
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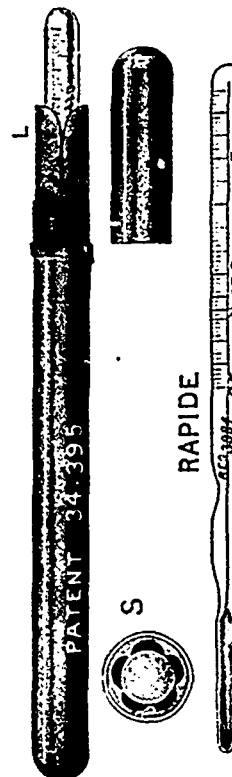
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KOLA, COCA and
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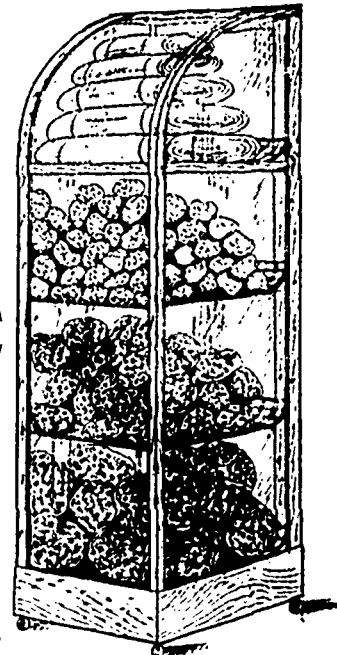
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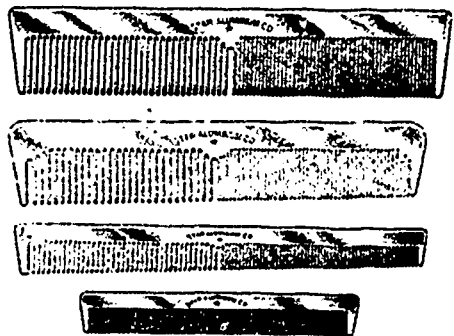
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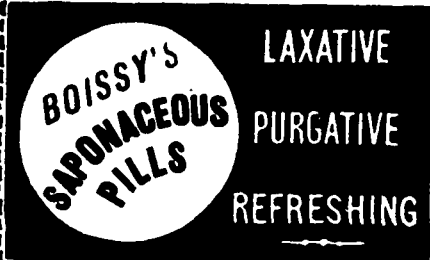
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All Wholesale Druggists keep in stock and will supply retail druggists with

- Wood's Phosphodine, Retalls \$1.
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- Cook's Cotton Root Compound, No. 2, Retalls \$3.

Many retail druggists sell dozens of these goods while others only sell a few boxes. The reason for these variations in sales are that one orders from his jobber in not less quantity than one dozen Wood's Phosphodine, one dozen Cook's Cotton Root Compound No. 1, and a half dozen Cook's Cotton Root Compound No. 2, and places the dozen cartons on his show case where they can be seen and examined by customers. The other orders a few boxes and hides them in a drawer behind his counter where they cannot be seen, or what is still worse, waits until a customer asks for the goods and then orders a box or two; thus one druggist sells many dozens, the other a few boxes or none at all. These goods all afford a liberal profit to the retailer, and are liberally advertised in nearly all papers from Cape Breton to British Columbia. No retail druggist can make a mistake in ordering from his jobber at least one dozen each of these goods and placing them on his show case where they can be seen. Druggists who have only purchased a few boxes and placed them in a drawer behind their counter will, by purchasing in quantity and placing where they can be seen, be surprised how quickly they will be sold. There is only one way to sell goods, and that is to keep a supply.

Trade Notes

goal of photographers is the production of colored pictures by direct action of light. So far, Ives' photo chromascope was the best attempt at indirectly obtaining colors by means of pictures taken through red, blue and green glass respectively. Early in 1897, however, Chasagne of Paris demonstrated an important step towards the goal, and although a certain amount of scepticism exists as to the nature of the result, there can be no doubt as to the effective picture obtained. The radiolint, as it is called, is produced by immersing the print or positive in a colorless liquid of a mordant of albumin and salt. The blue, green and crimson solution are next applied in turn and the finished print presents a picture in colors with the dark brown silver image underneath. The process is patented, and a company has been formed to work it, the American rights having been sold, it is stated, for \$27,000. An exceedingly useful paper on the pharmacist as a photographic dealer, appeared in our November issue, giving a number of developing and other solutions that can be readily prepared for the use of amateur photographers. The new Roentgen Society, under Silvanus Thompson, will probably extend our knowledge of these mysterious X rays. Meville and Heycock have examined sodium-gold alloys under the Roentgen rays; Dixon and Baker have demonstrated the chemical inactivity of the rays, and Hexapline has confirmed their results even with solutions sensitive to light. Acetyline has been used largely for lantern projection, and the oxy-hydrogen flame playing upon a lump of zirconia is stated to give a better light than lime-light. The calcium carbide industry for the production of acetylene bids fair to become an important industry, and the extensive water-power of Canada has been utilized for this purpose in the Lake of St. John's District, Province of Quebec, and elsewhere.

Several years ago an association was formed in Chicago to test the validity of the United States phenacetine patents, and the members subscribed to a fund to be used in carrying the case to the highest court. An appeal was sent out to druggists asking subscriptions, but the response was very meagre. As the question was a large one, and involved a very large expenditure to push it, the original members have disbanded the organization, refunding to its members the balance of the money on hand.

Norman R. McKenzie, druggist, Newcastle, N. B., is dead.

Dr. Stewart has opened a new drug store at Griswold, Man.

W. J. Fleming, of Prince Albert, was in Toronto recently on a visit.

Dr. P. A. Holmes is opening a new drug business at Parrsboro, N. S.

Hastings & Co. have opened a new drug store at 63 Charlotte St., St. John N. B.

Duncan McLean has purchased the drug business of C. W. Walden, Shubenacadie, N. S.

A. C. Gaviller, formerly in business in Grand Valley, has moved his drug stock to Sudbury, Ont.

The Egyptian Rheumatic Oil Co., dealers in patent medicines, Halifax, N. S., has been registered.

The Druggists Corporation of Canada Limited, have opened a warehouse at 32 Colborne St., Toronto.

E. Scarlett, formerly of Dundas, Ont., has purchased the drug business of Dr. H. A. Wright, Oak Lake, Man.

The firm of W. A. Griffiths & Co., druggists, Vancouver, B. C., have dissolved partnership, Mr. LePatourel retiring.

The firm of Coderre et Frere, druggists, consisting of C. E. Coderre and Jos. A. Coderre, have registered as druggists in Montreal, Que.

Dr. Alyn has purchased the drug business of W. E. Thomson, Fort Saskatchewan, N. W. T. Mr. Thomson is moving to Manitoba.

Dr. Hicks has opened an additional drug store at Griswold, Man., making two new drug businesses in that place, which are chronicled this month.

F. Lawson, of the firm of Lawson & Jones, druggist's printers, London, Ont., left New York on the 12th inst. by steamer *Teutonic* on a business trip to Europe.

The meeting of the wholesale Drug and Proprietary Medicine Manfs. Association was to have been held Dec. 28th, has been postponed until a date in this month to be named by the President.

W. J. Fielding & Co. have opened a warehouse at 117 and 119 Simcoe St., Toronto, as dealers in crude and powdered drugs and drug grinders. Mr. Fielding was formerly of the firm of the Holgate-Fielding Co.

Bert Smith, for some years with the Lyman Bros. & Co. Limited, and latterly with Scott & McMullan, is now with the American Silver Truss Co., of Yonkers, N. Y. He represents them from the Mississippi River to the Pacific Coast.

We regret to learn that Mr. J. Mattison, manager of the London (Ont.) drug warehouse of Kerry, Watson & Co., was injured in the recent sad accident which happened in that city, by the collapse of a portion of the floor of the City Hall. His many friends wish him a speedy recovery.

On Jan. 1st, the firm name of the well known drug house of British Columbia, Langley & Henderson Bros., Victoria, was changed to that of Henderson Bros. No other change is being made, the members of the firm being the same as formerly, viz., J. N. Henderson, T. M. Henderson and Wm. Henderson.

We regret to have to chronicle the death of Mr. B. Reed, manager of the wholesale drug warehouse of Evans & Sons, Montreal, which occurred while undergoing a surgical operation. Deceased had been with the firm for over 20 years and was very highly esteemed by all who knew him. He was 56 years of age and leaves a widow and three children.

At the recent municipal elections in Ontario the following druggists were elected to the highest office in the municipality, being chosen as mayors of their respective towns: J. A. Hacking, Listowel; J. Urquhart, Oakville; J. DeWitt Martyn, Kincardine.

Amalgamation.

Concentration of forces seems to be the order of the day. A few months ago we announced the amalgamation of two prominent wholesale drug houses in New York, now we are informed that the drug firms of Williams, Davis, Brooks & Co. and T. H. Hinchman & Sons, of Detroit have been consolidated into one firm, the name being "Williams, Davis, Brooks & Hinchman Sons." The president of the new firm is Wm. C. Williams, vice-president and general manager James E. Davis, capital stock \$600,000. The business will be conducted in the premises occupied by Williams, Davis & Brooks Co.

LUCIFER MATCHES, the discovery of Sir Isaac Holden, whose death was recorded recently, were put upon the market by chemists.

Montreal College of Pharmacy Christmas Sesssional Examinations, Dec. 23, 1897.

PHARMACY AND MATERIA MEDICA, SENIOR CLASS.

Examiner—PROF. T. D. RUMB, M.D., J.P.

(1) Give the steps in the soda process of Leblanc, as equations. In one short ton of crystallized sodium carbonate, how much is water and how much metal? (2) Name five official preparations containing mercury in the metallic state. In the case of a 50 per cent. ointment of mercury, containing only mercury sp. grav. 13.5 and grease .950, how much by weight of the ointment would be required to fill a 16 oz. pot? (3) Explain the manufacture of Magnesia Ponderosa beginning with Epsom salts. How much $H_3C_6H_2O_7 \cdot H_2O$ would be required to saturate 100 grains of magnesia carb. B.P.? (4) Name two official preparations in iron in the dyad state, and two in the triad. In the preparation of the official solution of per-compounds of iron detail the test which indicates the completion of the process. (5) Certain elements are designated halogenous radicals. Give in outline a method of obtaining those which have preps. B.P. (6) Name the Galenical preparations which contain added potassium sulphate. (7) Preparations of sodium, ammonia, potassium, lithia, are used as antacids. Taking 10 grains of lithia carbonate as a standard dose, how much Potassium Bicarbonate would be equal to it in neutralizing power? (8) Name the B.P. preparations of Calcium. Indicate briefly the method of manufacture of calx chlorata. How is this powder tested? (9) Distinguish between white lead, black lead, red lead. Relate the chemistry of the process for the preparation of so-called Goulard Extract. (10) Name five mineral acids of B.P. Select one, and note of it appearance of B.P. form, sp. gr., dose, and some tests of identity.

MATERIA MEDICA.—FIRST YEAR.

Examiner.—PROF. J. E. W. LECOURS.

No. 1. Calculate the weight of a gallon of sulphuric acid $\Delta 1,843$. Find the weight in grammes of a litre of alcohol $\Delta 838$.

No. 2. (a) A body weighs 160 grammes, in water it weighs 100; find its sp. gr. (b) A pint of a liquid weighs $19\frac{1}{2}$ oz., find its sp. gr. No. 3. (a) 20 degrees below zero C, corresponds to what figure on Fahrenheit's scale? (b) 22 degrees below zero F, is equal to what degree Centigrade?

No. 4. What are the advantages of evaporation *in vacuo*? No. 5. How may we dilute 5 litres of syrup $\Delta 1.40$ to produce a liquid $\Delta 1.33$. No. 6. Two specimens of opium powder contain respectively 8 and 15 per cent. of morphine, how may these be mixed to produce 10 oz. of powder of the strength of B.P. No. 7. Give a definition of distillation. No. 8. Give a definition of sublimation. No. 9. How may the following be filtered, nitric acid, etherial solutions, solution of silver nitrate, solution potas permangon, castor oil. No. 10. Give a definition of the terms: Amorphous, efflorescent, deliquescent, simple solution, chemical solution.

CHEMISTRY.—SECOND YEAR.

Examiner.—PROF. C. A. PEISTER.

No. 1. Give the chemical reactions of corrosive sublimate. No. 2. You have a white pulverulent substance insoluble in water. Ammonia dissolves it, but diluted with water this solution is milky. H_2S or NH_4HS gives a black. $K_2Cr_2O_7$ gives yellow. H_2SO_4 in the solution does not cause precipitation. The original body heated with H_2SO_4 and a crystal of $FeSO_4$ gives off red vapors. What is this body? No. 3. In the case of K. Br. in solution with a little bromine water, in the cold it gives a blue with starch. What may we conclude? No. 4. By what reactions may we recognize As_2O_3 ? No. 5. What are the common characteristics of the sulphides, Sn, Sb, Au, As? No. 6. Into a saline solution we pour solution of K_2SO_4 , we get a white precipitate. What may we suspect? No. 7. The above saline liquid treated with H_2S or NH_4HS gives a black precipitate. What is it? No. 8. How may we know that a salt contains a negative organic radical? Indicate the method of recognizing azote in a body which is not nitrite nor a nitrate? No. 9. A solution is not precipitated by H_2S nor by NH_4HS , nor by $Co_3(NH_4)_2$. Heated with K Ho it gives off NH_3 . After strong heating the residue is dissolved in H Cl, the solution is precipitated by Na_2CO_3 but not by H_2SO_4 . The only negative radical known as yet in the original body is Cl. Name the positive radicals in double salt. No. 10. Indicate the chief reactions of K_4FeCy_6 and $KFeCy_6$, with dyad iron and triad iron, also with copper. How is iron affected by $KSCy$?

PHARMACY AND CHEMISTRY.—JUNIOR CLASS.

Examiner.—PROF. JOSEPH BEMROSE, F.C.S.

(1) Why does water, when steadily heated, pass only gradually into steam? (2)

Suppose two forces of equal value, say 35, are active, at right angles to each other, what is the value of the resultant force? (3) What do you understand by the following terms: "Synthesis," "a calorie," "cohesion," "allotropy." (4) Two similar glass tubes of moderate bore, are filled to the same height, the one with quicksilver, the other with water; are the two fluid columns exactly alike, or not? If not, how do they differ, and why? (5) Give the symbols, atomic weights and quantivalence of a dozen elementary bodies, and the physical and chemical properties of one of them. (6) Given the molecular weight of a gas, how would you calculate the weight of a given volume of it? (7) Calculate the percentage composition of Epsom salts. (8) What is meant by the diffusion of gases? State the law expressing the rate of diffusion. (9) A glass globe holds 100 litres of air at normal T. and P. How much gas will escape when the temperature rises to $15^\circ C$ and the pressure falls to 752 m. m.? (10) When steam is passed over red hot charcoal the products are hydrogen and carbonic gas; put this statement into the form of an equation, and give weights and volumes of the gases as thereby shown.

BOTANY.

Examiners { PROF. J. BEMROSE F.C.S.
PROF. J. E. MORRISON, F.R.M.S.

(1) Give an account of the principal modes of cell formation. (2) Describe the cork cells; where are they found and what are their function. (3) Describe the transverse section of a monocotyledonous and of a dicotyledonous stem. (4) Describe the growing point of an exogenous stem. (5) What portions of the meristem tissue enter into the formation of the leaf-bud? and what parts of the leaf tissues do they respectively produce? (6) In what particulars does the central cylinder or stele, differ in root and stem. (7) Why are palisade cells found in one row, in two rows, and sometimes on both surfaces of a leaf? (8) Write as fully as you can about the epidermis. (9) Where are sieve tubes found? Give some idea of their appearance under the microscope. (10) What are the functions of the chlorophyll?

IT HAS BEEN CALCULATED that in the case of a man six feet high, it takes one-twentieth of a second for a message to travel along his nerves from the brain to the feet, so the theory arises that a shorter man is the sharper he should be.

STEARNS'

Wine of Cod Liver Oil

In presenting Wine of Cod Liver Oil—Stearns'—we do not claim it to be a food, but a stimulant to the processes of assimilation and nutrition. To be sure the manufacturers of Cod Liver Oil by the steam process, and those who are pushing emulsions of Cod Liver Oil, are very much opposed to the light brown Cod Liver Oil for obvious reasons. On account of the slightly product produced by the steam process they certainly have appearances on their side, but when a comparison is made between the therapeutic efficiency of the pale, straw-colored oil and the light brown oil, the latter is more efficacious. Why employ the fatty matter at all when the extractives can be administered separately from all the nauseous, fishy taste and disagreeable associations of Cod Liver Oil itself? Fat in no case stimulates tissue building. In fact, the fat has the property of inhibiting or slowing up cell action, and while it thus prevents tissue waste to a certain extent, it may cause an accumulation in the system of the products of waste to the detriment of the patient. Extractives, on the contrary, containing the substances which stimulate cell activity, not only clear the cells of the waste matter by increasing their activity, but cause them to take up nutritive material from the food and thus build fresh and healthy tissues in place of those wasted by disease. Unless food is given with Wine of Cod Liver Oil it is like putting a blower on an already exhausted fire without putting on fresh fuel. But why give the nauseous fat of cod livers when butter, cream or the fat of meat may be employed without disagreeing with the patient's stomach? Under proper diet, in which fat takes its relative proportion with the other ingredients necessary to nutrition, and with the use of the extractives as contained in Wine of Cod Liver Oil—Stearns'—better results may be secured in most cases than by Cod Liver Oil medication as generally practised.

Our Brochure on Wine of Cod Liver Oil, entitled "From Source to Finish," we will gladly mail to any pharmacist who may be interested enough in the subject to write to us for a copy.

Stearns' Wine of Cod Liver Oil is sold by all Jobbers at \$8.00 per dozen, or may be ordered direct from the Manufacturers.

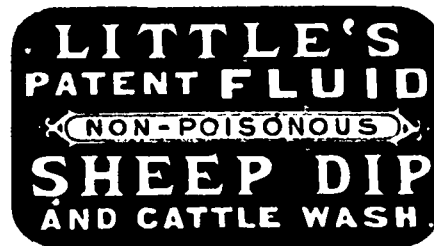
Frederick Stearns & Co., Manufacturing Pharmacists,

WINDSOR, ONT.

Detroit, Mich.

London, Eng.

New York City.



For the Destruction of Ticks, Lice, Mange, and
all Insects upon Sheep, Horses, Cattle,
Pigs, Dogs, etc.

Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc

Removes Scurf, Roughness, and Irritation of the Skin,
making the coat soft, glossy, and healthy.

Removes the unpleasant smell from Dogs and other animals.

"Little's Sheep Dip and Cattle Wash" is used at the Dominion Experimental Farms at Ottawa and Brandon, at the Ontario Industrial Farm, Guelph, and by all the principal Breeders in the Dominion; and is pronounced to be the cheapest and most effective remedy on the market.

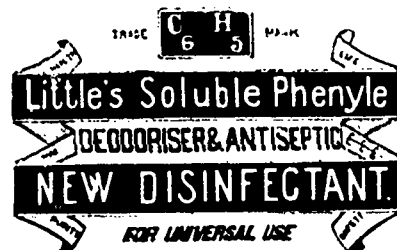
17 Gold, Silver, and other Prize Medals have been awarded to "Little's Sheep and Cattle Wash" in all parts of the world.

Sold in large Tins at 75c. Is wanted by every Farmer and Breeder in the Dominion.

ROBERT WIGHTMAN, Druggist, OWEN SOUND, ONT.

Sole Agent for the Dominion.

To be had from all wholesale druggists in Toronto, Hamilton, and London.



Cheap, Harmless, and Effective

A Highly Concentrated Fluid for Checking and Preventing
Contagion from Infectious Diseases.

NON-POISONOUS AND NON-CORROSIVE.

In a test of Disinfectants, undertaken on behalf of the American Government, "Little's Soluble Phenyle" was proved to be the best Disinfectant, being successfully active at 2 per cent., whilst that which ranked second required 7 per cent., and many Disinfectants, at 50 per cent., proved worthless.

"Little's Soluble Phenyle" will destroy the infection of all Fevers and all Contagious and Infectious Diseases, and will neutralize any bad smell whatever, not by disguising it, but by destroying it.

Used in the London and Provincial Hospitals and approved of by the Highest Sanitary Authorities of the day.

The Phenyle has been awarded Gold Medals and Diplomas in all parts of the world.

Sold by all Druggists in 25c. and 50c. Bottles, and \$1.00 Tins.

A 25c. bottle will make four gallons strongest Disinfectant. Is wanted by every Physician, Householder, and Public Institution in the Dominion.

ROBERT WIGHTMAN, Druggist, OWEN SOUND, ONT

Sole Agent for the Dominion.

To be had from all Wholesale Druggists in Montreal, Toronto, Hamilton, and London, Ont., and Winnipeg, Man.

is it asking too much to crave the privilege of sharing our profits with the retailer? We appreciate the value of the retail druggist's personal push in the sale of Cascarets and No-To-Bac, and are willing to pay for it. Every druggist who sells our goods and does not write us at once for our new and liberal proposition, in force Aug. 1, 1897, will lose money. Sterling Remedy Company, Chicago, Montreal, Can., or New York. 21.

Pharmacy in England.

Aq. Sambruci Trip.—Erythrol Tetranitrate Microscopes for Canada
Progress of the English P.A.T.A.—A Rich Norwegian Mine Photographic Flouints.

(From our own Correspondent.)

Elder Flower water is one of those old-fashioned preparations that seem to be slowly dying out, its reputation as a vehicle for eye tions having already waned. A great part of that used in pharmacy is imported from the south of France, together with rose water and orange flower water. But the Anti-fermentive Company—a company formed to run a preparation similar to salicylic acid and recommended for preserving jam, meat, etc.—of London, Eng., have taken up the distillation of elder flower water from English flowers, and have certainly obtained a superior product. One of their representatives informs me that a good deal of sophisticated elder flower water comes from the Continent, and is merely a "faked" product of orange flower water, with a trace of citronella. Some time ago, Messrs. Bush & Co. showed me a little phial containing the otto or essential oil of elder flower, which they valued at a good deal higher price than otto de rose; in fact, about \$25 per oz. In order to obtain their supply of elder flower water all the year round, many firms preserve a sufficiency for their need by mixing the flowers when fresh with salt. It can then be distilled as required, but the product is not so fine as if it be distilled at the proper time.

The sad death of one of Burroughs, Wilcome & Co.'s assistants through an explosion, caused by pounding erythrol tetranitrate in a mortar, has attracted attention to this chemical. It is closely related to nitro-glycerin chemically, erythrol being a tetrahydric alcohol, winest glycerin is, of course, a trihydric alcohol. In the evidence, the firm's chemist clearly laid the whole blame on the deceased assistant, and the suggestion was made that he had no business to be compounding it in the method indicated. In dealing with these decomposable, but not necessarily explosive, bodies, care and common sense must be exercised. For instance, picric acid can be safely handled in solution or gently pulverized by itself, but with certain combinations it forms salts that are quite liable to explode by percussion.

An instance of the revival in Canadian trade was given me last week by a firm of microscope and camera makers. They

had just shipped fifty microscopes and a number of their special cameras to Canada. In philosophic instruments as well as cameras, English manufacturers claim that they can easily compete, both in quality and price, with the United States. Moreover, nearly all the more recent improvements have been made in England, although it must be admitted that in cheapness of lenses the French beat us. The principal plate and paper manufacturers formed an association early in the year, with the object of maintaining retail prices. This has given the foreign manufacturer an opportunity of placing his wares on the English market, but they are not by any means liked. Most amateurs, after trying one or two of the principal makes, settle down to the one they like best and will try no other. There can be no doubt that the reduced price of silver has enabled manufacturers to pocket handsome profits during the year, as it is an important item in the cost of manufacturing both plates and prints.

The progress of the Proprietary Articles Trade Association in England in fighting the cutting problem has been slow, but eminently satisfactory. It has been proved over and over again that local arrangements will never meet the case, and mere pious expressions of disapproval at extreme cutting will avail nothing. The drug stores are only too glad of patent and proprietary medicines as stalking horses or advertisements. These goods afford them the opportunity of stating usual price so-and-so, our price, something very much lower. It should not be forgotten, however, that even if all these proprietaries were on the protected list of the association, the tactics of the cutter would be unaltered. He would still take lines like chemical food or Epsom salt and quote absurd prices. But this form of competition could be more easily met, and the public is not so anxious to buy wholesale quantities even if they are cheap. The ploy of it is that an association formed for the sole object of anchoring one of the most objectionable phases of modern business has not secured unanimous support. Many of the leading members in the trade, who have all along been securing full prices, prefer to sneer at the partial adhesion of manufac-

turers. As if the most potent argument that could possibly appeal to the manufacturers would not be the unanimity of the trade upon the subject. If the retailer requires no salvation, why should the manufacturer stir to secure it for him?

I have just received an interesting document from an enterprising Norwegian, who having heard of the interest caused by the discovery of helium, and being the happy possessor of a mine containing cleveite, is apparently under the impression that it is a useful commodity to druggists. The following is abstracted from the circular of Herr Maurice Karlevold, of Sundnes, Norway. "In the mountains of Norway are often found the rarest minerals in the world, such as contain helium, thorium, lanthan, yttrium, zirconium, vanadin, didym, galium, etc. From a rich mine in Vass, Ryfylke, is sold

Cleveite (containing helium)	\$7.20 per kilo
Uranium ore (95.50 p.c. oxide)	6.00 "
Alveite (containing yttrium, etc.)	2.80 "
Somarskite, auzonette	2.40 "
Ytter-spah, monazette	2.40 "

Professor Ramsay permits the undersigned, Mr. M. Karlevold to state that his cleveite yields from 1.5 to 2 cub cents per gram of helium. *Nature*, London, 11th March, 1897 writes that "his cleveite is estimated to be very rich in helium."

Melting and Assay Offices and Ore Floors, London, writes on the 11th November. "One box of uranium ore, net dry weight, 3 qrs. 25 lbs. Containing 12 per cent. of yellow oxide of uranium."

It deserves the special notice of laboratories and chemical factories with large consumption that theoretic and practical miners consider the mine above named and recently discovered the richest in Norway, nay in the world, as to uranium ore and still rarer helium.

I am myself discoverer and owner of the mine, and I am willing to give a liberal discount in proportion to quantities consumed." There is an air of enterprise about this circular that makes one almost regret that the discoverer of helium was not able to vaunt it as a remedy for consumption or something else. It would mean a small fortune to my Norwegian friend. As it is, I am afraid the demand for helium or even cleveite will never be large, and the discoverer and owner of the richest mine in Norway will not be inundated with orders in spite of the endorsement of "theoretic" and practical miners.

At this time of the year the amateur

photographer is looking for elegant and suitable mounts for some of his best prints so that he may present them to his friends. These are now obtainable in as many choice designs as Christmas cards themselves, and just as a good frame will set off a picture, so good mounts should be used for specimens of the photographer's art.

College of Pharmacy Examinations.

The Christmas Sessional examinations of the Montreal College of Pharmacy were held on Tuesday, December 21st to Thursday, December 23rd, inclusive, when the following students passed in their various subjects, and are ranged in order of merit, namely:

Botany—Geo. H. Voss, P. G. Mount, C. A. Descheres.

Chemistry (Junior Class).—M. Albert, T. A. Swift, A. J. Bedard, E. P. Jones, Allan T. Christie, J. J. Weinfeld.

Chemistry (Senior Class).—Gustave Richard, J. A. Goyer, Miss A. A. Prevost, H. Guerin, Gilbert Faulkner, S. Moison, J. N. Farley.

Materia Medica (Junior Class).—J. N. Farley, Joseph Valois, Miss A. A. Prevost, Gustave Richard, L. J. E. Vadboncour, H. Guerin, Gilbert Faulkner, J. B. Bisailon, Roger Pasquin, J. A. Choquette.

Materia Medica (Senior Class).—Geo. H. Voss, J. Bedard, A. E. Baldwin, M. Albert, F. J. Leimaistre, O. H. Tansey, Allan T. Christie. The next examination will be held at the end of March.

Reduction in Price.

True to their policy—to apply to the retail price all saving in cost of manufacturing, due to increased facilities and output—the O. & W. Thum Co. announce a reduction in the price of their Tanglefoot of 5 cents per box, and 40 cents per case.

For 1898 Tanglefoot will be sold at:
40 cents a box.

\$3.40 a case.

The Tanglefoot people hope that the reduction will be a welcome one to the retailer, and that it, like all previous reductions, will result in increased use.

A Complaint.

The following letter has been sent us for publication. The grievance spoken of is quite common in other than the lumbering districts, and the only remedy we see is to let such preparations "severe.

ly alone," not handling them, and pushing the sale of goods made by legitimate dealers:

I desire to call your attention to a method some of the manufacturers of the so-called "patents" are adopting to push sales. Every fall our country up here is overrun with their travellers, who try to stock us up with their respective nostrums, then make a tour of the various lumber camps and sell them by the gross at prices that we cannot touch. They (the travellers) come into our stores and threaten us that if we don't buy a large quantity that they will sell direct to the lumber firms. To-day a traveller for a certain liniment visited me, and intimated that if I would not buy that he would call on the various lumber firms and solicit their trade. Now could not the respective wholesale houses put the "screws" to these peripatetic concerns and compel them to do legitimate business. Last fall the same firm stocked up the whole country with their stuff. Goodness knows business is dull enough without having these people peddle their wares through the country and undermine our legitimate trade. We depend largely upon the lumbering trade for our business, but this sort of thing is knocking everything silly. Kindly give me your views on the subject.

Quick Work.

The annual stock-taking by wholesale druggists has always been a long and tedious operation, and how to shorten the time and yet have even more accurate results has just been exemplified. The Lyman Bros. & Co., Limited, Toronto, decided last year there could be an improvement in stock-taking, and decided to do it in a day instead of spending ten days over it as formerly. They commenced on Thursday evening the 30th at 7 p.m., worked until 10; started again Friday morning at eight and finished by five o'clock. While the trade were not canvassed on Friday all business that came to them was handled as usual. We congratulate them on this one of their many up-to-date methods of doing business adopted during the past year.

The Estimation of Aloes.

Fifty grammes of aloes are dissolved in about 300 cc. of hot water, rendered acid with a few drops of hydrochloric acid. The solution is allowed to cool, and the resinous bodies are separated. Large ex-

cess of ammonia and 45 grammes of a 30 per cent. solution of calcium chloride are added, and the whole well shaken. The precipitate is pressed and mixed with hydrochloric acid in a mortar. The free aloin and the calcium chloride are then dissolved in the minimum quantity of hot water. The aloin separates from its aqueous solution when cooled with ice, almost quantitatively.—*Pharm. Zeitung.*

Fehling's Test (Quantitative).

Mr. Thos. Carwardine, F.R.C.S., writes to the *British Medical Journal (C. D.)*: "This may be rendered much more rapid by placing the test-tube containing the suspended precipitate of red copper suboxide in a centrifugal machine. The precipitate is then thrown down at once, and the color of the solution is obvious without delay. Costly apparatus is unnecessary; a piece of string tied to the test-tube enables it to be twirled round in the air, when the precipitate will be all found at the bottom of the tube, and the color of the liquid can then be seen at a glance."

Miscible Tar Oil.

Heavy tar oil, which is largely used as a deodorant and disinfectant, is rendered easily miscible with water to a uniform and more or less permanent emulsion by the employment of alkaline resin soap. Fegon prepares the soap basis from resin, 100; soapmaker's lye, 95; distilled water, 200; commercial oleic acid, 40. The resin is dissolved in lye and the water by boiling. The resin soap is then evaporated to 200, cooled, and the oleic acid added. Soft soap may be substituted for the oleic acid; in this case only 85 of lye are used, and the mixture of the two soaps is evaporated down to 240. To every such 240 parts of resin soap basis sufficient heavy tar oil is added to produce 1000. The soap is gently heated and mixed gradually with 400 of the oil; the temperature is then carefully raised just short of boiling, until a perfect solution is effected; the rest of the oil is then added. During cooling the vessel should be covered over to prevent too great evaporation of water, of which the soap should retain about 50 parts. Finally the mixture is filtered or strained through a cloth.—*Jour. de Ph.*

The production of castor oil is looked upon as a probable future industry for China.

THE OPTICAL INSTITUTE OF CANADA



60 Yonge Street. TORONTO.

A Diploma from this Institution means something.
The knowledge gained at this Institution means something.

**THE ONLY RECOGNIZED OPTICAL
INSTITUTE IN CANADA.**

And at least equal to any in America.

No previous knowledge whatever of optics or fitting glasses is required, because the course embraces everything from first to last that is necessary for an optician to know in order to scientifically and properly fit glasses. Students prove their ability to do this by actual practical work on patients the last few days of the course.

Write for a Prospectus, and see the testimony of hundreds of previous students.

Next Class January 24th, 1898.

Fee for Full Course, \$25.

W. E. Hamill, M.D.,
Instructor.

Mr. J. S. Leo,
Principal.

THE BROWN BROS., LIMITED

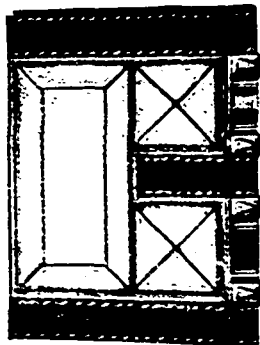
Stationers, Bookbinders,

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Manufacturers of
**Account
Books**
—every description

Leather Goods
Wallets, Portfolios,
Card Cases, etc.

**Office and
Pocket Diaries**
200 varieties



—Agents for—

Dealers in
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all kinds
Office Supplies
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Supplies**
**Bookbinders'
and Printers'
Material**

**Caligraph Typewriter, Edison Mimeograph,
Wirt Fountain Pens,
Esterbrook Steel Pens**

We aim to have the most complete Stationery House in the Dominion.

DUTY FREE

**LANSING'S
GLASSCINE
LABELS**

(CELLULOID),
Patented in the U.S. and Canada

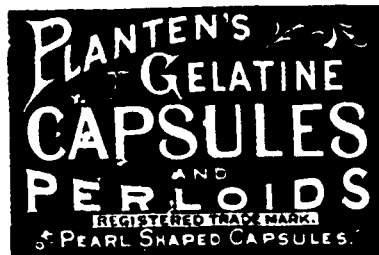
For Druggists'
Shelfware

Sample and sheet of designs free

Dr. R. R. LANSING

75 Beaubien St.

Detroit, Michigan, U.S.A



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BY

H. Planten & Son

ESTABLISHED 1866
NEW YORK

SPECIAL PRICES for EXPORT

Correspondence Solicited

PLANTEN'S Comp. O & C or Black and Sandal Wood Oil **CAPSULES**

Are Celebrated the World over for Uniformity and Reliability
Sold by all Druggists in the Dominion of Canada.
Specify Planten's on all Orders.

H. Planten & Son (Established 1866) **New York**
"The Pioneer American Capsule House"

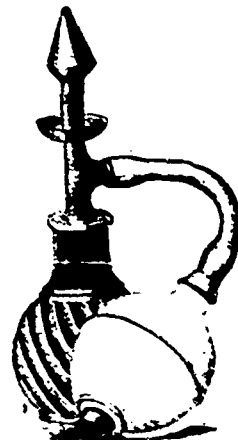
"Zeta" Atomizer

is an OIL ATOMIZER, and is fitted with our novel hard rubber cup for protecting the soft rubber parts and the hand of the user from contact with the oil being sprayed.

TRADE PRICE, \$7.00 PER DOZ.

A sample sent, postage prepaid, to the trade, on application.

We have a full range of atomizers at prices to suit all classes of trade. Price list, revised to date, now ready



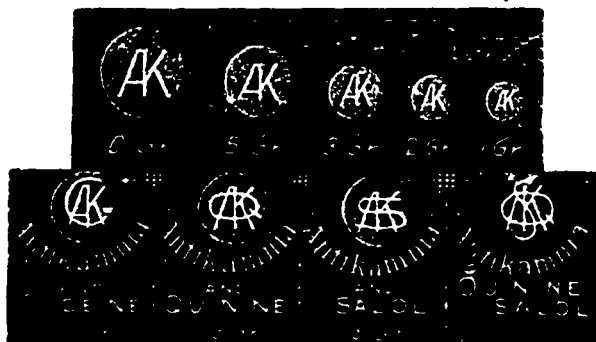
ALPHA RUBBER CO., LIMITED
MANUFACTURERS OF FINE RUBBER GOODS
MONTREAL

ANTIKAMNIA SUBSTITUTION

SPECIAL NOTICE

All cases of suspected substitution called to our attention will be investigated, and upon incriminating evidence, the substitutor will be reported to every physician and druggist in the surrounding territory.

Honest Pharmacy Must Have Honest Competition.



Antikamnia Powdered, Antikamnia Tablets and Combination Tablets are made solely by us and are put up in 1-oz. packages only.

NEVER IN BULK.

Information Respecting Substitution Thankfully Received.

All Correspondence Confidential.

ADDRESS:

THE ANTIKAMNIA CHEMICAL COMPANY, St. Louis, Mo., U. S. A.

Wampole's

BEEF, WINE, AND IRON.

In Pint Bottles.....\$5 00 per doz.
 Winchester (½ Imp. Gal.)..... 2 00 each.
 Imp. Gallon, in 5 gal. lots, and over 3 50 per gal.

With handsome lithographed labels. Buyer's name prominently Printed on same, at the following prices:

½ Gross lots, and over.....\$60 00 per gross.
 (Packed in One-Dozen Cases.)

We use a Pure Sherry Wine in the manufacture of this article, assuring a delicate flavor, and we guarantee the quality to be equal to any in the market.

We invite comparison with other manufacturers, and will cheerfully furnish samples for that purpose.

Your early orders and enquiries solicited through Wholesale Jobbers, or direct from us.

Henry K. Wampole & Co.,

MANUFACTURING PHARMACISTS,

Philadelphia, Pa.

Canadian Branch:

36 and 38 Lombard Street, TORONTO.

The Drug Trade of Canada. . . .

GENTLEMEN:—Ransom's Family Receipt Book for 1898 is now in the hands of the printer. This being the first year of its publication for a number of years in Canada, I beg to offer the following description of the same:

It is a thirty-two page book with cover illustrated, and containing three hundred recipes for cooking. It is sought after by the public and I am sure will please your patrons.

We propose to furnish this book to each druggist who will furnish us with his name and address; which will be printed on each book. The purpose of the book is to advertise Trask's Magnetic Ointment, and Ransom's Hive Syrup and Tolu.

Please forward your name, also number of books you could use, and they will be sent forward to you by express, prepaid from

Francis U. Kahle,

127 Bay St., TORONTO.



VIN MARIANI

(MARIANI WINE)

THE IDEAL FRENCH TONIC.

Nourishes, Strengthens, Stimulates, Fortifies and Refreshes the Entire System.

For invalids, *fatigued brain and body*, loss of appetite, stomach and lung troubles, and impoverished blood.

Effect Immediate and Lasting.

Prescribed by the medical profession for 30 years throughout Europe and America. The most popular tonic stimulant in hospitals, public, private and religious institutions.

As palatable as the choicest old wines.

Sold at Druggists and Grocers. Avoid substitutions.

ASK FOR VIN MARIANI.

LAWRENCE A. WILSON & CO., MONTREAL

Sole Agents for Canada for

GOLD LACK SEC CHAMPAGNE. ♦ OLD EMPIRE RYE WHISKEY
 BOUTELLEAU FILS. DOCTORS' SPECIAL BRANDY.

Ontario College of Pharmacy.

JUNIOR EXAMINATIONS.

The Ontario College of Pharmacy has just terminated the most successful junior term in its history. At the junior examinations 122 students presented themselves, the largest junior class, by twelve students, in the history of the institution. The result of these examinations is given below. Archie Moir, who heads the class in general proficiency, as well as in each individual subject, made a remarkably high mark, taking 498½ marks of a possible 500, representing 100 in each of four subjects, and 98½ in the fifth.

First Class Honors.—Arranged in order of merit: Archie Moir, Robert McDonald, Hugh McPherson, Chas. W. Watson, G. M. Bateson, James Twohey, Clarence H. Lewis, Leonard R. Clarke, Hugh W. Smith, Andrew Johnston, James M. Duncan, H. Homer Blach, A. J. Davidson, J. A. McDonald, J. Nelson Scovy, W. Graham Williams, Edward J. Davis, A. W. Smiley, Walter Bews, John McRae, J. A. Gallagher, James W. Johnston, S. M. Lyon, G. B. Fowler, G. W. Henderson, J. Bartholomew, R. W. McKinnell, Geo. E. Rason, Abraham Potts, H. A. Davidson.

Second-Class Honors.—In order of merit: J. W. McLaren, U. R. Bailey, H. A. Crooks, Louis D. Orr, H. T. Hobbwhite, F. M. Crowe, M. Galbraith, James T. Curtis, Wm. Driver, Herbert T. McLean, Arthur Powell, A. E. Wardell, Harry E. Ridley, R. E. W. McDiarmid, Alex. Stewart, Barth. Munro, James Winterborn, Elmer J. Bellman, W. C. Elliott, Percy L. Murray, J. I. C. Normabell, Geo. J. Mitchell, G. A. Borland (aeq.), F. E. Fielding, J. A. Bilbee, G. W. Pegg, W. J. Kent and M. C. Prust (aeq.), G. H. Worthington, R. N. Kelly, Reuben Morgan, J. F. Patterson, G. L. Walker, Wm. McLeod, E. E. Rutherford, Jack Kelly, A. R. Badger, W. L. McKinnon.

Pass List, Alphabetically.—Jas. Allen, W. A. Armitage, T. A. Argue, William Cameron, Victor S. Campbell, B. S. Corswell, C. P. Collins, F. G. Craig, Colin J. Cunningham, F. W. Dunn, Wm. Flood, W. E. Fraleigh, E. C. Haines, Harry W. Hardy, George Hourigan, R. C. Houston, A. F. Knowles, Frank McIntyre, H. E. Middleboro, Ezzié J. Nott, A. C. Oliver, Richard Reid, George A. Ross, Albert L. Smith, Irwin A. Snyder, L. H. Stanton, John Stewart, Stanley M. Ter-

rant, John Taylor, H. J. Thomas, R. A. Totten, Frank H. Walley, J. H. White, Ebon Wigle.

Aegrotats and Stars.—Granted aegrotat, with pass standing: Alex. McLean.

Starred in following subjects: J. R. Russell, Practical Chemistry; Fred. R. Glassford, Chemistry; W. C. Dixon, Latin, Posology, etc.; A. W. Miller, Latin, Posology, etc.; W. A. DePencier, Pharmacy and Chemistry; G. F. Brethour, Pharmacy, R. A. Whitton, Pharmacy, Chemistry, and Practical Chemistry; Wm. Summersfeldt, Pharmacy and Practical Chemistry.

Highest in Subjects.—Pharmacy—Archie Moir, Hugh McPherson and Clarence H. Lewis (aeq.).

Chemistry—Archie Moir, Hugh McPherson and G. M. Bateson (aeq.).

Practical Chemistry—Archie Moir and Charles W. Watson (aeq.), Hugh McPherson and G. M. Bateson (aeq.).

Latin, Posology, etc.—Archie Moir, W. Graham Williams, Charles W. Watson, James Twohey and A. J. Davidson (aeq.).

Botany—Archie Moir, Andrew Johnston, Leonard R. Clarke.

The supplemental examinations will be held on Jan. 3rd and 4th, when students will be examined on those subjects in which they failed. The senior session will begin Jan. 5th.

Semi-Annual Examination.

The results of the fifty-fourth semi-annual examination, held at the College Building of the Ontario College of Pharmacy, Toronto, from the 13th to the 18th of December.

The following students passed in all subjects:

Batchelor, J. H. Brampton; Flood, W. E., Toronto; German, S. A., Peterboro; Irvine, M. D., Lindsay; Robertson, J. P., Elora.

Passed in part subjects, having passed the others in prior examination:

Craig, H. G. G., Ottawa; Gillespie, I. R., Orangeville; Gun, J. R., Durham; Lang, J. S., Peterboro; Lander, N. B., Toronto; Macartney, C. B., Thorold; Moore, P. B., Creemore; McCullough, W. H., Guelph; Mullett, T. E., Madoc; Urquhart, W. H., Stouffville.

Passed in chemistry: B. Gillin, Hamilton.

Passed in pharmacy: F. A. Gray, Toronto.

ONTARIO COLLEGE OF PHARMACY.

SEMI-ANNUAL EXAMINATIONS, DECEMBER, 1897.

BOTANY.

Examiner—CHAS. R. SKEATH (Time allowed, two hours)

1. Describe fully the typical characteristics of a di-cotyledonous plant.
 2. Write short notes on (a) Stomata, (b) Gynecium, (c) Phyllotaxy.
 3. Define the terms:—Multiple Fruit, Pome, Stolon, Sucker, Pollination.
 4. Write briefly on Fertilization and the various means that help to bring it about.
 5. Describe fully the minute structure of a leaf.
 6. What is Inflorescence? Describe Raceme, Corymb, Cyme, Head, Umbel.
 7. What are Roots? Classify and explain your classification.
 8. Parasite Plants.—Define and give an example. How do they differ from Saprophytes?
 - 9 and 10. Oral Examinations.
- Values. 10, 10, 10, 10, 10, 10, 10, 20.

MATERIA MEDICA.

Examiner—D. S. SAGGE. (Time allowed, two hours)

1. *Gum Resins.*—Mention (a) all those of the B. P., (b) Habtat; (c) Preparations of each; (d) What distinguishes a gum-resin from a resin?
2. *Camphor.*—Describe (a) at moderate length, how and from what obtained, (b) Fully its characters; (c) Mention its preparations; (d) Give tests for purity.
3. *Glycerine.*—Describe (a) How and from what obtained; (b) Fully its characters; (c) Adulterations and impurities, and tests for same; (d) State preparations into which it enters.
4. Give the adulterations or impurities, or deteriorations which occur in (A) (a) Oil Lemon, (b) Oil Peppermint, (c) Oil Wintergreen, (d) Powdered Opium, (e) Powdered Rhubarb. (B) How would you detect them?
5. *Oil of Turpentine.*—Describe at moderate length—(a) How and from what obtained; (b) Fully its characters; (c) Mention all the official preparations into which it enters; (d) What impurities or adulterations occur in it; (e) Give briefly, tests for purity.
6. *Opium.*—Describe at moderate length (a) How obtained? (b) Mention its constituents and state the percentage of the principal ones. (c) What, in your

opium, would constitute a prime sample of Opium? (d) Name the adulterations, impurities or deteriorations of Gum Opium, and state (e) briefly how would you detect them? (f) Give the preparations.

7. *Microscopically*.—Differentiate: (a) Powdered Licorice from Compound Licorice Powder. (b) Powdered Rhubarb from Insect Powder. (c) *Hiera Pica* from Powdered Cloves. (d) Powdered Ginger from Powdered Orris. (e) Powdered Senna from Powdered Cinchona.

8. *Cardamoms*.—Give (a) Habitat and parts used? (b) Constituents; (c) Preparations; (d) from what are the following obtained:—Berberia, Daphnin, Chrysarobin; Delphinine, Jervine, Saponin, Narcein, Pelletierine, Saccharin, PicROTOXINE.

9 and 10. Oral Examinations.

Values. 8, 10, 10, 10, 10, 10, 12, 10, 20.

PHARMACY.

Examiner—F. T. HARRISON.
(Time allowed, two hours.)

1. Percolation:

(a) Give brief description of process, state principles involved, and give points to be specially observed in packing a percolator.

(b) Name classes of drugs for which it is well suited, also those for which it is not suited.

2. How would the following substances be affected if left in an open dish exposed to air and light: Camphor, Sulphate of Iron, Chloride of Calcium, Lead Plaster, Phosphorus, Santonin.

3. Give quantity of each of the following substances that would be equivalent to one grain of powdered Opium: Tincture of Opium, Compound Tincture of Camphor, Extract of Opium, Compound Pill of Soap, Wine of Opium, Compound Powder of Kino, Compound Powder of Ipecacuanha, Compound Powder of Opium.

4. *Ether Purus*: Say in what respect it differs from, and how it may be prepared from Ether, and give reasons for process.

5. Give description of the following, state from what they are prepared and give any common names by which they are known: Acetanilide, Glucide, Phenazone, Caffeine, Sulphonol.

6. Name the menstruum employed and state strength of each of the following: Tincture of Ergot, Tincture of Buchu, Tincture of Kino, Tincture of Iodine,

Compound Tincture of Lavender, Tincture of Nux Vomica.

7. Describe and explain fully the preparation of Lead Plaster, and state all the official preparations into which it enters.

8. *Liquor Ammonii Acetatis Fortior*:

From what is it prepared? Describe process and state just how you would determine when the process is finished.

9 and 10. Oral and recognition of specimens.

Values. 8, 4, 9, 12, 8, 12, 12, 8, 7.

CHEMISTRY.

Examiner—Paul L. SCOTT
(Time allowed, two hours.)

1. Give the chemical formula of: Zinc Sulphite, Aluminium Chloride, Potassium Hypophosphite, Ferrous Ferricyanide, Sodium Arsenite, Magnesium Citrate, Calcium Bichromate and Ferric Orthophosphate.

2. Give a brief account of the chemistry of Mercury.

3. Define the terms: Valence, Molecule, Ketone, Paraffin, Normal Volumetric Solution, Sublimation, Catalytic and Electrolysis.

4. Show by equations the action of:

(a) Chlorine upon moist Slaked Lime.

(b) Sodium Carbonate upon Zinc Sulphate in Solution.

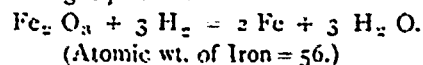
(c) Hydrogen Sulphide upon Copper Sulphate in Acid Solution.

(d) Hydrogen Sulphide upon Potassium Chromate in Acid Solution.

(e) Water upon Bismuth Nitrate ($\text{Bi}(\text{NO}_3)_3$).

5. Name the chief commercial sources of Sulphur compounds. Give the names and formulas of three Sulphur Acids. Mention three allotropic forms of Sulphur and the conditions under which they occur. Account for the occurrence of allotropy.

6. What volume of steam measured at 110°C ., under a pressure of 770 m.m. will be formed during the preparation of 100 grams of Metallic Iron, according to the following equation:



7. Give the empirical and the structural formula, commercial sources and preparations of Acetic Acid. Give the name of the homologous series to which it belongs, and the name and formula of another acid of the same series. Give tests for the recognition of Acetates.

8. Mention the three chief sources of Nitrates. Give tests for the recognition of Nitrates and Nitrites. Mention the most prominent chemical properties of Nitric Acid, and give examples.

9 and 10. Recognition of specimens and oral examination.

Values. 8, 12, 10, 12, 10, 8, 10, 10, 20.

PRESCRIPTIONS.

Examiner: A. R. FRASER.
(Time allowed, two hours.)

1. Translate into English, describe *very fully* the manner of mixing, pointing out any errors as to doses which may occur in the following:

Recipe—

Hydrargyri Biniiodidi grana septem.
Tincturae Gentianae Compositae uncias duas.
Potassii iodidi drachmas duas cum semisse.
Syrupus Trifolium Compositae uncias tres.
Aquam Menthae Viridis ad Uncias Octo.

Misce fiat Mistura Capiat Cochlearia magna unam post jentaculum et post prandium quotidie et bis hebdomatum Capiat Pilula Hydrargyri, grana quinque si vires sinunt.

2. Translate into English and describe *very fully* the manner of mixing the following, pointing out any errors which may occur:

a. ℞ Strychnine gr. ii.
Syr: Flores Aurant. ℥ss.
Aq: Dist. ad ℥ii.
M.

℥i. T.D.S. sesquihora post cibi ex. aq. ℥iiss.

b. Pot: Permang gr. i.
Conf: Rosae Q. S.
M. ft. pil. i. Mitte xii.

Unam hora somni sumend et alt noctibus repetend.

3. Give best solvent for following drugs: Iodoform, Camphor, White Vitriol, Acetanilid, Corrosive Sublimate, Sulphonol, Phenazone.

4. Give English and full Latin for the following abbreviations:

Sesunc; post prand; Aq. Fluv; Cochleat; F.L.A.; Sesquih; Seg pars hor; perendie; C.M.S.; lat dol;

5. Give dose of following:

Homatropia Hydrobromate., Ext: Nux Vomica,
Liquor Trinitrin, Argentii Oxidum,
Aconitine, Acid Carbohc, Grey Powder,
Gregory's Powder, Butyl Chloral Hydrate,
Liquor Hydrarg. Perchlor.

6. What do you consider the best excipient for Pills of Croton Oil, Nitrate of Silver, Pepsin, Quinine.

7. What rules are necessary to observe by druggists in the sale of certain poisons, viz., those in Part I., Schedule A, of the

Pharmacy Act (name a few of such poisons)?

8 to 10. Oral Examination.

Values. 15, 13, 8, 10, 10, 7, 30.

DISPENSING.

Examiner: W. MURKINSON.

(Time allowed, three hours.)

R. Kay.

℞ Quininzæ sulph.
Zinci oxid a gr. i.
Ft. pil. mitte tales No. viij.
Cap. unam bis indie, hora decima et hora secunda.

Lena Rivers.

℞ Camphoræ ʒi.
Liq. ammon. fort. ʒij.
Ol. olive ʒi.
Aque ad. ʒij.
Ft. Lin. Fricetur pars affecta ter quaterve indies.

Rupert King.

℞ Emuls. ol. morrhuzæ ʒoʒo ʒiv.
Cap. cochl. ampl. mane, merula et hora somni.

Edna Lyle.

℞ Camphoræ ʒss.
Hydrarg. ammon. ʒss.
P. acidi tannici ʒss.
Vasellini ad ʒi.
Ft. ungu. Modo dicto utend.

R. Chambers.

℞ Emp. canthar 3 x 5 in.
Inter scapulas applicand.

Values. 15, 20, 25, 20, 20.

*The Five Senses in Pharmacy.

By WM. MARTINDALE, F. L. S., F. C. S.

You come to this School, gentlemen, and associate yourselves together for discussion, mutual improvement and help, and to cultivate and train your minds on certain lines by applying your reasoning powers and memory to the study of chemistry and botany and the allied subjects, materia medica, and pharmacy, which are founded on them. You will be aided in this by your senses of touch, sight, taste, smell, and hearing, which, I trust, have been trained by your earlier education, as in all our elementary schools there are now better opportunities than was formerly the case. I will refer to these senses *seriatim*.

(1) That of *touch* first. The early training of this by modelling and other exercises tends to induce neatness and expertness in work, the use of the fingers, manipulation, and the handling of things in general, but particularly glass vessels and apparatus; the absence of this training employers often know to their sorrow,

*From an Address to the School of Pharmacy Students' Association delivered Thursday, December 9, 1897.

hence the necessity and advantage of apprenticeship, which is a period of training more especially of the sense of touch

(2) Next the sense of *sight*. You have to cultivate your powers of observation. I have not the extract pot to which Professor McLeod referred to when addressing you, where he said a lecturer dipped one finger in the pot and licked another finger, then passing the jar round told the students to do the same and cultivate the powers of observation. This, unfortunately, they had not done, but failing to observe his action, with wry faces licked their fingers coated with the extract. The sense of sight is best trained in early life by lessons in drawing; the power of committing to paper what you see, it is said, enables you to see twice as much, and this with minute observation and little effort, which, if carefully trained, can be easily sustained. Botanical study, especially field botany, develops this power of observation. The trained botanist readily detects the smallest plant new to him. To illustrate my point, I was once walking with a young farmer along a lane where I was told a certain small fern grew, and asked him to search one hedge while I did the other. After walking fifty yards he gave up the search, saying he was "not going to spoil his eyesight looking for brackens."

(3) *Smell*.—It is generally considered that the olfactory nerve, by which this sense is conveyed to the brain of the pharmacist, is blunted by its constant use. You have heard the riddle, "What smells most in the chemist's shop?" Although not of such importance to the pharmacist as the senses I have mentioned, it is generally about the first we apply in our diagnosis of a drug or chemical; still, we are least able to define it and that only by comparison.

(4) *Taste* also is used as a test. The employment of this sense requires caution, and the exercise of it before our clients in the pharmacy is to be avoided; still, it is a character of great service in diagnosis. We can vary it by the terms "bitter," "sweet," "pungent," "acid," "aromatic," etc. This sense is, however, mostly appreciated, and by the connoisseur cultivated, in the pleasures of the table.

(5) Lastly *hearing*. We probably can all enjoy the sweet solace of music, but for its full enjoyment this sense requires cultivation; unfortunately, we are much distracted by the discordant noises which

fall upon our ears in London, and our weary brains are irritated to such an extent that concentration of thought is well nigh impossible. Of late years much has been done to lessen the noises of the street by wooden pavement and india-rubber tired wheels, but there is still room for improvement in this direction. Why are we content to be pestered with German bands, barrel organs, and street cries of various kinds, which are quite unnecessary?

I have touched upon the cultivation of your senses, your reasoning powers, and your memory. Another of your faculties is imagination. Perhaps you may think that the pleasures of a cultivated imagination do not come within our scope, but applied to chemistry, pharmacy, and even to business, this helps to develop our ideas, and take away the reproach that an individual "could not see beyond the end of his nose." It enables us to devise and to conceive what may take place under certain conditions, which we can prove by experiment, and thus by induction and deduction, store our minds with facts.

Your Association gives you the opportunity of meeting to discuss problems which are of interest to you as students, but which would not at first interest outsiders, yet I am glad to know that your work has not been unobserved; the germ of original work requires a beginning, and may often be incubated at the suggestion of another. Your professors inspire you with enthusiasm, zeal, courage and hope by personal contact. In your discussions, you are developing your reasoning powers and preparing for your work in life.

But, you will ask, after all your training and your examinations passed, what is there at the end of it? From the complaints one hears, the times would seem to be against us. It is proverbial that the apothecary's calling is but a poor one, but the man who has knowledge has power, and the ever increasing field of work and remuneration for the pharmacist and chemist, even within his legitimate calling, will absorb his time, and happy is the man who can find a hobby in the scientific side of his daily occupation.—*Pharmaceutical Journal (Eng.)*

METHOD FOR INSECT BITES.—Immediate relief from the unpleasantness of insect bites is claimed for the application of mehol ether in the shape of the ordinary cone or in solution with sulphuric ether.

Quantitative Determination of Alcohol.

M. Cotte, in a thesis presented to the School of Pharmacy at Montpellier, gives the following method, which is a modification of that of Reischauer.

From the aqueous solution of which it is desired to determine the alcoholic contents, remove a sample of any convenient size, which, however, should not contain more than 30 centigrams of alcohol. Introduce it into a small matrass, and add to it 50 cubic centimetres of the following:

Potassium dichromate, c. p. 103 gm. 816 m.g.
Sulphuric acid, c. p. 150 ccm.
Distilled water, q. s. to make 1000 ccm.

Of this solution 10 cubic centimetres represents 25 centigrams of absolute alcohol.

Close the matrass tightly with a cork, put it in the water-bath and heat it for one hour. Remove from the liquor thus obtained 5 cubic centimetres, to which add sufficient distilled water to make (after the addition of ferrous sulphate) 150 cubic centimetres. To this, add drop by drop, sufficient of the following solution to reduce the excess of dichromate:

Ammoniacal sulphate of iron 50 gm.
Sulphuric acid, c. p. 20 ccm.
Distilled water, q. s. to make 1000 ccm.

The reduction is determined by removing from time to time a drop of the liquid, letting it fall on a saucer and touching it with a rod dipped into a recently prepared solution of potassium ferricyanide of 4% or 5% strength. The moment that an excess of the ammoniacal ferrous salt has been added to the liquid, the reaction will produce a blue color (Turnbull's blue).

It is necessary to titrate the solution of ferrous sulphate, each time, with the solution of the dichromate, and to keep accurate account of the number of drops of the ferrous sulphate solution necessary to produce the blue reaction in the 150 cubic centimetres of the aqueous solution. A very simple computation, on the basis of 25 centigrams of alcohol to the 10 cubic centimetres of the dichromate, will give the amount of alcohol in the sample, and hence of the percentage of alcohol in the liquid.

This process, which gives very accurate results in testing hydro-alcoholic liquids, seems destined to be of great service, especially in cases where the amount of alcohol present is very minute.—*National Druggist*.

Selections.**Incompatibilities.**

A contributor to the *Annales de Pharmacie* calls attention to the fact that when sodium salicylate is brought into contact with an acid, or an acidulated syrup (strawberry, lemon, gooseberry, etc.), it is decomposed, salicylic acid being thrown down. It is well to remember, too, that when salicylate of sodium and antipyrin are brought together, salipyrin is formed. When ammoniacal ichthyol and vaseline are brought together they form a smooth, homogeneous pomade. If, now, an aqueous solution of sulphate or hydrochlorate of morphine be added, the pomade becomes lumpy, and it is impossible to make it again homogeneous. Morphine and its salts are incompatible with ichthyol.—*Nat. Drugg.*

Elixir and Syrup of Quinine, Iron, and Strychnine Phosphates.

In making the elixir, Prof. Caspari recommends the addition of ammonium acetate to give an elixir which will remain clear on diluting with water, or on chilling. This has also been tried on the syrup of three phosphates with success. The only change from the official formula is the substitution of a strong solution of ammonium acetate, made by dissolving 71 grains of clear ammonium carbonate in 225 grains of 36 per cent. acetic acid, for an equivalent volume of syrup in each pint of elixir. The syrup so made mixes well with water, but is more sensitive to light than the official preparation, and should be preserved in the dark.—*Merk's Report*.

Estimation of Menthol.

A quick approximate estimation of menthol in peppermint oil can be made in the following way: About 5 gr. of peppermint oil (accurately weighed) are mixed, in a flask connected with a glass ground condenser tube, with about 5 cc. acetic anhydride, accurately measured and boiled for 30 minutes. In the meantime an equal quantity of the same acetic anhydride is titrated with normal caustic soda and phenolphthalein. After cooling the boiled liquid somewhat, the condenser is taken off and washed with some water, which is added to the acetylated mixture, and then the latter is titrated with normal caustic soda. The difference in the number of ccs. in both titrations multiplied by

0.156 gives the menthol in the oil used. An inconvenience of this method is that comparatively large quantities of normal solutions are required, and that the desired number has to be calculated from the difference of both, which naturally makes the method less exact, but all of the operations can easily be performed in 50 minutes.—*Dr. Kleber*.

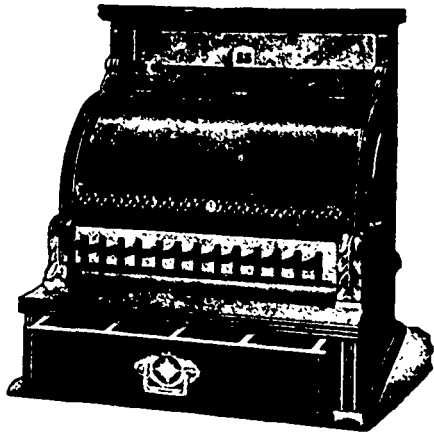
Fish Meat Extract.

One of the novelties in preserved food stuffs, recently patented in Germany, is a fish extract, put up in a style similar to beef extract. From the patent specifications we learn that it is prepared as follows: The fish, after the removal of the intestines, but not the scales, are cut up into little pieces, and, under pressure, boiled with water until the tissues are disintegrated. The liquid is then pressed off, freed from fat by skimming, put into the steam bath, and evaporated down to the consistency of an extract. The temperature of the bath must not be in excess of 150° C., as otherwise the taste of the product will be injured, and other changes are prone to occur. The extract is said to be of great service as a change from beef and other flesh extracts in the diet of valetudinarians. It is also vaunted as a diet for brain workers, and others requiring a food rich in phosphorus.—*Nat. Druggist*.

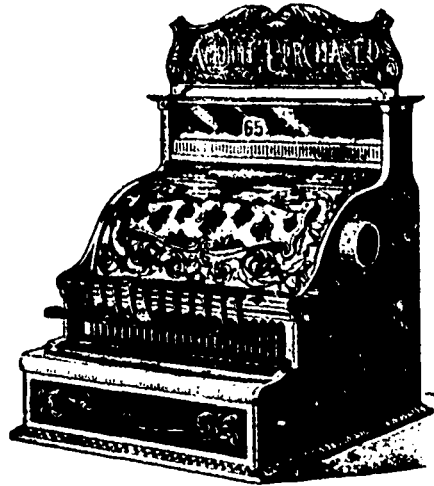
Mesquite Seeds.

The mesquite or screw "bean," which bids fair to become an important article of diet in the near future, is the product of a bush, growing wild in immense numbers, in the southwestern portion of the United States. It possesses strong nutritive properties, and is closely allied, in this respect and in its physical characteristics, to our common pea and bean. It has long been in use by the Indians and settlers of that part of the country, as a most satisfactory food. Reports state that this year's crop is so very abundant that millions of bushels of "beans" may be had for the gathering. A company has been organized in Texas with the object of introducing the burnt beans as a substitute for those of coffee, which they are said to closely resemble both in flavor and aroma. The *Prosopis juliflora* (botanical name of the mesquite plant) grows luxuriantly in New Mexico and central Texas. It belongs to the Leguminosæ, an order producing many edible and nutritious vegetables.—*Phar. Review*.

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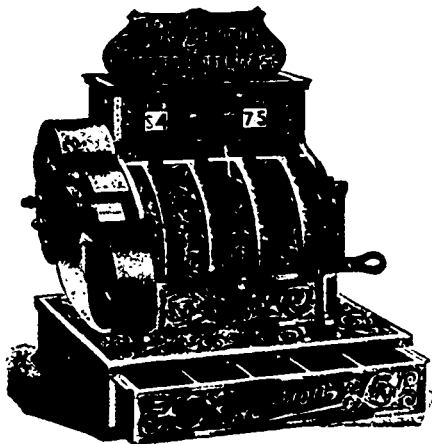
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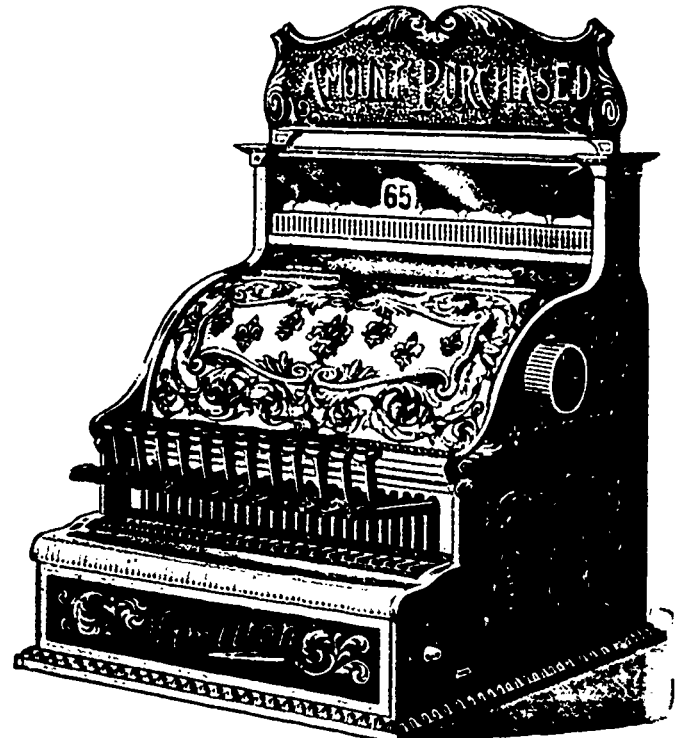
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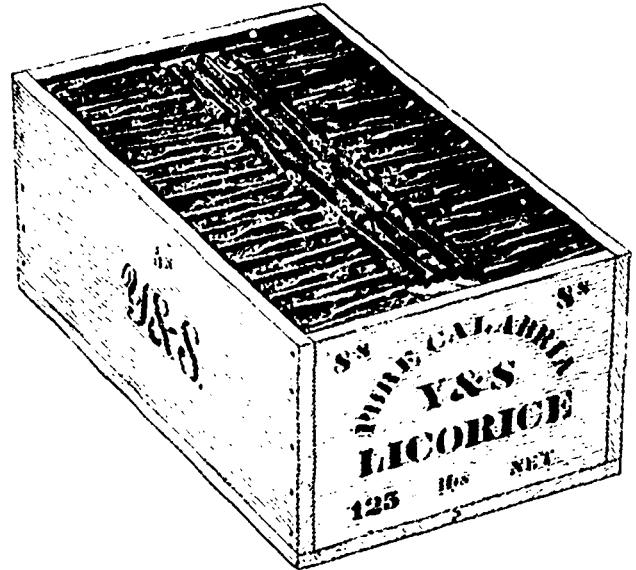
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The Care of Lenses.

It may not be generally known that compound lenses are liable to serious injury if kept in a damp place for any considerable time. The writer had this fact recently brought painfully home. The object-glass of a valuable microscope was found to be thus damaged, and thereby rendered comparatively valueless. And, so we say, want of proper care and thought may produce a like result to the lens of a camera. But, inasmuch as the lens is most important, it is obvious that every care possible should be bestowed on its treatment. The danger, however, is that the mischief referred to may be going on unnoticed and becoming worse and worse. Let operators, therefore, look to their lenses. After the winter's rest, and with all the damp weather of the past, it will be no wonder if some wreck will show up. The disease—if it may be so called—usually commences by very minute spots, occurring apparently upon the face of the lens, though, in reality, lying in the cement between the component glasses forming the lens proper. They may, indeed, be so small as to require a small magnifying glass, to see them at all. But, being of a fungoid nature, their growth is rapid, and once there, nothing short of drastic measures can eradicate them. The only resource, therefore, is to place the lens in the hands of a reliable optician, have all the suspected glasses taken to pieces and thoroughly cleaned and re-cemented. Another hint may perhaps be given as to the matter of cleaning or dusting the lens. Never use anything harsh or stiffened with starch. The best thing to use for this purpose is a piece of old soft cotton rag that has been well washed and freed from soap. By this means scratches will be avoided on the lens. Keep this rag and the lens in a bag together, made of chamois leather. Should the component parts of the lens be separated, it is scarcely necessary to say that they must be replaced in the same order as originally.—*Optical Journal.*

We are in receipt of a very handsome card "with the season's greetings" from Messrs. Johnson & Johnson, druggists, of Charlottetown, P.E.I. This wide-awake firm show their good judgment in continually keeping before the public in some way, and this latest "souvenir" is sure to be a welcome visitor amongst their many customers.

Wood Oil

Wood oil has been imported into Europe from Japan for about twenty-four years. This product is obtained from the seed of the tree known to the botanist as *Aleurites cordata*. It is also known under the names of *Elaeococca verrucosa*, *Aleurites japonica*, *Dryandra cordata*. The tree is known in Japan under the name of *Aburi giri*, which means "oil tree," and also as the *Jani kiri*—that is to say, "wild kiri." Kiri is the Japanese name for the *Paulownia imperialis*, the leaves of which resemble very closely those of the oil tree. This latter grows spontaneously and abundantly in the southern regions of Japan. It is here cultivated to shade the public paths, especially in the provinces of Homodaki and of Zigo, in the islands of Suruga, Musasi, Idzu, and in the central part of the isle of Nippon. It also grows spontaneously in China, where it is known under the name of *Tongjeou*, or *tunge*, and it is also found in Cochin China, where it is called *cay-deansow*.

The fruit of the tree is a small round drupe, with a fleshy pericarp. On drying, it opens and shows three or even four valves, which contain the same number of hard, triangular seeds, with a rough surface, and about twenty-five to thirty millimetres long. The kernel is white, greasy to the touch, and resembles in form and thickness certain varieties of earth nuts. We have exhausted the seeds with ligroine in a displacement apparatus, and thus determined the quantity of fatty matter which they contain.

In this manner they yield 55.25 per cent. of oil, whereas the yield on pressing is only 42 per cent.

The oil obtained by pressing is limpid, slightly tinted a yellow amber color, and has a peculiar odor, recalling that of castor oil. It is insipid and refracts the light. When it is exposed in a thin coat to the action of the air for twenty four hours it solidifies and forms an almost colorless, clear, transparent skin. It ought, therefore, to be kept in a closed vessel, which should be filled entirely to the stopper. It is soluble in ordinary ether, petroleum ether, and chloroform. It is insoluble in cold absolute alcohol, with which it forms an opalescent liquor. It is soluble in boiling alcohol, but separates out on cooling. It will dissolve in glacial acetic acid in a cold state, but when the acid is boiled it dissolves. When the temperature of the solution

gets down to 95° C. the liquor commences to become turbid.

It is possible that the commercial oil is a mixture of oils obtained from the seeds of different species of *Aleurites*, and, moreover, this commercial oil has absorbed oxygen. As De Lanessan showed, it is probable that under the name of "baucoulier" travellers have confounded several species of *Aleurites*. It is admitted generally that baucoulier oil is obtained from the *Aleurites moluccana*, a tree found in the tropical regions of the old continent. This is not found in the Moluccas, Java, Trinity Island, Labiti, nor in the Philippines. But it is not improbable that under the name of baucoulier the oil of the *Aleurites cordata* and of other species is confounded. The *Aleurites angustifolia*, which abounds in New Caledonia, resembles, both in its properties and in the oil which is extracted from it, the *Aleurites cordata* to such a degree that it is believed that it is the same plant. According to De Lanessan the seed of the *angustifolia* is formed by a very hard envelope containing a white kernel with an agreeable taste, recalling the earth-nut. The kernel is purgative, and contains an oil which is transparent when obtained by pressure. It has an amber color, an agreeable smell, and is insipid, but leaves a bitter after taste. It resinifies in the air, and, being extremely siccative, it is very highly appreciated in the varnish industry.

In the Chinese provinces of Kiangsi, Ci Kiang and Szechouen this oil is manufactured in large quantities, and constitutes one of the most important objects of commerce. It is used in China, as in Japan and other countries, to render wood impermeable to moisture; to caulk ships, varnish furniture, and to waterproof umbrellas and tissues, from hence it has the names of *Aleurites vernicia*, *Vernicia montana*, *Dryandra vernicia* and *Rhus vernicia*. It is highly probable that these properties may be attributed to a gum or gum resin, which runs spontaneously from different species of *Aleurites*. This gum enters into the composition of Chinese varnishes. In this connection Lindley affirms that the Ceylon lac varnish is made with the oil of the *Aleurites lucifera* and the gum which oozes out of the same tree. In a communication made to the French Society of Acclimatization, Dabry de Thiersait, the French consul at Canton in 1876, said that the oil of the *Aleurites cordata* and the varnish of the *Rhus vernicia* were used to manufacture

the Japanese lacquer, so renowned all the world over. The constantly-growing importance of this product long since attracted the attention of the director of the Kew Gardens. In his report for 1880 he mentioned that he had imported the seeds of this tree from Szechouen, and had distributed them in Ceylon, Guiana, Jamaica and Zanzibar. Concerning this Semler remarked that the English, once they had discovered in a tropical zone a commercial product which they judged to be worthy of attention, seek to introduce it into their tropical colonies, with the object of increasing the richness of these colonies and of being independent of the products of other nations. The systematic realization of these problems is confided to the Kew Gardens, which, although it is in England, constitutes the central point of exchange. From there seeds and cultivated plants are sent out to the English colonies.

The French have also recognized the importance of this tropical plant, which they have imported into Algeria, but the results obtained are not known. The Japanese oil tree must not be confounded with the Indian oil tree. This latter is thus named with more reason than the first, seeing that the oil is obtained not from the seeds but from the wood itself of these gigantic trees of the *Dipterocarpaceus* family, natives of the east of Bengal, of Chitogang and Singapore. Another variety of this same genus, giving the same product, exists—or at least an analogous product—but it is of a minor commercial importance. The greater part of this oil comes from the coast of Burma, where it is obtained from the wood by heat. The Indian wood oil is known under the name of *gurjun* or *gurgine*. It is not a fatty oil, but a dense, viscous fluorescent liquid, and is a compound of an essential oil and resin. It is used in Oriental countries, either alone or in mixtures, to varnish wood and to preserve it from white ants.—*Atti de la Societe Linguistica di Scienze Naturali et Geografiche (Oils, Colors and Dry Salteris)*.

X-RAYS FROM GLOWWORMS—A man of science reports in a certain scientific journal the curious results obtained by him last summer while experimenting with the light of the glowworms. He operated with three hundred glowworms, and he says that the light which they emitted, when filtered through cardboard or copper plates, showed the properties of X-rays.

Recent Patents Relating to Pharmacy.

PATENTS.

Stephen C. Attkisson, Salem, Ind., invalid's bed, 595514.

Geo. H. Bell, Brooklyn, N.Y., vaporizer, 595432.

Ludwig Fromm and R. Schmidt, Dresden, Germany, making extracts, 595296.

Frederic W. Loughran, New York, N. Y., surgeon's operating table, 595322.

Charles MacGregor, Dayton, Ohio, galvanocautery instrument, 595573.

Joseph N. Worthington, Annapolis, Md., frame for prescription cabinets, design, 28032.

Elizabeth Parker, Philadelphia, Pa., catamenial sack, 595861.

Eugene A. Bagby, Winchester, Ky., ointment applicator, 596351.

George R. Fox, Plaquemine, La. speculum, 596399.

Albert B. Hall, Indianapolis, Ind., pill-coating apparatus, 596297.

Stevens T. Harris, Carrollton, Ga., fountain syringe, 596158.

George B. Haycock, Chicago, Ill., hypodermic syringe, 596159.

Henry W. Meinhart, St. Louis, Mo., bandage, 596171.

Jules Bengue, Paris, France, sprayer, 594721.

Charles F. Bennett, Chicago, Ill., combined jock-strap and suspensory, 594673.

Charles S. Ruckstuhl, St. Louis, Mo., fever thermometer, 594840.

Horace D. Taggart, Akron, Ohio, appliance for assisting anatomical organs, 594815.

Abijah B. Bennett, Opelika, Ala., invalid bed, 594846.

David Fortney, Otho, Iowa, fracture apparatus, 594865.

T. N. McLean, Elizabeth, N. J. and C. B. McLean, Stamford, Conn., depurator, 594961.

John A. Rafter, Holton, Kan., inhaler, 594966.

TRADE MARKS.

Alfred Bishop & Sons, Limited, London, England, Effervescent medicinal preparations for the treatment of certain affections, 30913.

Alfred Bishop & Sons, Limited, London, England, Effervescent medicinal preparations for the treatment of certain affections, 30914.

George R. Simms Hair Restorer Company, Limited, London, England, Liquid preparation for restoring the growth of the hair, 30912.

Alonzo F. Richardson, New York, N.Y., Remedies for pulmonary and similar diseases, 30911.

John M. Creed, Ssdney, and W. J. Green, Croydon, New South Wales, Medicinal preparation of the cure of indigestion, 30941.

Dresdener Chemisches Laboratorium Lingner, Dresden, Germany, Preparations for the teeth, skin, etc., 30942.

Alonzo F. Richardson, New York, N.Y., Catarrh remedies, 30980.

Wilson Bros., New York, N.Y., Medical compound used on wounds, etc. 30979.

A. W. Stewart, & Co., New York, N.Y., Antiseptic medicine, 31037.

Frank C. Fowler, Moodus, Conn., Lotions, 31035.

James N. Heath, Appleton, Wis., Medicine for certain diseases, 31036.

Laxine Co., New Brunswick, N.J., Laxatives, 31034.

Lewis C. Milburn, Cherrydale, Va., Internal remedies for malaria, chills and fever, 31039.

Jules Magnat, Paterson, N.J., Blood-purifying beverage, 31032.

Petticord Mineral Springs Co., Cambridge Springs, Pa., Mineral water, etc., 31019.

"Don't's" for Opticians.

Don't advertise "free" tests, such "free" service is usually counted worthless.

Don't give regular tests, without first finding out whether party wishes to purchase or order glasses, then act accordingly.

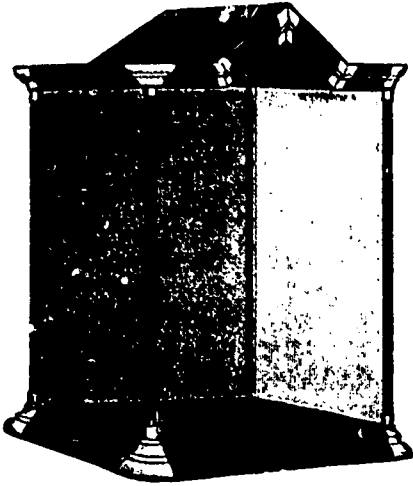
Don't state the character of correcting glass necessary without an order for same, to do so is to encourage "shopping."

Don't cut under regular prices, this hurts the trade at large as well as your own.

Don't spare any pains to look after the smallest details in style, fit and finish of your glasses, in order to please patrons.

Don't, if you can avoid it, use the ordinary o or oo eye skeleton lenses, these are faulty in shape; order them ground 31x38 or 32x39 m.m., these make lenses of more graceful curvatures if perfectly ground.—*Optical Journal*.

THE MOST WONDERFUL VEGETABLE in the world is the truffe; it has neither roots, stem, flowers, leaves nor seeds.

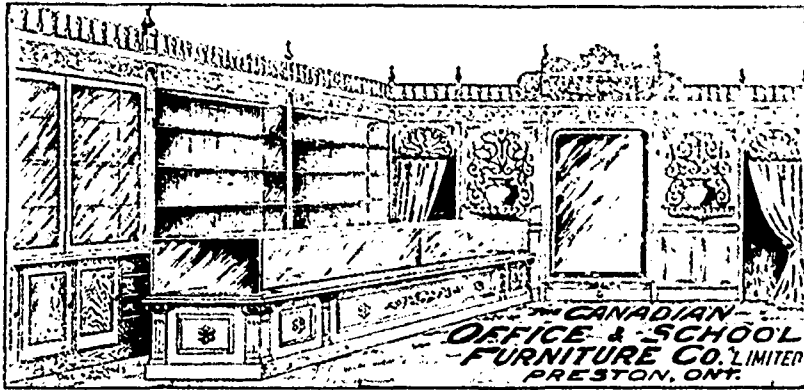


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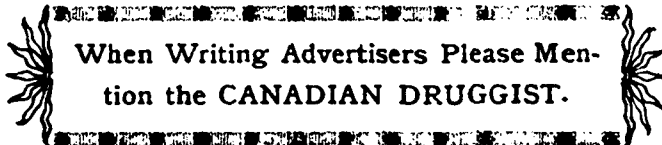
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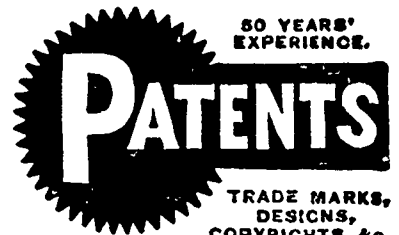
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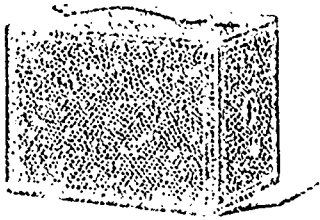
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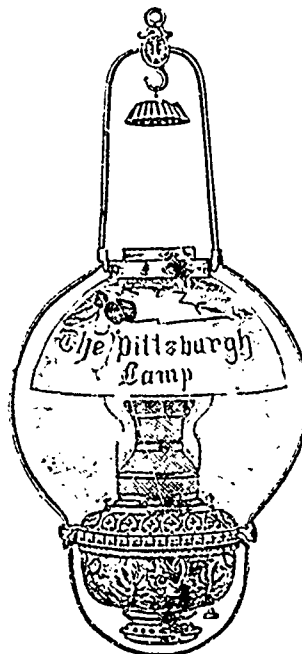
The central draft in one is perfect, the other you will find fault with. See the wick-screw in the "Pittsburgh," see if the other has anything like it. Which is the simpler? The "Pittsburgh," of course. A child can take it apart without any trouble.

Write for Primer.

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The Quebec Pharmacy Act

The Bill to amend the Quebec Pharmacy Act, to which we referred in our last issue, came before the Legislature of that province Jan. 7th. The number of articles named in the proposed amendment was largely added to at the sitting of the House and in committee afterwards. The following list of articles which it asks may be sold by others than registered druggists, as reported by the committee, comprises all patent medicines, alum, bicar-

gelica, catnip, centaury, couch grass, golden rod, gold thread, dandelion, white elder, prickly ash, marsh mallow, thoroughwort, yarrow, danewort, rosemary, sage, olive oil, etc.

The proposed amendment was supported by Messrs, Gouin, Robitaille, Pelletier and others, while those who opposed it and voiced the opinion of the Pharmaceutical Society were Messrs. Grosbois, Pauneton, Nantel, Guerin and Belaud. When the House rose the committee reported progress.

Patents Containing Poisons.

U. S. Food Commissioner Blackburn has issued warrants against druggists selling a number of patent medicines, notably Winslow's Soothing Syrup, Scott's Emulsion of Cod Liver Oil, Ayer's Cherry Pectoral, Agnew's Catarrh Cure, etc., on the ground that the law in force in the State of Ohio directs that preparations containing morphia, cocaine, chloral hydrate, etc., must be labelled *poison*, and he claims that these preparations contain some of the



J. W. Anderson.

A Neighborly Visit.

bonate of soda, borax, camomile, carbonate of lime, castor oil, cochineal, cod liver oil, cream of tartar, Epsom salts, flavoring extracts, ginger, glycerine, gum arabic, hops, linseed, linseed meal, manna, senna, sulphur, tartaric acid, Paris green, or London purple (when these substances are put up in safe packages distinctly labelled "poison"), culinary essences, camphor, gelatine, Irish moss, spruce gum, camphorated oil, tar, Pain Killer, Radway's Ready Relief, lime water, plantain seeds, liquorice root, turpentine, sarsaparilla, seidlitz powders, distilled water, peppermint, vaseline, wormwood, an-

Ontario College of Pharmacy.

The semi annual meeting of the Council for granting certificates of competency, and for general business, will be held at the college building, Toronto, on Tuesday, the 1st day of February, at 2 p.m.

TWO FRENCH CHEMISTS have succeeded in giving to cotton a silky gloss by a chemical process which manufacturers think will enable it to take the place of silk. The process depends upon the action of a cold alkaline bath.

poisons mentioned. Scott & Browne deny that their Emulsion contains any morphia and are prepared to defend their case.

We are in receipt of the first number of *La Pharmacie Libricuse*, the organ of the new Society of Pharmaceutical Students recently established in Montreal. It is edited by J. A. Goyer and Hercule Guerin, and should prove a factor in promoting the interests of the association. We wish it and its promoters success, and welcome it to our sanctum.

The Science of Optics.

By LIONEL LAURANCE.

Entered according to Act of Parliament in the year 1896, by Lionel Laurance, at the Department of Agriculture.

Myopia.

[We regret that through some unfortunate blundering a portion of the manuscript for this article was mislaid and replaced by another portion which did not belong. This occurred on page 236, vol. IX. and the matter on page 260 should have preceded the greater part of that on page 236. The article will now however be found correct, and will be continued as heretofore.—Editor.]

To find the amount of Ac. exerted at any given distance by a Myope, 40 is divided by the distance, this gives the normal Ac. for the divergence of the rays, and from this number thus obtained the diopeters of M is deducted.

For instance in M 1D for seeing at 13 inches, Ac. of 2D is exerted because $\frac{40}{13} = 3D$, the normal Ac. for that distance; and 3D less 1D for the M makes 2D. If the distance be such that the Ac. that would be used by an Emmetrope, is equal to the extent of the M then none is exerted.

If the M exceeds it, then the point is beyond the PR and the Myope cannot see there at all.

The Myope has more Ac. in reserve within his PR than the Emmetrope has within his.

In M of say, 2D, the reserve quantity of Ac. that can be exerted between 20 in. (which is the PR in M 2D, and, therefore, the most distant point at which no Ac. is used) and the PP is:

	in M	2D	in Em
At 10 years of age	14D		12D
" 20 "	"	10D	8D
" 30 "	"	7D	5D
" 40 "	"	4.5D	2.5D
" 50 "	"	2.5D	0.5D

It is clear that at any point nearer than 20 inches the Myope of 2 Duses 2D less Ac. than does the Emmetrope, and he has for still nearer points 2D Ac. left in reserve, both of them having the same amplitude. So the myope can read nearer and see smaller objects than can the Emmetrope, with the M fully corrected, that is, with a pair of—2D special lenses, the Ac. for close work would be the same as Em. at any age.

The PP of the Myope is nearer than

that of the Emmetrope. At 20 years the amplitude being 10D.

In Emmetropia the PP is at 4 in.			
In M. 1D	"	"	3½ in.
In M. 2D	"	"	3¼ in.
In M. 3D	"	"	3 in.
In M. 4D	"	"	2¾ in.
In M. 5D	"	"	2⅝ in.
In M. 6D	"	"	2½ in.
In M. 7D	"	"	2⅓ in.
In M. 8D	"	"	2¼ in.
In M. 9D	"	"	2⅒ in.
In M. 10D	"	"	2 in.

The above figures are found by adding to the amplitude the degree of the M and then dividing the total into 40. When younger the PP is nearer and when older it is farther away the same as in Em.

With the correcting lenses the PP is theoretically at the same distance as in Em., but it is frequently found further away in medium and high degrees of M, owing to the weakness and deficiency of the sphincter of the ciliary caused by non-use. Still the measurement of the PP is a useful sub test as when lenses are prescribed for constant use in medium degrees of M the PP with the glasses should be at about that same distance as in Em. In high degrees where the distance glasses are considerably reduced in strength for near work the measurement is of no use as reading is achieved really at the PR (with the lenses), or near to it.

Theoretically, also, the degree of M and its correction can be obtained by measuring the PP, but it is extremely vague for the reasons before given. Dividing the distance of the PP into 40, and deducting therefrom the amplitude of Ac. according to age, gives the degree of error, and the correction is the weakest — sph. that carries the PP away to that distance it would occupy in Em. Thus, if the PP be at 3 inches, the age being 30, then there is M 6D, and a —6D will carry the PP from 3 inches to 5½ inches, where it should be at 30 years of age.

When a Myope is old, and his PP has receded considerably, it can arrive at and coincide with his PR, but cannot pass beyond it, but both the PP and the PR recede in old age.

Legislating Against Department Stores.

The following is the text of the Bill introduced by Mr. Middleton, in the Ontario Legislature but which only received its first reading and was withdrawn by request of the Premier.

BILL.

An Act respecting departmental stores.

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. The council of any city or town may pass a by-law or by-laws for the purpose of imposing upon any departmental store carrying on more than three distinct classes of business, a special tax in respect of each additional class of business, and in imposing such business tax, the same may be regulated in and by the by-law so as to provide either a uniform tax in respect of each additional distinct class of business, or the same may be graded in such a manner as may seem proper; provided that no such by-law shall be passed or take effect under the authority of this Act without having been carried by a two-thirds vote of the members of the council present and voting.

"True to Principle."

We find in the Methodist Young People's paper *Onward* the following eminently true expression about the Canadian Press. We agree with *Onward* in saying that the press of Canada, taken for all in all, is as high-toned as that of any country in the world. Our readers will have no difficulty in recognizing the *Montreal Witness* as the paper specially referred to.

"Nowhere, we think, is there a press of higher moral tone than that of our beloved country. It possesses, we think, the unique distinction of having a leading journal in its largest city which for over fifty years has been a moral crusader, a champion of reform. In all that time it has not published one liquor, or tobacco, or theatrical advertisement. At the sacrifice of much money it has stood true to its high principle, and stands foursquare, a tower of strength, against all the winds that blow."

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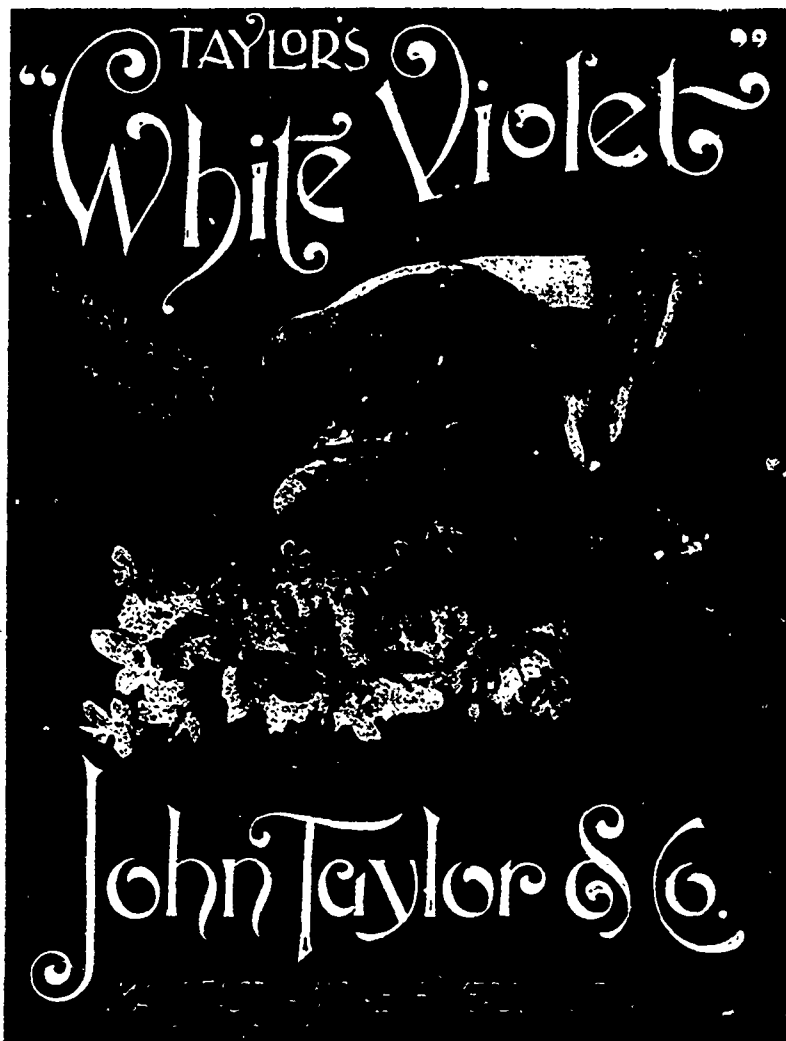
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U.S. Dispensary (in cloth).....	7 50
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U.S. Dispensary (in leather) (1894).....	7 25
National Dispensary (1894).....	7 00
National Formulary.....	1 00
Atfield's Chemistry.....	2 25
Gray's Botany, first lessons.....	1 50
Maisch's Materia Medica.....	2 80
Martindale's Extra Pharmacopœia.....	2 00
Pereira's Prescriptions.....	1 25
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Remington's Pharmacy.....	5 25
Practical Dispensing.....	50
Minor Ailments.....	1 50
Heebner's Practical Synopsis of B.P.....	1 00
Heebner's Manual of Pharmacy, etc.....	2 00
Manual of Formula.....	1 50
Practical Dentistry.....	50
Harrop's Monograph on Fluid Ex- tracts.....	2 00
Harrop's Monograph on Flavoring Extracts.....	2 00
Caspari's Treatise on Pharmacy.....	4 50
Coblenz's Handbook of Pharmacy.....	3 50
Art of Compounding, by Scoville.....	2 50
Bartley's Medical Chemistry.....	3 00
Sayre's Organic Materia Medica and Pharmacognosy.....	4 50
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Proctor's Testing.....	50
Stewart's (Balfour) Physics.....	1 00
Shuttleworth's Notes on New Reme- dies.....	50
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Fowne's Chemistry.....	2 25
Principles of Pharmacognosy, Fluck- iger and Tirsch.....	2 25
Bartley's Medical Chemistry.....	3 00
Oldberg's Home Study in Pharmacy.....	3 00
Duane's Medical Dictionary.....	50
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BENZOATED CAMPHOR ICE.

Pure lard.....	1½ oz.
Spermaceti.....	2½ oz.
Camphor.....	1 oz.
Expressed oil almonds.....	2 oz.
Benzoic acid.....	6 grn.
Oil cajuput.....	10 drops.

Melt the lard and spermaceti; dissolve the camphor in the almond oil with gentle heat, and add to the melted fats. When nearly cold, stir in the benzoic acid and oil of cajuput, and pour into molds.

CHILBLAIN REMEDIES.

Lanolin.....	½ oz.
Common soap.....	40 grs.
Warm aq.....	4 oz.
Make emuls. add cocaine.....	3 grs.
Spir. of rose.....	½ oz.
Aq., q.s. to make.....	8 oz.

The following is also useful:

Belladonna collodion.....	½ oz.
Flexible collodion.....	1 oz.

To be used as a paint morning and night.

This is designated an ideal liniment.

Chloroform.....	½ oz.
Belladonna liniment.....	1 oz.
Comp. tinct. benzoïn.....	½ oz.
Soap liniment.....	6 ozs.

This should not be applied by rubbing. Instead use bits of lint saturated with the mixture and allow them to remain on the affected part about ten minutes.—*Chem. and Drug.*

MANGE REMEDY FOR DOGS.

Mercurial ointment.....	1 av. oz.
Fish or tanners' oil.....	5 fl. ozs.
Spirits of turpentine.....	1 fl. oz.
Sulphur, sublimed.....	2 av. ozs.

Rub together the mercurial ointment and fish oil, incorporate the sulphur and then the turpentine. Directions: Remove if necessary the hair and apply to the parts night and morning. The kennel or place where the animal is kept should be thoroughly disinfected by the use of crude carbolic acid, a solution of which, one to twenty in water, should be sprinkled upon the floor and surroundings twice a day.—*By Albert E. Ebert, in Meyer Bros. Druggist.*

SYRUP CAMPHOR COMPOUND.

The following formula is said to be the one in use in the British Royal Infirmary:

Camphor.....	2 drachms.
Tincture opium.....	10½ fluid ozs.
Tincture of squill.....	20 fluid ozs.
Oil anise.....	2 drachms.
Benzoic acid.....	3 drachms.
Glacial acetic acid.....	6½ fluid ozs.
Ipecacuanha.....	1 oz.
Dilute alcohol.....	10 fluid ozs.
Loaf sugar.....	28 pounds.
Caramel.....	q.s.
Distilled water.....	12 pints or q.s.

Macerate the ipecac in the diluted alcohol for three days; strain, press, and filter; dissolve the camphor, oil, and benzoic acid in the acetic acid; then add the tinctures. Dissolve the sugar in the water with heat, and when cool add the other mixed ingredients and sufficient gallon to make the product measure four gallons.—*Bull. Phar.*

MENTHOLATED CREAMS.

1.	Menthol.....	3 parts.
	Salol.....	4 parts.
	Olive oil.....	4 parts.
	Lanolin.....	100 parts.

Mix the menthol and salol thoroughly with the olive oil, and incorporate the mixture with the lanolin.

2. A useful application for hoarseness with loss of voice, sore throat, cold on the chest, hard dry cough and whooping cough:

Vaseline.....	20 ozs.
Menthol.....	3 ozs.
Fid. ext. belladonna.....	3 ozs.

Rub the fluid extract with the menthol in a warm mortar until dissolved, and gradually incorporate with it the vaseline, by rubbing them well together.—*Merck.*

COD LIVER OIL EMULSIONS.

Condensed milk is said to be excellently adapted for the preparation of emulsion of castor oil and cod liver oil. The proportions are oil, 8; condensed milk, 3; syrup, 3; water, 2. The condensed milk is mixed in a mortar, the oil gradually added, and last of all, the syrup and the water.—*Pharm. Zeitg., Phar. Jl.*

MANUFACTURE OF SULPHUR SOAP.

(a) 1 part of sulphurated soda is dissolved in water, the solution filtered and mixed with 2 parts of curd soap. The soap thus formed is evaporated to dryness on the water bath. (b) 25 parts coconut oil, 5 parts lard, and 2 parts of lanoline are saponified with 16 parts potash solution of 38°. The partly cooled mass

is then at once well mixed with 2½ parts of sulphur and 2½ parts of water, and perfumed with ½ part of lemon oil and 1/10 part of cassia oil. (c) 25 parts coconut oil and 8 parts of lard are saponified with 16 parts potash solution 38°. The partly cooled mass is at once well mixed with 2 parts of flowers of sulphur and 6 parts of water colored with saffron yellow dye (dissolved in hot water), and perfumed with essence of lemon.—*Pharm. Zeit., Phar. Jl.*

FLORIDA WATER.

Ol. bergamotte.....	150.
Ol. limonis.....	90.
Ol. aurant. cort.....	60.
Ol. lavandule.....	105.
Ol. caryophyll.....	15.
Ol. cinnamon.....	15.
Ol. aurant. flor.....	15.
Alcohol.....	18,000.
Aq. destill.....	4,500.

—*Pharm. Zeitg.*

SOFT CORNS AND SMALL WARTS.

Tannin.....	1 dr.
Alcohol.....	3 ozs.

Mix. To be used frequently as a wash.

A SEAFOAM FORMULA.

1 Olei panaseptics.....	½ oz.
2 Alcoholis.....	1 pt.
3 Aq. ammoniac.....	3 drs.
4 Potass. carbonatis.....	4 drs.
5 Aquae.....	1 pt.

Add 1 and 2 together, solve 4 and 5, and add 3, then mix; Panaseptic oil is used in preference to castor oil, which gums and turns rancid when old and exposed to atmosphere.—*New Eng. Drug.*

PERFUMED SATCHETS.

Pieces of fine kid of suitable shape are soaked in a closed vessel for three days in the following solution:

Oil of bergamot.....	2
Neroli oil.....	20
Bitter almond oil.....	1
Oil of orris.....	40
Tolu balsam.....	30
Cumarin.....	2
Rectified spirit.....	100

The pieces of leather should then be dried on a line in a room of the temperature of 17.5° to 20° C. After some days the rough side of the pieces of leather should be painted with gum arabic, and finely pulverized orris root strewn on and again dried. Then prepare a mixture of 2 grms. finely pulverized musk and 2 grms. civet, and mix to a paste with a little gum arabic. Smear on both sides of the leather and dry again. Two pieces of leather are then stuck together, wound

round with wadding, and covered with silk or other fancy material. These satchets will be found to be of lasting perfume and are much liked, as they do not give off any dust or powder.—*Deutsch. Amer. Apoth. Zeit., Phar. Jl.*

CATARRH BALMS.

- 1.—Vaselin..... 9 lb.
Thymol..... 1 oz.
Oil wintergreen..... 6 fl. dr.
Oil sassafras..... 2 fl. dr.
- 2.—Petrolatum..... 1 oz.
Thymol..... 3 grn.
Bismuth subcarbonate..... 15 grn.
Oil wintergreen..... 2 min.

CORYZA REMEDY.

A remedy for colds, catarrh, influenza, and hay fever, preventing their development, and speedily curing them in their advanced stages.

- Scotch snuff..... 30 oz.
Ammonium chloride..... 1 oz.
Menthol..... 3 oz.
Powd. boric acid..... 3 dr.
Oil Australian eucalyptus..... 1 fl. dr.

A pinch to be snuffed up the nostrils.
—*Merck's Report.*

Perfumery Specialties.

Glycerine Cream.—Almond oil, 500 parts; spermaceti, 200; white wax, 38; glycerine, 85; bergamot oil, 3 parts.

Crème a la Reine.—Almond oil, 500 parts; spermaceti, 45; white wax, 40; Tolu balsam, 50, rose water, 125 parts

Lanolin Cream.—Lanolin, 250 parts, water, 200; zinc oxide, 50; almond oil, 250; flowers of sulphur, 180; extract violette, 120 parts.

Lalodont.—Soap powder, 1,000 parts; levigated chalk, 1,000; glycerine, 1,000; carmine, 2; peppermint oil, 100 parts.

Lip Cosmetic.—Ammonia, 60 parts; carmine, 35; rose-extract, 70; rose water, 2,000 parts. The finely powdered carmine is left to digest for a week in the ammonia, and the other materials added and shaken up at intervals during another week.

Honey Water.—(1) 35 parts of honey dissolved in 2,500 parts of rose water, and mixed with 500 parts of 90 per cent. alcohol, containing: Bergamot oil, 2; neroli oil, 1; and ambergris tincture, 1 part, in solution. 75 parts of saffron tincture are used for coloring the preparation. (2) 125 parts of honey dissolved in 2,000 parts of distilled water, and mixed with 500 parts of glycerine containing: Bergamot oil, 7; geranium oil, 1; and neroli oil, 1 part, in solution. Coloring as for No. 1.—“*Seifenfabrikant.*”—*Soap Maker and Perfumer.*

Optical Department.

In charge of W. E. HAMILL, M.D., Toronto.



Correspondents should note that for an intelligent answer to be given to their inquiries, it is necessary in every case to give the following information relative to their patient: (1) Sex, (2) age, (3) occupation, (4) near point of distinct vision for small type with each eye alone, (5) how their eyes trouble them, *i.e.*, their asthenopic symptoms, (6) vision of each eye at twenty feet alone without glasses, (7) best vision obtainable with glasses, naming correction.

Example.—J.S., male; age, 18; book-keeper; can read small type to within five inches of each eye; complains of much headache through the day and evening; eyes feel sore and water a good deal, look red and inflamed, etc., etc.

R.E.V. $\frac{28}{8}$ with + 1.50 = $\frac{28}{8}$
Z.E.V. $\frac{28}{8}$ with + 1.50 = $\frac{28}{8}$

The above example is taken to illustrate about how we desire inquiries to be made.

F. A. S.—I have a customer, 20 years old, a bookkeeper, who complains of pain in his eyes after using them for reading or any close work.

R V $\frac{28}{8}$ L V $\frac{28}{8}$, the weakest plus glass, blurs—indicating emmetropia. I then examined the muscles and found no heterophoria—and hence could not account for the pain and headache—but as an experiment gave him a +.75 for use when reading, &c., with perfect relief. Did I do right? And why?

Answer.—This is evidently a case of hyperopia where all the trouble is latent. We do find cases sometimes with considerable H. where no manifest is shown, the spasm of the ciliary being so intense that no relaxation whatever takes place under convex glasses. These cases, however, are rare and can only be definitely decided by the use of atropine or some other cyclophlegic. The ophthalmoscope often shows the nature of the case, even without atropine, but it is well to remember some cases do occur where to act intelligently at all atropine is absolutely necessary. In this case our friend divined the right thing to do, but the next case presenting

the same symptoms might not result so satisfactory under similar treatment.

R. A. D.—I wish you would give a prescription for an eye water which could be used in all cases of inflamed eyes without any danger of doing any injury.

Answer.—This is the straw which opticians should guard against, viz.: encroaching at all upon the province of an oculist. When eyes require any medical treatment it is unwise on the part of the optician and dangerous on the part of the customer to use anything without the prescription of an oculist, as the symptoms of mild inflammation of the eyes and severe and perhaps disastrous affections are sometimes so much alike that only experts can determine the difference and suggest the proper line of treatment. The optician should be satisfied with the cases that require glasses only for their eye trouble, and goodness knows they are numerous enough without jeopardizing the sight of those who really require careful medical handling.

T. C. M.—I have a Hardy's ophthalmometer, and in a recent case of astigmatism found the axis ten degrees different from that chosen by the customer with the trial case and astigmatic chart. Which axis would you give?

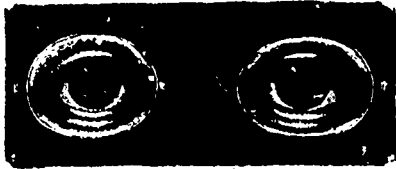
Ans.—The crucial test in all cases is the one with the trial set no difference what instruments you use, but remember if the axis chosen by the astigmatic chart does not prove entirely satisfactory, that if you change the axis to that indicated by the ophthalmometer the results will be most happy. I have had a few such cases as the above, but very few—my experience being that the axis shown by the ophthalmometer is the one usually accepted in the final test.

T. A. C.—When is the next class in optics at the Optical Institute of Canada?

Ans.—Jan. 24th, 1898.

A NEW USE for spun glass is mentioned; it can be used for umbrellas, and while it will keep the wet out, it will enable a man to see where he is going, and so avoid lamps, wayfarers, etc.

AN EMINENT LONDON PHYSICIAN has obtained good results in dressing burns with milk. Bandages are soaked with milk and laid on the burn, to be removed night and morning.



We
Manufacture

Spectacles and Eye Glasses

IN....
GOLD
SILVER
and GOLD FILLED



COHEN BROS.

MANUFACTURING OPTICIANS

TORONTO

N.B.—Prescription Work—Frames
and Lenses our specialty.

Egyptian Egg Shampoo

ORDER FROM
WHOLESALEERS

The only line for cleansing the Hair
sold in Canada.

For information write

The Winsor Barker Co.,
TORONTO Limited

EGG SHAMPOO EGYPTIAN

Concrete Perfume Tablets..

The perfection of the modern perfumer's art is exhibited in the dainty, fascinating Concrete Perfume Tablets made at Hudnott's Pharmacy, 205 Broadway. These tablets possess that fullness of fragrance and richness of perfume found in the freshly cut flower, so that one may possess at all times the odor of a bouquet of their favorite flower. By simply placing one or two tablets among laces, handkerchiefs, gloves, or wearing apparel the article will be delightfully and thoroughly perfumed.

Sewn in gowns or dresses they perfume the garment perfectly, giving out the most delightful odor.

These tablets are the latest creation in perfumery. They are unrivalled for richness of odor, and their desirable form makes them specially attractive to people of refinement.

They can be used among the most delicate fabrics without danger of discoloring the article. The tablets are made in the following odors:

Jack Roses, Jockey Club, English Lilacs, Sweet Verbena,
Carnation Pinks, Imperial Violets, Lily of the Valley, Peau D'Espagne,
English Lavender, Orange Blossoms, White Hyacinths, Persian Heliotrope.

SAUNDERS & EVANS, Sole Agents for Canada Toronto

-- THE --

Druggists' Corporation

of Canada, Limited

32 Colborne Street

TORONTO

ONTARIO

OFFER SPECIALLY THIS MONTH:

Owbridge's Lung Tonic (three sizes)

" Atoms of Health

" Embrocation

" Pile Salve

" Hog Powder

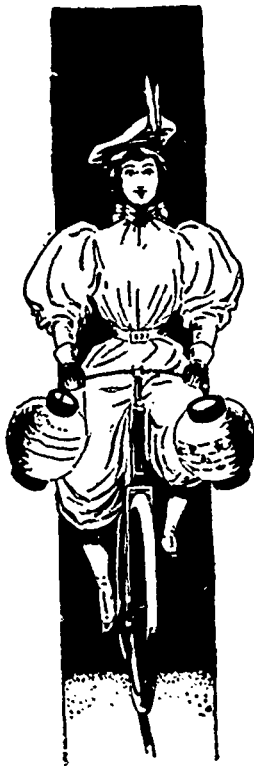
Dr. Harte's Celery-Iron Pills

Winekler's Antigastralgique

" Liqueur Hor

Excelsior Mixer and Sifter

BOOKLETS . .



MY PARTICULAR SPECIALTY is illustrated booklets. By a booklet I mean anything from eight pages upward. A booklet properly treats of a business as a whole, or of any particular part, branch or specialty of a business. For instance, my little booklet "How" tells why I think I should be paid for advice on advertising problems, and about what I ought to be paid for it. I will send it freely to any business man whose name is in the R. G. Dun book. I am making a large number of booklets this fall. Booklets for all sorts of businesses in all sorts of places. Last month I wrote, illustrated and printed 10,000 booklets for a banker in Sidney, New South Wales. The booklets cost him \$245.00, and the expressage to Sidney was \$182.00. But my client got exactly what he wanted—and it will pay him. Last month also I have made a series of seven booklets for one of the leading jewelry concerns of the country. Last month also a large pamphlet for a proprietary medicine concern of national importance. Last month also—on October 13—I received an order by telegraph from one of the largest importers and roasters of coffee in America. Order came at 2.45 p.m., and was for a 16-page booklet, with cover in two colors, and seven illustrations for the inside pages. *At five-thirty the same evening* the finished drawings and the copy were mailed by special delivery. The day the matter was received by my client I got a wire saying: "Matter for booklet received and perfectly satisfactory." I believe there is no other place on earth where this could have been done. I don't like to work in a rush, but I can do it if I must. How do I do it? I have on file in my offices—properly classified and indexed—matter pertaining to almost every conceivable business subject. When this "coffee" order came I called for all the matter on file in relation to coffee, and in five minutes I had on my desk about all the known facts about this particular food product. I worked carefully, but quickly. My information was accurate. My work was satisfactory. Write or telegraph me about a booklet for *your* business.

Charles Austin Bates + + + +
Vanderbilt Building, New York

Advertising.

Practical Hints on Advertising.

By CHARLES AUSTIN BATES, New York.

It is unfair to fix the rate of a newspaper solely by its circulation. There are a great many more important things to be considered than mere numbers. If a paper is the only one in its community, certainly one copy of it is worth more than it would be if it had half a dozen competitors. An advertisement in the only paper that a man reads is worth more than an ad. in one of half a dozen papers which he reads. Newspaper publishers generally find that their space is worth all they can get for it, and that this is about the only way to find out what it is worth. I should think that probably five cents an inch per issue would be about all that a paper of eight hundred circulation could get unless the advertisement was changed frequently, thereby making it necessary to charge more in order to get payment for composition. I should think that a local advertiser who changed his ad. every week ought to pay at least ten cents an inch. The rate of five cents an inch figures out half a cent per agate line per one thousand circulation. This is more than the large weeklies and dailies can get for their space, but it is probably about what the average small weekly gets. I should say that a small weekly paper ought to be worth more to the local advertiser than to the general advertiser—perhaps twice as much.

As to whether a paper would be worth more or less if it were all home print there is, I believe, no way of telling. Personally, I have never been able to see why home print was superior to ready print. In fact I incline to think that the best ready prints are superior to the majority of home print papers. I believe they are very much better for the publisher, when he considers the additional expense of the home print.

The nearer you can come to making people see the goods you are talking about, the better advertising you are doing. It is a good deal better to offer something special—even though it isn't fully described—than to advertise in a general way. But it is much better still to make an ad. perfectly plain and distinct, so that everybody may know ex-

actly what you are talking about—and in their mind's eye almost see the article.

I believe in writing an advertisement first, and deciding upon the space to be used afterwards. I do not believe in hammering an ad. down to fit in a given space. The way to do the best advertising is to make an ad. and then buy the space to put it in. There is no use trying to put a ten-acre ad. in a two-acre space. If you have got six inches to say, you can't say it in two inches very effectively. You may have a big message one week and a small message the next week. There is no use taking more space than you need in one issue, and less space than you need in the next issue. That would be equivalent to eating the same amount at every meal whether you were hungry or not, or making up your mind that you were going to take just forty cents' worth of medicine every week whether you were sick or not—whether you needed it or not—whether you needed ten times that much or none at all. Advertising should be taken as it is needed, and a retailer can always tell when it is needed. When his trade lags it needs advertising. When it is booming it doesn't need it so much.

It isn't always necessary even that the grammar in an ad. should be twenty-four carats fine. The sense is what counts. I have seen many a good ad.—ads. that brought business and big profits—that wouldn't stand criticism from the point of view of the grammarian.

I don't know how it is with other people, but bad poetry gives me the horrors. It sets my teeth on edge just like filing a saw would. It is actually physically nauseating. That is, when it is just ordinarily bad. It is possible for it to be so bad that it is good, if it is bad enough to be funny it has that merit. You can laugh at it then, but if it is just plain bad there is no help for it. It is likely to be just "plain bad."

Poetry has no business in advertising, anyway. A poet is permitted to take all sorts of liberties with the English language, and to make his meaning just as obscure as he pleases. Perhaps the more obscure he makes it the greater poet he

is considered by a whole lot of people—if you doubt it read Browning and Coleridge.

Now, obscurity has no place in advertising. The nearer you can get to bed rock common-sense the better. The poet has to think as much of sound as he does of sense, and he frequently sacrifices sense for the sake of sound. He takes sixteen four line verses to tell something that could be told in four words. He weaves wreaths and garlands all about his thoughts and disguises them so you have to look for them with a searchlight. That sort of language won't do in advertising. There is no possible way of making advertising too plain. The plainest kind of plain language doesn't seem to be strong enough or plain enough to penetrate the intelligence of a great many advertisement readers. A Chicago advertising manager said to me once, "When we advertise a certain clock, we put a picture of that clock right in the ad., then there can't be any mistake." One would suppose that was pretty near plain enough, but I have no doubt many people came to the store expecting to get something entirely different from the thing that was advertised.

Sponges.

Messrs. Saunders & Evans, 30 Wellington street east, Toronto, are, we believe, the only exclusive dealers in sponges and chamois skins in Canada. They are offering to the trade a very fine assortment in all kinds and grades of sponges, and being direct importers, are able to supply them at the lowest possible prices.

Their catalogue, which may be had for the asking, enumerates all kinds, both bleached and unbleached. They have their own bleaching establishment in this city, and are their own packers, so that these goods are always fresh in appearance, and consequently more taking. They are also agents for Hudnut's perfume tablets, a new line, which promise to be good sellers and are "the latest creation in perfumery."

The following opticians have added a DeZeng refractometer to their testing outfit: E. J. McIntyre, Chatham; W. Sanderson, Peterboro; G. A. Deadman, Brussels; N. B. Wilkins, Galt; A. Moffatt, Brantford; J. R. Orr, Colongwood; E. P. Battley, Sarnia; C. H. Ward, London; E. Davidson, Hamilton; T. G. Lean, London. Dr. Palmer, of Toronto, and Dr. Bates, of Hamilton, also are using it with uniform success.

Amongst Our Advertisers.

Messrs. Cohen Bros. say that the DeZeng refractometer, the wonderful little instrument for measuring errors of refraction, which has created somewhat of a furore in optical circles, seems to have opened up the old issue, "Atropine or no atropine," with the preponderance of opinion against atropine and in favor of the refractometer.

"Exquisite and Strong" after Twelve Years.

The following strong testimony as to the "keeping" qualities of Seely's perfumes has been received by that firm:

Seely Manufacturing Co., Windsor, Ont.:

GENTLEMEN,—I send herewith a bottle of your Seely's Marie Stuart perfume, which was given to me by your Mr. R. P. Thomas on Christmas, 1885. In some way the bottle was pushed back in one of the pigeon holes in my desk at home, and forgotten until last May, 1897, when in clearing out my desk, preparatory to changing it for a smaller one, this bottle became unearthed. I laid it aside until a few days ago; coming across it again I thought I would return it to you to test its strength. Kindly note the exquisite and strong odor which the perfume holds even after being "on earth" over twelve years. Surely this bottle of perfume speaks volumes on the purity and lasting qualities of your goods.

Wishing you greater success in the future than you have attained in the past.

P. E. LAUGHINGER.

Business Notes.

The Southwick Mfg. Co. of New York and Salem, Mass., sole controllers of the original Liebig's Extract of Beef, made in South America, shipped to Amsterdam for distribution in the European market, and shipped to them and put up by them at Salem, Mass. for the American and Canadian trade under the "Southwick Brand," are also introducing their "Bovox" Essence of Beef, which they claim and is proved by several doctors and analysts, to be of superior quality. The price is very much reasonable than other much advertised brands, the 5 ounce bottle retailing at 50 cents, the 11 ounce bottle retailing at \$1.00, and the 16 ounce bottle retailing at \$1.50. The Southwick Mfg. Co. have appointed the

Canadian Specialty Co., Toronto, as their agents for the Province of Ontario, and druggists can get their supply from them for "Bovox" as well as Liebig's Extract of Beef in pots. Drop them a line for quotations.

Soda Water Apparatus.

We are just in receipt of a very handsome catalogue of soda water fountains and apparatus issued by W. J. McCahill & Co., of Buffalo, N. Y. The catalogue is a beauty both in typographical appearance and in the handsome designs of fountains, etc., which are presented. This firm make a specialty of fine onyx fountains, and the high encomiums which are given them by those who have them in use, show their excellency and adaptability to the requirements of the drug trade. To those who intend putting in a new fountain or desire to exchange their old ones, we would suggest to send for a catalogue.

Lofoten.

"The Lofoten Islands and their principal product." This is the title of an elegant illustrated pamphlet, which has just come to hand. It gives a graphic description of that portion of Norway from which the best Cod Liver Oil is obtained, and also the methods adopted by the fishermen and producers. The illustrations serve to give an idea of the country and its inhabitants. It constitutes very interesting and instructive reading, and may be procured by any of our readers without charge by writing Parke, Davis & Co., Detroit, Mich.

HOW TO GET

	Per Doz.	One Gross
Dr. CODERRE'S RED PILLS, for Pale and Weak Women	\$4	\$40
In 3 doz. lots, 5 per cent. discount.		
Dr. CODERRE'S PLASTERS	\$2	\$20
In 3 doz. lots, 5 per cent. discount.		
Dr. CODERRE'S PURGATIVE TABLETS	\$2	\$20
In 3 doz. lots, 5 per cent. discount.		
Dr. CODERRE'S INJECTION POWDER	\$2	\$20
In 3 doz. lots, 5 per cent. discount.		

To obtain the 5 per cent discount, the order must be for not less than 3 dozen of any one of our Remedies. Special price in large quantities.

Correspondence Solicited. F.O.B. Montreal.

THE FRANCO-AMERICAN CHEMICAL CO.

57 ST. CHARLES BARRONNEE ST., MONTREAL.
Bell Tel. 635.

N.B.—We will not sell to Price Cutters.

Adipatum is an ointment vehicle, consisting of lanolin (anhyd.) 35 parts, petrolatum 53 parts, paraffin 7 parts, and water 100 parts.

WANTS, FOR SALE, ETC.

Advertisements under the head of Business Wanted, Situations Wanted, Situations Vacant, Business for Sale, etc., will be inserted once free of charge. Answers must not be sent in care of this office unless postage stamps are forwarded to re-mail replies.

SITUATIONS WANTED.

WANTED—POSITION AS MANAGER, TRAVELER or clerk. Graduate of O.C.P. Over fifteen years' experience. Most of time in business for self. Unexceptional recommends. Address Druggist, Box 61, Wallaceburg, Ont.

SITUATION WANTED—AS ASSISTANT, GOOD dispenser, good salesman, 6 years' experience. Testimonials if required. Small wages. Address Jno. H. Snedden, Almonte, Ont.

SITUATION WANTED—BY YOUNG MAN WITH matric., as drug apprentice, city preferred. Best references. Apply to W. H. E. Hartley, Lindsay, Ont.

FOR SALE.

CITY DRUG BUSINESS FOR SALE—CENTRAL locality, stock about \$1,800; Telegraph office. Must sell at once on account of ill-health. Address Box 25, CANADIAN DRUGGIST.

WANTED.

WANTED—TRUSTWORTHY AND ACTIVE gentlemen or ladies to travel for responsible, established house. Monthly \$65 and expenses. Position steady. Reference. Enclose self-addressed stamped envelope. The Dominion Company, Dept. V., Chicago.

We Solicit Your Trade

We offer a well-assorted stock of

Drugs
Chemicals
Patent
Medicines
Perfumery
Toilet Articles
etc.

CALL AND SEE US

JAMES A. KENNEDY & CO.,

WHOLESALE DRUGGISTS

342 Richmond St.,

LONDON, Ont.

The Seely Manufacturing Co.

Thank the Drug Trade for its liberal patronage
in the past, and wish all their friends a . . .

Happy and Prosperous New Year,



SEELY,---The American Perfumer

DETROIT, MICH.

WINDSOR, ONT.

CANADIAN DRUGGIST PRICES CURRENT

Corrected to January 11th, 1898.

The quotations given represent average prices for quantities usually purchased by Retail Dealers. Larger parcels may be obtained at lower figures, but quantities smaller than those named will command an advance.

ALCOHOL, gal.....	\$4 75	\$5 00	Powdered, lb.....	\$ 30	\$ 35	Myrrh, lb.....	\$ 45	\$ 48
Methyl.....	1 90	2 00	CARBON, Bisulphide, lb.....	15	16	Powdered, lb.....	55	60
ALLSPICE, lb.....	15	15	CARMINE, No. 40, oz.....	40	50	Opium, lb.....	4 75	5 00
Powdered, lb.....	15	17	CASFOR, Fibre, lb.....	20 00	20 00	Powdered, lb.....	6 00	6 25
ALON, oz.....	40	45	CHALK, French, powdered, lb..	10	12	Scammony, pure Resin, lb.....	12 80	13 00
ANODYNE, Hoffman's bot., lbs...	50	55	Precip., see Calcium, lb.....	10	12	Shellac, lb.....	35	40
ARROWROOT, Bermuda, lb.....	40	45	Prepared, lb.....	5		Bleached, lb.....	40	45
St. Vincent, lb.....	15	18	CHARCOAL, Animal, powd., lb...	4	5	Spruce, true, lb.....	30	35
BALSAM, Fir, lb.....	40	45	Willow, powdered, lb.....	20	25	Tragacanth, flake, 1st, lb.....	85	90
Copaiba, lb.....	70	85	CLOVE, lb.....	16	17	Powdered, lb.....	1 10	1 25
Peru, lb.....	5 25	5 50	Powdered, lb.....	17	18	Sorts, lb.....	55	70
Tolu, can or less, lb.....	90	95	COCHINEAL, S.G., lb.....	40	45	Thus, lb.....	8	10
BARK, Barberry, lb.....	22	25	COLLODION, lb.....	75	80	HERB, Althea, lb.....	27	35
Bayberry, lb.....	15	18	Cantharidai, lb.....	2 50	2 75	Bitterwort, lb.....	30	40
Ruckthorn, lb.....	15	17	CONFECTION, Senna, lb.....	40	45	Buttock, lb.....	16	18
Canella, lb.....	15	17	CREOSOTE, Wood, lb.....	2 00	2 50	Boneset, oz., lb.....	15	17
Cascara Sagrada.....	25	30	CUTTLEFISH BONE, lb.....	25	30	Catnip, oz., lb.....	17	20
Cascarilla, select, lb.....	18	20	DENTRINE, lb.....	10	12	Chiretta, lb.....	25	30
Cassia, in mats, lb.....	18	20	DOVER'S POWDER, lb.....	1 50	1 60	Coltsfoot, lb.....	20	25
Cinchona, red, lb.....	60	65	ERGOT, Spanish, lb.....	75	80	Feverfew, oz., lb.....	53	55
Powdered, lb.....	65	70	Powdered, lb.....	90	1 00	Grindelia robusta, lb.....	45	50
Yellow, lb.....	35	40	Ergotin, Keith's, oz.....	2 00	2 10	Horehound, oz., lb.....	18	20
Pale, lb.....	40	45	EXTRACT LOGWOOD, bulk, lb...	13	14	Jaborandi, lb.....	45	50
Elm, selected, lb.....	18	20	Pounds, lb.....	14	17	Lemon Palm, lb.....	38	40
Ground, lb.....	17	20	FLOWERS, Arnica, lb.....	15	20	Liverwort, German, lb.....	38	40
Powdered, lb.....	20	28	Calendula, lb.....	55	60	Lobelia, oz., lb.....	15	20
Hemlock, crushed, lb.....	18	20	Camomile, Roman, lb.....	25	30	Motherwort, oz., lb.....	20	22
Oak, white, crushed lb.....	15	17	German, lb.....	40	45	Mullein, German, lb.....	17	20
Orange peel, bitter, lb.....	15	16	Elder, lb.....	20	22	Pennyroyal, oz., lb.....	18	20
Prickly ash, lb.....	35	40	Lavender, lb.....	12	15	Peppermint, oz., lb.....	21	22
Sassafras, lb.....	15	16	Rose, red, French, lb.....	1 60	2 00	Rue, oz., lb.....	30	35
Soap (quillaya), lb.....	15	15	Rosemary, lb.....	25	30	Sage, oz., lb.....	18	20
Wild cherry, lb.....	13	15	Saffron, American, lb.....	65	70	Spearmint, lb.....	21	25
BEANS, Calabar, lb.....	45	50	Spanish, Val'a, oz.....	1 00	1 25	Thyme, oz., lb.....	18	20
Tonka, lb.....	1 50	2 75	GELATINE, Cooper's, lb.....	75	80	Tansy, oz., lb.....	15	18
Vanilla, lb.....	11 00	16 00	French, white, lb.....	35	40	Wormwood, oz.....	20	22
BERRIES, Cubeb, sifted, lb.....	20	25	GLYCERINE, lb.....	28	30	Yerba Santa, lb.....	28	44
powdered, lb.....	25	30	GUARANA.....	1 25	1 30	HONEY, lb.....	13	15
Juniper, lb.....	7	10	Powdered, lb.....	1 50	1 75	Hops, fresh, lb.....	20	25
Ground, lb.....	12	14	GUM ALOES, Cape, lb.....	18	20	INDIGO, Madras, lb.....	75	80
Prickly ash, lb.....	40	45	Barbadoes, lb.....	30	50	INSECT POWDER, lb.....	38	40
BUDS, Balm of Gilead, lb.....	55	60	Secotrine, lb.....	65	70	ISINGLASS, Brazil, lb.....	2 00	2 10
Cassia, lb.....	25	30	Assafetida, lb.....	40	45	Russian, true, lb.....	6 00	6 50
BUTTER, Cacao, lb.....	75	80	Arabic, 1st, lb.....	70	75	LEAF, Aconite, lb.....	25	30
CAMPHOR, lb.....	50	55	Powdered, lb.....	80	95	Bay, lb.....	18	20
CANTHARIDES, Russian, lb.....	1 40	1 50	Sifted sorts, lb.....	45	50	Bell-donna, lb.....	25	30
Powdered, lb.....	1 50	1 60	Sorts, lb.....	30	35	Buchu, long, lb.....	50	55
CAPSICUM, lb.....	25	30	Benzoin, lb.....	50	1 00	Short, lb.....	25	27
			Catechu, Black, lb.....	6	20	Coca, lb.....	35	40
			Gamboge, powdered, lb.....	1 20	1 25	Digitalis, lb.....	15	20
			Guaiac, lb.....	50	1 00	Eucalyptus, lb.....	18	25
			Powdered, lb.....	90	95	Hyoscyamus.....	20	25
			Kino, true, lb.....	4 25	4 50	Matico, lb.....	70	70

Senna, Alexandria, lb.....	\$ 25	\$ 30	Queen of the Meadow, lb.....	\$ 18	\$ 20	Valerianate, oz.....	\$ 55	\$ 60
Tinnevely, lb.....	15	25	Rhatany, lb.....	20	30	AMYL, Nitrite, oz.....	16	18
Stramonium, lb.....	20	25	Rhubarb, lb.....	75	2 50	ANTINERVIN, oz.....	85	00
Uva Ursi, lb.....	15	18	Sarsaparilla, Houd, lb.....	40	45	ANTIKAMNIA.....	1 30	1 35
LRECHES, Swedish, doz.....	1 00	1 10	Cut, lb.....	50	55	ANTIPYRIN, oz.....	1 10	1 20
LIPORIC, Solazzi.....	45	50	Senega, lb.....	55	65	ARISTOL, oz.....	1 85	2 00
Pignatelli.....	35	40	Squill, lb.....	13	15	ARSENIC, Donovan's sol., lb.....	25	30
Grasso.....	30	35	Stillingia, lb.....	22	25	Fowler's sol., lb.....	10	13
Y & S—Sticks, 6 to 1 lb., per lb.	27	30	Powdered, lb.....	25	27	Iodide, oz.....	50	55
Purity, 100 sticks in box	75	75	Unicorn, lb.....	38	40	White, lb.....	6	7
" Purity, 200 sticks in box	1 50	1 50	Valerian, English, lb. true.....	20	25	ATKOPINE, Sulp. in $\frac{1}{2}$ ozs. 8oc.,		
" Acme Pellets, 5 lb. tins	2 00	2 00	Virginia, Snake, lb.....	40	45	oz.....	6 00	6 25
" Lozenges, 5 lb. tins.....	2 00	2 00	Yellow Dock, lb.....	15	18	BISMUTH, Ammonia-citrate, oz.	40	45
" Tar, Licorice, and Tolu,			RUM, Bay, gal.....	2 50	2 75	Iodide, oz.....	55	60
5 lb. tins.....	2 00	2 00	Essence, lb.....	3 00	3 25	Salicylate, oz.....	25	30
LUPULIN, oz.....	30	35	SACCHARIN, oz.....	1 25	1 50	Subcarbonate, lb.....	2 00	2 25
LYCOPodium, lb.....	70	80	SEED, Anise, Italian, sifted, lb...	13	15	Subnitrate, lb.....	1 80	2 00
MACE, lb.....	1 20	1 25	Star, lb.....	35	40	BORAX, lb.....	7	8
MANNA, lb.....	1 60	1 75	Burdock, lb.....	30	35	Powdered, lb.....	8	9
Moss, Iceland, lb.....	9	10	Canary, bag or less, lb.....	4	5	BROMINE, oz.....	8	13
Irish, lb.....	12	13	Caraway, lb.....	10	13	CADMIUM, Bromide, oz.....	20	25
MUSK, Tonquin, oz.....	46 00	50 00	Cardamom, lb.....	1 15	1 25	Iodide, oz.....	45	50
NUTGALLS, lb.....	21	25	Celery.....	25	30	CAFFEINE, oz.....	55	60
Powdered, lb.....	25	30	Colchicum.....	50	60	Citrate, oz.....	45	50
NUTMEGS, lb.....	1 00	1 10	Coriander, lb.....	10	12	CALCIUM, Hypophosphite, lb....	1 50	1 60
NUX VOMICA, lb.....	10	12	Cumin, lb.....	15	20	Iodide, oz.....	95	1 00
Powdered, lb.....	20	25	Fennel, lb.....	15	17	Phosphate, precip., lb.....	35	38
OAKUM, lb.....	12	15	Fenugreek, powdered, lb.....	7	9	Sulphide, oz.....	5	6
OINTMENT, Merc., lb. $\frac{1}{2}$ and $\frac{1}{2}$.	70	75	Flax, cleaned, lb.....	3 $\frac{1}{2}$	4	CERIUM, Oxalate, oz.....	10	12
Citine, lb.....	45	50	Ground, lb.....	4	5	CHINIDINE, oz.....	15	18
PARALDEHYDE, oz.....	20	22	Hemp, lb.....	3 $\frac{1}{2}$	4	CHLORAL, Hydrate, lb.....	1 25	1 30
PEPPER, black, lb.....	12	13	Mustard, white, lb.....	11	12	Croton, oz.....	75	80
Powdered, lb.....	15	16	Powdered, lb.....	15	20	CHLOROFORM, lb.....	60	1 00
PITCH, black, lb.....	3	4	Pumpkin.....	25	30	CINCHONINE, sulphate, oz.....	25	30
Bergundy, true, lb.....	10	12	Quince, lb.....	65	70	CINCHONIDINE, Sulph., oz.....	28	30
PLASTER, Calcined, hbl. cash....	1 25	3 25	Rape, lb.....	5	6	COCAINE, Mur., oz.....	5 00	6 50
Adhesive, yd.....	12	13	Strophanthus, oz.....	50	55	CODEIA, $\frac{1}{2}$ oz.....	75	80
Belladonna, lb.....	65	70	Worm, lb.....	22	25	COLLODION, lb.....	65	70
Galbanum Comp., lb.....	80	85	SEIDLITZ MIXTURE, lb.....	25	30	COPPER, Sulph., (Blue Vitriol) lb.	6	7
Lead, lb.....	25	30	SOAP, Castile, Mottled, pure, lb..	10	12	Iodide, oz.....	65	70
POPPY HEADS, per 100.....	1 00	1 10	White, Conti's, lb.....	15	16	COPPERAS, lb.....	1	3
ROSIN, Common, lb.....	2 $\frac{1}{2}$	3	Powdered, lb.....	25	40	DIURETIN, oz.....	1 60	1 65
White, lb.....	3 $\frac{1}{2}$	4	Green (Sapo Viridis), lb.....	25	40	ETHER, Acetic, lb.....	75	80
RESORCIN, white, oz.....	25	30	SPERMACETI, lb.....	60	65	Sulphuric, lb.....	40	50
ROCKLE SALT, lb.....	25	28	TURPENTINE, Chian, oz.....	75	80	EXALGINE, oz.....	1 00	1 10
ROOT, Aconite, lb.....	22	25	Venice, lb.....	10	12	HYOSCYAMINE, Sulp., crystals, gr.	4 25	5 30
Althea, cut, lb.....	30	35	WAX, White, lb.....	50	75	IODINE, lb.....	4 50	5 00
Belladonna, lb.....	25	30	Yellow.....	40	45	IODOFORM, lb.....	5 25	5 50
Blood, lb.....	18	25	WOOD, Guaiac, rasped.....	5	6	IODOL, oz.....	1 40	1 50
Bitter, lb.....	27	30	Quassia chips, lb.....	10	12	IRON, by Hydrogen.....	80	85
Blackberry, lb.....	15	18	Red Saunders, ground, lb.....	5	6	Carbonate, Precip., lb.....	15	16
Burdock, crushed, lb.....	18	20	Santal, ground, lb.....	5	6	Sarch., lb.....	30	35
Calamus, sliced, white, lb....	20	25				Chloride, lb.....	45	55
Canada Snake, lb.....	30	35				Sol., lb.....	13	16
Cohosh, black, lb.....	15	20	CHEMICALS.			Citrate, U.S.P., lb.....	90	1 00
Colchicum, lb.....	40	45	Acid, Acetic, lb.....	12	13	And Ammon., lb.....	70	75
Colombo, lb.....	20	22	Glacial, lb.....	45	50	And Quinine, lb.....	1 50	3 00
Powdered, lb.....	25	30	Benzoic, English, oz.....	20	25	Quin. and Stry., oz.....	18	30
Coltsfoot, lb.....	38	40	German, oz.....	10	12	And Strychine, oz.....	13	15
Comfrey, crushed, lb.....	20	25	Boracic, lb.....	13	14	Dialyzed, Solution, lb.....	50	50
Curcuma, powdered, lb.....	13	14	Carbolic Crystals, lb.....	30	35	Ferrocyanide, lb.....	55	60
Dandelion, lb.....	20	22	Calvert's No. 1, lb.....	2 10	2 15	Hypophosphites, oz.....	25	35
Elecampane, lb.....	15	20	No. 2, lb.....	1 35	1 40	Iodide, oz.....	40	45
Gallangal, lb.....	15	18	Citric, lb.....	50	55	Syrup, lb.....	40	45
Gelsenium, lb.....	22	25	Gallic, oz.....	10	12	Lactate, oz.....	5	6
Gentian or Genitan, lb.....	12	13	Hydrobromic, diluted, lb.....	30	35	Pernitrate, solution, lb.....	15	16
Ground, lb.....	13	14	Hydrocyanic, diluted, oz. bottles			Phosphate scales, lb.....	1 25	1 30
Powdered, lb.....	13	15	doz.....	1 50	1 60	Sulphate, pure, lb.....	7	9
Ginger, African, lb.....	18	20	Lactic, concentrated, oz.....	8	10	Exsiccated, lb.....	8	10
Po., lb.....	20	22	Muriatic, lb.....	3	5	And Potass. Tartrate, lb....	80	85
Jamaica, blechl., lb.....	27	30	Chem. pure, lb.....	18	20	And Ammon Tartrate, lb. ..	80	85
Po., lb.....	30	35	Nitric, lb.....	10 $\frac{1}{2}$	13	LEAD, Acetate, white, lb.....	13	15
Ginseng, lb.....	4 50	4 75	Chem. pure, lb.....	25	30	Carbonate, lb.....	7	8
Golden Seal, lb.....	75	80	Oleic, purified, lb.....	75	80	Iodide, oz.....	35	40
Gold Thread, lb.....	90	95	Oxalic, lb.....	12	13	Red, lb.....	7	9
Hellebore, white, powd., lb....	12	15	Phosphoric, glacial, lb.....	1 00	1 10	LIME, Chlorinated, bulk, lb.....	4	5
Indian Hemp.....	18	20	Dilute, lb.....	13	17	In packages, lb.....	6	7
Ipecac, lb.....	2 40	2 50	Pyrogallic, oz.....	30	35	LITHIUM, Bromide, oz.....	30	35
Powdered, lb.....	2 50	2 75	Salicylic, white, lb.....	75	80	Carbonate, oz.....	30	35
Jalap, lb.....	55	60	Sulphuric, carbony, lb.....	2	2 $\frac{1}{2}$	Citrate, oz.....	25	30
Powdered, lb.....	60	65	Bottles, lb.....	4	5	Iodide, oz.....	50	55
Kava Kava, lb.....	40	90	Chem. pure, lb.....	18	20	Salicylate, oz.....	35	40
Licorice, lb.....	12	15	Tannic, lb.....	80	85	MAGNESIUM, Calc., lb.....	55	60
Powdered, lb.....	13	15	Tartaric, powdered, lb.....	40	45	Carbonate, lb.....	18	20
Mandrake, lb.....	13	18	ACRTANIID, lb.....	70	75	Citrate, gran., lb.....	35	40
Masterwort, lb.....	16	40	ACONITINE, grain.....	4	5	Sulph. (Epsom salt), lb.....	1 $\frac{1}{2}$	3
Orris, Florentine, lb.....	30	35	ALUM, cryst., lb.....	1 $\frac{1}{2}$	3	MANGANESK, Black Oxide, lb....	5	7
Powdered, lb.....	40	45	Powdered, lb.....	3	4	MENTHOL, oz.....	35	40
Pareira Brava, true, lb.....	40	45	AMMONIA, Liquor, lb., .88o.....	10	12	MERCURY, lb.....	75	80
Pink, lb.....	40	45	AMMONIUM, Bromide, lb.....	80	85	Ammon (White Precip.)....	1 25	1 30
Parsley, lb.....	30	35	Carbonate, lb.....	14	15	Chloride, Corrosive, lb.....	90	1 00
Pleurisy, lb.....	20	25	Iodide, oz.....	35	40	Calomel, lb.....	105	1 15
Poke, lb.....	15	18	Nitrate crystals, lb.....	40	45	With Chalk, lb.....	50	55

Magazines.

The article on Arthur Henry Hallam, by Mr. Gladstone, in the New Year's number of *The Companion*, is one of the most fascinating literary papers ever written by the great English statesman. It carries one back to a past full of charm. The remainder of this number abounds in interest. There is the beginning of a new serial story by C. A. Stephens, a good story of a reporter's interview with the late Emperor Dom Pedro of Brazil, several other short stories of exceptional merit, and the usual rare selections of miscellany.

Leslie's Popular Monthly.

An important and interesting article on Mexico occupies the leading place in *Frank Leslie's Popular Monthly* for January. It is written by Frederick Stone Daniel, and treats in an entertaining manner of the country's history, and the character and occupations of the people. There are many excellent illustrations. Other illustrated papers are "Beet Sugar Culture in California," by Frederick M. Turner; "The Lance in the German Army," "New Year's Day Festivities," "A Probable Giorgione," and "San Carlos Indians." There is an interesting instalment of the serial, "The Catspaw," which appears to be drawing to a close; several short stories, contributed by J. Frederick Thorne, Eleanor C. Scott and others; a number of really good poems, and the always attractive young folk's department.—Frank Leslie's Publishing House, New York.

A Companion for All Ages.

A gentleman who used to read the *Youth's Companion* when a boy, and reads it with the same interest now that he is a middle-aged man, was asked the other day if he had not outgrown the *Companion*. "I don't believe," said he, "that I can ever outgrow it. I find in it not only the cheery, hopeful spirit of youth, but the wisdom and experience of age. I like it just as much as when I was a boy, though perhaps in a different way. But I know that it is the same *Youth's Companion* with which I grew up, for my boys and girls like it as well as ever I did. It is a good paper to grow up with."

The *Youth's Companion* will contain the best thought of the best thinkers of

America and Europe during 1898. It will print serial and short stories of absorbing interest, and true tales of adventure. The various departments of the paper will be a current record of the best work that is being done in the world. Present readers of the *Companion* who renew their subscriptions, and all new subscribers, will receive free a beautiful illustrated calendar, printed in twelve colors, and embossed in gold. It is the richest and costliest calendar ever sent to *Companion* subscribers. New subscribers will receive the *Companion* every week from the time the subscription is received until January, 1898, and then for a full year to January, 1899.

An illustrated prospectus of the *Companion* for 1898 may be had by addressing Perry Mason and Company, 205 Columbus Avenue, Boston, Mass.

The Ladies' Home Journal for 1898.

To make *The Ladies' Home Journal* for 1898 "the best of all the years; the most cheerful and helpful magazine that a woman can possibly have in her home," is the purpose of its editors, as disclosed by a prospectus outlining a few of the projected features for the coming year. While the *Journal* will be more useful and practical than ever before, it is made apparent that its literary features will be strengthened, and that pictorially it will be more attractive and artistic than ever.

A notable feature, "The Inner Experiences of a Cabinet Member's Wife," a series of letters from the wife of a Cabinet member to her sister, will, it is said, reveal some startling and graphic pen-pictures of Washington social and official life. They are so realistic that the letters will be published anonymously and are likely to attract national attention. The biographies of President McKinley, Mrs. Cleveland, Mark Twain, Thomas A. Edison and Joseph Jefferson will be presented in a novel way by a series of anecdotes, giving the vital characteristics of each. Rev. John Watson, D. D. ("Ian Maclaren"), will contribute a series of articles on matters close to the interest of every man and woman; Edward W. Bok will have a special page for young men, in addition to his usual editorial discussions; Lillian Bell will continue her bright, crisp letters from European capitals; Mrs. Burton Harrison will describe society at the beginning of the century; and ex-President Harrison is to write on "The Flag in the Home."

Two fiction issues, in all over thirty short stories, are promised during the year. The stories will be by Mark Twain, F. Marion Crawford, Hamlin Garland, Mary E. Wilkins, Julia Magruder, Clara Morris, Mrs. A. D. L. Whitney, and other well-known authors.

The musical announcements for next year include Sousa's latest composition, "The Lady of the White House," dedicated by special permission to Mrs. McKinley, sacred songs and hymns by Fanny Crosby, the blind hymn writer, Ira D. Sankey, and others quite as prominent in their respective fields.

"Inside of a Hundred Homes" will be continued and supplemented by other articles upon fitting, furnishing and beautifying the home, and in addition to the *Journal's* "Moderate Cost Houses," churches, schools, farm buildings, etc., will be given, with detailed plans and specifications.

Mrs. S. T. Rorer, it is announced, will continue to write exclusively for the *Journal*. In addition to her "Cooking Lessons" she will write of foods, their value and their healthfulness. Special articles for children—young and middle grown—on needlework, fashions, home entertainments, church work, etc., are all promised. This is but a passing glance at the 1898 *Ladies' Home Journal*, which is aimed to meet the literary and practical needs of every member of the household. By The Curtis Publishing Company, Philadelphia. Ten cents per copy; one dollar per year.

Iodovasal.

Iodovasal is introduced as a stable iodised ointment basis. It is prepared by treating an excess of oleic acid with iodine chloride, washing the resulting oily liquid first with water, then with dilute solution of sodium thiosulphate, finally drying with anhydrous sodium sulphate, and mixing with a prescribed quantity of vaseline. A little absolute alcohol is then added and the mixture treated with a stream of ammonia gas until the oleic acid is saturated. The resulting brown liquid contains seven per cent. of iodine. It is very hygroscopic, and should, therefore, be kept in well-closed vessels. *Phar. Zeit., (Ph. J.)*

Messrs. E. D. and J. S. Cohen, of Cohen Bros., manufacturing opticians, have just returned from a two weeks' trip among the optical houses of the east. They report optics as booming in the United States, and state their arrangements for '98 will ensure the same condition among the Canadian trade.

Iodide, oz.....	\$ 35	\$ 40	Iodide, oz.....	\$ 40	\$ 43	Geranium, oz.....	\$ 1 75	\$ 1 08			
Bin., oz.....	25	30	Salicylate, lb.....	1 00	1 10	Rose, lb.....	3 20	3 50			
Oxide, Red, lb.....	1 15	1 20	Sulphate, lb.....	2	5	Juniper berries (English), lb...	4 50	5 50			
Pill (Blue Mass), lb.....	70	75	Sulphite, lb.....	8	10	Wood, lb.....	70	70			
MILK SUGAR, powdered, lb.....	30	35	SOMNOL, oz.....	85	00	Lavender, Chris. Fleur, lb...	3 00	3 55			
MORPHINE, Acetate, oz.....	1 75	1 80	SPIRIT NITRE, lb.....	38	68	Garden, lb.....	75	1 50			
Muriate, oz.....	1 75	1 80	STRONTIUM, Nitrate, lb.....	18	20	Lemon, lb.....	1 75	1 90			
Sulphate, oz.....	1 80	1 85	STRYCHNINE, crystals, oz.....	80	85	Lemongrass, lb.....	1 50	1 00			
PRUSSIN, Saccharated, oz.....	35	40	SULFONAL, oz.....	28	30	Mustard, Essential, oz.....	60	60			
PHENACETIN, oz.....	38	40	SULPHUR, Flowers of, lb.....	2 1/2	4	Neroli, oz.....	4 25	4 60			
PILO-CARPINE, Muriate, gram.....	12	15	Pure precipitated, lb.....	13	20	Orange, lb.....	2 75	3 75			
PIPPERIN, oz.....	1 00	1 10	TARTAR EMEUC, lb.....	50	55	Sweet, lb.....	2 75	3 00			
PHOSPHORUS, lb.....	90	1 10	THYMOL (Thymic acid), oz.....	55	60	Origanum, lb.....	65	85			
POPASSA, Caustic, white, lb.....	60	65	VERATRINE, oz.....	2 00	2 10	Patchouli, oz.....	80	70			
POPASSUM, Acetate, lb.....	35	40	ZINC, Acetate, lb.....	70	75	Pennyroyal, lb.....	2 50	2 50			
Bicarbonate, lb.....	15	17	Carbonate lb.....	25	30	Peppermint, lb.....	2 25	2 05			
Bichromate, lb.....	14	15	Chloride, granular, oz.....	13	15	Pimento, lb.....	2 60	2 70			
Bitrat (Cream Tart.), lb.....	25	28	Iodide, oz.....	60	65	Rhodium, oz.....	80	80			
Bromide, lb.....	70	75	Oxide, lb.....	13	60	Rose, oz.....	7 50	11 00			
Carbonate, lb.....	12	13	Sulphate, lb.....	9	11	Rosemary, lb.....	70	75			
Chlorate, Eng., lb.....	18	20	Valerianate, oz.....	25	30	Rue, oz.....	25	35			
Powdered, lb.....	20	22	ESSENTIAL OILS.								
Citrate, lb.....	70	75	Oil, Almond, bitter, oz.....	75	80	Sassafras, lb.....	75	85			
Cyanide, lb.....	40	50	Sweet, lb.....	40	50	Savin, lb.....	1 60	1 75			
Hypophosphites, oz.....	10	12	Amber, crude, lb.....	40	45	Spearmint, lb.....	3 75	4 00			
Iodide, lb.....	3 50	3 75	Rect., lb.....	60	65	Spruce, lb.....	65	70			
Nitrate, gran, lb.....	8	10	Anise, lb.....	3 00	3 25	Tausy, lb.....	4 25	4 50			
Permanganate, lb.....	40	45	Bay, oz.....	50	60	Thyme, white, lb.....	1 80	1 90			
Prussiate, Red, lb.....	50	55	Bergamot, lb.....	3 25	3 50	Wintergreen, lb.....	2 75	3 05			
Yellow, lb.....	32	35	Cade, lb.....	90	1 00	Wormseed, lb.....	3 50	3 75			
And Sod. Tartrate, lb.....	25	30	Cajuput, lb.....	1 60	1 70	Wormwood, lb.....	4 25	4 50			
Sulphuret, lb.....	25	30	Capsicum, oz.....	60	65	FIXED OILS.					
PROPHYLAMINE, oz.....	35	40	Caraway, lb.....	2 75	3 00	CASTOR, lb.....	13	15			
QUININE, Sulph, bulk.....	39	42	Cassa, lb.....	2 75	3 00	COD LIVER, N.F., gal.....	80	1 00			
Ozs., oz.....	42	45	Cedar.....	55	85	Norwegian, gal.....	1 30	1 50			
QUINIDINE, Sulphate, ozs., oz.....	16	20	Cinnamon, Ceylon, oz.....	2 75	3 00	COTTONSEED, gal.....	1 10	1 20			
SALICIN, lb.....	4 50	5 00	Citronella, lb.....	80	85	LARD, gal.....	90	1 00			
SANTONIN, oz.....	20	22	Clove, lb.....	1 10	1 20	LINSEED, boiled, gal.....	56	59			
SILVER, Nitrate, cryst, oz.....	80	85	Copaiba, lb.....	1 75	2 00	Raw, gal.....	55	58			
Fused, oz.....	85	90	Croton, lb.....	1 50	1 75	NEATSFOOT, gal.....	1 20	1 30			
SODIUM, Acetate, lb.....	30	35	Cubeb, lb.....	2 50	3 00	OLIVE, gal.....	1 30	1 55			
Bicarbonate, kgs., lb.....	2 75	3 00	Cumin, lb.....	5 50	6 00	Salad, gal.....	2 50	2 60			
Bromide, lb.....	70	75	Eriogon, oz.....	20	25	PALM, lb.....	12	13			
Carbonate, lb.....	3	6	Eucalyptus, lb.....	1 50	1 75	SPERM, gal.....	1 35	1 40			
Hypophosphite, oz.....	10	12	Fennel, lb.....	1 60	1 75	TURPENTINE, gal.....	50	60			
Hyposulphite, lb.....	3	6									

Drug Reports.

Canada.

The general report of business during the holiday season has been very satisfactory, and it is to be hoped the improvement during the latter part of the year will still continue, and there is every prospect that it will.

The principal change in values during the month has been on cocaine, which has much advanced, with a prospect of high prices continuing. Quinine is slightly easier, but higher prices may come into effect at any time. Ergot, cubeb berries, creosote, coumarin, guaiacol, Lithia salts, codeia, spices, and red ipecac are higher. Caffeine and camphor are easier.

The prices of glassware flint and green are in a somewhat demoralized condition at present. The Canadian manufacturers are fighting among themselves, and together are being opposed by the American manufacturers. In case lots green glass is being offered at 50 and 5 per cent., and flint at 45 and 5 per cent. discount, usual terms.

Welch grape juice has been reduced in price. The new Canadian price is: Quarts, case of one dozen, \$5.75 case, cash; pints, case of two dozen, \$6.25 case, cash; 1/2 pints, case of three dozen, \$5.75 case, cash; 3 oz., case of eight dozen, \$8 case, cash. In less quantities than a case they sell at \$6.25, \$3.40, \$2.10, \$1.10 per dozen, usual terms.

Paris green will likely be two or three cents a pound higher this season than last; it is claimed (and we think truly) last summer it was sold at a loss to manufacturers.

England.

London, Eng., Dec. 23, 1897.

There has been some improvement in the drug and chemical market during the month. Besides the advance in quinine, which is fairly well maintained, cocaine has advanced considerably. Iodophyllin is rising steadily owing to scarcity of root. Hydrastis has advanced for a similar reason. Opium is reported dearer at Smyrna, although unaffected here, but morphia makers have put up prices. Castor oil easier; cod liver unchanged; aniseed a trifle firmer; cassia tending lower; verbena and citronella advanced. Caffeine and its salts have been reduced.

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