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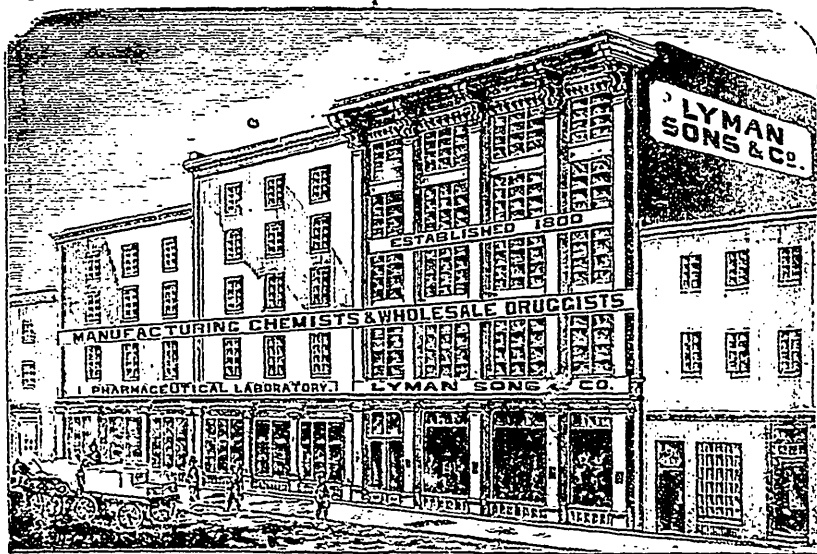
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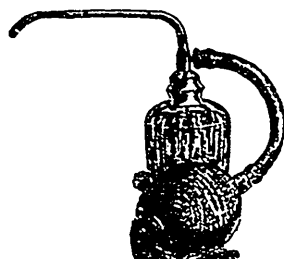
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| Lime Fruit Tablets,<br>Everton Toffy,<br>Mixed Fruit Drops,<br>Rose Drops. | Acid Drops,<br>Tip Top Tablets,<br>Gibson's Cough Drops,<br>Raspberry Drops. | Lemon Tablets,<br>Malt Tablets,<br>Butter Scotch Drops,<br>Strawberry Drops. |
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**HIGH-CLASS LOZENGES**

*OF EVERY DESCRIPTION.*

**Chlorodyne Cough Lozenges, Chlorodyne Jujubes, Peppermint Lozenges**

In every variety of size and strength. Curiously strong, and Multum in Parvo Mints give the utmost satisfaction. Medicated Lozenges of Pharmacopœia strength.

**DIGESTIVE TABLETS,**

**Voice and Throat Lozenges,**

For Singers and Public Speakers.

**ORIGINAL SUGAR WORM CAKES**

Have an immense sale, both at home and abroad; will keep in any climate, and give entire satisfaction. Put up in tins containing 3 doz., 6 doz., and 12 doz. cakes.

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(As per T. H. Pharmacopœia.)

All Lozenges are sent out in 1 lb., 2 lb. and 4 lb. bottles. (Bottles free.) Proprietary Lozenges carefully prepared, stamped, and cut to any size or shape.

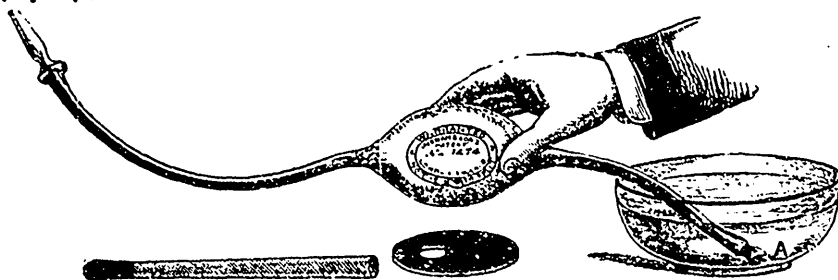
SOLD BY ALL THE BEST WHOLESALE HOUSES IN CANADA.

N.B.—It having come to the notice of Messrs. ROBT. GIBSON & SONS, that some makers are not only closely imitating their label, but are actually putting their goods in Gibson's bottles, Chemists are respectfully informed that every original bottle of Gibson's is capsuled, and moreover, every Drop and Tablet is stamped "Gibson," without this none is genuine.

# ❖ INGRAM'S 1474 ❖

## Imitation is the Highest Form of Flattery.

Owing to the many imitations of our Patent Enema, we are compelled to warn all who wish for a **GENUINE INGRAM'S ENEMA**, to refuse any that does not bear the No. 1474.



It will take years of practice for fresh hands to make this Enema—it being far more difficult to manufacture than the ordinary Barrel Enema.

J. G. INGRAM & SON have had 14 years' experience; therefore they do, with the utmost confidence, warrant every Enema of their manufacture bearing the number

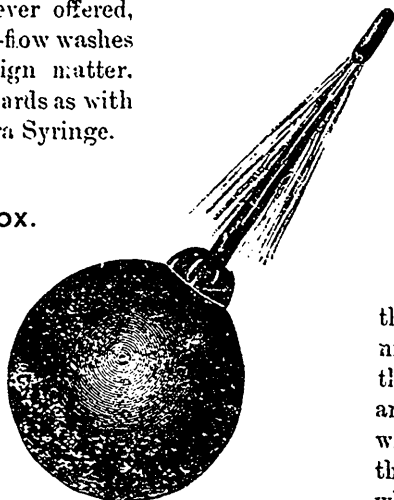
# ❖ 1474 ❖

## The New Back-Flow or Reverse-Current Ball Urethra

# SYRINGE.

Acknowledged to be the most efficient Urethra cleanser ever offered, as the action of the Back-flow washes and drives out all foreign matter, instead of sending it inwards as with the old-fashioned Urethra Syringe.

EACH IN A NEAT BOX.



"Undoubtedly a Syringe of exceptional utility."

J. F. TAYLOR,  
M.R.C.S., L.S.A., London.



### DIRECTIONS.

Tightly compress the Ball with the thumb and fingers, place the vulcanite pipe in the liquid, then release the Ball, which becomes quite full and prevents any air being injected with the liquid; insert the Pipe into the urethra and compress the Ball, when a perfect syringing and cleansing takes place.

**NEW**

## Ingram's Patent Seamless Collar or Rim Teat,

**THE BEST**

Soothing Teat in the World.

A

**PATENTED**

No. 22458

Patented in France, No. 220745. April 7th, 1892.



A

**IN ENGLAND**

DEC. 23RD, 1891

AMERICAN PATENT APPLIED FOR.

Made in the same sizes as the ordinary Teats, viz:—  
Small, Medium and Large.

**ADVANTAGES :**

- 1.—Will not collapse during suction.
- 2.—The Rim (AA) prevents the Teat swelling when in use.
- 3.—Entirely prevents air entering the mouth.
- 4.—The cylinder of the Teat being narrow, does not distend the lips of the child.
- 5.—The Rim or Collar (AA) prevents the Teat slipping out of the mouth.
- 6.—Its soothing properties are unrivalled.
- 7.—It is made of Absolutely Pure Rubber, Tasteless and Free from Smell.
- 8.—Acknowledged to be the Best Teat ever offered to the Public.

**NEW**

## Ingram's Patent Seamless Collar or Rim Teat.

The best Soothing Teat in the world.

The above is also made up in the following styles of

### Soothing Toys...

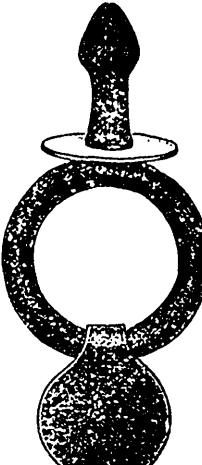




Fig. 30  
In two sizes, Small and Large.

Fig. 31

Fig. 32

# THE RESPIROREGENERATOR

— OR —

## Perfect Inhaler.

• • •

Patented in England, 16th August, 1892.

PATENT No. 14518

• • •

HEIGHT OF WATER.

Directions for using the Inhaler.

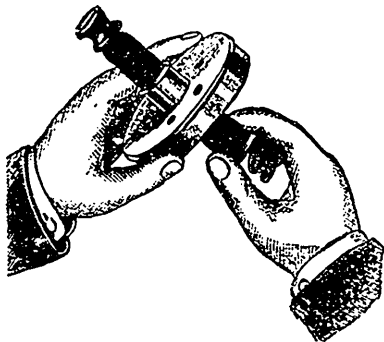


Fig. 1



Fig. 2

1. Take the lid off the Inhaler and pass the mouth-piece through the hole from the inside, drawing it tight, as shown in Fig. 1.
2. Remove the stopper of the glass bottle and pour the drug or medicine to be inhaled into the bottle, and place same in the Inhaler, as shown in Fig. 2.
3. Fill the Inhaler with hot water up to the top of the perforated tube, replace the lid of the Inhaler, and apply the mouth-piece to the mouth and inspire or breathe in freely.
4. If a strong vapour is required, pull the India-rubber tube closer down to the neck of the glass bottle containing the medicine.
5. When again requiring to use the Inhaler, remove the stopper, and simply re-fill the Inhaler with hot water as before, or if more convenient, the water can be made hot in the Inhaler.

N.B.—Procure the drug or medicine most suitable for your complaint from your own doctor.

**ADVANTAGES :**

1. When the patient has finished inhaling, the stopper of the bottle has only to be replaced, and no more of the drug is evaporated or wasted, which is a great advantage when expensive drugs are being used, as in ordinary inhalers the drug is mixed with the water, and consequently thrown away with it.
2. No mistakes can occur in the strength of the dose of drug or medicine, and it is immaterial how much drug is put into the glass bottle.
3. These advantages prove this Inhaler to be the most reliable and the most economical, and therefore the cheapest in the market.

TO BE OBTAINED OF ALL CHEMISTS AND DRUGGISTS.

Packer's  
Tar Soap is  
undoubtedly  
the best  
Shampooing  
agent known.  
It does not dry  
the hair, but  
makes it soft  
and glossy.



Physicians  
order its use  
in treatment  
of Dandruff  
and Baldness.  
It is  
refreshing  
and beneficial  
to the hair  
and skin.

## STEEDMAN'S Soothing Powders,

FOR CHILDREN CUTTING TEETH.

IN USE OVER 50 YEARS.

"JOHN STEEDMAN, Chemist, Walworth,  
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### SPECIAL OFFER.

To Druggists outside of the Cities  
of MONTREAL and QUEBEC.

Send your Jobber an order for 3 doz. **NERVOL** at 1.75 per dozen, and he will send you a **HANDSOME SILK EIGHT STEEL RIB UMBRELLA**, one that you will be proud to carry.

Now is the season for Toothache and Neuralgia, and "NERVOL" is the best seller on the market to-day. Unlike other preparations, it never fails to cure by simply applying a little on the cheek outside. You need have no hesitation in recommending it, as it will surely give satisfaction. It is at present extensively advertised in the Province of Quebec and will shortly be well advertised in the other Provinces. It is neatly put up and can be had from all Wholesale Druggists, or from

JOHN T. LYONS, Cor. Craig & Bleury Streets, MONTREAL

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TOOTHACHE  
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(A SWELL AFFAIR.)

This is not a  
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For Loss of Appetite, Low Spirits, Indigestion, Malaria, Fever and Ague, etc. . . . .

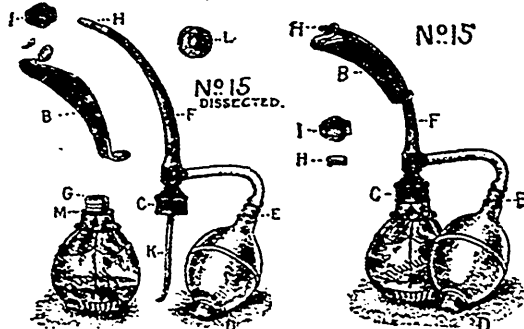
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DOSE—Half a Wineglassful.

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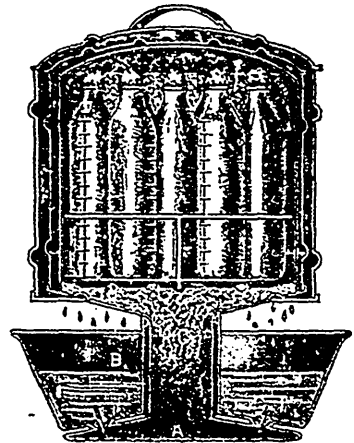
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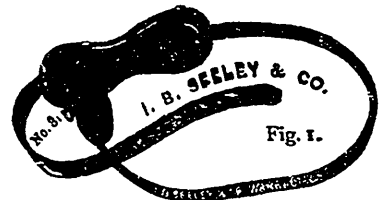
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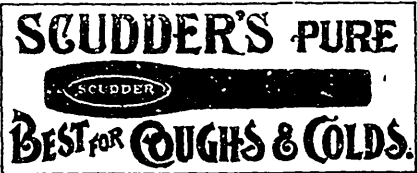
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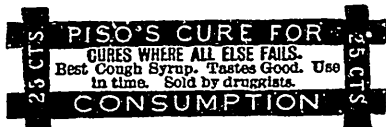
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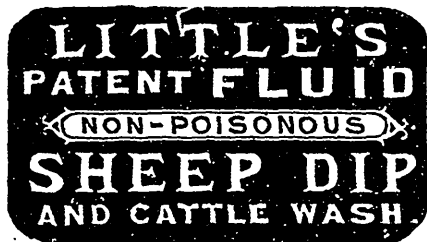
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Removes the unpleasant smell from Dogs and other animals

"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 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 \$1.00 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

ESTABLISHED 1859.

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Pharmaceutical Chemist,

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THE following Specialties, all of which have been well advertised, more particularly the "Castor Fluid," may be obtained at all the Wholesale houses at Manufacturers' prices:—

Gray's "Castor Fluid," for the hair.

Gray's "Saponaceous Dentifrice,"—An excellent antiseptic dentifrice.

Gray's "Dental Pearline,"— An excellent antiseptic toothwash.

Gray's "Sulphur Pastilles" for burning in diphtheritic cases.

We should have a true understanding of . . . the relative value of things . . .



## Johnston's

### Fluid Beef . . IS . .

FIFTY TIMES

more nourishing than ordinary meat extract or Home Made Beef Tea, and has no equal as a . . .

**STRENGTHENING and INVIGORATING BEVERAGE.**

PREPARED BY

**THE JOHNSTON FLUID BEEF COMPANY,**

**MONTREAL.**

# LICORICE

## HIGHEST AWARDS :

- Centennial Exposition, Philadelphia, - 1876
- Paris International Exposition, - - 1878
- New Orleans Exposition, - - - 1885



STICK } 4, 6, 8, 12, 14 and 16 Sticks to the lb.  
LICORICE } Packed in 5 lb. Wood Boxes.

LICORICE LOZENGES { in 5 lb. Tin Cans.  
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                                  { in Bbls., Bulk.

CATALUNA LICORICE, 100 Sticks in a Box.  
POWDERED EXTRACT LICORICE,  
POWDERED LICORICE ROOT,  
AMMONIACAL GLYCRRHIZIN, in Scales.

**THE MELLOR & RITTENHOUSE CO., - 218 North 22d St., PHILADELPHIA, PA.**

# ANTI-DANDRUFF.

THE object in view when *Anti-Dandruff* was first produced was to offer the public a preparation for the hair that would in the first place remove Dandruff effectually and also act as a perfect hair-dressing without containing any ingredient injurious to hair, head or scalp. *Anti-Dandruff* has in a short time proved itself a perfect specific for the hair, and now stands in the estimation of its patrons head and shoulders above any similar preparation.

- Why? It removes Dandruff with 3 applications.
- " It makes the hair soft and pliable.
  - " It is not of a greasy or oily nature.
  - " It stops falling of the hair—Is not a dye.
  - " It is of a nature peculiar to itself.
  - " It is pleasant to use—Clear as crystal.
  - " It possesses a most agreeable and delicate odor.
  - " Men, women and children endorse it.

Price for *Anti-Dandruff*,  
75c per bottle, \$6 per doz.  
*We trust there will be no cutting.*

DR. L. A. SMITH & CO.



## MAKE YOUR OWN BEER

Nine Gallon Cask of Alcoholic Beer from a brewery will cost you \$4.00, but eight gallons of beer made from . . .

### MASON'S EXTRACT OF HERBS

can be obtained for 25c plus a pound or two of sugar and a little yeast.

WE ARE ALSO MAKERS OF

### MASON'S

Extract of Herbs, Ginger Ale Extract, Ginger Extract, Hop Extract, Foamine, Horehound, and Wine Essences.

Inventors and Manufacturers: **NEWBALL & MASON,**

HYSON GREEN WORKS. - NOTTINGHAM.

Our Goods are carried in stock by **LYMAN, SONS & Co.**



IN THE COMBINATION OF ANTIKAMNIA AND QUININE, ANTIKAMNIA BEING SEDATIVE IN CHARACTER, OVERCOMES THE SYSTEMIC DISTURBANCES WHICH FREQUENTLY FOLLOW QUININE EXHIBITED ALONE, INDICATED IN HEADACHE, BACK-ACHE, ACHING OF THE LIMBS AND ALL MALICIOUS CONDITIONS.

THE SALICYLATES HAVE LONG BEEN RECOGNIZED IN ALL FORMS OF RHEUMATISM. SALOL IS SALICYLIC AND GARGOLIC ACIDS PERFECTLY COMBINED.

IN COMBINATION WITH ANTIKAMNIA THE EXCELLENCE OF BOTH IS MAINTAINED FOR THE RELIEF OF PAIN OR INTERNAL ANTI-ARTHRITIC EFFECT.

Trade supplied by **LYMAN, SONS & CO, MONTREAL**  
And by all Jobbers in the UNITED STATES, CANADA and MEXICO.

Fragrant, Delicious Coffee in a Moment!  
**LYMAN'S FLUID COFFEE.**

Samples, (equal to 5 cups) .....	\$o 35	per doz.	Retail at \$o 05
¼ lbs. (equal to 25 cups) .....	2 00	"	" 0 25
½ lbs. (equal to 50 cups) .....	3 50	"	" 0 50
Lbs. (equal to 100 cups, or 4½ galls W M) .....	6 75	"	" 1 00

**DRUGGISTS' ATTENTION !**

At this time of the year you cannot afford to be without "ANTI-MOTH" PAPER. A ready seller.

CHAPMAN'S IMPROVED  
**Anti-Moth Paper**

The value of "ANTI-MOTH" PAPER as a protector of Woolen Goods, Furs, etc., from moths, has been fully proved by the increasing demand and sales each year.

Its success has of course brought many imitations into existence.

The **Genuine Anti-Moth Paper** is clean and will not soil the hands or the most delicate white Woollens and Furs.

It is pleasant in odor, and has the hygienic and medicinal properties of the Pine Tree.

It is **better and cheaper than Camphor** or any of its worthless imitations.

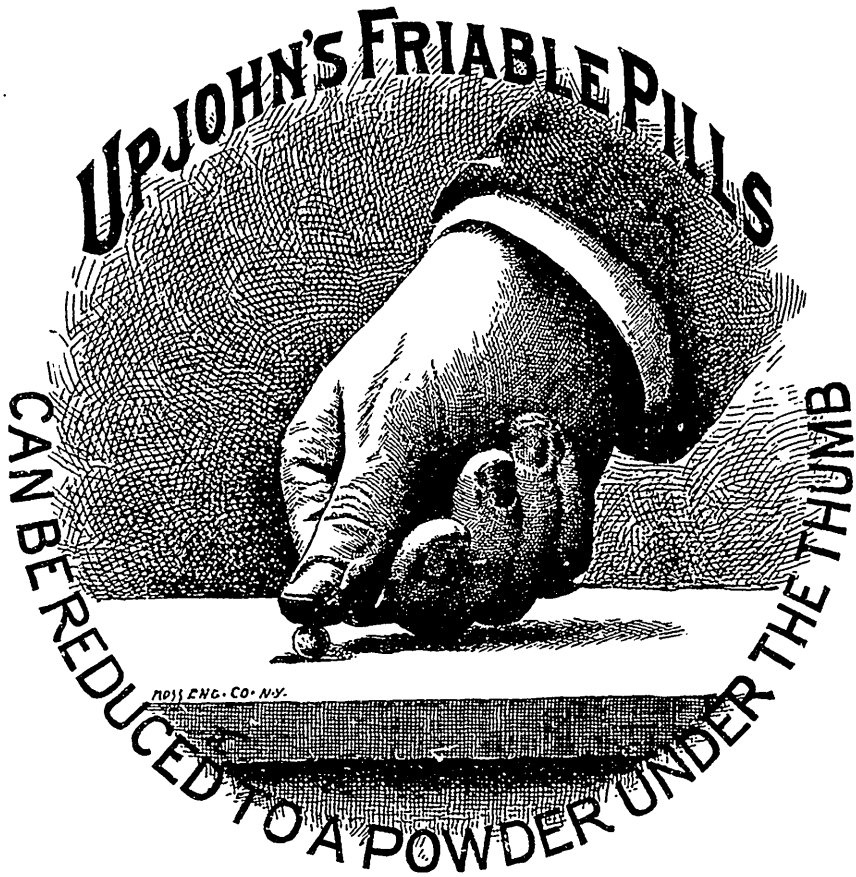
Retail Price, .. .. .	10 cent packets, 3 for 25c.
Price per dozen, .. .. .	75c.
" gross, .. .. .	\$7.50.
" 5 " .. .. .	.. 6.50 per gross.

Wholesale from **W. H. CHAPMAN,**  
*Manufacturing and Dispensing Chemist.*

Kindly mention this Journal when ordering. **2637 St. Catherine Street, MONTREAL.**

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Send for Price Lists  
and Samples to  
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MONTREAL.

# GREEN MOUNTAIN

Chocolate  
Worm Balm.  
Syrup.

<p>Geo. Tucker's Green Mountain Salve has no equal for rheumatic pains, weakness of the sides &amp; back, ladies' ailments.</p>	<p>Geo. Tucker's Botanic Syrup warranted to cure colds, influenza, whooping-coughs.</p>	
<p>ARRAPANO OR <b>Geo. Tucker's</b> <b>GREEN MOUNTAIN BALM</b> THE WELL KNOWN INTERNAL-EXTERNAL REMEDY</p>		
<p><b>\$5000 REWARD FOR BETTER PATENT MEDICINES SOLD BY ALL RESPECTABLE DRUGGISTS AND GROCERS SOLE AGENTS</b></p>	<p>THE SAFEST, SUREST AND MOST SPEEDY RELIEF FOR ALL NERVOUS AND INFLAMMATORY ACHES AND PAINS. IT HAS NO EQUAL ITS ACTION UPON THE NERVES IS REALLY ASTONISHING; IT STOPS PAINS AS IF BY MAGIC IT SHOULD BE IN EVERY FAMILY FOR IT IS TRULY A DOCTOR IN YOUR HOUSE IT GIVES IMMEDIATE RELIEF. TRY IT. DIRECTIONS ON EACH BOX</p>	<p><b>THOUSANDS OF PERSONS SUFFERING FROM VARIOUS DISEASES, IMMEDIATELY HAVE RECOURSE TO GEO. TUCKER'S INDIAN REMEDIES</b></p>
<p><b>LYMAN, SONS &amp; CO.</b> WHOLESALE DRUGGISTS, 36 PAUL STREET MONTREAL</p>		<p><b>429 CRAIG STREET MONTREAL</b></p>

Pills, Salve,  
Balm, Syrup.

PREPARATIONS

# JOHNSON'S ANODYNE LINIMENT

Established 1810.

**ORIGINATED BY AN OLD FAMILY PHYSICIAN.  
GENERATION AFTER GENERATION HAVE USED AND BLESSED IT.**

**Every Mother** Should have Johnson's Anodyne Liniment in the house for Croup, Colds, Sore Throat, Tonsillitis, Colic, Cuts, Bruises, Cramps and Pains, liable to occur in any family without notice. Delays may cost a life.

**Every Mechanic**, or person exposed to accidents or injury, Base-Ball players, etc., should keep it near at hand; for it acts promptly; is Soothing, Healing and Penetrating. When once used always used.

**Every Traveller** Should have a bottle in their satchel. It can be used Internally or Externally in more cases than any other medicine. Cures head-aches if inhaled.

**Every Sufferer** From Rheumatism, Sciatica, Neuralgia, Nervous Headache, Diphtheria, Coughs, Catarrh, Bronchitis, Asthma, Cholera-Morbus, Diarrhoea, Lameness or Soreness in Body or Limbs, Stiff Joints or Strains will find in this old Anodyne relief and speedy cure.

**THE REASON WHY**—Generation after Generation have Used and Blessed Johnson's Anodyne Liniment, is because it cures when all other remedies fail. It was devised and used for years in the private practice of old Dr. Johnson, to treat inflammation liable to afflict any person on earth; and which cause the danger in all the above troubles. The medical advice around each bottle is worth ten times the price.

**How to Use Economically.** Advice sent free. All who buy direct from us, and request it, shall receive a certificate that the money will be refunded if not abundantly satisfied. Price, 35 cts. by mail; 6 bottles, \$2.00. Express prepaid to any part of the United States or Canada. Duty also paid. **I. S. JOHNSON & CO., Boston, Mass.**

## TIME AND CASH PRICE LIST

### FOR Johnson's Anodyne Liniment, Parsons' Pills and Sheridan's Condition Powder.

ALL ORDERS PAYABLE IN FOUR MONTHS AT THE PRICES INVOICED.  
If not paid in FOUR MONTHS six per cent. interest added to each invoice.  
If paid in Ten Days from date of invoice, THREE per Cent. rebate allowed. (otherwise no allowance.

#### JOHNSON'S ANODYNE LINIMENT.

One Dozen or more.....	Four Months,	\$2.00 per dozen.....	If Cash, 3 per cent. off.
Six " " .....	" "	22.50 per gross .....	" " "
Two Gross " .....	" "	21.50 " .....	" " "
Five " " .....	" "	21.00 " .....	" " "

#### PARSON'S PURGATIVE PILLS.

One Dozen or more.....	Four Months,	\$1.60 per dozen.....	If Cash, 3 per cent. off.
Three " " .....	" "	1.40 " .....	" " "
One Gross " .....	" "	16.50 per gross .....	" " "

#### SHERIDAN'S CONDITION POWDER.

SMALL	{	One Dozen or more... Four Months,	\$1.60 per dozen.....	If Cash, 3 per cent. off.
		Three " " ... " "	1.40 " .....	" " "
		One Gross " ... " "	16.50 " .....	" " "
LARGE	{	One Dozen or more... Four Months,	\$8.50 per dozen.....	If Cash, 3 per cent. off.
		Three " " ... " "	8.00 " .....	" " "

**NOTE.**—We shall allow the larger quantity Time or Cash prices, on assorted orders made up of any or all of the above articles, when ordered at one time, if the order amounts to \$125.00 or more at the Four Months prices.

# MONTREAL PHARMACEUTICAL JOURNAL.

VOL. V—No. 1.

APRIL, 1894.

\$1.00 per annum.

## The Montreal Pharmaceutical Journal.

171 St. James St., Montreal, Canada.

JOSEPH E. MORRISON, Editor.

Subscription. \$1.00 per Annum.

Advertising Rates will be made known on application.

All remittances, matters intended for publication, new advertisements or changes should be addressed,

MONTREAL PHARMACEUTICAL JOURNAL.

P. O. Box 1144, Montreal.

F. L. BENEDICT, Secretary.

### PRIZE ESSAY.

For the best essay on the following subject, in French or English.

“What modifications or additions should be made in the next edition of the B.P., to render it more suitable to the requirements of Canadian Pharmacy.”

We offer \$10 or its equivalent in books and for the second best, \$5 or its value in books.

Essays will be received until March 31st.

Each essay must be signed by a *nom de plume*, this *nom de plume* and the writer's name being enclosed in a separate envelope to be opened only after the awards have been made.

The prize essays will be published in this journal under the *nom de plume* or the writer's name as may be desired.

### THE EXAMINATIONS.

One of the most striking features of the examinations is the small number of candidates who were successful, although the questions set were by no means difficult. In the Preliminary, the questions were of an elementary character—such as any schoolboy would be expected to answer—still a very large proportion of the candidates were sent back, not having

been able to secure the necessary 60 per cent. Complaints have been made that at previous examinations the papers were too difficult, especially as regards history and geography; but in this last paper the examiners seem to have gone to the other extreme, the questions on these subjects having been such as any Canadian should be able to answer off-hand. The lesson to be drawn from the result of the Preliminary is that, if it were not for this examination, pharmacy in the Province of Quebec would soon be overcrowded with a very undesirable class of students, since if, after several years spent at school or college, candidates cannot make the requisite percentage on ordinary subjects, what chance would they have of becoming successful pharmacists, or of passing the Minor and Major examinations? for which they must prepare while at work in some retail pharmacy, with long hours and small opportunity for study. Strict preliminary examination is a good thing for both the candidates and the profession, unsuccessful candidates can find some more suitable field for their talents, and a good class of students is secured in those who are successful.

The Minor examination was very simple, and we cannot understand why so many failed to pass on what we believe to be the easiest paper offered for some years. Among the materia medica questions, we notice one on squill, and incidentally the difference in strength between the fresh and dried powder. The latter part of the question is rather ambiguously worded. What is meant by fresh and dried powder, and what peculiarity exists in fresh or dried powder of squill more than is common to all drugs in these conditions? We think this question

has been asked several times and might well be laid upon the shelf as it has done very good service and is now getting threadbare.

The other Minor questions were practical, and although of an elementary character, were well adapted to show the range of the candidates' knowledge.

The Major questions were of a much more difficult character, in fact some claim, were too scientific, especially in chemistry, an opinion in which we do not concur. We consider that on the whole the questions were of a fairly average character, and none of them should have presented any difficulty for a student who had just finished his second term in college and four years' practical work.

In the Major paper we noticed a few instances of ambiguous-worded questions, and we would also wish to draw the attention of the board to the necessity of having the French and English copies exactly alike.

We congratulate the successful candidates and extend our sympathy to those who were not, and advise them to renewed exertion, to continue their studies, to pay more attention to their work, and success will no doubt crown their efforts.

A CASE of considerable interest was recently tried before Mr. Justice Chitty in the Chancery Division of the High Court, London, namely, *The Carter Medicine Co. vs. Carr*, being an action to restrain the defendant from selling as Carter's Little Liver Pills, pills other than the genuine. A witness testified to having ordered by mail two bottles of Carter's pills from defendant, but received two bottles of Carr's Little Liver Pills. Another witness swore that he had called at the store of Mr. Carr, and asked for Carter's Little Liver Pills, and received a package which on being opened proved to contain Carr's pills. The plaintiff produced other evidence to show that Carr's pills were unknown outside of the defendant's store, but the latter produced evidence to show that his pills had been in use for over fifty years, but had never been extensively advertised till lately. Judge Chitty, in rendering judgment, scored the defendant for the manner in which he had acted, and in regard to his evidence stated that, in his opinion, Carr had largely drawn on his

imagination, and that he preferred to believe the evidence offered by the plaintiff; and taking into consideration all the facts in the case, he thought that a case had been made out and that an injunction should be granted.

Plaintiff's counsel said the form of the injunction would be restraining the defendant, his servants or agents from selling or advertizing for sale any pills not manufactured or supplied by the plaintiff so as to represent or induce the belief that such pills were manufactured or supplied by the plaintiff.

His Lordship said the injunction would be granted, with costs.

#### EDITORIAL NOTES.

The druggists of Quebec are busily engaged in a cut rate war. Every day sees prices dropping, till very soon they will be giving away all proprietary goods. The only trouble is that this action has been taken a little too late since if it has been adopted a few months ago, the original cutter would by this time have been sorry for his bargain and might have left drugs and patents alone.

We commence in this issue the publication of a series of articles on the history of pharmacy in the Province of Quebec, and also sketches of the Board and faculty of the Montreal College of Pharmacy. Our first article "The pioneer pharmaceutical society of Canada," briefly sketches the causes which led to its formation. In our next "Pharmaceutical Legislation in the Province of Quebec," we will give a review of the various acts passed at different times during the past 20 years, and their effects upon pharmacy in Canada. Many of the men who took prominent parts in the demand for the enactment of pharmacy laws in this province are still with us, although the efforts made by them in days gone by may be forgotten by the younger generation of pharmacists. To men like the late Benj. Lyman, R. J. Devins, Jno. Kerry, Henry R. Gray, N. Mercer, Henry Lyman, Dr. Reed, and last but not least E. Muir, the present Registrar, is due the foundation of the Montreal College of Pharmacy and the Quebec Pharmaceutical Association, and it must be a source of great and lasting satisfaction to the founders, who are

still with us to see the success which has followed their efforts to establish pharmacy upon a modern and scientific basis in this province. And that success should be a stimulus to the younger generation to carry on their efforts in that direction.

**POISON BOTTLES.**—The following bill has been introduced in the New York State Legislature.

Section 1. No person, firm, or corporation shall, after October 1st, 1894, either sell or give away, or cause to be sold or given away, any poison or poisonous substance in liquid form except in fluted bottles labeled in the manner heretofore provided by the laws of the state. Each person or corporation violating any of the provisions of this act will be guilty of a misdemeanour.

Section 2. This act shall take effect immediately.

This bill much resembles the Ross bill, which the Quebec Association fought against some years ago, by which druggists of this province, would have been compelled to use triangular bottles for fluids, and triangular boxes for powders. Fortunately with the aid of the medical members of the Legislative Assembly and Council, the bill was defeated, as being impracticable, and unnecessary. Bills of a similar character to this, seem to crop up periodically in some of the legislative assemblies of the world, and are as a rule promptly killed and buried for an indefinite period, and then come up again to go through the same performance.

We regret that distance and a previous engagement prevent us accepting the very kind invitation of the Philadelphia College of Pharmacy for the annual commencement, April 13. We hope professors and graduates had a good time, and that the class of '94 will continue in the footsteps of their predecessors and add further glory to their Alma Mater, from which has graduated the best men in American pharmacy.

THE *Chemist and Druggist* of March 31 contains a letter from a correspondent, highly extolling the virtues of silicate of soda as a mounting medium. We wish to draw the attention

of our readers who, in consequence of this letter, might be tempted to follow his advice, to the experience of H. M. Wilder, whose name is familiar to all readers of American pharmaceutical literature, with this substance. In the *American Journal of Pharmacy*, June, 1890, he commends silicate of sodium as a medium, but in the same journal, Dec., 1890, he says: "A couple of months ago the writer strongly recommended water glass as a medium. He did so, based on one year's experience. On a late inspection of his slides he found that nearly all silicate mounts had become more or less opaque, granular-like. It is a pity; through its quickly setting and strong sticking property, the silicate promised to be an excellent medium." We have never used silicate, preferring to pin our faith in Canada balsam and glycerine jelly, but after reading the above expression of opinion we do not feel inclined to experiment in that line, and wish to save our microscope-using readers trouble and spoiled mounts.

## PHARMACEUTICAL ASSOCIATION OF THE PROVINCE OF QUEBEC.

### MINOR EXAMINATION.

MONTREAL, April 17th, 1894.

N.B. You are requested to—

1. Write on one side of paper only.
2. Number your answers so as to correspond with the printed questions.
3. Number the sheets of paper in their proper order.
4. Candidates will be careful not to commence a new subject on the same sheet with another, and fold each subject separately, putting on the back of the sheet your number and name of the subject treated.

### MATERIA MEDICA.

- 1 (a) What are galbanum and tragacanth? (b) Whence and how are they obtained? (c) Name the B. P. preparations of each.
2. (a) What is Squill? (b) Give its source, (c) habitat, (d) and name its official preparations, with strength and doses. (e) What is the difference in strength between the fresh and dried powder?
3. (a) State the percentage of the active ingredients in each of the following compound powders. Pulv. kino co: pulv. ipecac. co: pulv. rhei co: pulv. opii co: pulv. scam. co: pulv. antimoniai. (b) Give the dose of each.

4. Give the doses of the following: strychnine: arsenic: rhubarb: calomel: cocaine: codeine: eserine: and opium.

## CHEMISTRY.

1. (a) What is an alkaloid? (b) Why is it called alkaloid? (c) Name five alkaloids and one salt of each.

2. Give three laws of Chemical combination and explain each by example.

3. What is atomic weight? Give atomic and names of K.- Na.- Sb.- P.- S.- Sr.- N.- I.- What is molecular weight? Give the molecular weights of the following salts: KI - K, CO<sub>2</sub> - BIO NO<sub>2</sub> - KClO<sub>3</sub>.

4. Give the physical characteristic of chlorine: iodine: hydrogen: oxygen: sulphur. How are they obtained?

## PHARMACY.

1. How is sulphurated potash made and of what salts is it a mixture?

2. Name the official decoctions of the B. P. with strength and doses of each.

3. Name the B. P. Inhalations with their strength.

4. Write out in full in *Latin* the formula for making one gross of pills, each pill to contain  $\frac{1}{4}$  gr. quinine,  $\frac{1}{4}$  gr. dried sulphate of iron,  $\frac{1}{10}$  gr. ext. nuc. vom.

*Direction.*—One pill three times a day after meals.

## Montreal Items.

Mr. Edmond Giroux, Jr., who disposed of his business at the corner of St. Catherine and St. Charles Borromeo street to Mr. T. E. Barbeau in order to go into business in Quebec, has returned to the metropolis, and is now head clerk for Messrs. Laviolette & Nelson, Notre Dame street.

## PHARMACEUTICAL ASSOCIATION OF THE PROVINCE OF QUEBEC.

## MAJOR EXAMINATION.

## MATERIA MEDICA AND TOXICOLOGY.

1. (a) What is Codeia? (b) How is it obtained? (c) What are its distinctive characteristics and give the dose.

2. (a) Give the natural order habitat and official parts of heubaue, belladonna, Indian hemp, chiretta and manna. (b) Give their medicinal properties. (c) Name the preparations of each with their respective doses.

3. Give the toxic doses and chemical antidotes of the following substances: phosphorus, carbolic acid, blue vitriol, prussiate of potash, prussic acid, laudanum, chloral and atropine.

4. From what sources is elateium obtained? How is it collected? How would you extract its active principle and what percentage should be obtained? What are the doses of elateium and elaterin respectively?

## BOTANY.

1. Define the terms: syncarpous: hilum: apetalous: tetradynamous: laciniate: hermaprodite: dehiscence and extrorse.

2. Describe the germination of the dicotyledonous seeds and give the chemical changes which occur.

3. Diagnose the natural orders of Rosaceae and Papaveraceae, and name three official drugs of each.

4. Describe the course and elaboration of sap, and give an official example of a plant with (a) coloured, (b) acrid, (c) milky (d) resinous (e) saccharine juice or sap.

## CHEMISTRY.

Antimony—Give symbol, atomic weight and sources. Explain the difference between antimonii sulphidum and antimonii sulphidum purificatum. What is liq. antimonii chloridum of the B.P.? How is it prepared? Illustrate its preparation by equation.

2. How is the volume of gas affected by (a) changes of temperature, (b) changes of pressure? Suppose one litre of gas at 40° F. and 747 m. m. pressure, subjected to the temperature of boiling water and 996 m. m. pressure; what variations of volume is to be expected?

3. How would you distinguish chemically (a) nitrate of potash and chlorate of potash; (b) sulphate of zinc and sulphate of magnesium; (c) sulphate of morphia and sulphate of quinine?

4. How may we get the formula of a compound from its percentage composition? An organic body gives on analysis:

O, 51.66  
C, 44.68  
H, 4.255

99.995

Give its name, formula and official preparations.

## PHARMACY.

1. Give tests of identity for morphia, narcotine, codeine and meconic acid. How may one gallon of tr. opii. B. P. be made with samples of opium containing  $7\frac{1}{2}$  per cent. and  $11\frac{1}{4}$  per cent. of morphia?

2. What is lead plaster chemically? Represent in diagrams the changes which take place in its manufacture. Name the plasters and ointments which contains lead.

3. How is liq. ammon. made? A druggist has five pounds of liq. ammon. of 28 per cent., how shall he make it into liq. ammon. B. P.,

and how much of the latter will he have in fluid measure?'

4. What are the official suppositories of the B. P. with their strength? Which mode of preparation do you consider the best, and give reasons for?

**DISPENSING PERCENTAGE PRESCRIPTIONS.\***

BY C. A. MACPHERSON.

Percentage prescriptions may be roughly divided into two classes—(1) those in which *n* parts are added to 100 parts, and (2) those in which *n* parts are contained in 100 parts. The following are examples of the first class:

I.

Emp. plumbi .....  $\frac{3}{5}$  i (= 480 grains)  
Paraffin. moll. ....  $\frac{3}{5}$  i (= 480 grains)  
Acid. salicylic ..... 2% (= 19.2 grains)

II.

Magnes. carb. pond  $\frac{3}{5}$  i (= 480 grains)  
Cretæ preparat ...  $\frac{3}{5}$  i (= 480 grains)  
Thymol..... 1% (= 9.6 grains)  
Acid. carbolic ..... 1% (= 9.6 grains)  
Fiat pulv.

In dispensing this the thymol should be mixed with the carbonate of magnesia, and the carbolic acid with the chalk, and then all mixed together thoroughly.

III.

Camphor .....  $\frac{3}{5}$  i (= 60 grains)  
Chloral . ....  $\frac{3}{5}$  i (= 60 grains)  
Veratriæ..... 1% (= 1.2 grains)

In the foregoing examples the apothecaries' ounce and dram are indicated, and the percentages are accordingly calculated upon their values, but in the following the basis of calculation is different, the avoirdupois ounce being used.

IV.

Cret. præcip..... 1 oz. (= 437.5 grains)  
Camphor..... 10% (= 43.75 grains)

So far, no difficulty has occurred, but when a prescription like the next one is presented, a doubt arises as to how the percentage is to be calculated.

V.

Mucilag. amyli  $\frac{3}{4}$  iv (= 1,920 minims,  
or adde 1,750 gr. meas)  
Tinct. opii..... 2% (= 38.4 minims)  
Plumbi acet..... 1% (= 17.5 grains)

Where there is no special knowledge of the prescriber's intention, and in the absence of any generally understood rule, the better plan appears to be to follow pharmacopœial precedent—weigh solids, measure liquids, and calculate parts by weight in like parts by measure.

The first example of the second class is a logically true percentage preparation and presents no difficulty.

VI.

Acid. salicylic..... 2 per cent.  
Resorcin..... 5 per cent.  
Adipis..... ad.  $\frac{3}{5}$  i

Here the proportions are 2, 5, and 93—equivalent to 9.6, 24, and 446.4 grains respectively in the case of 480 grains.

In the next set of examples, which contains solids and liquids combined, the same difficulty presents itself as in the last example of the first class, and for several reasons it is expedient to follow the procedure indicated.

VII.

Sol. hydrarg. bichlor. (1 in 500)  $\frac{3}{5}$  vi  
(437.5 × 6) ÷ 500 = 5.25; the number of grains of hydrarg. bichlor. required.

VIII.

Menthol..... 2 per cent.  
Ol. eucalypti.....  $\frac{3}{5}$  i  
Alcohol ..... ad.  $\frac{3}{5}$  iss  
As  $1\frac{1}{2}$  fluid ounces equal 656.25 grains measure, the quantity of menthol is 13.125 grains.

IX.

Glycerin. acid. boric. (12 per cent.)...  $\frac{3}{5}$  ii  
 $875 \times \frac{12}{100} = 105$  grs. boric acid.

X.

Make  $\frac{3}{5}$  i. application tannic acid and glycerin 10 per cent.  
 $437.5 \times \frac{10}{100} = 43.75$  grs. tannic acid.

XI.

Ammon. chlor ..... q. s.  
Aqua .....  $\frac{3}{5}$  ii  
Sig.: A teaspoonful added to half a pint of water = 1 in 800.

Here we have first to ascertain the quantity of ammonium chloride in a teaspoonful of the solution, and from that the amount required for the two ounces (437.5 × 10) ÷ 800 = 5.46875, the number of grains of ammonium chloride in the teaspoonful, which multiplied by 16 gives 89.5 grs. as the total amount required.

In making carbolic acid preparations the difficulty arises in using crystallized acid as to whether it should be weighed or melted and measured. The better way seems to be to weigh it and make up to the required measure with the required solvent. The resulting product will be practically identical in strength with one made from the official liquified acid by measure.

XII.

Make 2 ounces of a 10 per cent solution carbolic acid in equal parts of water and glycerin. This can be made by using 87.5 grains of crystallized or 96 minims of liquefied acid, and

\* Read at meeting of the Edinburgh (Scotland) Chemists Assistan's Association, March 7th, 1893



making up to 2 fluid ounces with a mixture of equal volumes of water and glycerin. In like manner the following may be dispensed :

## XIII.

Lotio. carbol. 1 in 40. mitte  $\bar{3}$  vi.  
 $(437.5 \times 6) \div 40 = 65.625$  grains crystallized acid.  
 $(480 \times 6) \div 40 = 72$  minims liquefied acid.  
 But crystallized acid alone should be used or the next one.

## XIV.

Ol. carbol. (10 per cent.) .....  $\bar{3}$  iii  
 For this 131.25 grains of acid are required, together with sufficient oil, to make up the measure of 3 fluid ounces.

Another way of ordering the class of preparations now being considered is to prescribe a definite weight of solid in a definite volume of liquid.

## XV.

Make  $\bar{3}$  i sol. atrop.  $\frac{1}{10}$  gr. in every 10 minims.

## XVI.

Sol. atrop. sulph. ( $\frac{1}{10}$ ) et morph. acet ( $\frac{1}{10}$  gr. in 5 minims).....  $\bar{3}$  iv

This is the preferable way, and one where there can be no dubiety as to what is meant. As much cannot be said for the following, where, owing to the quantities ordered and the purposes for which they may be required, the doubt may arise whether the percentages should be calculated on grain measures or minims.

## XVII.

Sol atropin. sulph. ( $\frac{1}{2}$  per cent .....  $\bar{3}$  ii

## XVIII.

Sol. morph. acet. (4 per cent.).....  $\bar{3}$  iv

## XIX.

Make  $\bar{3}$  i sol. cocain. hydrochlor. (7  $\frac{1}{2}$  per cent.

The safer way would seem to be to make these according to the general rule already referred to, and calculate on grain measures, unless the prescription bears internal evidence that the prescriber intends a definite amount of active ingredient to be administered, as by hypodermic injection, then the percentage should be calculated on minims.

In the following it is difficult to make out what the prescriber's intention is.

## XX.

Acid, boric. .... gr. 40  
 par

Glycerin .....  $\bar{3}$  vi.

Acid, salicyl.....  $\frac{1}{2}$  per cent.

The simplest way seems to be to measure the glycerine, and on the combined weight of it and the boric acid calculate the required amount of salicylic acid.

In view of the importance of this subject to dispensers and students, as well as to the public, it would be well if some general rule for dispensing percentage prescriptions could be agreed upon, so as to insure uniformity; but better still it would be if practitioners in prescribing were to take care to leave nothing indefinite.

### Calomel and Potassium Bromide.

#### A DANGEROUS INCOMPATIBILITY.

By J. N. THOMPSON.

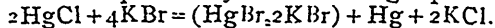
Read before the Edinburgh Chemists' Assistants' and Apprentices' Association on January 31, 1894.

The paper dealt with the following prescription, which has been written for a child :

Potass Bromidi..... grs. x.  
 Calomel..... grs. iii.

Ft. pulv. mitte tales xii.

As soon as the ingredients are rubbed together in a mortar the mixture begins to darken, and if water is added the powder instantly becomes grayish black. It was found that if the potassium bromide was powdered and then dried so as to remove interstitial moisture before being mixed with the calomel, there was no darkening, but the same change took place instantly on the addition of moisture. It was thought that the presence of carbonate or free alkali in the bromide might cause formation of black mercurous oxide, but on testing with phenolphthalein and litmus it was found that the salt was quite neutral. After adding water to a quantity of the mixed powders it was sublimed, and the sublimate contained distinct globules of metallic mercury. The mixed powders were shaken up with water and filtered. On acidifying the filtrate and warming with copper foil metallic mercury was deposited, indicating a soluble salt of mercury. On shaking up with ether and evaporating the ether, mercury was found in the residue indicating a mercuric salt. On adding solution of strychnine hydrochlorate to the aqueous solution a dense white precipitate separated, indicating the double salt,  $HgBr_2KBr$ , analogous to Meyer's reagent,  $HgI_2KI$ . The darkening is therefore due to the separation of metallic mercury from the calomel, and it is explained by the following equation :



The prescription therefore is an example of a dangerous incompatibility, as the mercuric salt formed is a powerful poison. There is no method by which the decomposition can be avoided, and calomel and potassium bromide should never be prescribed together.

This reaction has already been explained in this Journal and attention drawn to the dangerous character of the prescription.

—Ed. M.

## L'association Pharmaceutique de la Province de Quebec.

### Examen Ecrit Preliminaire.

MONTREAL, 5 AVRIL, 1894.

N.B.—Il faut :

1. Ecrire sur un côté du papier seulement.  
2. Numéroter et letter les réponses, de sorte qu'elles correspondent aux questions imprimées.

3. Compter les feuilles de papier dans leur ordre naturel.

4. Avoir soin de ne pas commencer à traiter un sujet sur la même feuille que celle qui a été employée pour une autre matière, et plier chaque sujet séparément, en écrivant à l'endos son No. et le nom du sujet traité.

#### ENGLISH FOR FRENCH CANDIDATES

1. Translate into French :

Gentlemen—Please send us by express three cases brown shirting. of the quality before ordered, and draw on us for the amount at ten days' sight.

2. Translate into English :

Monsieur—Je vous prie de m'envoyer par le prochain courrier, si cela est possible, le prix de votre remède pour les marchands qui en achèteraient cent bouteilles.

#### GRAMMAIRE FRANCAISE.

1. Ecrivez à un pharmacien une lettre de quinze lignes par laquelle vous lui demandez une place d'employé dans sa pharmacie.

2. Comment faut-il écrire le participe dans cette phrase : ces deux partisans se sont succédé dans la faveur du roi ? Motivez votre réponse.

3. Qu'est-ce qu'un pléonasme ?

4. Donnez les temps primitifs de vivre, vaincre, savoir, mourir, coudre.

5. Ecrivez correctement la phrase suivante :

Pour recueillir quel que travaux, il persista dans cet résolution, quoiqu'on lui représenta qu'il pourai en résultat sa ruine total, et en effet, c'est se qui arriva.

#### GEOGRAPHIE.

1. Où se trouve la presqu'île du Prince-Edouard ?

2. Nommez la rivière et le canal qu'il faudrait suivre en France pour passer de l'océan atlantique dans la mer Méditerranée.

3. Quel est le plus grand fleuve de l'Europe ? où prend-il sa source, et dans quelle mer se jette-il ?

4. Enumérez les colonies anglaises dans le monde.

5. Quelles sont les divisions actuelles du Territoire du Nord-Ouet ?

#### LATIN.

1. Citez cinq verbes déponents qui gouvernent l'ablatif.

2. Déclinez le nom Jésus.

3. Comment forme t-on l'impératif ?

4. Donnez les temps primitifs de negligere, ordiri, inferre, poscere, currere.

5. Traduisez, en bon français, mais en suivant le latin d'aussi près que possible :

Et, secundum ea, multae res eum hortabantur, quare sibi eam rem cogitandum et suscipiendam putaret imprimis quod Aeduos, fratres consanguineosque saepenumero ab senatu appellatos, in servitute atque in ditione videbat Germanorum teneri, eorumque obsides esse apud Ariovistum ac Sequanos intelligebat ; quod in tanto imperio populi romani turpissimum sibi et reipublicae esse arbitratur. Paulatim autem Germanos consuescere Rhenum transire, et in Galliam magnam eorum multitudinem venire populo romano periculosum videbat ; neque sibi hominosferos ac barbaros temperatos existimabat quin, cum omnem Galliam occupasset (ut ante Cimbri Teutonique fecissent), in Provinciam exirent atque inde in Italiam contenderent, praesertim, cum Sequanos a Provincia nostra Rhodanus divideret.

#### HISTOIRE.

1. Donnez les événements importants auxquels se rattachent les noms suivants : Cartier, Champlain, La Salle, Frontenac, Maisonneuve. Un événement pour chaque nom.

2. Quels changements eurent lieu dans la constitution du Canada en 1841 et en 1867 ?

3. Enumérez les causes et les résultats de la guerre de Sept ans, en ce qui concerne la France et l'Angleterre.

4. Citez cinq des plus importants événements et cinq des principaux hommes d'Etat du règne de Victoria Ière

5. Enumérez brièvement les causes de la Révolution Française.

#### ARITHMETIQUE.

1. Trouvez le produit du plus grand commun diviseur par le plus petit commun multiple de 256 et 176.

2. L'on veut tapisser un appartement qui a 24 pieds de long, 20 pieds de large et 12 pieds de haut avec de la tapisserie dont les rouleaux ont 16 verges de long, et 18 pouces de large et qui coute 75 cents le rouleau. Quel sera le montant de la facture

3. Partagez 86 onces  $\frac{1}{4}$  de sel en deux paquets, l'un contenant deux fois plus de sel que l'autre.

4. Simplifiez l'expression suivante :

$$\frac{2\frac{1}{2} + 3\frac{2}{3}}{2\frac{1}{2} \div 3\frac{2}{3}} \times \frac{9}{35} + 3 \cdot 2 - \frac{1}{1 - 2\frac{1}{4}}$$

5. Trouvez la différence entre \$500, placés à intérêt simple, et la même somme placée à intérêts composés pour 3 ans, 4 mois à 6 p.c.

## EXERCISES FOR STUDENTS.

No. 9. — A sample of blue ointment, containing only mercury and fat, is found to have sp. grav. 1.35. What is its strength? Show work. Grease sp. grav. .931, hyd. sp. grav. 13.5.

No. 10. — From a quart bottle of glycerine, two fluid ounces is surreptitiously removed, and replaced by water. When this had been repeated several times, it was found that the liquid in the bottle was slightly stronger than half glycerine. How many times had the exchange been made?

No. 11. — A shrub. Leaves alternate, stipulate, net-veined, oddly-pinnate; the leaflets 5-7, wedge-shaped at base, petiolate, serrate. Flowers large and solitary or corymbose. Petals 5 pink, inserted with the numerous stamens on the edge of the hollow calyx tube, calyx tube urn-shaped, contracted at mouth, becoming red and fleshy in fruit. Pistils numerous, hairy. Bony achenes.

Name this plant, indicate the parts used, and state the preparations commonly found in the shops.

## ANSWERS.

No. 3. — Calculate the sample first as wholly iodide, and then as wholly chloride, thus:

$$\begin{array}{l} 166 : 108 :: 18.55 : 12.07 \\ 58.5 : 108 :: 18.55 : 34.24 \end{array}$$

These quantities differ from 14.4 given, by 2.33, and 19.84; these then, on the principle of alligation, represent the proportion in which the 18.55 is divided.  $\frac{23.30}{23.17} = 10\frac{1}{2}\%$  NaCl. Ans. — 16.6 grains KI, 1.95 grains NaCl.

No. 4. — Soda having been added to the acid, a soluble double cyanide of silver and sodium is formed, and a precipitate only appears when half of the total amount of silver required has been added.

$$\text{HCN} = 27 \therefore 14:27 :: 1 : \frac{7}{14} \times 50 \times \frac{485}{475} \times \frac{100}{297} = 106 + \text{minims. Ans.}$$

No. 5. — Taraxacum Officinale.

Sanmetto, 3, 4, 5, correct. As you do not show the work we cannot give you full marks.

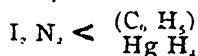
WE notice that some of our American contemporaries are following the example set by us in devoting a part of our space to questions for students, but this feature to be of any practical use should have some educational value, and so far the questions we have seen have been of an elementary character, requiring little or no study. Follow us a little further, American confreres, and give questions which require some effort to unravel, similar to those which you will find in THE MONTREAL PHARMACEUTICAL JOURNAL every month.

## The Production of Crystallised Mercurous Iodide in the Wet Method

By M. FRANÇOIS.

Crystallised mercurous iodide as obtained by sublimation has been described by Yvon. In the course of a study of the combinations of mercuric iodide with aniline, I obtained in the wet way small but very brilliant crystals of the mercurous salt, and since the iodide obtained by sublimation is mixed with free mercury, which can only be removed by washing with dilute nitric acid, a description of the method may be useful, since, as prepared by this method, all impurities are removed by washing with neutral solvents.

It is known that if an alcoholic solution of anilin be heated in contact with mercuric iodide, the latter is rapidly dissolved, and on cooling the liquid deposits crystals of iodide of diphenyl mercurammonium.



If ether be added to the mother liquor, brilliant yellow crystals, with a slightly greenish cast are slowly formed; these crystals consist of mercurous iodide.

The following proportions may be employed:—50 grammes of mercuric iodide are dissolved with the aid of heat in a mixture of 100 grammes of anilin and 200 grammes of 90 per cent. alcohol; the solution is filtered and allowed to stand several days. The large crystals of the diphenyl mercurdiammonium iodide are drained off, and to the clear liquid 350 grams of ether are added. After about a week the yellow scales of mercurous iodide are collected in a filter, washed first with cold alcohol, and then with boiling alcohol and ether.

A further addition of ether to the mother liquor produces a fresh crop of crystals, and this may be repeated several times. The yield is but small (2 grams at each addition of ether). The body consists of clearly defined yellow crystals which are insoluble in water, alcohol and ether, and are decomposed by warm potash solution with separation of mercury; they are blackened by ammonia.

The formation of this body is evidently due to some reducing action, which is not that of ether or alcohol, and ultimately the author finds that it is due to the presence of aldehyde in the commercial ether employed, and that if the iodomercurammonium iodide,  $\text{Hg I. NH}_4$ , be dissolved in a mixture of alcohol and ether and aldehyde then added, the crystallised mercurous iodide is readily formed.

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	PER LB.	PER OZ.
1000	\$ 3.50	\$ .30
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2000	7.00	.50
2500	8.75	.65
3000	10.50	.75
4000	14.00	.95
5000	17.50	1.20
6000	21.00	1.40
10000	35.00	2.25
15000	52.50	3.95

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All are perfectly soluble.

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EXTRACTS DOUBLES ET TRIPLES

### ANCIENT CHEMISTRY.

M. BERTHELOT, the eminent French chemist, has in these latter years devoted himself with much persistence to the study of the history of chemistry. His equipment for work of this kind is of an unusually complete character. In addition to his scientific attainments he is a clear thinker, a close reasoner, and gifted with unusual critical ability. So much as this it is, perhaps, necessary to say, because his conclusions are not always in accordance with those generally received. The merit of M. Berthelot's investigation lies in the fact that he has not been contented to accept any statement at second-hand. The great libraries of Europe are rich in texts bearing upon alchemical science and the beginnings of chemistry, but to a great extent these ancient MSS have been overlooked or ignored. M. Berthelot has devoted ten years of patient study to their elucidation, with the valuable help of some of the most learned Egyptologists of the day. Many of these texts have been printed in the *Origines de l'Alchimie*, published in 1885, so that they are now open to students of science generally. The recent publication of *Le Chemic au Moyen Age* completes M. Berthelot's work. An interesting epitome of the whole subject was published in the *Revue des deux Mondes* for September 15th, and October 1, 1893.

The starting point of the alchemic tradition is lost in the mist of ages. Zosimus the Pano-politan traces it to the rebel angels, who, seduced by the love of women, betrayed its secrets in return for their favours. For this they were driven from Heaven, and thus was founded the race of Giants. Tertulian, writing of this tradition, held that the secrets confided to women by the fallen angels related to the art of poisoning, to transmutation, to magical incantation, and to working in precious stones.

It is curious how widely disseminated this myth became in the dark ages, but it is only part of that intimate blending of early science with religion which all history teaches. In fact, all early science was of a religious character. The temples of the East were the storehouses of learning. All industrial work was inaugurated with magical rites, and the priest was as important as the builder.

In ancient Egypt alchemy was the "sacred" art, and was taught only to king's sons. All Egyptian learning was symbolic, and language is so continually used in a vague and enigmatical sense, that it is difficult to define its precise meaning. The pupils of the alchemists were bound by oath to keep secret all teaching imparted to them. Nevertheless the Egyptian people possessed a wide knowledge of the working of metals, of alloys, of working in glass and precious stones, similar to that

practised by the alchemists of a later age. A papyrus discovered in a tomb at Thebes gives instructions for purifying, tempering, and soldering metals; for making glass; for mixing love-philtres; for procuring dreams; and for ensuring the success of any undertaking. This papyrus, M. Berthelot believes, contains the oldest-known alchemical receipts.

M. Berthelot insists on an intimate connection between Babylonian, Chaldean and Egyptian science. The story of the philosopher's egg appears to have been common to all.

There is preserved in the National Library at Paris a number of alchemical manuscripts of great interest. They were brought into France in the reign of Francis I, who made extensive purchases of books in Greece and in the East generally, they were written in the Greek language and copied in the 15th century. A still earlier manuscript is that of St. Mark, at Venice. This dates from the 11th century. It bears marks of loving study and has many marginal notes. Its pages are stained by chemical substances and its figures are more carefully drawn than those in the later MSS. It probably represents the position held by the occult sciences in the 4th century, or even at an earlier period. Many of these texts were probably written by authors who had seen and studied those priceless works of early learning which have been lost to us by the destruction of the Alexandrian Library.

To say that these MSS. have been discovered by M. Berthelot would be incorrect. Borrichius, a Danish doctor, referred to them in the 17th century. They were known to Du Cange and Reinsius. Hoeffler published extracts from them in his History of Chemistry, but it is M. Berthelot who has assigned to them their true importance.

It has been usual to look upon Arabia as the birthplace of chemical knowledge. M. Berthelot claims to have proved that this was not so, and contends that the part played by the Arabs, even as transmitters of an earlier knowledge, has been greatly exaggerated. The fact seems to be that eastern science has come down to Europe in two well-defined streams, one by way of Syria and Arabia, the other from Egypt through the Alexandrian Greeks and the industrial arts of the Roman Empire. A great part of Arabian learning was of Hellenic origin. The book of Crates is impregnated with Greek ideas, and the same may be said of the authentic works of Geber. The importance of Hellenic influence has perhaps been overlooked through the absence of alchemical symbols in the Arab writings. This is most likely due to Mussulman intolerance of every thing pertaining to magic. It is a curious fact that alchemical symbols do not appear in

the Latin translation of the thirteenth century, and their reappearance at the close of the fourteenth was owing to the direct influence of Greek authors. The art of distillation, which has been generally attributed to Arabia, was really practiced in Greece centuries before the birth of Geber, and the same may be said of many other processes.

Arabian influence has been exaggerated also in assigning to Arabic authors Latin writings of a later date. There is strong internal evidence that the Latin works of Geber are spurious. His undoubtedly genuine works are full of declamative and vague idealism, charlatanesque to a degree, but containing philosophical ideas, generally of Greek origin. For instance, he traces an analogy between metals and living beings similar to that which exists between the body and spirit. This corresponds with Aristotelian theories. That Geber was conversant with Greek philosophy is attested by his translation of the logic of Aristotle and other works of a metaphysical character. But the Latin works attributed to him are of a different order altogether. They are scholastic in style and method, and treat of matters unknown to Arabian scholars. In the "alchemy," mistakenly attributed to Geber, the manufacture of nitric acid is described, although its discovery took place long after his death.

Broadly speaking, M. Berthelot maintains that Science properly so-called originated with the Greeks. All knowledge anterior to them was of a non-rational character, steeped in mysticism and sacerdotalism, even when most usefully applied. But in science, as in literature, the Greek intellect was clear, critical and perceptive. Thus came about that divorce between Science and Empiricism which elevated the epoch of the 6th century to a point beyond which but little progress was made until the end of the 16th. Not that this growth was sudden—superstition dies hard; but charlatanism became discredited by enlightened minds, and had far less sway than in later times, when the antique culture was swamped by the breaking up of the Roman Empire. This enlightened knowledge was transmitted through Syria to its Mussulman conquerors. Syrian scholars translated and edited Greek authors, Aristotle particularly. Alchemy, medicine, and astronomy were their favourite studies, and professors of these sciences acquired great influence at the Courts of the Byzantine Emperors. Bagdad eventually became the seat of important schools. It is to Syrian scholars that we owe many of the most important alchemical manuscripts scattered through the libraries of Europe. They are generally translations from the Greek and form the basis of M. Berthelot's historical

theories. An important MS. in the British Museum commences with a list of symbols—the names of the metals and those products of *materia medica* employed in chemistry. These are identical with those of the Greek authors. M. Berthelot remarks that in this the names of the metals are associated not only with those of the corresponding planets, but also with those of similar Babylonish divinities. Tin is represented at the same time by Zeus and by Bel; copper by Venus and Bilati, or by Astera; lead by Kronus and by Camoch. The seven earths, the twelve stones employed as remedies and for amulets, the nineteen coloured metals used in tinting glass, recall those numerical combinations so dear to the Neo-Pythagoricians and to Orientals generally. There are besides a number of other manuscripts written in Latin, which prove that chemistry—particularly as applied to the Arts—was practised long before the Arab influence made itself felt in Europe. They are of an essentially technical character. The *Compositiones ad ligenda*, a manuscript of Lucques, contains receipts for tinting mosaics, dyeing skins, gilding iron, writing in gold, &c. Italian jewellers made use of many of these formulæ. Recipes also for soldering and for reducing the precious metals to powder are numerous. This was an important art in the Middle Ages, facilitating the carriage of gold from one country to another.

Many of these old manuscripts are really trade-manuals and collections of workshop receipts rather than treatise of learning. The Syriac MS. at Cambridge includes twelve books written by Zosimus, a Greek author, who lived in the third century of our era. These books are lost in the original Greek, but their authorship is uncontested. They treat, amongst other matters, of working in copper, tin, mercury, lead, electrum and iron. Several of these preparations are referred to under the names of their authors, as is the custom at the present day. This, as pointed out by Berthelot, was quite opposed to Egyptian tradition, which attributed all alchemical works to Hermes. The special interest possessed by many of these ancient texts consists in the fact that they have been completely ignored by the historians of chemistry in the past times, and in the light they throw upon European science before the time when Arab learning became prevalent in Europe. A tradition of the manufacture of unbreakable glass runs all through the middle ages. It is frequently referred to in these texts, and is said to have been discouraged by Tiberius on account of its influence on existing trades. These treatises influenced the whole industrial life of the dark ages particularly in Italy and France. They represent alike the work and the culture of a

period extending from the early years of the Christian era to the time when a similar stream of knowledge coming from the same Greek source passed by way of Syria and Arabia into Europe through the medium of the Crusades.

—*The Chemist and Druggist.*

### 'FIFTY YEARS OF PHARMACY.'

Dr. J. Birkbeck Nevins delivered a lecture thus entitled to the Liverpool Pharmaceutical Students' Society on January 25th.

In his opening remarks the lecturer said that the term covered by his experience ought to be more correctly described as fifty-nine years of pharmacy, as it was that since he was apprenticed to an apothecary in Leeds. During that period astonishing discoveries had been made, which had revolutionized the practice of pharmacy. Quinine, iodine, bromine, chloroform, and many other things were unknown entirely, and the art of medicine was conducted on much simpler lines when he commenced his career than now.

One of the striking features that he noticed was the change which had taken place in the nomenclature of various preparations. The names of persons who invented a compound was freely used when he was an apprentice; for instance, when Jenner introduced a new and improved form of tartar emetic his name was for a long time associated with it. No one spoke of liq. plumbi. acet., but always of Goulard's extract of lead. Dover's powder was used instead of pulv. ipecac. co. Gregory's powder was a case of evolution. Magnesia was discovered in 1755, and had been used for many years as a specific for various things, especially as a fashionable remedy for gout. When one of the Georges had rhubarb prescribed as a stomachic, and it became a fashionable remedy also, Dr. Gregory hit upon the idea of combining the magnesia and the rhubarb with a little ginger giving his name to the compound, which has come down to this day, with more or less pleasant associations for us all.

Speaking of the use of rhubarb, Dr. Nevins said that the fact of its appearing in a royal prescription had large influence with those who wished to be considered in the fashion, and it was almost impossible to buttonhole anyone in those days who had any claim to social position without the inevitable appearance of the piece of rhubarb from the waistcoat-pocket, to be chewed with apparent enjoyment. Liquor arsenicalis never appeared in prescriptions—always Fowler's solution, as the impression seemed to prevail among medical men that their patients might be alarmed if they found arsenic entering into the compos-

ition of their medicines. Spirit of Mindereus was always ordered for spirits of hartshorn, and it was universally believed that the inspiring influence of the remedy was due to the lively and energetic character of the deer itself, and not to the chemical composition. He had the opinion that the old process with rassa cornu cervi produced an article which was different from the new, and was in many respects superior, as the empyreumatic oil from the horn contained elements which are entirely wanting when the article is prepared as now directed. All this is changed now, and very few medical men would think of giving their name to any compound or prescription, the tendency being to employ the scientific name of the article. Prescriptions in those days were more complex than now, and the lecturer believed that there is a growing tendency to rely upon one or two ingredients.

The apothecary's apprentice fifty years ago knew what hard manual labor was. There were not so many wholesale houses with every necessary appliance, and no small steam-engine to do unpleasant tasks. Aloes had to be powdered by hand slowly and laboriously in a mortar, and hyd. c. creta, pil. hydrarg., and ung. hydrarg. were all made at home. For testing the finished condition of the mercurial preparations a little of the article was spread on the finger, and then examined with a lens. If there were no uncombined globules of mercury the preparation was finished. He was afraid, however, that the apprentice frequently put the lens, like Nelson when he did not want to see signals, to a blind eye, and thus secured a shortening of his task. Capsicum, too, had to be powdered. It was a sovereign remedy for headache, but he thought the relief secured by the patients scarcely compensated for the sufferings of the unhappy apprentices.

Though the dispensing chemist of those days had printed labels, it was *infra dig.* for a medical man to use these. His labels, familiar pieces of folded paper, were always attached to the neck of the bottle. It was customary to send as many bottles as possible to a patient, as eight bottles paid better than one or two. Effervescing draughts were in great favour, and it was the custom to send about eight bottles at once to a patient, one to be taken every three hours. The spare time of the apprentices used to be devoted a good deal to the preparation of these draughts. As there were no soda-water machines a simple process was adopted. A suitable 1½ oz. bottle was nearly filled with a solution of soda bicarb., a small crystal of citric acid was dropped in, and then the bottle was quickly corked, and in a short time the draught was ready—if the bottle was strong enough. Another means of employing



spare time was in the manufacture of enema apparatus. No India-rubber tubing and bulbs were to be had then, no ingenious contrivances were invented for the injection of fluids. The apprentice had to secure a supply of calves' bladders, tie a pipe securely into the neck, and otherwise prepare them for use, and then one would be sent out with each clyster.

Each summer the apprentice had to collect the herbs likely to be required, chiefly digitalis. Belladonna was not generally found wild those days, and seemed only to be found in the neighborhood of the old monastery gardens. The lecturer lingered over this part of his reminiscences as if he were conscious that the modern student lost much through want of more intimate familiarity with what he had to use.

Plasters had to be made and spread, and much time and trouble were devoted to the production of an elegant article. Ladies' plasters were generally made heart-shaped as a matter of sentiment.

Bleeding, as anyone knows, was very common—far too common—but Dr. Nevins remembered one instance where it was used for an extraordinary purpose and with success. A patient of his master's had been troubled with a most obstinate constipation—so obstinate, indeed, that his life was in serious danger. After every usual remedy had been tried, and the case seemed hopeless, his master dispatched him to see the patient once more with the injunction, "If he is not better, bleed him!" On reaching the man Dr. Nevins found him still without relief, so he followed the instructions given to him, and bled the man to fainting point. The desired effect was produced—the man broke into a profuse perspiration and recovered. The philosophy of this treatment was rather hard to discover at first, said Dr. Nevins, but it had a basis of good reasoning, as every medical man would at once recognise.

Pills were rolled by the fingers, and coated pills were unknown. It was a subject of remark in those days that a medico might be known at a dinner table by the way in which he fingered his bread.

When he was a youth there was a very good rule in connection with the making of tr. cardam. co. for ensuring a perfect article. It was: "Don't eat the raisins." He believed the same advice was given to-day.

In the early part of the century medical men were largely herbalists, and there was nothing discreditable in that—provided you did not call yourself one. Galenical practice was the correct term. At the same time many were subject to the influence of Paracelsus, who introduced minerals into medicine. As the century has advanced the followers of this school have increased in importance.

To illustrate the difficulties which existed when no alkaloids were available, the lecturer said that when a patient had to be operated upon for cataract in the eye it was necessary to smear ext. bellad. over the eye and surrounding parts for twenty-four hours before the operation, in order that the necessary dilation of the eye might take place. In this connection the doctor remembered seeing years before it came into use, a hypodermic syringe by Wood, of Liverpool; but it was practically valueless, as morphia and atropia had not been discovered.

Among the new remedial agents introduced during his time the doctor referred to phosphorus, which he had bought by the grain as a boy. With regard to the introduction of iodine he said that it was interesting to note that *spongia ustum* was once used for goitre, and on the source of its power being looked for by a French physician, he found that it was due to iodine, and this article at once displaced the old remedy.

The process for getting the iodine at the first was very crude, and he remembered that his chemistry master, Mr. West, used to add considerable to his income by making iodine from kelp in his own laboratory. Bromine was looked askance at for a long time, even in the form of bromides, and, in conjunction with the iodides, was only prescribed at first in extreme cases and in small doses.

Quinine when first brought out was very expensive, and was prescribed in 1-grain doses for a long time. The other extreme was then taken, and 5-grain doses became fashionable among many doctors. It is a matter of congratulation that a mean has now been established. Creosote came out, like many other things, as a "cure for everything," and was at first sold at 10s. 6d. per oz.

The doctor remembered the early attempts at the production of anaesthetics. Nitrous oxide gas was first supplied in a bladder. But these were mere playthings—the man and the time had not then arrived for the production of chloroform.

During his career he had seen many animal preparations laughed down. Castoreum used to be considered a pleasant nerve-tonic, but it gradually declined in favour. He noted with interest, however, that it again appeared to be coming forward, if he were to judge by the demand at present. Musk, in the form of pills, was also once a grand remedy for gout in fashionable society, but it seems to have been now relegated to perfumes. White snails used to be used as a jelly in the morning by the *elite*, but are quite out of date. He believed they are still in the French Codex.

In conclusion the lecturer made some amusing allusions to the old beliefs affecting med-

icine, such as astrology and the black arts. Particular attention was drawn to Culpepper's horoscope, and to the supposed influence of the stars upon herbs and animals. Of course, he said, we are now superior to all this, and can afford to smile at the credulity of our forefathers; history repeats itself in many things, and seemed to be doing so in medicine, if we may judge by some modern speculations. Learned men of to-day are talking of the malign influence of the black spots in the sun on the world, and attributing droughts, plagues, and what not to them; so there may have been some elements of truth in the old teaching about celestial influence. And when we see extracts of the thyroid gland, brain, and testicles of rabbits, as well as cockroach and rattlesnakes employed by leading men in medicine we begin to doubt whether the scoffs against those who used dried toads, vipers and dogs' livers were fully justified.

The lecture was listened to with the greatest interest, for Dr Nevins has always been immensely popular among the pharmacists of Liverpool, and his quaint way of telling his reminiscences was heartily relished by his audience.—*Chem. and Drug.*

#### Montreal College of Pharmacy.

The Sessional Examinations of the Montreal College of Pharmacy were brought to a close on Friday, March 30th., with the following results, the names of the successful students being given in order of merit, as follows:—

Botany,—Herbert W. Reynolds, W. L. Taylor

Chemistry, 1st. year,—Medard Langlois; 2nd. year,—Wm. Lyman, R. J. Lunny, Alex. M. McMillen, W. L. Taylor, Wm. A. Hendrie J. V. Levesque.

Materia Medica, 1st. year,—J. Francum, O. Mowatt, A. C. Pacquette, O. Turgeon, W. J. Roach; 2nd. year.—Wm. Lyman, J. C. A. Bates, Osborne T. Pinch, J. H. Goulden, R. N. Miller.

#### The Electrolytic Process in Making Caustic Soda and Bleach.

This process has been devised by Mr. Greenwood, and consists in the manufacture of caustic soda and chlorine by the electrolytic decomposition of common salt. When the two terminals of a battery are connected to two iron plates, the latter being dipped in a solution of brine, the action of the electric current will break up the common salt and form caustic soda with evolution of chlorine gas. The latter is given off at one terminal, called the *anode*, while the caustic soda is formed at the

other terminal, called, the *kathode*, and the difficulty, which has always had to be contended against in the manufacture on a large scale, has been the fact that these substances will recombine and form common salt unless separated at the moment of formation. The success of the present method depends on the fact that the two products are kept apart by a special diaphragm, which offers little resistance to the passage of the electric current, but which will not permit the circulation of the liquids between the anodes and kathodes. Five large tanks are used in the process, and each tank is separated into five cells by a non-porous plate. Each cell contains a kathode and an anode, the former being simply an iron plate, while the latter is made of type metal covered with non-porous carbon, and treated in a special manner to prevent the liberated chlorine from acting on it. The anode and kathode in each cell are separated by a special diaphragm, which consists of several V shaped troughs of glass or slate, laid one above the other, and packed with asbestos. The tanks are placed on platforms at different levels, and all the the anode cells are connected together with iron pipes, a constant circulation being thus maintained between all the caustic soda and all the chlorine cells. When the electric current is passed, caustic soda is formed on the kathode side of the diaphragm in each cell and chlorine is liberated on the anode side, the latter gas being conducted away by a pipe at the top, and made into bleaching powder by the process of passing over lime. The solution from the kathode cells is concentrated by boiling, and the common salt which remains undecomposed crystallises out, and is thus separated from the caustic soda, the latter being afterwards obtained in a solid condition by further evaporation.—*For. & Col. Importer.*

#### Where Cotton Seed Oil goes to.

Last year there were probably 1,250,000 tons of seed crushed. Out of this seed there were obtained 1,000,000 barrels of oil. Of this amount it is estimated that 300,000 barrels are used in Chicago for making lard, and St. Louis, Kansas City, and Omaha, are credited with about 200,000 in making the same product. A comparison of the statistics of lard production and cotton seed oil consumption might show interesting results as to the composition of the former. About 20,000 barrels of cotton oil are used on the coast of Maine to pack sardines, and probably from 50,000 to 100,000 barrels are used by soap-makers in the manufacture of toilet soaps. About 250,000 barrels go to Rotterdam, Holland, for making butter, and large quantities go to southern Europe for mixture with the olive oils, exported from

Marseilles, Trieste, and other Mediterranean ports. Although this oil is not to be preferred for illuminating purposes on account of its containing too much gum, a considerable quantity of the cheaper grades is asked for such purposes. The use of this article upon its own merits is however rapidly increasing. It is already extensively used in Latin countries as a cooking grease, and several American manufacturers are advertising it for culinary purposes.

As an oil for lubricating machinery, it soon took the place of others that had hitherto stood unrivalled; and as a substance that could be used with safety and advantage in the production and manipulation of the different descriptions of food, it quickly proved to be invaluable. From being adapted to the modern requirements of the home trade in oils and manufactures, it afterwards grew in favor with traders and producers in foreign countries and a considerable traffic was opened for its exportation to the Continent of Europe, the Mediterranean, and more distant parts of the globe. As a substitute for other seed oils, cotton oil has turned out to be very useful as well as economical and cheap, and by sharpening the competition with linseed, rape and similar oils, it has often been the means of keeping quotations in the various markets from rising to high or to rapidly.

### The Pioneer Pharmaceutical Society of Canada.

Until 1864, nothing had been done by the pharmacists of the Canadas, in the way of concerted action or professional organization. From time to time, meetings had been held of the trade in Montreal, only, however, for purposes purely commercial, such as the regulation of credits, discounts, etc. At this time the status of the apothecary was settled by a board called by the Governor of the provinces of Upper and Lower Canada, which examined applicants and licensed them to practice. The ordinance was an old one dating back to the time of George III, 1787. Previous to 1864, the College of Physicians and Surgeons of Lower Canada, had, on several occasions, taken upon itself to examine and licence chemists and druggists, while the power remained in the hands of the Governor alone. This oversight was rectified by a bill assented to June 30th, 1863. One section of this act repealed previous legislative action, and rested the licensing power in the College of Physicians and Surgeons, another section legalized the licenses previously granted by the College.

In the uncertain state of legislation at the time, the apothecaries were generally indifferent

to any gubernatorial or collegiate control, some registering, and some not doing so.

In October, 1865, the following advertisement appeared in the *Official Gazette* :—

“Every person now practising medicine, surgery, midwifery or pharmacy, or who may hereafter practice in Lower Canada, shall register his or her name, age, place of residence, nativity, the date of his or her license, and the place where he or she obtained it, in the books of the college, within three months after the publication of this By-law.”

LOUIS BOYER,  
Registrar and Treasurer,  
College of Physicians and Surgeons,  
Lower Canada.

This move on the part of the medical profession, we consider established, as the final one starting the agitation amongst the chemists and druggists, and leading to combined action which has been, as to the Province of Quebec, practically continuous to this day.

We have before us a copy of the legal opinion furnished by an eminent Queen's Counsel to Messrs. Davidson then chemists of St. James Street, to the following effect, and dated 7 November, 1865.

“With reference to the question submitted by you, on behalf of certain chemists and druggists, with whom you are associated, I beg here to state that I am clearly of opinion that any apothecary, chemist or druggist, who shall practice as such in Lower Canada, without due license or authority, will be held to have wilfully controvenced a public act of this province, and to be liable consequently, to trial and punishment, as for a misdemeanor.”

The apothecaries being sufficiently stirred up, a meeting was held in the office of Messrs. Lyman, Clare & Co., St Paul Street, Nov. 15, 1865, the primary business attempted was, by organization, to get the control of pharmaceutical matters into the hands of the pharmacists, and thus get away from the paternal control of the medical profession. No records are available of the business transacted at the various meetings, only an account of the first officers, of this first association of Montreal pharmacists. From the personal recollections of the surviving members, we are informed that meetings were held irregularly. Of the gentlemen named we are glad to find that six, Messrs. John Kerry, W. H. Clare, H. R. Gray, K. Campbell, R. Bolton, J. A. Harte, are still with us, worthy citizens, and with the exception of two, actively engaged in pharmacy.

From this time until the consummation of Confederation in 1867, the Chemists' Association was hibernating, at least the evidences of its activity are undiscoverable. In 1867

the Apothecaries of the Province of Ontario, formerly called Upper Canada, impatient of the supposed encroachments of the medical profession on the chemists and druggists, were bestirring themselves. and the Ottawa chemists somewhat macrocephalic, with a pride worthy of their town's new dignity, as capital of the New Dominion, held a meeting and decided to call upon all the Pharmacists of the Dominion to act with them in Pharmaco-politics. The letter of the secretary of the Ottawa Chemists Association, having reached Montreal, the pharmacists of the latter city assembled in Mechanic's Institute, May 31, 1867, and revived the Montreal Chemist's Association, which like a giant refreshed, or a phoenix from its ashes, arose to vigorous activity, and continued so until merged in the Pharmaceutical Association of the Province of Quebec, in 1870. The president, Mr. Jno Kerry, the vice president, Mr. B. Lyman, the treasurer, Mr. W. H. Clare, and the secretary, Mr. H. R. Gray, resuming their offices.

It is not our intention here to give a history of pharmaceutical legislation, this may be attempted another time, for the present, let it suffice that our purpose is to establish the right of the Montreal Chemists Association to the title at the head of this article.

The dates of formation of the societies are as follows :—

Montreal Chemists Association, 1865, Ottawa Chemists Association, 1867, the Chemists Association of Toronto, 1867.—*T. D. R.*

**PHARMACEUTICAL NOTES.**

Coronillin is a glucoside, obtained from the seeds of *Coronilla scorpioides*, soluble in water and in alcohol. It has been successfully used as a cardiac tonic, causing a strengthening of the pulse, and an increase of urinary secretions. It is given in doses of 10 grs, daily, in five or six portions.

Oleocressote is slightly soluble in water or chloroform. It is recommended in cases of chronic bronchitis, catarrhal affections of the respiratory organs, and tuberculosis. It is best given as an emulsion as follows :—

- Oleocressoti ..... ʒ i ʒ ii
  - Pulv. gum, acacia ..... ʒ vi
  - Aq. font. ad..... ʒ viii
  - Fiat emulsio. et adde,
  - Ol. menth. pip.....gtt i
  - Syr. papaveris..... ʒ iss
- Sig.— One table spoonful thrice daily.

**COLORING MEDICINES —DR. F. V. OEFELE.**  
(*Phar. Centralh.*; XXXIV; p. 683)

The author recommends coloring medicinal mixtures on the ground of the desirability of changing the appearance of medicines from time to time, and of distinctively marking strong and mild remedies.

The following examples are given :—

- Formic Acid ..... 20 gme. ( ʒs.)
- Blue Pyoktanin..... 1 ctg. ( ʒi grn.)
- Soft soap ..... 100 gme. ( 3¼ oz.)
- Lanoline..... 10 " ( 2½ drs.)
- Blue Pykotanin.... 5 ctg. ( ¾ grn )
- (Revulsive).
- Potassium Iodide ..... 3 parts.
- Starch ..... 3 "
- Hot water ..... 5 "
- Boil and add :
- Lanoline ..... 20 "
- (In Eczema).

As iodine becomes liberated, whilst this mixture is preserved, the ointment will turn violet, owing to the formation of starch iodide.

As methylene blue is, in itself, employed as an antipyretic, the author recommends adding it to quinine, antipyrine, etc., viz :

- Antipyrine ..... 50 parts.
- Methylene Blue..... 1 part.

Medicines containing hydrocyanic acid he colors with soluble Prussian blue, as in the following formula. :

- Morphine Hydrochlorate.. 10 ctg. ( 1½ grn. )
- Bitter-Almond Water ..... 10 gme. ( 2½ fl. drs.)
- Prussian Blue soluble)..... 1 mg. ( ¼ grain. )

The following additional formulæ are given:

- 1—Carlsbad Salt ..... 20 parts.
- Gamboge ..... 1 part.
- 2—Acetanilid..... 30 ctg. ( 5 grn.)
- Rhubarb ..... 3 " ( ½ " )
- 3—Alum ..... 40 " ( 6 " )
- Saffron ..... 10 " ( 1½ " )
- 4—Calomel..... 15 " ( 2¼ " )
- Cinnabar ..... 15 mg. ( ¼ " )
- Sugar ..... 30 ctg. ( 5 " )

*Am. Med. Chir. Bul.*

Solphinol, is the latest addition to the already long list of antiseptics. It is a mixture of boric acid, borax and sulphites. It is said to be a valuable disinfectant for use in surgery, employed in the form of 2 to 10 p.c. aqueous solution.

Oleate of Mercury. Frank Edel, in the *Western Druggist*, recommends the precipitation process as superior to direct combination. His process is as follows :—

- Yellow Oxide of Mercury.....grs. ʒ83
- Nitric Acid....." ʒ23
- Water ..... fd. oz. 1.

Mix the water and acid in a porcelain evaporating dish, add the mercuric oxide gradually, and apply heat if the mercury does not all dissolve, adding more acid carefully to insure perfect solution, then dilute to 4 fluid ounces.

The solution of potassium oleate is heated to 150 °F. and the solution of mercury added, stirring constantly. The precipitated oleate is then washed thoroughly, and then rubbed on a pill tile to remove adherent moisture.

The solution of potassium oleate, is made as follows :—

Oleic Acid .....	grs. 1000
Potassium Hydrate .....	" 220
Alcohol .....	dr. 6
Water .....	to make oz. 32

Dissolve Potassium hydrate in 2 ounces of water, heat the oleic acid gently and add the potash solution gradually, stirring constantly. Towards the last, dissolve a small portion of the soap in the alcohol and test with phenolphthalein, ending the operation when the solution remains a light pink. Then add the alcohol and dilute with water to 32 ounces.

He also gives the following table for dilution of 100 grains of this oleate, 28.3 p.c., to any required strength.

To make 5 p.c. oleate of mercury, add...	Oleic Acid	466 grs.
" 6 "	" "	371 "
" 7 "	" "	304 "
" 8 "	" "	254 "
" 9 "	" "	214 "
" 10 "	" "	183 "
" 12 "	" "	136 "
" 14 "	" "	102 "
" 15 "	" "	89 "
" 16 "	" "	77 "
" 18 "	" "	56 "
" 20 "	" "	41 "

Essential Oil of Male Fern, is obtained by distilling the freshly gathered root. According to Ehrenberg, male fern owes its tæniifuge properties to this oil and not to the silicic acid as is generally supposed.

Peter Boa. at a meeting of the North British Branch of the Pharmaceutical Society of Great Britain, read a paper on ointments, in which he recommended that the melted ingredients should not be stirred while cooling, the resulting ointment being of a firmer consistence, perfectly homogeneous, and not so liable to spoil, as that which had been stirred in the usual manner.

Glucose in Syrup of Iodide of Iron.—At the same meeting Mr. W. Lyon contributed a paper on this subject, in which he had repeated and extended the experiments of G. C. Chas. Klie, as detailed in papers read by him before the Missouri State Association. Mr. Lyon found that the presence of 8 to 10 p.c. of glucose prevented the decomposition which took place in the official syrup after a short time.

Our experience has been similar to that of Mr. Lyon, and we think that the Syr. Ferri. Iod. of the next edition of the British or Imperial Pharmacopœia should contain 8 to 10 p.c. of pure glucose, which would make it a permanent preparation.—*Ed. M. J. P.*)

Solnaine, is the name proposed by Prof. J. U. Lloyd, for an alkaloid extracted by him from the root of Solanum Carolinense, Horse Nettle, it is in white brilliant crystals, insoluble in water and dilute ammonia, freely soluble in acids, for-

ming very soluble salts, and is soluble in ether, the latter property distinguishing it from the alkaloid abstracted from the same source, by Mr. Kransé, and reported by him in the *American Journal of Pharmacy* during 1890 and 1891.

### OUR METRIC STANDARDS AND UNIT.

BY WILLIAM HALLOCK, A.B., PH. D., PHAR. D.  
Adjunct Professor of Physics at Columbia College

"To find the length of a rood in the right and lawful way, and according to scientific usage, you shall do as follows: Stand at the door of a church on a Sunday, and bid sixteen men to stop, tall ones and small ones, as they happen to pass out when the service is finished; make them put their left feet one behind the other, and the length thus obtained shall be a right and lawful rood to measure and survey the land with, and the sixteenth part of it shall be a right and lawful foot."—JACOB KORBEL on Surveying; Germany, 1550. Translated by E. A. GIESELER in the *Journal of the Franklin Institute*, 126, 3d ser. 96, pp. 115-16

In Italy there existed, in 1832, no less than 215 foot measures, and in Germany, at the beginning of the century, there were certainly no less probably more—GIESELER, l. c.

What is a "standard" and what a "unit"? Who have absolute standards and concrete or type or practical standards. For example, the absolute standard of length in the distance from the equator to the pole on the meridian of Paris. The practical standard is the distance between two marks on a certain bar preserved in Paris, and called "the meter of the archives." It was intended to be one forty-millionth of the absolute standard, it is not, but we know its error, and hence it serves our purposes very well. Some one may say we know the relation of the yard to the earth's quadrant and hence it would answer Very true, but the yard stands alone and the meter is the keystone of a whole system.

A fruitful source of misunderstanding is the standard or a unit of mass, or weight. The old standard is a piece of brass—a pound. Is it mass or weight? It is a *mass* and is always called a *weight*. What is the difference? Mass is the quantity of matter (brass), weight is the force with which the mass is drawn toward the centre of the earth. The mass is the same whether it is at the sea level, or on a high mountain, on the moon, the sun, or anywhere else in the universe; mass is constant, is absolute. The weight of the mass is less on a mountain than at sea-level, less on the moon than on the earth, more on the sun, and in fact is purely relative, depending entirely upon the position of the mass with reference to other masses. When we say "a body weighs ten pounds," we really mean "the body is drawn toward the earth with ten times the force with which the standard pound is drawn toward

the earth." The force is proportional to the mass, and hence, if the force is ten times the mass, it is ten times, and the mass of the body is ten pounds.

The metric absolute standard of mass, is the mass of one cubic decimeter of pure water at its temperature of maximum density. The practical standard is a certain piece of metal preserved at Paris and called "the kilogram of the archives." Again, it is not equal to the absolute standard, but we know its error and so it answers our purpose.

Another standard that interests us, and is very intimately connected with the kilogram, is the liter—equal, theoretically, to the volume of maximum density of a mass of water equal to the "kilogram of the archives." The difference is very slight, and can be neglected in all but the most accurate absolute scientific work. Similarly the cubic centimeter is the volume of one gram of water at its temperature of maximum density.

Our immutable standard of a period of time is one revolution of the earth on its axis—a day. It is also our practical standard.

The "unit" is usually some fraction of the "practical standard," and varies with the quantity measured; for example, the kilometer, meter, millimeter and micron (1-1000 m. m.) are various units, any one being chosen according to the length we wish to measure. Similarly the day, hour, minute, second, are units of time.

Mark the simplicity of this system. We measure the dimensions in convenient decimal units; the unit area is the square on the unit of length; the unit volume is a cube on the unit of length; the unit mass is the unit volume filled with matter of unit density (water at 4° C). Specific gravity is the number of units of mass of the substance in the unit volume etc., etc.

In practice it is found desirable to use only certain units, for example; we often use the kilometer, the meter, centimeter, millimeter, whereas, hectometer, dekameter, and decimeter are seldom used. In mass we use kilogram (called simply "kilo,") gram, but decigram, centigram and milligram are much less used. In volume we use the cubic meter, hectoliter, liter and cubic centimeter (never called milliliter). Specific gravity multiplied by volume gives us mass (weight in common usage); conversely, mass (weight) divided by specific gravity gives volume. Compare for a moment these operations with an attempt to get from cubic inches to scruples and drachms, or vice versa. In a word the metric system is homogeneous throughout and that one fact ought to be sufficient to speedily accomplish its adoption.

Let us see what is the status of the metric system to-day and what are its claims to our favorable consideration. In the first place it

should never be called the 'French system;' the French first had the good sense to adopt it, but it is in no wise French, even the names being taken from the Greek and Latin. The metric system is not only entirely homogeneous as regards its various standards and units, but it is the foundation of a whole system of absolute units for measurements of every conceivable quantity. We have in this country the amusing spectacle of a metric superstructure and foundation, with a very heterogeneous unscientific ground floor intervening. We are almost as familiar with "ohms," "amperes" and "volts" to day as we are with "pounds," and "feet," and more than we are with various "ounces," "scruples," "drachms," etc. Yet we could not measure an ohm or a volt without the metric system, they are metric units.

Among the blessings which the era of electricity is going to bring us the metric system as a whole. Already we find the "kilowatt" challenging the antiquated "horse-power" for popular favor, and we are bringing up a generation of engineers who appreciate the merits of the system.

To look at the subject from another point of view, let us suppose we have a yard or pound and wish to know whether it is "true and lawful." After some inquiry we may learn that we must send it to the Coast and Geodetic Survey, a department of the U. S. Treasury, at Washington, D. C. which has the custody of the United States standards. In due time we should receive our yard or pound back again with the report of their errors. They have been compared with—what? A standard yard, a standard pound? Not at all. They have been compared directly or indirectly with the "national prototype standard meter and kilogram," which are the copies of the meter and kilogram of the "archives" and have been attested by the International Bureau of Weights and Measures" at Paris, and issued to each of the co-operating governments. Thus to-day both ends of our system are metric. The "meter and kilo of the archives" are our standards and our more complete units are directly derived therefrom. Only our two intermediate units, the foot and the pound, are in the old system, if indeed, such a heterogeneous conglomeration can be dignified with the name of "system." Let us hope that this anomalous condition will soon pass away. The physicist and the chemist already use the metric system exclusively, and we look to the apothecary and the physician to take the next step toward the millennium when our antiquated units will be laid away with the antiquated methods of communication and transportation, and when we shall no longer accomplish twentieth century deeds and measure them in mediæval units.—*N. Y. Alumni Journal.*



DAVID WATSON.

Mr. David Watson, President of the Montreal College of Pharmacy, is a member of the well known firm Kerry, Watson & Co., wholesale druggists. Mr. Watson is a native of "Auld Scotia." like many of the men who have made names and fortunes for themselves in this country. After serving his apprenticeship to the drug trade at Arbroath, he came to Canada in 1857, and entered the drug business as clerk for the late Dr. Bowman, on McGill street, which position he resigned to enter the service of Carter, Kerry & Co., in which he pushed his way by business capacity, and perseverance, until he became a partner in the firm now known as Kerry, Watson & Co. Mr. Watson is well known all over Canada, having travelled for his firm many years, and was this year elected President of the Dominion Travellers Association. He has been connected with pharmaceutical legislation ever since its inception in this province and has held many offices in the Association and in the College, in the latter he has held the position of President since 1888. To his efforts are greatly due the fact that the college is now installed in a handsome building which is almost free from debt.



C. J. COVERNTON.

Vice-President of the Montreal College of Pharmacy, was born in Norfolk county, Ontario, and entered the drug business in 1861. After serving three years with Dr. Jno Wilson of Simcoe, he came to Montreal in 1864, and commenced business in 1868, on St. James street, with the late Mr. Tate, the firm name being Tate and Covernton. Mr. Tate dying in 1872, Mr. Covernton carried on the business alone and in 1878 removed to Bleury street, where he has since carried on business as C, J. Covernton & Co. Mr. Covernton has a large and lucrative business being the proprietor of several well known specialties, and as he enjoys the confidence of physicians and the public, his dispensing business is extensive.

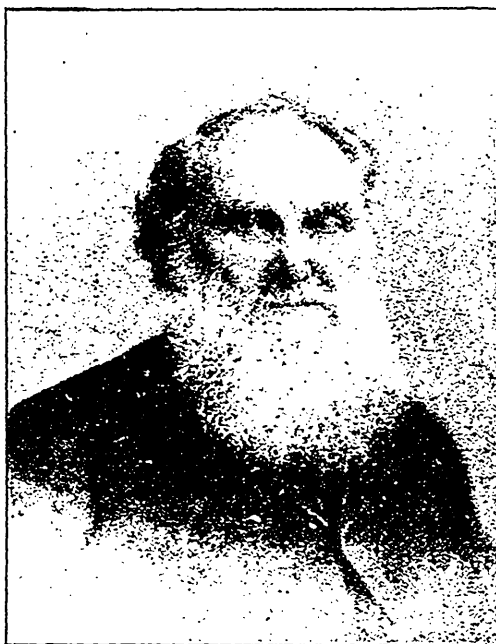
Mr. Covernton has been prominently identified with pharmaceutical matters in this province. He has been connected with and held many offices in both the Pharmaceutical Association and the the College, he was first Vice-President of the former for some years and has held the same office in the College since 1892.



MR. MUIR.

Mr. Muir was born in the city of Montreal and at the age of 14 entered the study of pharmacy with the old firm of Lyman, Kneeshaw & Co., (now Lyman Bros. & Co.,) of Toronto, with whom he served an apprenticeship of five years. In November, 1851, he entered the wholesale establishment of Carter, Kerry & Co, Montreal, remaining in their employ until the following June, when he removed to Hamilton, Ontario, and entered the establishment of Hamilton & Kneeshaw, as their assistant. In 1855, he bought out Mr. Kneeshaw's interest in the firm, and for 10 years carried on the drug business with Mr. Hamilton under the firm name of Hamilton, Muir & Co. In September, 1865, Mr. Muir removed to Montreal and opened a very handsome drug store, on the corner of Place d'Armes square and Notre Dame street, when he continued on business for 10 years. Mr. Muir was one of the founders of the Pharmaceutical Association, and was its first Registrar, holding that position from 1870 to 1879, when owing to pressure of other business he resigned. For 10 years he was one of the most popular travellers of the firm of the Davis & Lawrence Company. In April, 1888, Mr. Muir was re-appointed Secretary-Registrar of the Pharmaceutical Association of the Province of Quebec, and Secretary of the Montreal College of Pharmacy, which offices he still hold, much to the

satisfaction of the councils of both institutions, whose interests he has always at heart. He has three times represented these institutions at the Conventions of the American Pharmaceutical Association, and at the recent International Pharmaceutical Congress, held in Chicago in August last, was elected one of the Vice-Presidents of that Congress, and a member of the Committee on Pharmaceutical Education. There is probably no person in this province better acquainted with Pharmaceutical Law and Legislation than the subject of this sketch.



MR. ALEX. MANSON.

Alex. Manson, Treasurer of the Montreal College of Pharmacy is a native of Thurso, Scotland, was born in 1832. He acquired his knowledge of the drug business as an indentured apprentice in Golspie, Sutherlandshire. He came to Canada in 1858 and entered the establishment of Lyman, Savage & Co., now Lyman, Sons & Co, in May 1859, where he gradually worked his way up until he ultimately became a partner in the business. On the dissolution of that firm in 1883, caused by the death of M. B. Lyman, his connection with the firm ceased, and in February, 1884, he became associated with the firm of A. Ramsay & Son in the Paint and Oil trade, where he still remains. He took an active interest in all the movements inaugurated to elevate the



standard of the drug business in Montreal and the Province of Quebec, and was instrumental with others in establishing the College of Pharmacy and in organizing the Pharmaceutical Association of the Province of Quebec, being a charter member of both institutions. Mr. Manson has filled various positions in the Association and in the College, having been President of the first for 4 years, from 1879 to 1883 and has been Treasurer since that time to the present day, and was for over twenty-five years, a member of the Board of Examiners. Mr. Manson has also been Treasurer of the Montreal College of Pharmacy since 1884.

#### THE LATE JNO. J. HALL.

We regret to learn of the death of Jno. J. Hall, President of the Ontario College of Pharmacy, on March 22d from an attack of inflammation of the lungs.

Mr. Hall was one of the most prominent men in pharmaceutical matters in Ontario, and his loss will be much felt as he was an earnest worker for the improvement of pharmacy. He represented the Woodstock district for many years on the College Council, and in 1892, was elected President of that body. He was also a member of the Town Council for many years and in 1893 was elected Deputy Reeve, and at the last election was a candidate for the mayoralty, he was also one of the representatives of the Ontario College of Pharmacy at the International Pharmaceutical Conference held at Chicago last summer.

#### Pharmaceutical Association of the Province of Quebec.

##### Preliminary Examination.

MONTREAL, APRIL 5TH, 1894.

N. B. You are requested to—

1. Write on one side of the paper only.
2. Number your answers so as to correspond with the written questions.
3. Number the sheets of paper in their proper order.
4. Candidates will be careful not to commence a new subject on the same sheet with another, and fold each subject separately, putting on the back of the sheet your No. and name of the subject treated.

##### FRENCH FOR ENGLISH CANDIDATES.

1. Translate into English :  
Monsieur, je vous prie de m'envoyer par le prochain courrier, si cela est possible, le prix

de votre remède pour les marchands qui en achèteraient cent bouteilles.

2. Translate into French :

Gentlemen—Please send us by express, three cases brown shirting of the quality before ordered, and draw on us for the amount at ten days' sight.

##### HISTORY.

1. Give one important event connected with each of the following names :  
Cartier, Champlain, La Salle, Frontenac, Maisonneuve.
2. What constitutional changes occurred in Canada in 1847 and 1867 ?
3. The Seven Years' War—its causes and results, (as affecting France and England).
4. Name five of the most important events and five of the most prominent statesmen of Victoria's reign.
5. Describe concisely the causes of the French Revolution.

##### ARITHMETIC.

1. Find the product of the Greatest Common measure and the Least Common multiple of 256 and 176.
2. Find the cost of papering a room 25 ft. long, 18 wide and 12 high, with paper in rolls 16 yds. long, 18 in. wide, costing 75 cents per roll.
3. Divide  $86\frac{1}{4}$  oz. of salt into two packages, the larger having twice as much as the smaller.
4. Simplify the following expression :  

$$\frac{2\frac{1}{2} + 3\frac{1}{3}}{2\frac{1}{2} \div 3\frac{1}{3}} \times \frac{9}{35} + 3.2 - \frac{1}{1 - 2\frac{1}{4}}$$
5. Find the difference between the Simple and Compound Interest of \$500 for 3 years and 4 months at 6 p.c.

##### LATIN.

1. Give five deponent verbs governing the ablative.
2. Decline the name Jesus.
3. How is the Imperative formed ?
4. Give the principal tense of negligere, ordiri, inferre, poscere, currere.
5. Translate into good English, and yet as literally as possible :

It, secundum ea, multae res eum hortabantur quare sibi eam rem cogitandam et suscipiendam putaret, imprimie quod Aeduos, fratres consanguineosque saepenumero ab senatu appellatos, in servitute atque in ditone videbat Germanorum teneri, eorumque obsides esse apud Ariovistus ac Sequanos intelligebat ; quod in tanto imperio Populi Romani turpissimum sibi et reipublicae esse arbitrabatur. Paulatim autem Germanos consuesce re Rhenum transire, et in Galliam magnam eorum multitudinem venire, Populo Romano periculosum videbat : neque sibi homines feroces ac barbaros temperaturos existimabat quin, cum-

omnem Galliam occupasset (ut ante Cimbri Teutonique fecissent), in Provinciam exirent, at que inde in Italiam contenderent, praesertim cum Sequanos a Provincia nostra Rhodanus divideret.

## GEOGRAPHY.

1. Where is the peninsula of Prince Edward situated?
2. Name the river and the canal one would follow in France, in passing from the Atlantic Ocean to the Mediterranean Sea.
3. What is the largest river in Europe? Where does it rise, and where does it empty?
4. Give the English Colonies in the world.
5. Name the divisions of the North-West Territory.

## ENGLISH LANGUAGE.

1. Write and punctuate the passage dictated.
2. Write a description of the room in which you are seated.
3. Correct the following sentences :
  - (a) The *Star* has the largest circulation of any paper in the city.
  - (b) Lay down and rest yourself.
  - (c) These kind of pens don't suit me.
  - (d) Each of the men must sign their names.
4. Change the voice but not the meaning in the following sentences :
  - (a) And Henry shall the Duke depose.
  - (b) By thee, I am bereaft of my children.
  - (c) He taught his son Latin.
5. Parse underlined words in the following sentence :

Silver and gold have I none : but such as I have, give I unto thee.

## Pharmaceutical Examinations.

The quarterly preliminary examination of the Pharmaceutical Association of the Province of Quebec, for students entering the study of pharmacy, was held on Thursday last, in Montreal and Quebec, when thirty-five candidates presented themselves in Montreal and five in Quebec, of them the following, named in order of merit, passed, and are entitled to be registered as certified apprentices, namely :—Gaston St. Jacques, A. Quintin A. Desormeau, J. B. T. Biron, M. Charbonneau, Allan Ayerst, and Wilfrid Landry.

The following candidates passed on all subjects but one, for which they will be required to present themselves in July next, namely :—W. J. O'Connor, French, T. D. Lyman and Achille Roy, geography, J. A. Goyer, T. E. Gagnon and G. P. Plamondon, arithmetic.

The remaining candidates will require to take all subjects should they present themselves again.

These examinations are held on the first Thursday of January, April, July and October, and candidates are required to file their appli-

cations with the Registrar at least ten days before the date of examination.

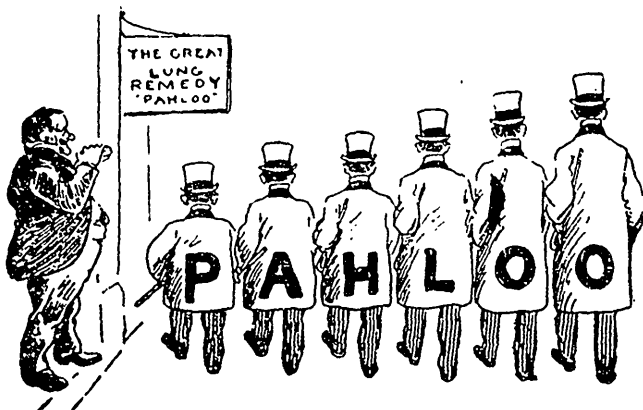
The subjects examined upon are ; English, French, Arithmetic, Latin, Geography and History.

The Examiners are : Prof. A. Leblond de Brumath, and Prof. J. Gamelle.

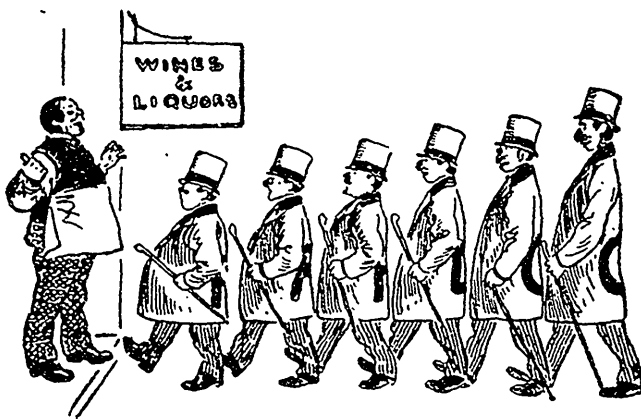
## MODERN BOTANY.

Professor J. Reynolds Green, Professor of Botany to the Pharmaceutical Society, gave a lecture on "Recent Work on the Physiology of the Pollen-tube" to the Liverpool Biological Society, on March 9. The lecturer described minutely the process of germination of the pollen-grain, which he said is easily observed under the microscope. If the grain be treated with a solution of chloral hydrate containing iodine, the grain is rendered transparent, and granules of starch contained within are stained violet. There are a large number of starch-granules present, except in young grains, when there are few, if any. These starch-grains are seen to travel gradually down the pollen-tube, and slowly separate from each other ; then, passing to the point of activity (the apex of the tube), their character becomes changed, first into dextrine, and next into sugar. This is beautifully seen in the pollen-tube of the lily : as the granules approach the apex their color (violet) changes into red, indicating dextrine. Thus the pollen-grain ministers to the nutrition of its own tube. There are in the tubes granules which are not starch, and they are extruded from a very minute orifice at its apex. It is not an unreasonable hypothesis that these granules are enzymes, which play an important part in the nutrition of the tube. If the style of the lily be examined at the right age, it will be found that starch is being carried to it by the fibrovascular bundles, and then formed into small granules, providing in this way more nourishment for the pollen-tubes. This is observable in both longitudinal and transverse sections. Further provision for the nourishment of the tube is made in the form of malt-sugar—probably the result of the action of the enzymes on the starch-granules. At a certain age the enzymes are found to increase ; also the starch exceeds what is found in the tube originally, and it is supposed that the tube stores away at first more nutritive matter than it requires, in order to provide for contingencies. In the pollen of the *Zamia* there is no starch, but if the tube be placed in a solution containing sugar—say, the pulp of the apple or pear—starch at once begins to form. Sugars (malt, grape, and cane) are frequently found in the tube instead of starch.—*Chem. and Drug.*

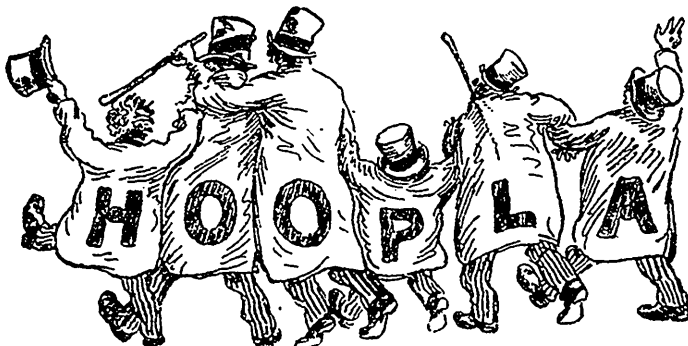
HOW A BRILLIANT IDEA MISCARRIED.



Proprietor of Patent Medicine—Ah! That's what I call advertising! Just wait till they get on the Avenue.



On the way to Avenue. (Wetting up.)



One hour later.

**FORMULÆ.**

PULVIS ACID. SALICYLICI C. TALCO.

- Salicylic Acid. Pow'd..... ̄ i
- Starch..... ̄ iij
- Pow'd Talc..... ̄ iij

Mix

Useful as a dusting for excoriations, sweating of the feet and as a nursery powder.

STICKY FLY PAPER.

- Resin..... 60
- Linseed Oil..... 36
- Yellow Wax ..... 4

MOSQUITO OIL.

- Oil of Pennyroyal..... 1
- Pine Tar..... 2
- Castor Oil..... 4

Mix.

MOSQUITO OIL.

- Carbolic Acid ..... 2
- Oil of Pennyroyal..... 4
- Spt. Camphor..... 4
- Oil of Tar..... 8
- Castor Oil..... 12

SYRUP OF SARSAPARILLA WITH POTASSIUM IODIDE.

- Potassium Iodide..... 80 grs
- Fld. Ext. Burdock..... 2 oz
- “ “ Stillingia Comp ..... 2 “
- Senna..... 1 “
- Oil of Wintergreen..... 10 m
- Syrup to make..... 16 oz

TOOTHACHE DROPS.

- Rad. Pyrethri..... ̄ iss
- Opium..... ̄ iiiss
- Spirit..... ̄ ivss

Macerate one week and add :

- Menthol..... ̄ i
- Chloroform..... ̄ iiiss

BRILLIANTINE.

- Castor Oil..... 3
- Glycerine..... 4
- Alcohol . ..... 10

Perfume to suit.

CASCARA CORDIAL.

- Fld. Ext. Cascaræ Sag..... ̄ iss
- Elix. Taraxaci Co..... ̄ vj
- Elix. Aromat..... ad ̄ xvj

Mix and after standing two days filter.

GINGER ALE SYRUP.

- Soluble Ess. Ginger..... 4 oz
- “ “ Capsicine..... 2 dr
- “ “ Orange..... 2 oz
- “ “ Tangerine..... 2 oz
- “ “ Lemon..... 1 oz
- “ “ Rose..... 1 drm
- “ “ Neroli ..... 1 “
- Citric Acid .. ..... 1 ½ oz
- Syrup..... 1 gallon
- Caramel..... q.s.

WITCH HAZEL CREAM.

- Lanoline..... 4
- Vaseline..... 4
- Dist Ext. Witch Hazel..... 2

Mix.

**Allan's New Drug Store.**

Mr. J. Roberts Allan, of Ottawa, has recently moved into his new building, built on the site of the old stand, 75 Rideau street, which was occupied for over half a century as a drug store, first by the late Mr. Neeshaw who was succeeded by E. S. Lyman.

After the death of the latter, the late Mr. Roberts took over the business and carried it on for over 40 years, the present occupant succeeding to the business on the death of Mr. Roberts in 1892.

The new building is of pressed brick, with sandstone trimmings and has a frontage of 34 feet and is three stories high. The interior presents a very fine appearance, the ceiling is finished in wood, in square panels, while the fixtures are of quartered oak and are beautifully finished, the cabinets on one side contain the patent medicines while on the other side the tinctures, powders, etc., are kept in handsome recessed ware, while at the end of the shop is a very large mirror, which has a very fine effect, on one side of which is the door leading into Mr. Allan's private office and on the other, that leading to the dispensing department, the latter is fitted with every convenience necessary. The cellar is used for storing heavy goods, while in the upper flats are kept the patent medicines and sundries.

The building is lighted by electric light, and contains an elevator, steam heating apparatus and all modern improvements. It is without doubt one of the handsomest stores in Ontario, and we have no doubt will prove a bonanza to the enterprising proprietor.

## NOVA SCOTIA.

HALIFAX.—We are pleased to know that Mr. D. G. Cameron, druggist, is able to attend to business after being confined two weeks to his house.

WINDSOR.—J. A. Shaw, the veteran druggist, will return from England this month. His large interests in shipping necessitates his occasional absence from business.

PORT MILGRAVE.—Mr. TUPPER FOSTER, the genial clerk, for some time with J. D. Copeland, Esq., Antigonish, will shortly open out in drugs. The Journal extends best wishes.

MIDDLETON.—Dr. S. W. Miller is one of the most enterprising druggist in Nova Scotia. His proprietary medicines are well known throughout the maritime provinces.

## ADVERTISING MISCELLANY.

An item which has been floating around for some time in the "funny" columns of the press, reads as follows: "A farmer at Stanberry, Mo., had enough simple faith in mankind to advertise in the local newspaper for the recovery of a ten-gallon keg of blackberry brandy, which he lost out of his wagon on his way home." The expression "simple faith in mankind" discloses the reason for this piece of humour, and the average reader at once puts human nature against simple faith, and comes to the conclusion that the man who advertises for such a commodity, under such circumstances is throwing his money away. This verdict will be found to be almost universal, but similar instances are not confined to farmers who have simple faith in mankind. There are apparently many business men following the same course. They have goods to sell and naturally expect that their advertising will have the desired result of aiding in such sales, but many of them are following after a certain manner the methods of the farmer. In the first place they are not advertising the right kind of goods, and in the second, they may word their advertisements in an unattractive manner, or in a way to actually repel trade, for we can imagine that perhaps a portion of the farmer's "ad" started out next day with the idea of finding that keg of blackberry brandy, and appropriating it to their own use instead of restoring it to its rightful owner.

The advertising of the fact that a man keeps certain staple goods, or a complete stock of goods has no effect upon the buyer, as the latter knows that every merchant in the same line of business does the same thing, or pre-

tends to. This sort of advertising may be illustrated by supposing that an announcement was made by a druggist that he furnished a cork in every bottle of medicine sold. This would have no effect upon his customers, as they are already aware of the fact, and they also know that all his competitors do the same. But if the announcement were made to read "corkscrews," attention would be attracted at once, as the act is somewhat unusual, and all druggists do not do such things.

The public now looks for bargains or special offers, and the man who desires to advertise himself or his staple goods must do it with something else. He must choose 'leaders,' and depend upon their drawing power to get people into his place of business. There are several successive steps in performing such a task which must be carefully observed. The first is the selection of an article which the public wants, and this must be either something new or a novelty, or it must be some staple article upon which prices may be so fixed as to attract attention. This latter method may be a reprehensible practice from the ethical standpoint of some, but unfortunately our commercial captains pay more attention to dollars than to ethics, their actions being usually beyond the control of even a majority, and we are only dealing with such matters as we find them. The second step is engaging the attention of the public. Two examples of advertising to accomplish this end are shown, which speak for themselves. Neither is entirely new, but it is an easy matter to settle their comparative ages.

JOHN DOE,

DRUGGIST,

Dealer in Drugs, Medicines, Toilet Articles,

. . . Perfumery, Etc . . .

PRESCRIPTIONS CAREFULLY COMPOUNDED.

43 Easy Street, - PILLVILLE.

The first is a rather languid announcement that John Doe is still on earth, doing the same kind of business that he did last year, and perhaps has some of the same old goods. If anyone happens to want any of his goods, or should happen to get sick, why, John is still there, and people can if they feel like it, drop in and see him the next time they come to town. Richard Roe, on the contrary, invites people to come in right away, and strike while the iron is hot. That soap may all be gone

BLANK'S  
FAMOUS.

# Toilet Soap

6 CENTS  
PER CAKE

This is the usual 10 cent cake. I bought a big lot of it at big lot prices. I knew it wouldn't go out of style. Its better to sell soap on small profits than to sit around complaining of the hard times.

Now is your Chance-

**RICHARD ROE, Druggist,**

10 Hustle Ave. - PILLVILLE.

if they don't hurry. Everybody knows that he keeps the same kind of goods as his neighbor, Doe, does, and compounds just as carefully, but they didn't know he was selling that soap at 6 cents per cake. They will go for the soap, but at the same time they cannot help seeing his entire stock of goods, and quite likely when they leave home to get some of that soap, they will conclude that as they are going to Richard's place of business they might as well buy a tooth brush, as they are saving a few cents on soap and can thus afford it.—*Pharm. Era.*

## OLEATES, P. B.

By EDWIN WILLIAMS.

Read at a meeting of the Liverpool Chemists' Association.

We have two official oleates and a number of oleo-palmitates, such as lead plaster, ammonia liniment, carron oil, hard soap, and oleo-stearate as curd soap, each and all of indefinite composition. I will confine my remarks to what are classed as oleates in the B. P. The formula for real oleates is  $M.C_{18}H_{33}O_2$ , or  $M''(C_{18}H_{33}O_2)_2$  according to the valence of the metal. There are likewise acid oleates. The oleates dissolve in cold absolute alcohol, ether, and petroleum benzine, a property by which they may be distinguished and separated from the palmitates and stearates.

Oleates were expected to replace in the Pharmacopœia a great number of inert ointments now in use. A medicament dissolved in one will prove more efficacious by penetrating deeper into the tissues than an insoluble powder distributed on the surface. That the oleates have not found that important place anticipated for them is possibly largely attributed to the fact that our oleates are not worthy of the title, being simply a solution of the metal or oxide in oleic acid. They are of indefinite strength and most of the samples that I have obtained contained palmitate or stearate, derived perhaps from the impure

oleic acid, although some samples contained sufficient of these impurities to warrant my saying, that they were derived from the soap that they had been precipitated from.

Oleate of mercury is the oleate most in demand. I find it a most satisfactory preparation. When the proper amount of oxide has been added, and the B.P. directions followed, it often takes seven days—sometimes longer—to form a solution, which, in my opinion, indicates that it is not a true oleate. The oleic acid which is in excess soon begins to take up the oxygen, reducing the mercury first to suboxide, which is shown by the change of colour from light brown to slate colour, and immediately the whole of the oleate becomes metallic mercury. It takes long to make, and after it is made it is not what it is represented to be. This instability causes trouble to the dispenser, as it prevents him sending out the article always of the same consistency, appearance, and therapeutic strength.

The only way out of the difficulty that I can see would be a modification of the B.P. process, whereby you could make it in a short time. A method that I have found to answer is to place the mortar in a pan of boiling water, placing the weighed oleic acid in the mortar, and maintaining the heat until the oleic acid is about 100°F, then dusting the oxide of mercury into it, afterwards stirring until a solution is effected, which takes about fifteen minutes. The oleic acid must not be subjected to a great heat, as heat favours the absorption of oxygen, causing it to smell disagreeably and become rancid. I found that oleate of mercury 10 per cent. made in this manner would keep a month and retain its characteristics. A stronger solution will keep much better, as the excess of oleic acid is the cause of deterioration, owing to its reducing properties.

A true oleate should be made by precipitation and diluted as required. A good method is to make a saturated solution of Castile soap in water, allowing it to stand for a day to get rid of the sodium palmitate, which will deposit, decanting the clear solution and filtering. The filtrate will be composed principally of sodium oleate with some palmitate. Make a solution of a neutral salt of the metal, and precipitate the oleate by reacting on the soap solution. The solution of the metal must not be acid, or we should get some free oleo-palmitic acid. In the case of mercury we should require to keep it boiling briskly for two or three minutes to aggregate the particles. This precipitate—an oleo-palmitate of the metal—can be strained and adherent water got rid of by evaporation in the water-bath.

The oleate may be separated from the palmitate by dissolving out with petroleum ben-

zine or ether, which will dissolve the oleate but not palmitate. The filtered benzine solution evaporated will yield the oleate in a fair state of purity. This I would call a real oleate, and not a mixture or a solution of the metal in oleic acid. It could be diluted to any strength with lanoline, spermaceti ointment, or even oleic acid.

### ENGLISH PHARMACEUTICAL NOTES.

FROM OUR LONDON CORRESPONDENT.

The recent publication in a Canadian drug journal of a description of the London drug-auctions has caused some amusement among the brokers. This is hardly surprising when it is seen that they are credited with marvellous powers of prescience regarding the rise and fall in prices, and a pathetic anecdote is related concerning the profound disappointment experienced by a broker who named a figure at which a parcel would sell subsequently found that it had changed hands at a half-penny less than he said!

The subject is evidently of interest so an account of a recent visit to the Crutched Friars warehouse—London's big drug storehouse—may be opportune. On entering the gateway in Crutched Friars we notice the sort of sentry-box from which a custodian peers. Strict surveillance is taken of all passing out with parcels, etc., as the company used to be frequently defrauded and curious tales are told of the smuggling of silk, diamonds, etc., in the days when these were heavily taxed. Passing across the quadrangle which gives a good view of the gloomy and uninteresting 6-storied pile, we enter the rhubarb floor. Here a number of men are employed in opening cases, sorting the different qualities and making up again in cases ready for sale. There are some 800 cases in the room and the smallest case weighs 1 cwt., whilst the largest weighs as much as 6 cwt. Formerly rhubarb all came in the large cases, but the smaller ones now predominate. The past season has been a poor one for rhubarb owing to the continuous wet in China.

In an adjoining room sample cases are displayed under the names of the various brokers and the different varieties such as high-dried, Shenshi, Canton, etc.

The voluble attendant assures us that the best rhubarb goes out of the country chiefly to Germany and Russia. Agents for these countries will pay very high rates for slightly and heavy rhubarb. By a staircase in this room we pass to the musk in piles. There is also a small stock of ambergris.

By means of an elevator we pass to the top floor as here is the best display of drugs, prepared for the next auction day. The intervening floors are stocked with sponges, hides,

gums, &c. The whole of the top floor is packed with drugs, hardly leaving room to pass between the bales and cases. Along one side is an assortment of aloes. Curaçoa in cases appear very prominently but of indifferent quality, those in gourds are better and some capey kinds seem fair. Socotrine or Zanzibar aloes in monkey-skins and also in kegs of about 80 lbs weight. Cape aloes are kept at the London stocks.

As we pass along we notice on the floor cases of gum benzoin, sawn through and broken so as to see the quality throughout. Some fine almond blocks of Siam benzoin are very attractive and would make a good window display. Several bales of Senega root, nearly all the Manitoba variety, are displayed, and Ipecacuanha is in such profusion that it covers a good deal of floor space. Both Rio or Brazil and Cartiagena varieties are to be seen. Huge bales of sarzæ stand against the wall and the different tints of Jamaica, Honduras etc., make a pleasant picture. Two or three bags of Kola nuts are pointed out to us as curiosities for which there has been a small demand. There is also a solitary case of Kino for which the fortunate owner demands an exorbitant price. Some bags of columba root of poor color and cases of dragon's blood attract passing notice. In the adjoining room is the Museum. At present a very unpretentious affair and chiefly remarkable for its unusually fine assortment of New Zealand gums, varieties of Kaurie gum. A number of men are engaged in this room uncasing and removing the covers of bales &c.

Besides the Crutched Friars Warehouses, drugs are often on view at several of the wharves, whilst many of the oils are stored at Smith's warehouse.

The auction or public sales takes place on Thursdays, fortnightly, at the New Corn Exchange Sale Rooms, Market Lane. Catalogues are printed in the names of the various brokers who take it in turn to ascend the rostrum to offer their goods. The room is small, probably holding not more than 100 persons and the rostrum reminds one of an antiquated pulpit. When the broker takes his seat in the rostrum, he proceeds at once with his own catalogue whilst his chief clerk, standing on the steps, makes notes of buyers and prices at which the lots are knocked down. A constant hum of conversation and the moving in and out of brokers and buyers make it difficult for the unaccustomed spectator to follow the proceedings. The total absence of excitement and at times almost even of interest certainly distinguishes the London drug auctions. There are no samples and usually no questions. Most of the brokers have offices in Mincing or Mark Lane and do a large amount of general

business with wholesale druggists, merchant shippers, etc., quite apart from the auction room. Parcels, which are withdrawn at the auction owing to the reserve price not being reached, frequently change hands subsequently and market prices therefore do not transpire.

Comparisons between the U.S.P., and the B.P. are every day being made and always favorable to the States. An Edinburgh pharmacist has reviewed the assay processes of the new U.S.P. and with exception of the opium assay method speaks very highly of them. There is no more important part of a pharmacopœia than the standardisation methods adopted and pharmacists should co operate to obtain satisfactory standards and methods in the new B.P. Anything which tends to uniformity in percent preparations is a step in the right direction. But there are several important questions which might be discussed with advantage before the pharmacopœia is taken in hand. Many leading pharmacists hold that fluid extracts are too highly concentrated—that the proportion of 1 in 1 is a mistake. There is also the question about the introduction of patented articles and imitations of proprietary medicines. Something like uniformity in the dosage of a class of preparations, such as tinctures, would probably be of more value than the 1 in 10 or 1 in 8 proportion of drug in the galenical. Now is the time for urging effective arguments in favor of reform and all representations will be very carefully considered by Professor Atfield and his committee.

The market has been rather featureless of late with only jobbing business. Menthol is much easier and for forward delivery is nearer its old level. Opium is very firm owing to large American purchases, but prices will probably shade lower. Civet is scarce and dear. Cubebs, Chiretta and Columba are lower.

### The Relation of Teaching to Research in Chemistry.

By W. E. STONE.

It is eminently proper that this Congress of chemists should devote some portion of its attention to the teaching of the science. This not alone because it is desirable that chemists be well taught, but also by reason of the prominent place chemistry has secured in the curriculum of every college and university as well as in many high schools. The teaching of chemistry in institutions of learning is a modern invention, introduced and developed within the memory of living men. The chemical laboratory as a means of instruction was first recognized in America about thirty

years ago. Now the chemical lecture room and laboratory form an essential part of the equipment of every institution for higher education. It naturally follows that teachers of chemistry have become numerous, and positions of this kind are the goals toward which many young chemists aspire.

The teaching of chemistry has therefore become a kind of profession with its own peculiar limitations and disappointments as well as pleasures and aspirations. The discussion of methods and details of teaching chemistry I leave to the speakers who are to follow me. I wish, however, to consider briefly what I regard as the most important feature of didactic chemistry, viz.: The attitude of teachers of chemistry toward research.

A survey of the field reveals an interesting comparison between America and Europe in this respect. In the European universities we find the teachers of chemistry including the famous investigators and discoverers. It is a recognized function of the teacher that he be also an investigator. Indeed his appointment to a chair in any of the great universities is dependent upon his standing as an investigator and he retains his position so long as he maintains his standing. In short, one of the necessary qualifications of the teacher is active participation in scientific research. Turning to America, two features are at once noticeable. First, a less degree of activity and attainment in scientific research, and second a weaker interest in the spirit of investigation. We must acknowledge that our teaching and the results of our research are still inferior to those attained abroad. The reasons for this are probably complex, but chiefly they are to be sought in the relations of our teachers to investigation. They do not lack enthusiasm because there are many young men with the successes and examples of their European preceptors still in mind. Our American teachers are not at the head of their profession by reason of any lack of training or enthusiasm or material equipments. If I ask then why, anyone of my hearers can answer promptly. Every American teacher of chemistry has a common complaint to voice. They will tell you that the demands made upon them as instructors are alone culpable for their meager contributions; to the annals of research. Too many students. Too many hours of teaching. Too many subjects to be taught. These are the counts in the indictment against the conditions under which our American teachers exist.

In short, to sum up the existing status, we find ourselves somewhat in the rear of the foremost ranks of investigators and teachers. We find these branches most flourishing where the activity of the investigator is a required qualification for the teacher. In our own country



we find these requirements of secondary moment or they are lost sight of entirely. This seems to me not only a great fault in our educational system, but also a very serious hindrance to the progress of American chemical science.

I am aware that some will fail to see the relation between teaching and research in chemistry and will maintain that the teacher should be only teaching and the investigator only occupied with investigation.

We may regard this matter from the standpoint of the student, from the standpoint of pure science, and finally from the standpoint of the teacher himself.

The student has a right to expect instruction in chemistry either as part of a liberal education or as a preparation for a professional career. In either case it is or should be taught, not as a dead and completed science, but as a constantly advancing vital, living science. It is or should be taught as a science of investigation. The only one who can teach it as such must be himself an investigator. No one would maintain that the discoveries of Woehler or Hoffman did in any way detract from their effectiveness as teachers. On the contrary, it is apparent that in their characters as investigators they transmitted an inspiration to their pupils which has given to modern chemistry an incalculable impetus.

Again, science looks mainly to teachers for its advancement, since, as a rule, they alone have or should have at command the necessary funds, materials, and equipments for the prosecution of research. Moreover, they alone have or should have the leisure and unbiased mind so essential in the search for truth.

Lastly, the teacher himself has no right to content himself with the single aim of the *plagiat*. If he would not stagnate, he must advance. He must be himself a student, standing as interpreter between the unknown and his pupils. The true attitude of the teacher of chemistry toward research is one of interest and active participation in precisely the same degree as he manifests interest in and sympathy with his pupils.

—Read at the *World's Congress of Chemists*.

### AN IMPORTANT PEPSIN DECISION.

In last week's issue of the *Reporter* we published the decision of the court in the suit instituted several years ago by the Carl L. Jensen Company against the New York manager for Parke, Davis & Co., for alleged infringement

of the plaintiff's patent for the manufacture of pepsin. The progress of the litigation was watched with interest by the trade, and as the final adjudication of the questions at issue is of general importance a brief review of the leading facts in the case will be opportune at this time.

The legal controversy originated in 1889, in the United States Circuit Court of New Jersey, the plaintiff relying mainly upon the second claim of his patent in which his product is described as "having a digestive power of one to seven hundred." The defense was that the pepsin complained of had a digestive energy equalling one to two thousand, and that while it possessed some of the physical characteristics of the Jensen product it was an entirely different article. The defendants insisted that their pepsin could not be made by the methods described in the patent, and they further assailed the validity of the Jensen patent, but the latter point the court did not consider it necessary to pass on.

The gist of the patent appears to be that the process of manufacture includes converting the stomach tissue into peptone by the action of its contained pepsin under favorable conditions, and the retention of all the peptone, with its contained pepsin so found. An expert called on behalf of the complainant seemed to take this view of the patent, and stated that in his opinion a pepsin which is made by a process which aims at a partial elimination of the peptone is not the pepsin of the Jensen patent.

Another expert testifying for the defense, said that the pepsin sold by the defendants could not be produced under Jensen's patented method of manufacture, and that the pepsin of Parke, Davis & Co., is practically three times as strong as any that can be made by the Jensen process. He further deposed that the pepsin of defendants differed both physically and chemically from that of the complainants. It appeared on the trial of the case that the defendants' pepsin was made in accordance with a process which secured the removal of a portion of the peptone and a considerable part of the soluble salts contained in the peptone, by dialysis.

After hearing the evidence and carefully examining the various issues presented, the judge came to the conclusion that the digestive power of the pepsin made by defendant indicated that it was not, and could not be, made by the Jensen process. As these facts fully supported the position taken by the defendants, the court did not decide upon the validity of the patent upon which the plaintiffs based their action — *Oil, Paint and Drug Reporter*, Feb. 12th, 1894.

M. P. P.

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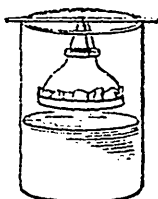
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### Chemists' Assistants' Association.

At the meeting held on Thursday, March 15, a paper was read by Mr. T. Tickle upon  
THE CHEMISTRY OF AGRICULTURE.

The author dealt solely with the composition and constitution of soils, and treated of the different processes by which the various elements were rendered fit for absorption as plant-food. He traced the formation of soils from solid rocks. Plants absorb food of three different classes:—Food-substances proper, the elements of which are carbon, hydrogen, oxygen, nitrogen, sulphur and phosphorus; food-substances of the nature of condiments; potassium, sodium, calcium, magnesium, silicon, iron and chlorine; and amongst the casual constituents of plant-food may be found bromine, iodine, aluminium, zinc, copper, zirconium, and lithium.

All of the first group are elements of the protoplasm, and essential; those of the second group are always present, but are not all essential. Potassium is necessary for the healthy development of the plant, and cannot be replaced by sodium. Iron must be present, or chlorophyll will not be developed. The function of calcium is to form insoluble salts with the injurious acids present in plants. Silicon is a subject of dispute, but it is believed that most, if not all, of the graminaceæ can do without it.

The author then dealt at some length with the properties and uses of the humus. Humic acid is a constituent of the humus, and forms soluble salts which are probably absorbed by the roots of plants. It was doubted by some authorities whether humus furnished carbon to plants, but it does play an important part in the economy of the plant; it provides the plant with most of its nitrogen, and besides, when wetted it absorbs a large amount of water, and so remains moist and cool in times of drought. The soluble contents of water contaminated with sewage are retained by the humus, and nitrates, phosphates, and many salts are forcibly retained by it. Further, by slow oxidation it yields carbon dioxide, and this being dissolved by the water present, and being retained in the humus, renders the calcium and magnesium salts soluble.

The value of soils depends largely upon the nature of the subsoil. They are much impaired if the free percolation of water and the consequent access of air is hindered, and a clay subsoil will soon render the strata of soil above it worthless, because of the amount of stagnant water which it will contain. The importance of free access of air is great, for seeds cannot germinate without oxygen. In the absence of atmospheric oxygen, the decomposing carbonaceous matter of the soil exerts a

reducing action, forming ferrous sulphide, which is poisonous to vegetation. When a soil is in the above-mentioned state, and it is improved by draining, it changes in color from black to red, owing to oxidation of the iron.

Soils are enriched in several ways. Weathering is an old practice. It owes its success to the setting free of fresh soluble matter during the year's rest. The application of manure from cattle-sheds is of great benefit, and is the outcome of several chemical processes. When manure is stacked in heaps, oxidation and fermentation takes place slowly; in the process of oxidation the carbonaceous matter produces various acid bodies. Together with this the fermentation of urea caused by a species of yeast (*Torrula ureæ*) goes on, and it is converted into ammonium carbonate, which combines with the acids formed by oxidation to form soluble but less volatile salts. When the manure is distributed over the land the ammonia salts are converted by the agency of a bacterium into nitrous acid, the salts of which are further changed by another bacterium into nitrates, and these last salts are of the greatest value for supplying nitrogen to the plants.

Plants cannot absorb nitrogen direct from the air, but some do it indirectly. From experiments made by Hellriegel, the fact was established that a large amount of free nitrogen becomes fixed by a bacterium which infests the roots of leguminous plants, and it is observed that after a large crop of vetches or clover has been taken off a field, the amount of nitrogen in the soil has increased: work has been done recently in this subject by Sir J. B. Lawes and Sir J. H. Gilbert at Rothamstead, and also by Winogradski.

Mr. Tickle also referred to the use of artificial manures, and mentioned that the presence of thiocyanates in gas-works ammonium sulphate was injurious to plant-life.

A short discussion followed the reading of the paper.—*Chem. and Drug.*

### Pharmaceutical Examinations.

The Semi-Annual Examinations of the Province of Quebec, were held in the Montreal College of Pharmacy, 595 LaGauchetière Street—commencing on Tuesday, April 17th and closing on Thursday night. Twenty-one candidates for the Major and twenty-three for the Minor Examinations presented themselves, and of these, the candidates who are named in order of merit, passed: and are entitled to be placed on the register of the Association as "Licentiates of Pharmacy" and certified clerks, respectively, as follows:—P. J. A. Alderic Brault, R. A. Taschereau, J. A. Pelletier, Henri Laurent, Wm. Lyman, J. Picotte, Wilfrid L. Taylor, J. E. A. Gauvin, Xiste Bourque

as "Licentiate of Pharmacy" and James H. Goulden, R. G. Rioux, J. C. A. Bates and T. E. Huot (equal) Alex. Lemieux, Osborn, Thos. Pinch as "Certified Clerks." The candidates were submitted to a severe, written and oral examination, in Chemistry, Materia Medica, Botany, Practical Dispensing, weights and measures and reading of prescriptions. The Examiners were: S. Lachance, W. A. Chapman, J. R. Parkin, Montreal, A. E. Du Berger, Waterloo, and R. W. Williams, Three Rivers.

**CANADIAN CASTOREUM.**

The following figures, which have been courteously supplied to us by Messrs. August Faber & Co., of 60 Mark Lane, E.C., show the quantities of castoreum offered at auction in London by the Hudson's Bay Company since 1849, and the range of prices, per lb., realized by the best quality (so called "firsts") :—

Auction.	Lbs. offered.	Price.
1849 August.....	396	43/
" December.....	1,287	50/ -56/
1850, July.....	431	60/ -61/
" December.....	1,489	58/ -60/
1851, June.....	162	60/
" December.....	1,902	58/ -59/
1852, August.....	170	77/
" December.....	2,204	61/ -71/
1853, September.....	266	60/ -61/
" December.....	2,341	32/ -33/
1854, August.....	314	44/6
" December.....	2,085	42/
1855, July.....	716	30/ -36/9
" December.....	2,450	38/6-44/6
1856, July.....	339	32/3
" December.....	2,840	30/
1857, August.....	549	25/
" December and Feb...	3,530	23/3-24/9
1858, September.....	573	25/
" December.....	3,280	21/ -23/
1859, September.....	1,319	13/6-13/9
" December.....	3,316	15/
1860, September.....	446	14/6-14/9
" December.....	4,055	16/6-17/6
1861, July.....	450	13/6
" December.....	3,546	15/3-17/3
1862, August.....	443	11/6
" December.....	2,943	16/
1863, August.....	476	12/
" December.....	3,448	19/
1864, August.....	490	12/9
" December.....	2,510	19/9
1865, August.....	747	10/3
" December.....	4,165	14/
1866, August.....	658	9/
" December.....	4,332	14/
1867, August.....	No sale	.....
" December.....	2,590	32/

1868, July.....	645	13/
" December.....	2,972	15/6
1869, August.....	681	13/6
" December.....	3,621	12/
1870, (War), August.....	1,197	6/3
" December.....	4,320	7/
1871, August.....	780	11/6
" December.....	2,697	19/
1872, August.....	481	13/6
" December.....	2,560	16/
1873, August.....	515	14/3
" December.....	2,490	16/
1874, August.....	480	10/
" December.....	2,793	23/6
1875, August.....	387	25/3
" December.....	2,524	.....
1876, August.....	273	22/
" December.....	3,900	30/6
1877, September.....	265	.....
" December.....	3,148	21/9
1878, August.....	260	20/
" December.....	1,400	21/6
1879, March.....	800	43/6
" August.....	300	30/
" December.....	2,640	25/
1880, September.....	333	26/6
" December.....	2,500	30/
1881, September.....	336	34/
" December.....	2,950	30/
1882, October.....	160	32/
" December.....	2,829	31/ -36/6
1883, August.....	642	38/
" December.....	2,400	35/
1884, August.....	642	32/
" December.....	1,519	25/
1885, August.....	200	34/6
" December.....	2,240	36/ -39/
1886, January.....	217	36/
" December.....	1,442	40/ -42/6
1887, December.....	2,033	40/6-42/
1888, December.....	1,488	43/ -45/
1889, December.....	1,759	45/6-50/6
1890, December.....	1,845	48/ -50/
1891, December.....	1,480	64/ -70/
1892, February.....	345	66/6
" December.....	1,334	99/ -107
1893, April.....	350	114/
" December.....	1,085	130/ -140

These auctions were partly held in January of the following year, but the entire quantity is here included until December.

The prices are the highest and lowest figures realized by "firsts" of all marks.—*Chem. and Druggist.*

**The Formation of Coloring Matter by Microbes.**

A new process, due to G. Sencier, consists in abstracting from chromogenic bacteria and microbes or all analogous micro-organisms, the coloring matters which they either contain

or are capable of producing under appropriate conditions, as well as the by-products which are cultivated in the course of their cultivation. The invention includes suitable apparatus for carrying out the suggested process on an industrial scale.

The arrangement will be something like the following:—In a mixing vessel provided with mechanical agitator the nutritive liquor required for the nourishment of the microbes which it is desired to cultivate is prepared. This nutritive liquid is run or is pumped into a sterilising apparatus in which it is subjected to a temperature of 115°C. for a quarter of an hour to ensure complete sterilisation. The liquid is next transferred to the cultivating vats, *i.e.*, into vats the contents of which have been inoculated with the bacilli which it is desired to propagate, sterilized air being admitted in cases where this is favourable to the maximum development of the chromogenic properties of the bacilli. When a sufficiently large growth has been obtained, the contents of the cultivating vats are run into others beneath, and from these transferred to a moujetus, whence the microbes are separated from the liquor by forcing, by means of compressed air, through filters. The microbes collected on the filters are washed and then treated with such chemical agents as are required to abstract the colouring matter they contain. It is to be remarked that the air coming from the cultivating vessels (which are kept carefully closed) carries away with it a certain quantity of gaseous products whose formation generally accompanies the development of microbes, and that it is important to collect them where utilisable, which is done by chemical or physical means, as may be most suitable according to the nature of the bodies to be dealt with (*Revue de Chem. Indust.*)

#### American Pharmaceutical Association. Special Membership Committee.

BOSTON, January 1.—The following resolution was adopted at the Chicago meeting of the American Pharmaceutical Association:

"That the president be instructed to appoint a special membership committee, to consist of one member from each state and territory, and one each from the District of Columbia, and the Provinces of Nova Scotia, Ontario and Quebec. The duty of such committee shall be that of soliciting new members in their respective sections of the country. They will report to and not under the direction of the chairman of the council, Prof. J. M. Good, St. Louis, Mo. and the chairman of the committee of membership, Prof. Charles Caspari, Jr., Baltimore, Md."

Considerable time has been required to secure the acceptance of distant appointees, but the earnest and enthusiastic letters received from many, indicate that the great advantages of membership are appreciated, and the present year promises to be one of exceptional pro-

gress in this direction. The thanks of the Association are due to Prof. Whelpley for the practical suggestion.

The following named members have accepted the appointment: Alabama, Philip C. Caudius, Mobile; Arizona, Clemens L. Eachman, Phenix; Arkansas, Wm. W. Kerr, Russellville; California, Prof. Wm. M. Searby, San Francisco; Colorado, Chas. Kline, Denver; Connecticut, Chas. A. Rapelye, Hartford; Delaware, John M. Harvey, Wilmington; District of Columbia, Sam'l L. Hilton, Washington; Georgia, Dr. Henry R. Slack, La Grange; Idaho, Albert O. Inglis, Murray; Illinois, T. H. Patterson, Chicago; Indiana, Joshua R. Lilly, Indianapolis; Iowa, Mrs. Rosa Upson, Marshalltown; Kansas, Mrs. M. O. Miner, Hiawatha; Kentucky, Dr. Wiley Rogers, Louisville; Louisiana, Alex. K. Finlay, New Orleans; Maine, Edward A. Hay, Portland; Maryland, Prof. D. M. Culbroth, Baltimore; Massachusetts, Prof. W. L. Scoville, Boston; Michigan, Arthur S. Parker, Detroit; Minnesota, James C. Hening, Stillwater; Mississippi, John C. Means, Natchez; Missouri, Prof. H. M. Whelpley, St. Louis; Nebraska, James Reed, Nebraska City; New Hampshire, Audae P. Preston, Portsmouth; New Jersey, Wm. C. Alpers, Bayonne; New Mexico, James A. Kinnear, Deeming; New York, Caswell A. Mayo, New York City; North Carolina, Henry M. Cheers, Plymouth; Ohio, Louis C. Hopp, Cleveland; Oregon, Geo. C. Blakely, The Dallas; Pennsylvania, Prof. Frank G. Ryan, Philadelphia; Rhode Island, Henry J. Alfreds, Providence; South Dakota, Irvin A. Keith, Lake Preston; Tennessee, James O. Burge, Nashville; Texas, L. Meyers Conner, Dalles; Utah, Frank A. Druhl, Lake City; Vermont, Henry A. Chapin, Brattleboro; Virginia, Edmund R. Beckwith, Petersburg; West Virginia, Edwin L. Boggs, Charleston; Wisconsin, Johr. A. David, Milwaukee; Wyoming, Thos. G. Maghee, M. D., Rawlins; Quebec, Seraphin Lachance, Montreal; Nova Scotia, Francis C. Simson, Halifax; Ontario, John Lowden, Toronto.

Every pharmacist of good moral and professional standing, whether in business or his own account, retired from business, or employed by another, and those teachers of pharmacy, botany and chemistry, who may be especially interested in pharmacy, and materia medica, who, after duly considering the objects of the Association, and the obligations of the constitution and by-laws, are willing to subscribe to them, are eligible to membership. The large volume of proceedings issued annually to the members containing the valuable and exhaustive report on the progress of pharmacy, embracing all of prime value that has appeared in the leading chemical and Pharma-

ceutical journals in this country and Europe, is of greater value than the membership fee.

It is hoped that the druggists of each section will have a local pride in aiding the members of the committee representing them to present at the next annual meeting at Asheville, N.C., the largest accession of members ever secured. The following sections have not responded, and the president would be pleased to have some eligible parties volunteer their services: Florida, South Carolina, Washington State and North Dakota.

EDGAR L. PATCH, President.

### MANITOBA PHARMACEUTICAL ASSOCIATION.

The quarterly meeting of the council of the Pharmaceutical association was held recently in the Exhibition association rooms. There were in attendance the president, Mr. J. F. Howard, in the chair, and Messrs. C. F. Flexon, G. W. McLaren, E. D. Martin, W. R. Bartlett, B. M. Ganniff, J. C. Gordon, Dr. Hutton and J. K. Strachan, registrar.

The first business was the election of officers for the ensuing two years; those chosen were Messrs. J. F. Howard, re-elected president; C. Flexon, elected vice-president; J. C. Gordon, re-elected treasurer; board of examiners, Messrs McLaren, Canniff, Flexon, Dr. Hutton and the president, ex-officio.

The report of Dr. Blakely, special examiner was submitted; it was that H. H. Agnew, R. W. McClure, J. R. Robertson, H. Coltart and A. S. Healy had successfully passed the preliminary examination. The registrar was instructed to enter their names on the register as certified apprentices.

The special committee appointed at the annual meeting to interview the Medical College authorities as to obtaining suitable rooms in the Medical College addition, for the association's examinations, reported that they had waited on the medical faculty and had obtained an offer of rooms for a term of five years from next fall at a rate of \$250 a year, with the use of chemical apparatus and furniture, and to include water, heating, light, caretaking and storage accommodation. The committee's report was adopted.

Mr. McLaren, on behalf of the special committee appointed to obtain equipment, reported that apparatus for the association's use had been donated by Messrs. E. D. Martin & Co., and Bole, Wynne & Co., Winnipeg, J. Winer & Co. and Archdale, Wilson & Co., of Hamilton, Elliott & Co., Toronto, Lyman Sons. & Co., Montreal; G. F. Stephens & Co., Winnipeg; Knowles & Co., London, Ont.; and on motion of Mr. Canniff, seconded by Mr. Bartlett, the council passed a hearty vote of

thanks to those firms for their liberal gifts to the association.

The treasurer's statement was read, showing a balance in favor of the association of \$1,952.13.

The report of the registrar was received; it showed that since the last meeting of the council the following had been added to the register of pharmaceutical chemists: Alexander Lawson, of Hamiota; Max Peplow, of Selkirk; J. P. Wright, of Baldur; Dr. J. W. Cartmell, of Glenboro, and R. T. Kyle, of Winnipeg (provisional); apprentices, W. B. Fairbanks and F. W. McVicar, Winnipeg.

Messrs. Howard, Mitchell and E. E. Lightcap were appointed auditors for the next two years.

The examiners' report on the recent minor and major examinations not being completed, the council adjourned until a day next week to be fixed by the president.

### To Members of the American Pharmaceutical Association.

The scientific section of the American Pharmaceutical Association urgently requests members to inform the Committee as to the subjects upon which they will write, and to send their papers ready for printing to the chairman, not later than June 30.

The Committee would suggest a number of papers upon the following: Does practical experience with the new Pharmacopœia prove the processes therein contained to be the best?

#### Committee:

L. E. SAYRE, Chairman, Lawrence, Kansas.

CHAS. M. FORD, Sec., Denver, Colo.

F. S. HERETH, Asso. Member, Chicago, Ill.

### Journal Notes.

WOODSTOCK, N.B.

A board of trade has been established, composed of the principal business men of the place, with H. Paxton Baird, druggist, as president and Julius Garden, druggist, as vice-president.

### Free Want Department.

Druggists in need of apprentices and help generally, are invited to make free use of this department, and all persons seeking situations in the drug trade are cordially invited to do likewise. Advertisements of business for sale will also be inserted free of charge.

**WANTED.**—Position by experienced man as travelling salesman for drug or soap house. Good references furnished on application. Apply "Morphia," care of this journal.

**WANTED.**—Situation by certified clerk; well recommended, and speaking both languages. Address, "Minor," P.O. box 1423, Montreal, Que.

## Observations on Some British Pharmacopœial Preparations.

By E. W. LUCAS.

Read at an evening meeting of the Pharm. Soc. of Great Britain.

*Aloes.*—No chemical test is official for distinguishing between the two varieties of aloes. Cold nitric acid produces a fugitive red color when added to powdered Barbadoes aloes, while Socotrine aloes, when so treated, gives no coloration until warmed, when it turns reddish brown. Also—it might be added—the surface of hepatic aloes is invariably covered with minute wrinkles, and the odor of either variety becomes much more marked if gently breathed upon.

*Balsam of Tolu* is occasionally mixed with common turpentine, but its presence may be readily demonstrated if, after adding strong sulphuric acid to the suspected sample, sulphur dioxide is given off, accompanied by blackening—whereas pure balsam only turns cherry red.

*Buchu.*—Although it is mentioned that buchu leaves are marked on their margins with oil glands, yet stress might be laid on the fact that one gland is situated on each serrature, and especially one at the apex. *Empleurum serrulatum*, which somewhat resembles *Barosma serratifolia*, has no gland at the actual apex.

*Catechu and Scammony.*—The percentage of ash yielded by these substances is not specified. Catechu is required to be entirely soluble in boiling water. This it rarely, if ever, is, a more or less turbid mixture being generally produced. Some impurity is invariably present, and it would be well to limit the ash to 6 per cent., as is now done by the German Pharmacopœia. Scammony is notoriously adulterated; even the prefix "virgin" is not always a guarantee of its purity, and the limit of ash would be an additional safeguard, 3 per cent. being looked upon as the maximum.

*Poppy Capsules.*—When poppy capsules are used for extract and for syrup they are directed to be free from seeds. Should not this direction be extended to the decoction? As it stands the capsules are ordered to be bruised, which implies that the seeds are to be used as well. It is, I know, urged by some that a little of the oil is removed from the seeds and remains suspended in the mucilaginous liquid. This may be so to a small extent, but I think it must be a very small one, and it seems

doubtful if any therapeutic value can be accredited to it. Moreover, poppy capsules are so often broken in storage and transit that most of the seeds escape, and frequently the decoction is prepared with anything but the fair percentage that belongs to a capsule.

*Digitalis.*—Everyone knows the difficulty experienced at times in distinguishing broken specimens of dried leaves. *Digitalis*, for instance, is common in certain parts of the country, and many pharmacists no doubt have the leaves collected and dried under their own supervision. This is as it should be, but unfortunately it cannot always be done, and then one has to fall back on dried material, obtained as a rule in a more or less broken and crumpled condition. Under such circumstances, a detailed acquaintance with the leaf is desirable, and it might usefully be noted that in foxglove leaves the veins run well down into the petiole, thus distinguishing them at once from numerous possible substitutes, including the not uncommon one of *Inula Conyza*.

*Plasters.*—In several of the official plasters cured soap has been substituted for hard soap, and I have to strongly advocate a return to the latter. According to Dr. Paul, powdered curd soap contains twice to three times as much water as most other soaps, and whether it is due to this fact or not, certain plasters made with it are not as easy to roll into sticks as they were formerly. *Emplastrum plumbi* and *emplastrum resinæ* are notable examples of this alteration for the worse. I also have to suggest the addition of a little rubber to the principal basis, to counteract the tendency to crack when kept spread. A process involving little trouble is to dissolve the rubber in chloroform and anhydrous wool-fat, in a wide-mouthed bottle, fitted with a long upright condenser, applying just sufficient heat to keep the mixture gently boiling; one part of rubber and two parts of wool-fat are good proportions. The semi-fluid mixture should not be added to the other ingredients until nearly cool, when if well stirred, the chloroform is soon dissipated. A little extra care has perhaps to be taken in the manipulation, as if a heat much exceeding 200° F. is used to melt the plaster, the rubber has a slight tendency to come out in lumps. This, however, is no disadvantage, as every practical plaster spreader is much too wise to use a greater heat than that afforded by a water-bath. I have here *emplastrum ferri* and *emplastrum picis*, to which only half per cent. rubber and one of wool-fat were added, and yet they are at this length of time still sufficiently pliable to admit of being rolled up and sent out in a cylindrical case without cracking, an operation to which few, if any, pharmacopœial plasters would submit to half an hour after solidification had



taken place. Rubber is now so extensively employed by large plaster spreaders that no objection is likely to be lodged against its introduction, particularly as the quantity would be so small.

*Extracts.*—The solid extracts are mostly ordered to be evaporated to a suitable consistence for forming pills, or else to the consistence of a soft extract. This leaves a good deal to the discretion of the operator. If an extract is to be really of a consistence for pill making it must be hard indeed; as a fact very few extracts could be made into pills without the aid of some addition, and they are very rarely so perscribed. Would it not be better to order all the solid extracts to be evaporated to a soft consistence, say that of fresh honey, for it is obvious that both requirements can not be complied with. With regard to those intended for pill making, it has been my own experience that the official ones are better evaporated fairly low down, and while still warm sufficient finely sifted althea or sugar of milk stirred in, to bring the whole up to pillular consistence when cold. An ordinary extract requires about 10 per cent. of moisture to be driven off, and replaced with an equivalent quantity of some inert powder to effect this. There are, however, three—the extracts of colocynt, rhubarb, and cascara—which even if treated as described are a constant source of trouble to the dispenser. These, it is suggested, should be evaporated at a proper temperature to dryness, and either be brought up to weight or kept as "species," the equivalent of which is to be used instead of the soft extract.

*Extract of Nux Vomica and Opium.*—These are both adjusted to definite strengths, the finished products varying considerably in consistence, which alters still further on prolonged keeping. This renders the standardizing abortive, and it is suggested that these two also should be evaporated to complete dryness, and adjusted with sugar of milk.

*Extractum Belu Liquidum* already contains about 20 per cent. of rectified spirit, but it is insufficient to prevent the tendency to decomposition during very warm weather. In hot climates it is a common practice to add a little chloroform or salicylic acid to preparations whose keeping properties are not of the best, but I doubt if such a procedure is admissible in England, although on some of our summer days the thermometer may register an almost tropical temperature.

*Extractum Cinchona Liquidum.*—Our present process for this liquid extract is undoubtedly a vast improvement over the old method of exhaustion with distilled water, but even now the alkaloids are only partially removed, and serious loss, with consequent increase in

the cost of production, is the result. After several trials I have found that the best results are obtained by percolating at an elevated temperature. The apparatus employed is simply an ordinary percolator provided with a hot water jacket, and can be easily fitted up in any laboratory. The coarsely powdered drug is moistened and packed in the percolator, the hot menstruum being poured on until the liquid begins to drop, when the orifice is closed and the whole allowed to macerate at a temperature of about 150° F. for twenty-four hours, when percolation is allowed to proceed (still maintaining the temperature) until solution of soda ceases to cause a precipitate with the droppings. The percolate is afterward evaporated on a water bath and standardized in the usual way. Working on small quantities I have found that each pound of bark requires about four pounds of the B. P. menstruum for exhaustion, although operating on a large scale this quantity could probably be reduced. The comparative value of the two processes will be seen by the following: Two pounds of powdered red cinchona bark, practically containing five per cent. of total alkaloids, was divided into two equal portions. One half was exhausted by hot percolation, the second by the B. P. process. In the first instance the standardized product was as nearly as possible sixteen ounces, in the second only a little over thirteen ounces, although it had been percolated by the full amount of liquid ordered, followed by an additional four or five pints of water. These facts appear to indicate a temperature of about 150° F. as the most suitable for complete extraction, with a reduction in the volume of menstruum and consequent shortening in the time of evaporation and exposure.

*Liquorice Root (Dried).*—This may be used in either the peeled or unpeeled condition. Would it not be well to insist on its being peeled, as if the cortical portion which contains an acrid principle is included the sweetness is somewhat impaired?

*Rhamnus Frangula* bark is ordered to be kept for at least one year before being used. Should not this direction be extended to cascara sagrada? It has been stated that extract made from seasoned bark is not only less bitter, but is less liable to disagree with the patient.

*Glycerin of Starch* was, I believe, introduced by Mr. Schacht some thirty years ago under the name of "Plasma." His original formula, which was practically adopted by the 1847 pharmacopœia, produced a fairly stiff translucent jelly, but now that one-third of water is substituted for an equal volume of glycerin, the product is too soft to answer the same purposes the old one was fitted for; moreover it has a great tendency to separate after being kept a short time. If made with glycerin alone the

plasma does absorb moisture from the atmosphere, and a little moisture may be an advantage, but 33 per cent. appears too much.

*Guaiacum Resin* is occasionally adulterated with pine resin. This sophistication may, however, be detected, if a terebinthinate odor is exhaled when thrown on burning coals, or if the precipitate caused by the addition of caustic potash solution to the tincture remains undissolved in excess of the alkali.

*Infusions.*—Bruised leaves are ordered to be used in making infusion of buchu, and the rhizome in No. 20 powder for infusion of serpentry. In the case of the first-named a mucilaginous liquid is produced, the viscosity of which at times may be so magnified as to render straining almost an impossibility; while the infusion when so made is much more liable to suffer decomposition. In the case of the second, if serpentry infusion is made with bruised material, the hot water takes up an appreciable amount of starchy matter, the result being that if prescribed with tincture of iodine, as it frequently is, a turbid blue mixture is produced, owing to the fixation of the iodine, which is hardly what the prescriber intends. Under these circumstances it would appear advantageous to omit the directions for bruising either drug when ordered to be infused with boiling water.

*Rhubarb* in powder may be adulterated with turmeric, and it would be useful if a test were inserted for its detection. Perhaps as good a one as any is to add a little saturated solution of boric acid to weak tincture of the suspected powder, when a brown coloration ensues if turmeric is present.

*Sodium Arseniate* contains more than half its weight of water of crystallization, part of which may be lost if the salt is exposed, the effloresced salt then containing a varying proportion of water. The anhydrous salt on the other hand is stable and easy to store and weigh, and it would be a distinct gain if it could be substituted for that now official.

*Syrup of Phosphate of Iron* is peculiarly liable to change, and in spite of many attempts no form has yet been devised yielding an unalterable preparation. In the official process sulphate of iron and phosphate of sodium react on each other, forming ferrous phosphate and sulphate of sodium, the resulting free sulphuric acid, which would keep a portion of the iron in solution, being nearly neutralized with bicarbonate of soda. After washing, the precipitate is dissolved in phosphoric acid, and this solution converted into syrup, which is therefore presumed to contain acid ferrous phosphate. But during the washing the original white precipitate has turned blue from the formation of ferroso-ferric phosphate, and this oxidation continues to some extent in the syrup, notwith-

standing the protective action of the sugar, thus probably accounting for the change in color on exposure. Under such circumstances it would appear advantageous to direct a solution to be made directly from iron wire and phosphoric acid, in such proportions that, when mixed with simple syrup, one grain of phosphate should be contained in each fluid drachm. This is by no means a new idea, as it has been recommended by several very eminent pharmacists for a considerable length of time, and no doubt many chemists already manufacture their syrup thus; still it would be better if authority were given for doing so.

*Tinctura Quinina Ammoniatæ*, although so useful, is perhaps the nastiest medicine in the whole pharmacopœia combining as it does a sharp alkaninity with such intense bitterness. I wish to show you a specimen containing the full amount in quinine sulphate and solution of ammonia, partially disguised by the addition of glycerine and compound tincture of chloroform. I cannot claim that its admixture with water is any more elegant than that now official, but I think it would be much more readily taken by the fastidious. A fluid drachm forms only a slightly opalescent mixture with a wineglass of water.

The suggested form is:

Quinine sulphate .....	grs. 160
Diluted Alcohol .....	oz. 6
Comp. tinct. of chloroform ...	oz. 2½
Solution of ammonia .....	oz. 2½
Glycerin, to produce .....	oz. 20

Mix the quinine with the diluted alcohol, and add the tincture and ammonia, previously mixed together; shake and make up with glycerin to one pint. In this, as in the official form, there are merely eight minims of ammonia solution in each drachm. This appears somewhat large, and the mixture would be rendered much more palatable if the quantity were reduced to one ounce and a half.

*Effervescent Preparations.*—The proportions of the two acids in the effervescent preparations in the addendum require a little adjusting to secure strongly cohering granules. As now prepared, they are very apt to crumble to powder during the sifting, or even before such an advanced stage is reached. In effervescent sulphate of magnesia the citric acid should be increased to 6½ ounces, with a consequent reduction of ½ oz. of the sugar. In effervescent phosphate of soda the amounts of the acids would be better if more nearly equalized, thus:

Powdered tartaric acid.....	12 ozs.
Powdered citric acid .....	10½ ozs.

*Mucilages and Injections.*—In the three mucilages, and one of the hypodermic injections, distilled water is employed, the exceptions being made with camphor water, and they are

all more or less prone to change if kept any length of time, even protection from light being insufficient to obviate this. Perhaps it is impossible altogether to prevent decomposition, but a vehicle might be used, possessed of such preservative power that solutions made with it would keep unimpaired for a reasonable period. Water that has been boiled with the residue left after manufacturing syrup of tolu has one of the strongest claims in this respect, and could with advantage be employed in many pharmaceutical operations. Injection of ergotin and apomorphine hydrochlorate both keep well when made with it; while morphine injection not only does not turn brown so rapidly, but is less liable to deposit crystals of alkaloids. Mucilage of tragacanth already keeps fairly well but the mucilages of starch and acacia are noted for their tendency to spoil. Specimens of these preparations with tolu water a month or more old, which have been kept at varying temperatures, are here, and I think they are all in a very fair state of preservation. There is perhaps one little drawback if mucilage of acacia is made with this water, and that is, the color is slightly deepened, but it is not too serious to prevent its adoption.

*Pills.*—In our present formulæ for pills it appears as if we are trying to combine two practically incompatible conditions, viz: a soft mass which will mix easily with other ingredients, and a pill mass of sufficient consistence to roll, which when rolled and cut ought to yield pills that will keep their shape. Three masses alone answer these conditions; most of the others are much too soft when first made, and much too hard if kept for any length of time, and the ones that do not come under either category are of such consistence as to adapt themselves with singular exactitude to the shape of the containing vessel. Such pill masses as those of aloes and iron, or aloes and asafœtida if kept for a short time, become almost as hard as the mortar in which they were compounded, while others, as Plummer's pill are just as unsatisfactory from never really hardening or drying at all. It would be a decided advantage, and a change that would be welcomed by most dispensers, if the official pills, with certain exceptions, were kept in powdered "species," say four grains to equal five grains of mass, the expipient being left to the discretion of the prescriber or dispenser. The exceptions of the pills of iron, iodide of iron, mercury and phosphorus, none of which would lend themselves to such alteration if it were desirable. I may perhaps be allowed to suggest the omission in the next edition of the synonym for pil. saponis co., for if one is to judge by recent correspondence that has appeared in our journals, consider-

able doubt may be engendered in the mind of the dispenser as to what is meant when pil. opii is ordered in a prescription.

*Ointments.*—When unguentum cetacei is made without the benzoin it will not keep for more than a week or two under ordinary circumstances. If benzoated it is not entirely satisfactory, for this reason that there are certain persons who cannot apply benzoic acid to the skin without its causing more or less irritation. This may be due to idiosyncrasy, but nevertheless it is the case, and only on the morning before I wrote this a case came under my notice in which much pain and smarting had been the experience after its application to the eyelids. Here it is proposed to make use of oil of theobroma. The following proportions yield an ointment almost indistinguishable from the official one, and probably much blander in operation, while the preservative properties of cacao-butter are almost as marked as those attributed to benzoin:

Spermaceti.....	4
White wax .....	2
Almond oil.....	18
Oil of theobroma.....	6

*Filtration Methods.*—Anyone who has had to manufacture simple elixir and such like preparations knows the difficulty there is in obtaining perfectly bright solutions of the essential oil in water. The use of calcium phosphate, as suggested by the U. S. Pharmacopœia, partially gets over the difficulty, but if acid liquors are under operation an inert powder must be substituted. Recourse must then be had to kaolin, as directed by the B. P. C. Formulary. But a new difficulty arises from the extremely fine state of division in which kaolin exists; in suspension it can only be removed by filtering through a layer of itself, and the constant turning back of the filtrate to secure this involves a great deal of time and trouble. To obviate these disadvantages I have to propose the use of a mixture of powdered paper, asbestos, and kaolin, in some such proportions as the following:

Paper powder (obtained by rubbing dried white filter paper through a 20-hole sieve).....	1 oz.
Asbestos (sifted).....	1 oz.
Kaolin.....	10 ozs.

Mix lightly together, finally sifting. The powder should be shaken up with the turbid liquid for a few minutes and poured on to the previously wetted filter, the filtrate being returned until it has passed through bright, which it does in a short time. Using this admixture, the filtering of such refractory liquids as acid glycerole of pepsine is rendered effectual and expeditious, while turbid solutions of essential oils in distilled water, etc., are very readily dealt with.

**PRICES CURRENT.**  
APRIL, 1894.

Acetum cantharides .....	lb	\$0 60	
" colchici cor m.....	lb	50	
" ipecac.....	lb	40	
" opii.....	lb	1 20	
" scillæ.....	lb	12	
Acetanilid .....	lb	90	oz. 15
Acid. acetic glac.....	lb	40	Whr. qt. 35
" " fort.....	lb	12	carboy 10
" benzoic German.....	oz	15	lb 1.75
" " " ozs. Hwds		25	Bulk 20
" boracic.....	lb	18	pulv. 20
" butyric conc.....	oz	30	lb 3.75
" camphoris.....	oz	60	
" carbolic No. 5 Cal.....	gl	1 50	
" " common.....	gl	90	
" " cryst.....	lb	40	10 lbs 35
" " No 1 Calverts.....	lb	2 25	
" " No. 2 ".....	lb	1 40	
" " " ".....			10 lb tins 1.10 lb
" chromic.....	oz	10	lb 1.00
" chrysophanic.....	oz	30	
" citric.....	lb	85	
" " pulv.....	lb	70	
" gallic.....	oz	10	lb 1.25
" hydro-bromic dil.....	lb	45	
" hydrochloric.....	lb	5	carboy 2½
" " C.P.s.g.1.19.....	lb	25	Wins. 20
" hydrocyanic P B.....	doz.	90	in 1 oz. 10c per oz.
" " Scheele's.....	doz.	1 00	do 10c do
" hypophosphor.....	lb	1 10	
" hydrofluoric (in patent			¼ lb bottles .50 ea.
ceresine bottles).....			1 lb " 1.25
" lactic dilurum.....	lb	1 15	
" " conc. pur.....	lb	2 75	
" nitric.....	lb	15	Wins. 12 carboy 8½
" " C.P.s.g.1.40.....	lb	30	Wins. 25
" oleic pur.....	lb	45	
" osmic.....	gm	1 75	
" oxalic.....	lb	12	50 lb 10
" perchloric.....	oz	35	
" phos. dilut.....	lb	17	Whr. qt. 14
" " cone S.G. 1.5.....	lb	50	
" " glac. pur stick.....	lb	1 20	
" " syr.s.g 1.750.....	lb	55	
" picric.....	lb	75	
" pyrogallic Schering's.....	oz	40	8 oz. 35
" pyroligneous.....	lb	10	gall 50
" salicylic.....	lb	2 00	
" sulphuric.....	lb	4	carboy 2½
" " C.P.s.g.1.84.....	lb	25	Wins. 20
" " pur Eng.....	lb	20	Wins. 18
" " aromat.....	lb	65	
" sulphuros.....	lb	12	
" tannic.....	lb	80	5 lb 75
" tartaric pulv.....	lb	40	10 lbs 38
" valerianic.....	oz	40	
Aconitina exot.....	gr	4	60 gn. 3
Adeps benzoatus.....	lb	35	
Ether S. G. 735.....	lb	40	Whr. qt. 35
" acetic.....	lb	55	do 50
" butyric.....	oz	15	lb 1.50
" chloric.....	lb	65	Whr. qt. 60
" Anæsthetic tin 500 gms		1 50	each.
" " 250 ".....		80	" Squibbs.
" " 100 ".....		40	"
" " L. S. & Co			1 lb tins 1.00 each
" " " ".....			¼ lb tins 0 55 "
" " " ".....			½ lb tins 0 30 "
Alcohol brl.....	cash	3 85	10 gall 4.15 5 gall
" absolut.....	lb	1 00	4.20 1 4.25 in a/c
" methylated.....	gal	2 00	Wr. 90
Aloes Barb opt.....	lb	30	Brl. 1 75 cash
" " pulv.....	lb	35	10 lb 25
" " ".....			do 32

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**Kidney and**  
**Liver Cure.**

THIS preparation has jumped to the front by virtue of its indisputable merit.

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The best, the oldest, the most reliable remedy for Corns, Warts and Bunions again on the market. A sure and infallible cure. Hundreds of certificates to prove its efficacy. Every druggist should have a little stock on hand in anticipation of the demand, as I am making contracts with every newspaper.

PRICE.—25c and 50c a bottle.  
1 doz., \$1.65; gross, \$18.00.

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2449 Notre Dame Street, MONTREAL.

Aloes Cape.....lb	15	10 lbs 18
Aloes Cape pulv.....lb	25	do 23
Aloes Socotrina.....lb	60	do 55
" " pulv.....lb	70	do 65
A'oin.....oz	30	
Alumen lump.....lb	3	brl 1½
" pulv.....lb	4	brl 2½
" chrom.....lb	15	
" exsiccat.....lb	20	
Alumnol.....25 gm	50	each
Ammonii benzoas, from gum oz	25	lb 8 00
" bromid.....lb	65	
" carb.....lb	15	
" " kegs.....lb	11	
" " pulv.....lb	20	
" " resub.....lb	55	c. b.
" chlorid.....lb	12	100 lb 10½
" " gran.....lb	12	100 lb 11
" " pulv.....lb	13	
" " pur.....lb	25	
" hydrosulph sol.....lb	40	
" hypophosph.....oz	25	lb 8.00
" iodid.....oz	45	lb 5.50
" molybdas.....oz	25	
" monocarb.....lb	35	
" nitras gran.....lb	33	25 lb 30
" " crist.....lb	35	25 lb 30
" oxalas pur.....lb	75	
" phosph.....lb	1 25	
" salicylat.....oz	40	lb 4.75
" sulphas com.....lb	9	pur 25
" valerian.....oz	40	
Amygdala amara.....lb	50	
Amyl nitras.....oz	15	
" nitrite.....oz	15	
" valerian.....oz	35	
Amylum pulv.....lb	9	owt. 8
Anatto Hispan opt.....lb	50	
" Fullwood ½ oz & 1 oz lb	1 00	
Antim crocus pulv.....lb	20	
" nigrum pulv.....lb	12	50 lb 10
" oxid.....lb	65	
" sulphurat precip.....lb	50	
" tartarat pulv.....lb	45	10 lb 42
Antikamnia.....oz	1 30	
Antipyrin Knorr's.....oz	1 10	6oz 1.05 10-25oz 1.00
" Swiss.....oz	1 00	5 ozs. .95 10-25oz 90
" ".....lb	12 75	
Apiol green.....oz	65	
Apomorph hydroch.....gr	4	
Aqua anethi.....lb	10	
" anisi.....lb	10	
" aurantii flor trip.....lb	25	Win qt 20
" camph.....lb	10	
" carui.....lb	10	
" cassia.....lb	10	
" cinnam.....lb	20	
" destillata.....gl	12	carboy 10
" floridæ.....gl	5 00	
" lauro-cerasi.....lb	25	Whr qt 20
" mentha pip.....lb	10	
" rosæ.....lb	25	Whr qt 20
" sambuci flor.....lb	25	
Argenti chloridum.....oz	2 50	
" iodide.....oz	2 50	
" nitras cryst.L.B.&Co.oz	85	9.50 lb cash
" " fus (4 to oz)oz	1 00	
" oxidum.....oz	2 40	
Aristol.....oz cartoons	1 85	
Arsenicum alb. pulv.....lb	10	
" rub ".....lb	15	
Arsenici bromid.....oz	40	
" iodid.....oz	60	
" tersulph pulv.....lb	25	
Asphaltum exot.....lb	15	100 lbs 12
Atropium pure.....dr	1 00	

# PENNINGTON & Co.

... MANUFACTURERS OF ...

## Fine Cigars



... OUR LEADING BRANDS ...

**Montero**

**Union Jack**

and **Kennel**



**Montero Gigar Factory,**

**MONTREAL.**

STEARNS'S

## Wine of Cod Liver Oil

WITH PEPTONATE OF IRON.



An entirely new and original preparation which contains 25% of pure Cod Liver Oil, as represented by its active medicinal constituents, Morrhaine, Butylamine, Amylamine Iodine, Bromine and Phosphorus.

Modern investigation has proven that the value of Cod Liver Oil as a medicinal agent is not due simply to the fact of its being an oil, but to the valuable active principles which it contains, as noted above.

Each fluid ounce of the Wine contains four grains of Peptonate of Iron, the most readily assimilated and most valuable of all forms of Iron, it being partially predigested and free from styptic properties.

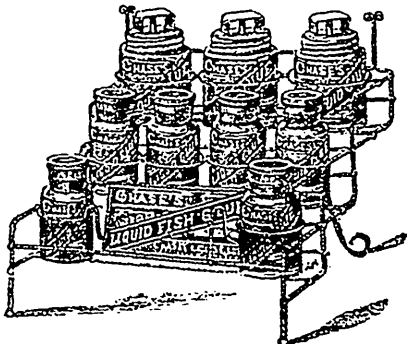
Stearns's Wine may be used in all cases where Cod Liver Oil and Iron are indicated, and furthermore it is devoid of all the objectionable features hitherto attending the administration of Cod Liver Oil in any form.

Sold by all prominent Wholesale Drug-houses.

**FREDERICK STEARNS & CO.**  
 MANUFACTURING PHARMACISTS,  
 DETROIT, MICH., & WINDSOR, Ont.  
 AND NEW YORK CITY.

Atropinæ sulphas..... dr	30	oz 4 00		Carbo ligni..... lb	6	
Auri chloridum (15 gr).... doz	3 60	400 3 Doz. 3.75		Carbo ligni pulv..... lb	10	brls 5 50 each
Baccæ aurantii..... lb	25			Carbon bisulphidum..... "	20	Whr qt 15 drums 12
" capsici..... lb	25	pulv. 30		Carmine..... oz	40	lb 5.25
" cassiæ..... lb	35	pulv. 40		Caryophyllum, Zanzibar... lb	18	22 Pulv.
" cubebæ..... lb	60			Caryophyllum, Amboya... lb	25	
" pulv..... lb	65			" Ponang..... lb	50	
" juniper..... lb	8	10 lb 7		Cassia fistula..... lb	30	
" juniper pulv..... lb	12	10 lb 11		Castoreum..... oz	1 40	
" xanthoxylon..... lb	50			Cera alba..... lb	65	sec 45
" pimentæ..... lb	12			" " paraffin, opt..... lb	25	50 lb 20
" pulv..... lb	14	25 lb boxes 18		" " "..... lb	18	50 lb 18
Balsam canad..... lb	45	Winch. 40		" flav opt..... lb	40	secs 85
" copaibæ..... lb	75	Whr. qt. 70		" " lithographers..... lb	50	
" peruvian..... oz	20	lb 2.00		Cerii oxalæ..... oz	10	lb 1.20
" tolut..... lb	60			Cetaceum..... lb	55	10 lb 50
Barii carb pu..... lb	35			Cetrar Iceland..... lb	16	
" chlorid pur..... lb	25			Chirata Incis..... lb	45	
" hypophos..... oz	25			Chloralamid..... oz	35	
" nitras exsic..... lb	20			Chlorodyne Lyman's..... lb	2 00	
" nitrate C. P..... lb	35			Chloral Hydrate recryst..... lb	1 10	
" sulphate pur..... lb	50			Chlorof pure Smiths 1 lb g.s. bs. lb	90	Whr. qt 80
" sulphide..... oz	10			" D. F. & Co's pur..... lb	1 80	5 lb 1.75
Bath Pipe..... lb	40			" " meth..... lb	85	5 lb 80
Bay rum St. D..... gal	3 75	sec. 2.75		" " blue label. lb	1 00	
Beberinæ hydroch..... dr	50			" Merok 1 s..... lb	65	
Beberinæ sulphas..... oz	90			" " 28-lb tins..... lb	55	
Benzine refined..... gal	40			Cinchonidin sulph..... oz	15	Hds. 20
Benzoyl Guaiacol..... oz	2 00			Cinchoninæ murias Hds..... oz	18	
Bismuthi carb..... lb	3 00			" sulphas..... oz	18	
" citras..... oz	20			Cocaine hydrochlor crys..... oz	9.00	
" et ammon-cit..... oz	35	lb 4.50		Cocculus Indicus..... lb	10	pulv 20
" salicylas..... oz	35			Cocculus cacti S. G..... lb	40	pulv 45
" subgallas..... oz	35			Codeina..... dr.	1 00	oz 6.50
" subiodid..... oz	50			" Sulp..... dr.	1 00	oz 6.50
" subnitras..... lb	2 65	10 lb 2.55		Colchici corm..... lb	30	
" valerian..... oz	50			Collodium..... lb	65	
Bismuthum (metal)..... lb	3 25			" vesicans, P. B..... lb	2 25	
Bole armen..... lb	6			" flexile..... "	65	
Borax..... lb	11	keg 9		Colocynthis Turc select..... lb	60	pulv 85
" pulv..... lb	12	do 10		Confectio rosæ Gallic..... lb	50	
Bromine..... oz	20			" sennæ..... lb	40	
Bromoform..... oz	40			Cortex aurantii Ang..... lb	70	
Cadmium..... oz	10	lb 1.20		" " coml..... lb	15	
Cadmii bromid..... oz	20	lb 2.25		" " opt. ½s..... lb	20	
" iodid..... oz	45			" canellas..... lb	20	pulv 25
" sulphas..... oz	20			" cascara sagrada..... lb	25	
Caffeinæ pur..... oz	25			" cascarillæ..... lb	25	
" citras..... oz	25			" cassiæ..... lb	13	pulv 18, 25 lb box 16
Calamina præparata..... lb	7			" cinchro flav..... lb	90	pulv. 1.00
Calci bromid..... oz	30	lb 3.25		" " coml..... lb	30	pulv. 35
" carb. præcip..... lb	25	V. Creta præcip.		" " rub quill..... "	60	pulv. 70
" chlorid. cryst..... lb	30			" granat fruct..... "	20	
" fusum pure. lb	30			" " radices..... "	60	
" fused crude. lb	15			" limonis ang opt..... "	65	
" hypophosphis..... lb	1 40			" " com..... "	16	
" lactophosph..... oz	15	lb 9 00		" mezerei..... "	25	
" nitras..... lb	75			" myricæ (bayberry)..... "	20	
" phosphas præcip..... lb	20			" pruni virginianæ..... "	15	20 lbs 12
" sulphas..... lb	4			" quillaisæ..... "	15	grd. 20 pulv. 25
" sulpho-carbolas..... lb	2 50			" sassafras..... "	15	pulv. 22
" sulphid..... lb	50			" ulmi..... "	16	pulv. 16 grd 14
" sulphis..... lb	18	pulv. 20		Creolin, Pearson's..... "	60	
Calx chlorinata..... lb	5	-keg 4 brl. 3½		Creosot. Ang (Morson's)..... oz	20	lb 2.25
" in packets 1 lb	7, ½ 8, ½ 9			" (Beechwood) Merck's. lb	2 00	
Camphora Amer..... lb	70	brl 65		" " French lb	2 75	
" " cakes..... lb	75	case 70		" white, from coal tar. lb	75	
" Ang. Hd's..... lb	70			Creosote Carb..... oz	1 25	
" " ozs..... lb	75			Creta gallic..... lb	18	
" " flowers, lb	80			" " pulv..... lb	5	½ lbs 3½
" Dutch..... lb	65			" præcip..... lb	10	keg 8
Camphor monobromid..... oz	20			" præparata..... lb	5	50 lbs 4
Cantharides Russian..... lb	1 40	pulv. 1 50		Crocus stigmat amer..... lb	95	
" Chinese..... lb	—	do 75		" " Valent..... oz.	80	Alicante 65c oz.
Cantharidine..... grain	8			Croton chloral-hydrate..... oz	45	
Cap papav. alb..... 100	1 00			Cudbear..... lb	20	
Carbo animalis pur. pulv..... lb	12			Cupri ammonio-sulphas..... lb	1 00	

# Always Ready Without Heating.



SMALL PACKAGES FOR FAMILY USE.  
ASSORTED CASES.

Each case contains a wire stand for the display of Glue on the counter, for which there is no charge. But stands are only given with assorted cases. Send for list to

GILMOUR & CO.,

Or from the trade.

MONTREAL.



Please observe Bottle and Label to avoid errors. For Sale at Drug Grocery and Wine Dealers.

## FOR Body and Brain.

Since 30 years all Eminent Physicians Recommend

## VIN MARIANI

The original French Coca Wine; most popularly used in Hospitals, Public and Religious Institutions everywhere.

NOURISHES,  
FORTIFIES,  
REFRESHES.

Strengthens entire system; most agreeable, effective and Lasting renovator of the vital forces.

Every test strictly on its own merits, will prove its exceptional reputation.

PALATABLE AS  
CHOICEST  
OLD WINE.

LAWRENCE A. WILSON & CO.,

Sole Agents.

28 & 30 Hospital St., MONTREAL.

# STANDARD PREPARATIONS.

## Mrs. Winslow's Soothing Syrup

Has been used for over fifty years by millions of mothers for their children who teething, with perfect success. It soothes the child, softens the gums, allays a pain, cures all Wind Colic, and is the best remedy for Diarrhoea. Retail price 25 cents a Bottle. THE ANGLO-AMERICAN DRUG CO., Proprietors, 217 Fulton Street, NEW YORK, N.Y.

## Brown's Bronchial Troches

As a simple yet effective remedy for Coughs, Colds and Bronchial Affections, stand first in public favor and confidence. They are absolutely unrivalled for the alleviation of all throat irritations caused by cold and are everywhere known as an old and reliable article. Sold only in boxes. Retail price, 25 cents, 50 cents and \$1.00. JOHN I. BROWN & SONS, Proprietors, 195 Summer Street, BOSTON, MASS.

## Brown's Vermifuge Comfits or Worm Lozenges.

This valuable combination, although effectual in destroying Worms, can do no possible injury to the most delicate child. Successfully used by physicians and found to be absolutely sure in eradicating Worms. Retail price, 25 cents a box. THE CURTIS & BROWN MFG CO., Ltd, Proprietors, 217 Fulton Street, NEW YORK, N.Y.

## Brown's Household Panacea.

Unequaled for relieving pain—both internal and external. Stronger than any similar preparation and invaluable as a household remedy for speedily relieving aches and pains. Retail price, 25 cents a bottle. THE CURTIS & BROWN MFG CO., Ltd, Limited, 217 Fulton Street, NEW YORK, N.Y.

## Brown's Camphorated Saponaceous Dentifrice.

A superior and most agreeable article for Cleansing and Preserving the Teeth and purifying the Breath. Used daily it prevents trouble from bad teeth' soft gums. Retail price, 25 cents a bottle. Prepared by JOHN I. BROWN & SONS. THE CURTIS & BROWN MFG CO., Ltd, Proprietors, 217 Fulton Street, NEW YORK, N.Y.

Patented in Canada and  
the United States...

# The Triumph Feeding Bottle

Recommended by the highest medical authorities all over the world.

Always Clean.

Price \$4.00 Doz.  
Fittings can be supplied separately.

No Rubber Tube,  
No Metal Tube,  
Fluid Flowing only through Glass.

FOR SALE BY ALL WHOLESALE DRUGGISTS.

**THE CANADIAN CAPSULE CO. TORONTO**

For General Excellence in Solubility Perfectly Uniform in cut and Finish SPECIFY WHEN ORDERING Crystal Capsules.

SIZES & QUANTITIES	
N700	6 GRS DRY POWDER
N701	2 - FILL MASS
N702	2 - FILL POWDER
N703	4 - FILL MASS
N704	4 - FILL POWDER
N705	2 - FILL MASS
N706	2 - FILL POWDER
N707	2 - FILL MASS
N708	2 - FILL POWDER
N709	2 - FILL MASS
N710	2 - FILL POWDER
N711	2 - FILL MASS
N712	2 - FILL POWDER

OUR CAPSULES ARE THE MOST PERFECT, ELEGANT AND UNRIVALLED ARE MANUFACTURED OF THE FINEST & BEST MATERIALS. SAMPLES FREE.

MADE BY THE CANADIAN CAPSULE CO TORONTO

Cupri chloridum pur.....lb	60	
“ nitras pur.....lb	60	
“ oxidum nigr. pur.....lb	1 75	
“ “ coml.....lb	50	
“ sulph.....lb	7	kg 5 hrl 4½
“ sulph recryst.....lb	25	
Cuprum scales.....lb	40	
Currie powder.....lb	35	
Cusso “.....oz.	10	
Damiaua.....lb	40	
Daturine, pure xtls.....gr	10	
Dextrine, white.....lb	10	50 lb 8
“ yellow.....lb	9	“ 7
Diapente.....lb	30	
Diastase.....oz	1 25	
Digitaline.....oz	50	each
Diuretin “Knoll”.....oz	1 75	
Dolichos pruriens pubes....oz	60	
Duboisin, pure Amp 5 gr. tube	69	each
“ sulphate.....gr	12	
Eikonogea.....25 gm. tins	40	each
Elaterium.....dr	35	
Ergota.....lb	90	pulv. 1.00
Ergotinum Bonjean.....oz	75	
Ergotine Bonjean Gen..30 gm	2 00	
Eserine sulph 5 or 10gr. tube.gr	10	
Ethyl, Benzoate.....oz	40	
“ Bromide.....oz	35	
“ Butyric.....oz	15	
“ Chloride.....tubes	35	each
“ Iodid.....oz	75	
“ (Enanthylate.....oz	1 00	
“ Succinate.....oz	60	
“ Valerian.....oz	50	
Eucalyptol.....oz	25	lb 3 50
Europhen.....oz	2 00	
Exalgine.....oz	1 25	
Extract. acon. (rad alco.)...oz	35	lb 4.80
“ aloes barb.....lb	75	
“ “ pulv.....oz	10	lb 1.25
“ socot.....“	10	lb 1.25
“ anthemides.....“	20	lb 2.50
“ belladon ang.....“	25	lb 8.50
“ “ pulv.....“	25	lb 2.50
“ “ aqneos.....oz	15	lb 1.5 J
“ “ alcoh.....oz	25	lb 3.00
“ calumb.....oz	25	lb 3 25
“ cannabis indica.....oz	25	lb 5.00
“ cara sagra.....oz	25	lb 3.50
“ cir. chonæ flav.....oz	25	lb 3.50
“ colchici.....oz	20	lb 2.60
“ “ acet.....oz	15	lb 2.00
“ colocynth co.....oz	25	lb 3.00
“ “ pulv.....oz	20	lb 2.50
“ conii.....oz	10	lb 1.00
“ conii pulv.....oz	20	lb 2.50
“ copaibæ resin.....oz	15	lb 1.50
“ digitalis.....oz	20	lb 2.50
“ “ pulv.....oz	30	lb 3.50
“ ergotæ pulv.....oz	60	
“ gentiana.....lb	45	
“ filicis maris ether.....oz	25	
“ hamamelis dest...gr	1 25	
“ glycyrrh mol.....lb	0 75	
“ “ pulv.....lb	0 75	
“ hellebor nig.....oz	25	
“ homatoxyli.....lb	80	
“ hyoscyam.....oz	20	lb 2.50
“ “ aqnos.....oz	10	lb 1.00
“ “ pulv.....oz	25	
“ “ exot.....oz	15	lb 1.50
“ ignatia amara.....oz	60	
“ ipecac acetic.....oz	1 50	
“ jaborandi.....oz	60	
“ jalapæ.....oz	25	lb 3.50
“ “ pulv.....oz	35	

# LINTOS

Prepared by

JOHNSON & JOHNSON, - NEW YORK.

## AN IMPROVED LINT,

MORE ABSORBENT. MORE EASILY APPLIED.

Lintos is a new absorbent fabric made of Absorbent Cotton 'celted into thin sheets. Every fibre thoroughly cleansed, sterilized and antiseptic. Can be readily formed into Bandages, Pads, Tampons or any desired form of dressing

Is a substitute for  
GAUZE,  
COTTON,  
BANDAGES,  
NAPKI,  
SPONGE,  
TOWELS  
&c. &c

### ADVANTAGES OVER LINT.

Greater absorbancy. Tears Readily

No loose Fibres to stick to Wounds  
or Clothing.

Covers 50 per cent more surface than same weight of Lint.

Notwithstanding these advantages Lintos is no higher in price than ordinary Lin'.

Order from your Wholesaler.

Price by single pound 55c. per lb. net.

Sample and Literature on application to

**THOS. LEEMING & Co.,**  
**MONTREAL.**

Sole Agents for JOHNSON & JOHNSON



**CANADA BRANCH:**

The Maltine Manufacturing Company, New York.

Reed & Carnrick, New York.

The New York Pharmacal Association, Yonkers, N.Y.

The Arlington Chemical Company, Yonkers, N.Y.

**R. L. GIBSON, 30 WELLINGTON STREET EAST, TORONTO.**

PRICE LIST SENT ON APPLICATION.

**PRODUITS SPECIAUX**

.... POUR ....

**Injections Hypodermiques,**

—PRÉPARÉS PAR—

**J. MOUSNIER, DE SCEAUX, FRANCE.**

Pharmacien de l'école Supérieure de Pharmacie de Paris.

Eucalyptol. Eucalyptol Gaiacolé, Eucalyptol Gaiacolé et  
Iodoformé, Eucalyptol Créosoté, Eucalyptol Iodoformé,  
Eucalyptol à l'Hélénine, Eucalyptol Phosphoré,  
Phosphate de Soude, Ergotinine, Hypophosphite  
de Strychnine, Quinine, Chlorure double de fer  
et de Quinine, Salicylate de fer. Sparteine,  
Menthol, etc., etc.

Injections Sequardiennes.

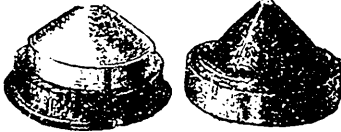
Suc Testiculaire.

Substance Grise.

Extract krameria.....oz	25	lb 3.50	Flor arnica.....lb	25	
" lactuca.....oz	20	lb 2.20	" lavand.....lb	15	pulv 25
" logwood.....lb	11	(15 & 30 lb boxes)	" rosa gall.....lb	1	75
logwood 1 lb pkts..lb	15	(30 lb boxes)	" " white.....lb	75	
" " 1/2 lb pkts..lb	16	"	Folia aconiti.....lb	25	pulv. 40
" " 1/4 lb pkts..lb	17	"	" belladon.....lb	25	pulv. 35
" " asst. pkts..lb	16 1/2	"	" buchu.....lb	25	
" lupuli.....oz	25	lb 3.00	" coca green.....lb	75	
" malt.....lb	25		" conii.....lb	20	pulv. 35
" mezerei ether.....oz	60		Folia digitalis.....lb	20	pulv. 35
" nucis vomic.....oz	40	lb 5.40	" eucalypti glob.....lb	18	
" " pulv.....oz	40		" hyoscy. exot.....lb	25	powd. 40
" opii.....oz	90	lb 13.50	" jaborandi.....lb	90	
" opii pulv.....oz	1	00	" matico.....lb	40	
" " liquid.....lb	1	25	" pulegii.....lb	20	
" papaveris.....oz	16	lb 2.25	" scennæ alex.....lb	60	
" physostigmatis.....oz	2	00	" " tenny.....lb	20	15, bale 16, 12.
" podophylli.....oz	25	lb 3 00	" " pulv.....lb	25	
" quassia.....oz	20	lb 2.40	" uva ursi.....lb	12	
" rhamni frang.....oz	50	lb 5.00	Fruct. anethi.....lb	30	
" " pulv.....oz	40		" anisi German.....lb	15	
" sarsæ jam.....oz	30	lb 4.00	" " pulv.....lb	20	
" rhei E. I.....oz	25	lb 3.50	" " Star.....lb	45	
" sarsæ jam co.....oz	28	lb 3.25	" capsici.....lb	27	10 lbs 25
" sarsæ hond co.....oz	20	lb 2.75	" " pulv.....lb	30	" 28
" stramonii fol.....oz	20	lb 2.50	" carni.....lb	12	" 11
" stramonii pulv.....oz	25	lb 3.00	" " canad.....lb	1	" 10
" taraxaci.....lb	50		" carni pulv.....lb	18	
" valerian.....oz	15	lb 2.00	" conii.....lb	30	
" veratri viride.....oz	45		" coriandri.....lb	10	bag 7 1/2
Fabæ physostigmatis.....lb	50		" " pulv.....lb	18	
" tonca para.....lb	1	00	" fœniculi.....lb	15	pulv 20
" " surinam.....lb	1	75	Fuller's earth.....lb	4	100 lb 3
" " angostina.....lb	2	75	" " pulv.....lb	6	100 lb 5
" vanillæ short.....lb	3	00	Gallæ cœrula.....lb	28	bag 25
" " medium.....lb	5	00	" cœrula pulv.....lb	30	grd 28
" " 7 1/2 in.....lb	6	50	Gasoline, 76°.....gal	60	
Fehling's solution.....lb	1	00	Gelatine, black label.....lb	35	10 lb 30
Fel bovinum purificat.....oz	20	2.00 lb	" " bronze label.....lb	40	" 35
Ferri ammon chlorid.....lb	60		" " silver.....lb	45	" 40
" " persulph(iron alum) lb	40		" " gold.....lb	60	" 55
" " protosulph.....lb	25		" " pink gold label..lb	75	
" " tartras.....lb	75		Glue.....lb	12	17
" arsenias.....oz	15	lb 1.60	" white.....lb	25	30
" bromidum.....oz	20	lb 2.00	Glycerine (double dest)1260deg lb	20	56 lb tin 16 case 15
" carb. precip.....lb	15		Glycerine Price's.....lb	70	W. qt. 65
" carbonas sacch.....lb	30		Grana paradisi.....lb	20	
" citras soluble.....lb	65		" " pulv.....lb	30	
" et ammonii citras.....lb	70		Guaiacol.....oz	80	
" et quin. cit., 4%.....oz	15		" carb.....oz	1	75
" ".....lb	1	75	Guarana pulv.....oz	3	00
" " 10%.....oz	20		Gum acacia turc elect.....lb	65	
" ".....lb	2	50	" " med.....lb	50	
" " P. B.....oz	25		" " sorts.....lb	35	
" ".....lb	3	00	" " pulv.....lb	75	
" " Hd's.....oz	25		" ammon in guttæ.....lb	50	
" " amorph.....oz	15		" asafœtid. opt.....lb	45	sec 35
" ".....lb	1	75	" " pulv.....lb	40	
" " et strych. cit. oz	35		" benzoin opt.....lb	75	
" " Hd's, oz	40		" catechu nig.....lb	12	20 lb 11 pulv 25
" et strychn. citras 1% oz	15	10 oz 13 lb 1.75	" catechu pallid cubes..lb	16	10 lb 15
" hypophosphis.....oz	20	lb 2.50	" copal.....lb	75	
" iodide.....oz	40		" damar.....lb	30	
" lactas.....lb	75		" elemi.....lb	45	
" perchlorid.....lb	35		" euphorb. pulv.....lb	40	
" phosphas.....lb	85		" galban opt.....lb	3	50
" pyrophosph.....lb	80		" gambogiæ.....lb	1	05 pulv 1 20
" sulphas commercl.....lb	2	brl 1.00 gross	" guaiaci.....lb	65	Sec. 40 pulv 50
" " exsic.....lb	9		" juniper.....lb	45	
" " pur.....lb	7	10 lb 6	" kino.....lb	1	10 pulv 1 20
" sulphid.....lb	15		" mastiche select.....lb	1	25
" valerian.....oz	25		" myrrh. turc opt.....lb	70	
Ferrum dialysatum.....oz	40		" " " sorts.....lb	45	pulv 65
" redactum.....lb	75		" olibani.....lb	25	
" tartaratum.....lb	80	10 lb 75	" sang. drecnis.....lb	45	reed 90
Flor. anthem. opt, French..lb	35		" " pulv.....lb	75	
" " Roman.....lb	30		" scammon. aleppo } lb 6 50		
" " German.....lb	30		opt. (pulv) }		

# SHIRLEY'S N 42 MENTHOL CONE.

Is admittedly the best selling in the world.



The case is of celluloid pink lettered in aluminum, and the cone takes off with the lid. Nothing to equal it, has ever been brought out.

Sells in London.....@ 3/9 doz  
also, No. 41, 6d flat celluloid. .... 3/9 "  
41c 1/ " " ..... 6/9 "

We can supply Menthol Cones to retail from 1d upwards, and give a few leading shapes.

No. 110P. 1d pedestal, 7/6 gro. No. 8P. 6d acorn boxwood 3/6  
114P. 2d " 14 " 111 1/ " " 5/-  
107F. 3d " 1/10 doz. 112 6d Flat.....3/3  
17 F 1/- " .....5/6  
109 4d " 2/6 " 6d Roller Pattern..3/6  
113R. 6d reversib 3/3 " 4d " " ..2/6  
9CR 1/ " 5/ The Roller is unbreakable.

All above prices are those obtained in England.

**SHIRLEY BROTHERS.**

105 Whitecross St., E.C., LONDON, ENG.

Father Matthew Remedy,  
Dr. Sey's Remedy,  
Audette's Hair Promoter,  
Indigenous Bitters,  
Persian Lotion

— AND **Capilline,**  
For Sale by all Druggists.

## S. LACHANCE

Proprietor,  
MONTREAL.

Laboratory for the United States :

ROUSE'S POINT, N.Y.

# MUNN'S LIQUID GLUE

IS WARRANTED TO MEND LEATHER, WOOD CROCKERY GLASSWARE ETC., AND IS PRONOUNCED BY ALL AS THE STRONGEST, CHEAPEST AND BEST.

MUNN'S Glue is packed in 1 oz. and 2 oz. bottles, Cans, Pails and Bottles.

**STEWART MUNN & CO.,** Board of Trade Building, **MONTREAL.**

Celebrated Brand of Cognac Brandy

# FAUSTIN FRERES,

As shipped in all the Markets of the World.

THE BEST VALUE IN BRANDY SUPPLIED FOR THE PRICE!!!

Agents ——— LYMAN, SONS & Co. ——— MONTREAL

Gum scammon resin.....lb	3	75	
" seedlac.....lb		40	
" shellac orange.....lb		40	
" " bleached.....lb	40	50 lb 35	
" spruce.....lb	30	10 lb 25	
" storax liquid.....lb		50	
" thus.....lb		15	
" tragacanth Ribbons.....lb		90	
" " Aleppo opt lb		75	
" tragacanth Aleppo No.2 lb		60	
" " pulv. opt. lb		90	
Gun cotton.....	70	1 oz box	
Hæmoglobol, 10 gm. vials....	60	each	
Hæmol " " " "	35	"	
Homatropine Hydrobrom. gr	30		
Humulus lupulus.....lb	20	assorted packages	
Hydrarg. bichlorid.....oz	30		
" bisulphate.....lb	90		
" iodid rubr.....oz	40	lb 4.50	
" " virid.....oz	25	lb 3.50	
" oxyd. flav.....lb	1	50	
" " rubr.....lb	1	10	
" perchlor.....lb	90	pulv. 1.00	
" subchlor.....lb	1	00	
" sulph flav.....lb	1	50	
" " alb.....lb		50	
" " c sulph.....lb	1	00	
" tannas.....oz	35		
" ammon.....lb	1	20	
" c. creta.....lb	60		
" oleas.....5% lb	55		
" " " 10% lb	65		
" " " 20% lb	80		
Hydrargyrum.....lb		10 lb 70	
Hydrastine alcaloid C.P. dr	50		
" hydrochlor C.P. dr	50		
Hydrastinine mur.....gramme	1	25	
Hydrochiuone.....oz	35	lb 4 50	
Hydrogen peroxid, Peuchot's. 1 lb		doz 8 00	
" " " ½ lb		" 6 00	
" " " ¼ lb		" 4.50	
Hyos. inc. hydrobrom, 5 gr tub. 1	75	each	
Hyocynamine.....gr	25	sulph gr 35	
Hypnon, pure.....oz	1	50	
Ichthyoe. inc. Brazil.....lb	2	40	
" " " oz packets	2	25 dozen	
" " Russian.....lb	5	25	
Ichthyol, Merck's.....oz	40	½ lb 5.50 lb	
		¾ lb 5.25 lb	
		1 lb 5.00 lb	
Indigo Madras opt.....lb	75	sec 65	
" " pulv.....lb	90		
" Paste.....lb	20		
Idsect powder Dalmatian.....lb	35	25 lb 28 56 lb 27	
Iodoformum.....oz	40	lb 5.90	
" præcip.....oz	40	lb 5.90	
Iodol.....oz	1	40	
Iodum crude.....oz	30	lb 4.50	
" resub.....oz	40	lb 5.25	
Jalapin ang.....oz	1	00 lb 13.50	
Kamaia.....lb	60		
Kousso.....oz	10		
Kava Kava.....lb	90		
Lactopeptin ozs.....doz	8	50	
" " ½ lbs.....lb	10	50	
Lactucarium aug.....oz	70		
Lanolin.....lb	85		
Lapis calam. præp.....lb	7		
" putnicis select.....lb	8	ordinary 6	
" " " lb	7	100 lb 5	
Leptandrin.....oz	45	Keiths 50	
Lichen Hibern opt.....lb	20	Sec 15	
Licorice Corig.....lb	35		
" Solazzi.....lb	45		
" Zuvia.....lb	30		
" Y & S. stick.....lb	35		
" Pellets Y. & S.....lb	40		



**PENNYROYAL WAFERS**

33 1/3 % PROFIT.

6 YEARS in Canada and United States, and sales largely due to their merit. Often imitated. Costs you \$8.00 per dozen. We desire to establish and advertise local druggists as agents; quick sales and profit thus insured to such agencies. Get this advantage for yourself by writing to the SOLE MANUFACTURERS, EUREKA CHEMICAL CO., DETROIT. No duty to pay.

THE FINEST OF ALL

French Perfumes

ROGER & GALLET'S

PARIS

Grand

Prix.

Exposition Universelle, . . . Paris, 1889

## SPECIAL OFFERS . . . .

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Marianis Coca Wine

St. Michel's Wine

Oil Lemon

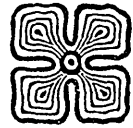
Oil Orange

Oil Bergamot

Morphia Sulphate

Naphthaline Balls

Argoline bottles and tins



Pinaud's Perfumes

“ Sachet Powders

“ Hair Tonic

Lundborg's Perfumes

“ Sachet Powders

“ Toilet Waters

Sponges

Chamois



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LYMAN, SONS & CO.,

MONTREAL.

Licorice Pellets M. & R....lb	40		Naphthol Beta.....oz	10	lb 1 .40
Lignum guaiaci rass.....lb	7		Nickel sulph cryst..... lb	75	
“ quassia incisa.....lb	10	50 lb 9	“ ammon. sulph.....lb	35	
“ sant flav grd.....lb	65	Rub 10	Nux. areca select.....lb	20	pulv 35
Liniment aconiti.....lb	90	Whr. qt. 80	“ kola.....lb	50	
“ belladon.....lb	95	“ 85	“ myristicae (limes).....lb	90	pulv 1.00
“ camph.....lb	55		“ “ opt.(unlimed).....lb	1 00	
“ camph corrup.....lb	60	Whr. qt. 55	“ vonica.....lb	12	pulv 25
“ iodi.....lb	1 50		Olio Resin Capsici.....oz	35	
“ opii.....lb	90		“ Cubeb.....oz	50	
“ saponis co.....lb	45		Ol. absinth.....oz	40	lb 4.75
“ “ c pot iod.....lb	90		“ amygd. dulc.....lb	50	Whr. qt. 45
“ terebinth.....lb	30		“ “ essent. sine acid.....oz	50	
Liquorammon. acet conc.....lb	35		“ pruss.....oz	50	
“ ammon. fort s. g. 880lb	12	12 Whr. qts. 10	“ anethi Ang.....oz	35	lb 4.50
“ antim. chlor.....lb	22	W. qt. 20	“ anisi.....lb	2 75	Whr. qt. 2.50
“ arsenicallis.....lb	10	pt., Whr. qt. 8	“ anthem Ang.....oz	2 00	
“ arsenii et hyd. iod. .lb	25	W. qt. 20 (Donovans)	“ aurantii.....lb	3 25	Winch. 3 00
“ Ferri Acet.....lb	35		“ bergam super.....lb	4 00	
“ “ “ Ft.....lb	60		“ buchu.....oz	3 00	
“ ferri dialysatus.....lb	40	W. qt. 35 lb	“ cadi.....lb	35	Whr. qt. 30
“ “ perchlor fort.....lb	12	Whr. qt. 11	“ cajeputi.....oz	10	lb 1.00
“ “ pernit.....lb	14		“ carui.....lb	2 50	
“ “ persulph.....lb	25		“ caryoph.....lb	1 25	
“ hydrogenii perox.....lb	35		“ cassia.....lb	1 50	
“ plumbi subacet.....lb	12	Whr. qt. 10	“ cedri opt.....lb	75	Whr. qt 70
“ potassæ.....lb	7		“ chaulmoogra.....oz	20	
“ santal flav comp.....lb	1 50		“ cinnamomi ver.....oz	1 70	
“ sodii chlor.....lb	16		“ citronellæ.....lb	80	bot. 70 lb
“ strychnine.....lb	50	Whr. qt. 45	“ cocoanut.....lb	15	
Lithii bromid.....oz	25		“ cognac.....oz	1 75	
“ carbonas.....oz	25	lb 3.20	“ Cologne.....oz	60	
“ citras.....oz	20	lb 2.75	“ conii...spruce.....lb	70	Whr. qt. 65
“ hippurate.....oz	1 50		“ copaibæ.....lb	1 25	
“ iodid.....oz	50		“ coriandri.....oz	70	
“ salicylat.....oz	30		“ crotonis.....oz	10	bot. 1.20 lb
Litmus.....lb	60		“ cubebæ.....oz	50	
Lucilline.....1 lb tins	20	each	“ cumini.....oz	40	
“ .....5 lb “	90	“	“ erigerontis.....lb	3 25	
“ .....10 lb “	1 60	“	“ eucalypti.....lb	1 60	
“ .....25 lb tubs	14	lb	“ foeniculæ dulc.....lb	1 50	
“ .....50 lb “	13½	“	“ gaulther.....oz	25	lb 3.00
Lupulinum.....lb	60		“ “ synthetic.....lb	2 00	
Lycopodium.....lb	80		“ geranii rox.....oz	50	
Lysol.....½ kilo bottles	75	each	“ “ super.....oz	1 00	
Macis.....lb	1 20	pulv 1.30	“ juniperi bacc.....oz	15	lb 2 00
Madder compound.....lb	10	carboy 9	“ “ lig.....lb	60	Whr. qt. 55
“ Dutch.....lb	12	brl 10	“ lauri.....lb	40	
Magnes citr. gran. Bishop.lb	80	7 lb 75	“ lauri essent Bay.....oz	40	lb 5.00
“ “ Lyman.lb	35		“ lavand ang.....oz	2 00	
“ calcined.....1 lb tins	50		“ “ exot.....lb	3 50	sec 2.50 1.50
“ “ “ bots	65		“ limonis auper.....lb	25	copper 2.10
Magnesii carb levis 1 oz pkt lb	22	10 lb 20	“ macis.....oz	25	lb 3.50
“ “ “ 2 “ lb	20	“ 18	“ menth. pip. Amer.....lb	4 25	Whr. qt.4.00
“ “ “ powd..lb	26	1 lb tins	“ “ “ English.....oz	1 00	lb 14.00
“ chloride.....lb	30		“ “ “ Japan.....lb	4 75	
“ sulphas.....lb	3	Brl. 1.50	“ “ virid.....oz	25	lb 3.50
Magnesium, wire or ribbon oz	75	Powder 50	“ morrhuae Newf.....gl	90	to 1 60 brl. 85
Maltopapsin ¼ lb bots.....lb	5 35		“ “ Norveg.....gl	1 20	brl. 95
“ bots.....doz	6 35		“ “ Nfld by Nor- } weg. process }	1 00	kegs 18 gals 85
Mangan chlorid.....lb	50		“ myrbane.....lb	30	Whr. qt. 25
“ oxyd. nigr.....lb	10	brl. 7½	“ myristicae.....oz	30	bot. 25
“ sulph. pur.....lb	60		“ neatsfoot, pale.....gl	1 25	
Manna flak select.....lb	1 75		“ neroli. opt.....oz	4 00	
Maranta Bermuda.....lb	45	10 lb 42	“ olivæ sublime salad .gl	2 50	
“ Jamaica.....lb	15		“ “ “ 1 gal	original tins incl 2 50 each.	
Mel. canadensis.....lb	15	10 lb 14	“ “ green.....gl	1 40	brl. 1.20
Menthol.....oz	50	lb 7.50	“ “ “ opt.....gl	1 50	brl. 1.35
Morphinæ acetas.....oz	2 15	10 oza. 2 00	“ “ yellow.....gl	1 40	brl. 1.15
“ hydrochloras.....oz	2 15	“ 2.00	“ “ yellow opt.....gl	1 50	brl. 1.25
“ sulphas.....oz	2 25	“ 2.10	“ “ (Salad American)gl	1 30	brl. 1.15
Moschus, in grain..... dram.	5 50	(in ¼th oz phials 25c oz extra)	“ origani.....lb	85	
Myrtol.....oz	1 00	4.50 3.50	“ “ Sec.....lb	50	Winch 45
Naphtha mineral.....lb	50		“ palmæ select.....lb	15	
Naphtha vegetable.....lb	60		“ patchouli opt.....oz	1 25	
Naphthaline resublimed.....lb	30		“ petit. gran.....oz	75	Sec 45

# We · Pay · Express · Charges

TO THE RETAIL TRADE OF CANADA.

## PRICE LIST

—OF—

# T. A. Slocum & Co's Remedies.



. . . Having found in the past that some retailers have been unable to procure small supplies of all our remedies from their Wholesaler, we offer to supply such cases in future direct, and to **prepay charges** on all **cash** orders of \$3.00 and over. Goods can be obtained from any Wholesale Druggist or direct

**TERMS, CASH ; 5 per cent. DISCOUNT.**

	Dozen.	Sold at		Dozen	Sold at
Dr. Slocum's Psychine, large.....	\$28 00	\$3 00	Dr. Slocum's Compound Pennyroyal Tea ..	\$ 2 00	\$ 25
Dr. Slocum's Psychine, small.....	14 00	1 50	Dr. Slocum's Worm Wafers.....	2 00	25
Dr. Slocum's Oxygenized Emulsion, large..	7 50	1 00	Dr. Clark's Catarrh Cure.....	4 00	50
Dr. Slocum's Oxygenized Emulsion, small..	3 00	35	Dr. Clark's Pile Ointment.....	7 50	1 00
Dr. Slocum's Coltsfoot Expectorant.....	7 50	1 00	Dr. Clark's Regulative Pills.....	4 00	50
Dr. Slocum's Celery and Quinine Bitters...	4 00	50	Dr. Clark's Lightning Liniment.....	2 00	25
Dr. Slocum's Regulative Pills.....	4 00	50	Peach Bloom Skin Food.....	7 50	1 00
Dr. Slocum's Magnetic Plasters.....	2 00	25	Dr. James' Horehound Expectorant.....	2 00	25
Dr. Slocum's Iron Blood Pills.....	2 00	25	Abrasive Corn Solvent.....	2 00	25

All orders receive prompt attention. Remit by Post Office Order, Express Order or Registered Letter. Postage stamps taken for amounts less than \$1.00,

Address all Monies and Letters to

# T. A. SLOCUM & CO.,

186 Adelaide Street, West, TORONTO, CANADA

Ol. piols.....	lb	12	Whr. qt. 10
" plmontæ.....	oz	25	lb 3.20
" pini silvestris.....	lb	1 50	
" pulegii hed.....	lb	2 25	
" rapii.....	gl	1 00	
" rhodii.....	oz	90	
" ricini E. I.....	lb	11	case 8½ tins 0½
" " Gal water pale.....	lb	12	brls 8½
" " Virgin.....	lb	15	tins 18
" " Ital.....	lb	20	tins 18
" rosmarini exot.....	lb	70	W. qt. 65
" ruta.....	oz	25	
" sabiæ.....	lb	1 30	
" sambuci vir.....	lb	30	
" santali ang.....	oz	50	lb 7.50
" Santali ang. W. I.....	oz	40	lb 5.00
" sassafras.....	lb	70	Whr. qt. 65
" sem santon.....	oz	25	lb 3.20
" sesame.....	gl.	1 85	case 1.25
" sinapis essent.....	oz	65	lb 8.50
" sperm.....	gl.	2 00	
" spiko.....	lb	25	
" succin. rect.....	lb	65	Whr. qt. 60
" tanacetii opt.....	oz	30	lb. 4.25
" terobinthium.....	lb	50	
" " coml.....	gl	65	brl. 58
" theobromatis.....	lb	55	(tablets)
" valerian.....	oz	1 00	
" verbenæ.....	oz	10	bot. 9
" vini.....	oz	25	lb 3.50
" ylang-ylang.....	oz	7 00	
Opium Turc.....	lb	4 75	
" " pulv.....	oz	40	lb 5.75
Os sepio.....	lb	25	select 40 pulv 35
Otto rose Doupsi.....	oz	7 00	
" virgin.....	oz	9 00	opt 11.00
Panc'reatine, Morson's.....	oz	1 00	
" Merok's.....	oz	85	
Papoid.....	oz	3 25	
Paraffinum durum.....	lb	20	50 lb 15
Paraldehyde.....	oz	20	lb 2.25
Paris Green.....	lb.	18	tins 15
Peilaterine Tannate.....	gm	45	
Pepsin.....	lb	2 25	
" pur. sol pulv. Merck's.....	lb	3 00	
" Merck's scales.....	lb	5 00	
" ang. coml.....	oz	30	lb 3.50
" Boudault's.....	oz	1 20	
" medicinal Morson's.....	oz	85	
" porci Morson's.....	oz	2 25	
" sacchar.....	oz	25	lb 3.50
" Jensen's scales.....	oz	1 25	
" Armour's.....	oz	90	lb 12.00
Petrol Barbadens.....	lb	15	
Petroleum, see Lucilline			
Phenacetine Bayer.....	oz	45	lb 6.50
Phenocol.....	gm	25	
" Hydroch.....	25 gms	1 50	
Phenolphthalein.....	oz	1 00	
Phosphorous... 11 lb tins.....	lb	85	1 lb bots 1.00
Pil. hydrarg.....	lb	70	
Pilocarpin Hydrochlor.....	gr	10	5 or 10 tubes
" nitras.....	gr	10	5 or 10 tubes
Pipe clay.....	lb	5	100 lb 4
Piperina.....	oz	1 00	
Piperazin Bayer, ¼ oz bottle.....	oz	8 75	
" tablets... 10x16 gr.....	gr	2 40	each
Piper alba.....	lb	20	pulv 22
" Cayenne.....	lb	25	10 lb 20
" nigram.....	lb	17	pulv 19 25 lb 17
Pix Burgund bladders.....	lb	10	20 lb 9
Plumbi acetat brown.....	lb	10	50 lb 9
" " Xtis.....	lb	12	50 lb 10
" " C. P.....	lb	25	
" iodid.....	oz	35	lb 4.50
" nitras coml.....	lb	16	
" oleas.....	lb	1 00	
" oxyd pulv.....	lb.	9	keg 7½ (litharge)

# TURKISH DYES.

... Seventy-four Colors ...  
... Fast Shades ...

**BRAYLEY, SONS & CO.**  
MONTREAL.

## Rheumatism Quickly Cured

—BY—  
**DR. NELATON'S POWDER.**

Sent free by mail on receipt of \$1.

**LAVIOLETTE & NELSON,**

Dispensing Chemists,

Corner Notre Dame and St. Gabriel Sts.,  
MONTREAL.

# BOTT'S MALT PREPARATIONS.

## Pure Malt Stout and Wine of Malt

Recommended strongly by prominent  
Physicians all over the Country.

FOR SALE BY ALL DRUGGISTS.

Obtainable Wholesale from Messrs. **LYMAN, SONS & CO.**  
at the following prices:

**Pure Malt Stout, \$1.60 per doz**  
**Wine of Malt, \$2.60 "**

**WALTER R. WOHAM & SONS,**  
Agents.



**IMPORTANT INFORMATION FOR  
RETAIL DRUGGISTS.**

In this issue of the *Montreal Pharmaceutical Journal*, will be found the full proceedings in Court of the case in England of

“CARTER vs. CARR.”

This is a case of the Carter Medicine Co. or to use a title more familiar, “The Carter’s Little Liver-Pill Co.” against the man named Carr, who was putting up Carr’s Little Liver Pills.

It can be readily seen, that from the similarity of names, it was easy to deceive a purchaser, and substitute these for “Carter’s Little Liver Pills,” and this he was doing.

The Court granted a perpetual injunction—with costs.

The proprietors of the Carter’s Little Liver Pills desire by this notice to reach the retail druggists of Canada, and most respectfully call their attention to the importance of this decision.

A good man may be guilty of an unlawful act simply because he is not aware that his act is unlawful, and hence we are trying to inform you that

**SUBSTITUTION IS UNLAWFUL.**

Do not be guilty of it.

It is nothing more than fair that we should have the business which we have made. Give us “fair play.” But at the same time we wish it distinctly understood that we shall protect our rights, and in this determination, we are quite sure every fair-minded retail druggist will uphold us.

Yours very respectfully,

**CARTER MEDICINE CO.**  
57 Murray Street,  
NEW YORK.

SMALL PILL.  
-o-  
SMALL DOSE.  
-o-  
SMALL PRICE.

**CARTER'S  
LITTLE LIVER  
PILLS.**

**A POSITIVE CURE  
FOR SICK HEADACHE.**

**J. M. FORTIER'S  
Cigars**

Are the Leading  
Sellers in the Dominion!



TO GAIN AND RETAIN CUSTOM, DEALERS SHOULD KEEP UP THEIR STOCK OF THE CELEBRATED . . . . .

· **“Creme de la Creme”** ·

· **“Pete”** · **“Mirosa”** ·

**La “Sonadora”**



**J. M. FORTIER,** Dealer in **High Grade Raw Leaf Tobacco,**

**Creme de la Creme Cigar Co.,**

**141 to 153 ST. MAURICE STREET, MONTREAL.**

**THE  
HEARLE  
M'FG' CO.**



Successors to

**J. G. HEARLE,**

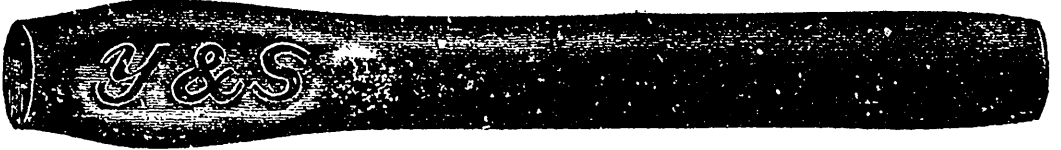
**TOILET SOAP MAKERS,**

**84 St. Urbain Street,**

**MONTREAL.**

WE are pleased to announce to the Drug Trade of Canada that our well known make of TOILET SOAPS can now be had from all the leading whole sale houses.

" " rub.....lb.	8	keg 6 (red lead)	Rad auchusa.....lb	20	
Podophyllin resin.....oz	35		" angelica.....lb	30	pulv 35
Potassa caustica sticks.....lb	55		" arctii (Turlock).....lb	15	
" sulphurata.....lb	35		" belladon.....lb	18	contus 30
Potassii acetat.....lb	45	gran 50	" calam. aromat.....lb	30	
" bicarbonas.....lb	16		" calumb.....lb	20	pulv. 20
" " pulv.....lb	17		" curcumæ Madras.....lb	10	" 12
" bichromas..... lb	15	keg 12½	" galangal minor.....lb	18	
" binoxal'as.....lb	23	10 lb 22	" " pulv.....lb	25	
" " pul'v..... lb	25	10 lb 23	" gentian, select.....lb	10	
" bitart.....lb	30	keg 24 brl 23	" " ground.....lb	12	
" bromid.....lb	60	5 lb 55	" " pu'v.....lb	15	
" carbonas.....lb	14	10 lb 12	" ginseng.....lb	4	50
" " pearl ashes, lb	10	100 lb 9	" glycyrrh decort.....lb	25	10 lb 22
" chloras.....lb	27	keg 25	" " incis.....lb	60	
" " pulv.....lb	23	keg 26	" " dec't pul'v.....lb	10	bundles 12
" chlorid. pur.....lb	30		" " sicut.....lb	10	brl. 11
" chromas.....lb	60		" " grd.....lb	12	
" citras neutral.....lb	70		" helleb alb.....lb	12	
" cyanid. C. P.....lb	1 00		" " pulv.....lb	16	keg 14 br. 13
" " gold plater, lb	75		" ipecac.....lb	2 00	
" " fused.....lb	45		" " pulv.....lb	2 25	
" hypophosph.....lb	1 50		" iridis Florentine.....lb	50	
" iodid.....lb	4 00	5 lbs \$3 80	" " pulv.....lb	60	
" nitras.....lb	10	112 lb keg 7	" jalapa.....lb	45	
" nitras pulv.....lb	11	(Gran) 10 keg 7½	" " pulv.....lb	55	
" " C. P. Mercks.....lb	30		" krameria opt.....lb	30	
" oxal'as, neutral.....lb	25		" pareira brava.....lb	40	
" permangan pur.....lb	35	10 lb 30	" pyrethri.....lb	35	
" pruss. flav.....lb	35		" rhei E. I. opt.....lb	1 25	cubes 1.00
" " rubr.....lb	75		" " " sec.....lb	75	
" silicas.....lb	30		" " elect opt.....lb	2 25	fingers 1.50
" " Liq.....lb	20		" " pulv elect opt.....lb	2 50	
" sulphas.....lb	12	pulv 13	" " " E. I. opt.....lb	1 25	
" sulpho-cyanid.....oz	15		" " " sec.....lb	80	
" sulphocarb.....lb	1 90		" sanguinaria.....lb	14	pulv 16
" sulphuret.....lb	35		" sarsæ Hond.....lb	45	incis 50
" tartras.....lb	80		" " " Jam.....lb	70	" 75
Potassium.....oz	3 00		" " Mex'can.....lb	18	20 lb 16
Propylamine.....oz	75		" scil'æ sicc.....lb	12	
Pulv. aloes c. canella.....lb	40		" " pulv.....lb	30	
" antimonialis P. L.....lb	60		" senegæ.....lb	65	
" catechu comp.....lb	70		" spigelia.....lb	45	pul'v 65
" cinnam comp.....lb	75		" sumbul.....lb	90	
" cretæ aromat.....lb	1 20		" taraxac sicc.....lb	18	10 lb 15
" " " c. opio.....lb	1 50		" tormentilla.....lb	25	
" " comp.....lb	50		" " pulv.....lb	35	
" " " c. opio.....lb	75		" zingib. Afric. n. b.....lb	16	20 lb 15 bag 13
" cretæ c. camph.....lb	25	10 lb 20	" " " pul'v.....lb	18	30 lb 16
" glycyrrh comp.....lb	30		" " " Jam. u. b.....lb	25	brl 23
" ipecac comp.....lb	1 40		" " " bleached, lb	30	10 lb 28
" jalap comp.....lb	75		" " " pulv opt. lb	30	10 lb 28
" kino comp.....lb	1 25		" " " sec. lb	25	
" rhei comp.....lb	75		Resin flav.....lb	4	brl 4.00 280 lbs.
" sapo cast.....lb	25		" " pulv.....lb	5	50 lb 4
" " alb.....lb	35		Resorcin xtls.....oz	25	lb 3.00
" scammon comp.....oz	30		" resublim.....oz	50	
" seidlitz Howards.....lb	25	7 & 14 lb	Rhizoma ar. icæ.....lb	30	contus 40
Pyoktannin.....25gms	1 25		" cimicifuga.....lb	75	
Pyridin Purias.....oz	20		" podophylli.....lb	14	
Quassine, ½ oz vials.....oz	4 00		" serpentaria.....lb	55	pulv. 90
Quinina bisulph.....oz	50		" valeriana.....lb	15	pulv. 22
" bromid.....oz	75		Rouge—Jewellers.....lb	65	
" citras.....oz	80		Rubidium chloride..... gm	40	
" hydrobrom.....oz	1 00		Saccharine..... dram	20	oz 1.20
" hydrochlor.....oz	60		Sacch. lactis pulv.....lb	30	
" hypophos.....oz	1 50		Sago perlat. parv..... lb	6	bag 5½
" iodid.....oz	1 00		Sal prunella glob.....lb	20	
" phosphas.....oz	75		Salicinum.....oz	20	lb 2 75
" salicylas.....oz	65		Salipyrine..... 50 gms	2 50	each
" sulph German.....oz	40	100oz tin 27 25 oz 28	Salot.....oz	40	lb 5 50
" " Howards.....oz	45	100 oz 40	Salophen.....oz	1 60	
" " " 4 oz	40		Santoninum.....oz	20	lb 2.75
" sulphocarb'as.....oz	1 50		Sapo Castile Alb Contis.....lb	16	box 15
" tannate.....oz	50		" " " Shell.....lb	12	" 10
" valerian.....oz	75		" " " Virgin.....lb	12	" 10
Rad aconiti.....lb	20		" " " cakes box,	5 00	
" " contus.....lb	25	pulv 30	" " Mottled opt.....lb	12	box 11



PURE CALABRIA "Y. & S." LICORICE,

4, 6, 8, 12 and 16 to pound.

"Acme" Licorice Pellets, in 5-pound Tin Cans.

Tar, Licorice and Tolu Wafers, in 5-pound Tin Cans.

Licorice "Y. & S." Lozenges,

In 5-pound Tin Cans and 5-pound Glass Jars.

"Purity," Pure Penny-Licorice

100 and 200 Sticks in a Box.

Ringed Licorice, 17 Sticks to a lb.

MANUFACTURED

EXCLUSIVELY BY

**YOUNG & SMYLLIE,**

*Where did you see this Advertisement?*

BROOKLYN, NEW YORK.

**SIMPLE BUT SURE.**

**SOMERVILLES'**

*M. F. COUGH*

**C·H·E·W·I·N·G  
G·U·M,**

Five Cents per Bar.

Twenty Bars on a Handsome Standing Card.

The Wholesale Trade have it.

Price 65 cents per Card.

C. R. SOMERVILLE, LONDON, ONT.

Sapo Castile Mottled com..lb	10	" 9
" " " cakes gross	4 75	
" mollis ang.....lb	10	20 lb 8
" " German Green..lb	35	
" " Green opt.....lb	55	
Scammonæ resin pulv.....lb	2 75	
Scoparii cacumin.....lb	25	
Secale Cornut.....lb	75	
Sem. canary.....lb	5	bag 3½
" cardam.....lb	1 75	1.50 & 1.25
" " decort.....lb	1 00	
" " pulv.....lb	1 50	
" celery.....lb	25	
" chenopodii.....lb	25	
" colchici.....lb	55	pulv. 65
" cydoniæ.....lb	50	
" cymini.....lb	20	pulv. 25
" fenugræci.....lb	5	
" " pulv.....lb	7	ground 6 brl 5
" hemp.....lb	5	bag 4½
" hyoscyam.....lb	60	
" jambul.....oz	15	
" lini sifted.....lb	4	brl. 3½
" lini crushed.....lb	5	brl. 4
" " " No. 2.....lb	4½	brl 3½
" " " No. 3.....lb	4	brl. 3½
" lobeliæ inflatæ.....lb	50	pulv 55
" maw.....lb	15	10 lb 14
" millet.....lb	6	keg 5
" pumpkin.....lb	25	
" rapii.....lb	8	bag 7
" santonicæ.....lb	18	pulv. 28
" sinapis alb.....lb	12	
" staphisagriæ.....lb	35	
" stramonii.....lb	25	
Soda caustica stick.....lb	45	
" caustica cake.....lb	40	
" crystals.....lb	2	brl 1.25 per 100 lbs
" tartarata.....lb	28	
Sodii acetas pura.....lb	25	
" arsenias.....oz	10	lb 1.20
" benzoas.....oz	15	lb 1 50
" bicarb. pulv Morson's lb	10	
" " " Hd's.....lb	16	14 lb 15
" " pulv. coml... lb	4	keg 2 75
" bisulphis.....lb	25	
" bisulphas.....lb	30	
" bromid.....lb	65	
" carb. recryst.....lb	15	
" carbolas pur.....lb	3 50	
" chlorate xtls.....lb	50	
" citras.....lb	1 00	
" hypophosphis.....lb	1 40	
" hyposulphis.....lb	5	keg 112 lbs. 3.00
" iodid.....oz	40	lb 5.50
" nitras pur.....lb	25	coml. 8
" oxalas.....lb	50	
" phosph pur.....lb	15	pulv 25
" salicylas.....lb	2 00	
" silicas xtls.....lb	15	
" " solut conc.....lb	10	
" sul' jas.....lb	3	brl. 1½ Hds 5 [brl. 4.
" " exsicc. pulv.....lb	15	
" " pur recryst.....lb	30	
" sulphid.....lb	60	
" sulphis.....lb	7	pulv. 8
" sulpho carbolas.....lb	1 10	
" valerian.....oz	50	
Sodium.....oz	40	
" molybdate.....oz	40	
" succinate.....oz	35	
Sol. acid osmic 1%.....oz	1 50	
" cocain 4%.....oz	80	
" nitro glycerin 1%.....lb	1 75	
Somatose—Bayer, 2 oz tins.oz	70	
Sozoidol of Zinc.....oz	1 50	
Sparteim sulph.....dr	40	
Spice pickling.....lb	40	

# Adams' Horehound Tutti Frutti.



Send for elegant advertising matter,

ADAMS & SONS CO.,

11 and 13 Jarvis St.,

TORONTO, ONT.

**WAMPOLE'S**  Now in stock at all Wholesale Druggists.

**Granular Effervescent Bromo-Pyrine,**

Large size, \$9.00 doz. Small size, \$2.25 doz.

(Trade Mark) Medium " 4.75 " Sample " 8.50 gros

1 lb. Bottles, 2.37 lb.

Com p. S y. Hypophosphites, <sup>PBR DOZ.</sup> \$8.50 <sup>5 PINTS.</sup> \$3.17

Tasteless prep'n Cod Liver Oil, 8.50 3.17

Syrup Hydriodic Acid ..... 8.50

Hypno-Bromic Co. (True Hypnotic)

1 lb. Bottles, \$25.67 Doz.

½ " " 12.64 "

¼ " " 7.37 "

Tasteless preparation Cascara Bark,

12 oz. Bottles, \$7.00 Doz.

Asparoline Compound..... 8.50 "

Alvinine Suppositories, <sup>Per Doz. Boxes, (Adult Size)</sup> \$4.00

<sup>Per Doz. Boxes, (Children's Size)</sup> .. 2.75

Glycerine Suppositories, <sup>Per Doz. Boxes, (Adult Size)</sup> .. 3.17

<sup>in a new and original Package) Per Doz. Boxes, (Children's Size)</sup> .. 3.17

White Pine Com , 5 pt. bottles ..... 2.65

Per dozen ..... 6.85

PREPARED SOLELY BY

## HENRY K. WAMPOLE & CO.,

Manufacturing Pharmacists,

**PHILADELPHIA, U.S.A.**

CANADIAN BRANCH:

36 & 38 LOMBARD ST., TORONTO.

Highest Awards

PARFUMERIE

At all Exhibitions.

**ED. PINAUD,**

37 Boulevard de Strasbourg,  
**PARIS.**

ED. PINAUD'S latest Exquisite Perfumes:

PAQUITA-LILY,  
AURORA-TULIP,  
ACACIA DE FRANCE,  
FRENCH PANSY,  
VIOLETTE  
DE PARME.



FOR SALE BY  
LYMAN, SONS & CO.

THE GENUINE

**EAU DE COLOGNE,**

Distilled strictly according to the original recipe of the  
Inventor, is manufactured by

Johann Maria Farina Julich Place No. 4,  
Cologne o/Rhine

Patented Purveyor to H. R. H. the Prince of Wales, and to  
several other Imperial and Royal Courts.

This EAU DE COLOGNE was distinguished with prize-medals  
and diplomas at the Exhibitions of all nations in London  
1851, New York 1853, London 1862, Oporto 1865,  
Cordova 1871, Vienna 1873, Santiago (Chili)  
1875, Philadelphia 1876, Cape Town 1877,  
Sydney 1879, Melbourne 1880, Boston  
1883, Calcutta 1884, Adelaide 1887,  
Melbourne 1888-89, and at  
Kingston (Jamaica) 1891.

I beg all consumers wishing to obtain the genuine  
*Eau de Cologne*, distilled strictly according to the  
original recipe of the inventor, my ancestor, to pay  
special attention to my firm:

Johann Maria Farina Julich Place No. 4

Patent Purveyor to H. R. H. the Prince of Wales, and  
to several other Imperial and Royal Courts.

**WALTER BAKER & CO'S**

Soluble

25252525252525

**Chocolate.**

2525252525252525

THIS is a preparation for the special use of Druggists  
and others in making Hot or Cold Soda. It forms  
the basis for a delicious, refreshing, nourishing, and  
strengthening drink.

It is perfectly soluble. It is absolutely pure. It is  
easily made. It possesses the full strength and natural flavor  
of the cocoa-bean. No chemicals are used in its prepara-  
tion.

Samples furnished to Druggists on application.

The trade is supplied with one, four, or ten  
pound decorated canisters.

**WALTER BAKER & CO.,**

Dorchester, Mass., U.S.A.

BRANCH HOUSE:

6, HOSPITAL STREET, MONTREAL.

"THE BEST OF AMERICAN"

**PLANTEN'S  
CAPSULES**

H. PLANTEN & SON, ESTABLISHED 1858. New York.

MANUFACTURED OF HIGHEST GRADES

SOLUBLE HARD AND  
ELASTIC GUM **CAPSULES,**

Improved French Pearls and Globules.

SOME SPECIALTIES:

SANDALWOOD, ERIGERON, CREASOTE, TEREBENE,  
COMPOUND SANDAL, IODIDE ETHYL, WINTER-  
GREEN, APIOL, MALE FERN, ETC.

**Planten's Sandal**

ARE CELEBRATED THE WORLD OVER

EMPTY CAPSULES

Powders, 8 Sizes; Liquids, 8 Sizes; Rectal, 3 Sizes;  
Vaginal, 9 Sizes; Horses and Cattle, 6 Sizes;  
Veterinary Rectal, 3 Sizes.

Capsules for Mechanical Purposes.

SPECIAL RECIPES CAPSULED. NEW KINDS CONSTANTLY ADDED.

Send for Formula Lists of over 250 kinds.

SOLD BY ALL DRUGGISTS.

BEWARE OF SUBSTITUTION.



# BISHOP'S

ORIGINAL  
**GRANULAR**  
**EFFERVESCENT**  
**PREPARATIONS.**

Highest Awards Paris Exhibition 1889, Chicago Exhibition 1893.

We beg to call the attention of the Medical profession to the fact that we were the original inventors and makers of Granular Effervescent Preparations, and that for more than thirty years we have given our sole attention to perfecting this one class of articles. In these preparations, which are universally admitted to be the finest in the market, the most scrupulous care and attention are given by us to ensure uniformity, and we guarantee that they may be absolutely relied on. As the Profession naturally wish to obtain the best preparations for their patients, they will make certain of doing so, if, when prescribing, they specially mention BISHOP'S, as by that means they will not only secure the best article in the market, but be certain that the materials used are of the finest quality and always kept up to the highest standard. LIST FREE.

## ANTIPYRIN.

5 and 10 grs. in each drachm.

ANTIPYRIN with	2½ grs.	} in 1 dr.
SODA SALICYLATE	2½ grs.	
ANTIPYRIN with	5 grs.	} in 1 dr.
CAFFEINE CITRATE	1 gr.	
ANTIFEBRIN	5 and 10 grs.	} in 1 dr.
CAFFEINE CITRATE	1, 3 & 5 grs.	
" " HYDROBROMATE "	1, 2 & 5 grs.	} in 1 dr.
EXALGINE	1, 2 & 5 grs.	
IRON CARB. (form. Blaud's)	2 grs.	} in 1 dr.
IRON and ARSENIC	4 grs. & 3 mns.	
LITHIA CITRATE	5 grs.	} in 1 dr.
LITHIA BENZOATE	5 grs.	
LITHIA SALICYLATE with	5 grs.	} in 1 dr.
SODIUM BROMIDE	5 grs.	

"VICIHY" and other Mineral Water Salts.  
And all other Granular Effervescent Preparations.  
May be obtained of all Chemists and Importers.

Lists free on application

None genuine without this Trade Mark.

## PIPERAZIN.

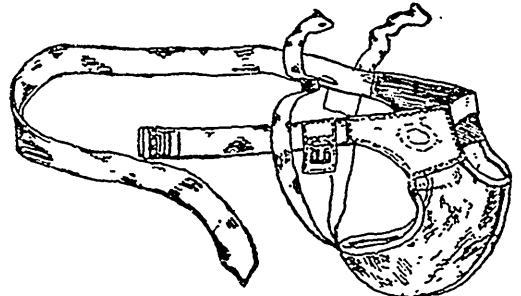
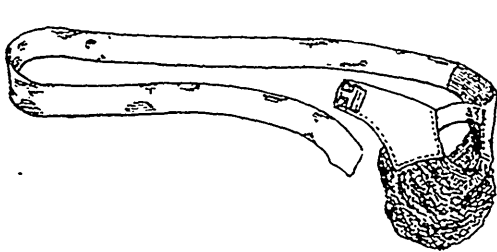
5 grs. in each drachm.

LITHIA SALICYLATE	5 grs.	} in 1 dr.
NUX VOMICA	1-12 gr.	
PHENACETIN	5 grs.	} in 1 dr.
PHENACETIN with	5 grs.	
QUININE	1 gr.	} in 1 dr.
PHENACETIN with	3 grs.	
SODA SALICYLATE	3 grs.	} in 1 dr.
POTASH CITRATE	10 grs.	
SODA BICARBONATE	10 grs.	} in 1 dr.
SODA SALICYLATE	5 & 10 grs.	
SODA SULPHATE	10 grs.	} in 1 dr.
SODIUM BROMIDE	10 grs.	
MAGNESIA CITRATE (the original BISHOP'S)		

ALFRED BISHOP & SONS, Limited.,

"SPECKS FIELDS," 48 Spelman Street,  
LONDON, Eng.

# Suspensory Bandages

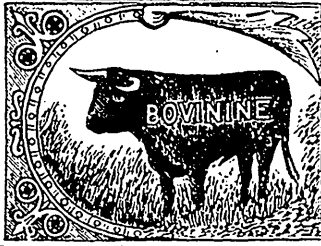


The Ware Manufacturing Co.,

CAMDEN, NEW JERSEY, U. S. A.

WRITE FOR PRICE LIST.

Our Goods are carried in stock by LYMAN, SONS & Co.



# BOVININE

A CONDENSED FOOD

Prescribed by more than 25,000 physicians during the present year.  
It will sustain and nourish babies, children, invalids and aged people when all else fails.

Creates new and vitalized blood faster than any other food preparation in the world.  
For overworked and insufficiently nourished people; over-taxed professional and laboring men

Builds up the system after severe illness when recovery is slow and the appetite poor.  
Nursing mothers, teething infants and puny children thrive surprisingly by its use, a change for the better being perceptible often within 24 hours.

It is the only thing that will permanently cure nervous prostration, dyspepsia, cholera infantum and excessive irritability of the stomach from any cause.

Read the remarkable testimonial from Col. Fred. Grant, regarding the prolongation of his father's life by the use of Bovinine:

"During the last four months of his sickness, the principal food of my father, Gen. Grant, was Bovinine and milk and it was the use of this incomparable food alone that enabled him to finish the second volume of his personal memoirs.  
October 1st, 1885. FRED. D. GRANT."

Send for pamphlet containing testimonials from a large number of the leading physicians of the country  
Put up in 6 and 12 oz. size, at 60 cts. and \$1.00 per bottle. 12 ozs. contains the strength of 10 pounds of beef.

**The Bovinine Co.,**

NEW YORK.

CHICAGO.

BOSTON.

LYMAN, SONS & CO., Sole Agents for Canada, MONTREAL.

## LYMAN'S Fluid Coffee

Made from choice selected coffee, freshly roasted and ground expressly for this purpose. It is absolutely unrivalled for quality and flavor, and acknowledged the best wherever used. It is prepared by a process, by which all the more desirable qualities of the Berry are preserved without injury while the bitter principle is carefully excluded.

ASK FOR SAMPLES FOR DISTRIBUTION.



HIGHEST AWARD AT CHICAGO EXHIBITION

ABSOLUTE PURITY GUARANTEED BY USING

→ T. & H. SMITH'S ←

CHLOROFORM PURE

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[ Answering all Recognized Purity Tests ]

\*

MORPHINE & SALTS

AND OTHER FINE CHEMICALS.

From all Wholesale Houses Throughout Canada

T. & H. SMITH & CO.,

MANUFACTURING CHEMISTS,

Edinburgh, Scotland, and 12 Worship St., London, England



S. MAW, SON & THOMPSON'S

BEST QUALITY

**TOOTH BRUSHES**

Each bearing TRADE MARK and Warranted.

May be had either direct, or through any of the leading Wholesale Houses in the trade.

No Charge for Stamping Name and Address of Customer  
when not less than One Gross are Ordered.

For Patterns see Book of Illustrations  
pages 246 to 254.

Quarterly Price-Current and Book of Illustrations containing nearly 5000 Engravings of Surgeons' Instruments and Druggists' Sundries of all kinds, may be had on application, enclosing business card, forwarded *post free* to all parts of the world.

S. MAW, SON & THOMPSON, 7 to 12 Aidersgate St., LONDON, ENGLAND.