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Fraser Jas. D. B. & Son

ESTABLISHED 1890.

A Monthly Journal of Chemistry, Pharmacy and Materia Medica.

OFFICE OF PUBLICATION 171 ST. JAMES STREET, MONTREAL, CANADA.

Vol. V—No. 9.

DECEMBER, 1894.

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Swayne's Ointment.

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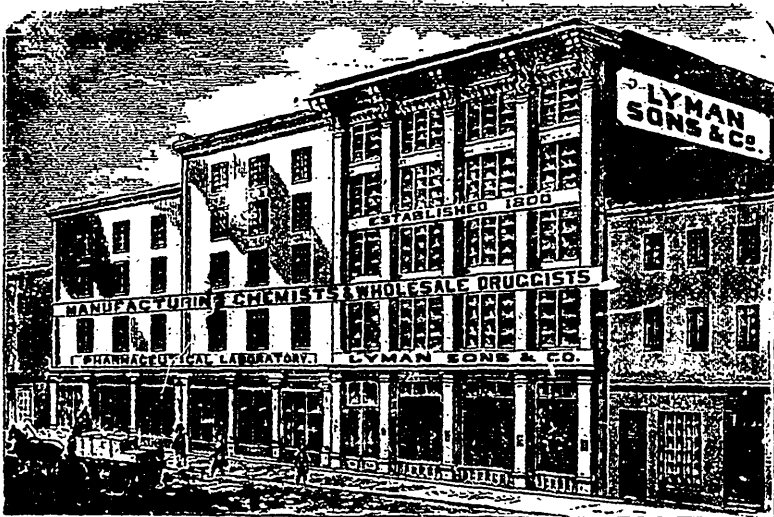
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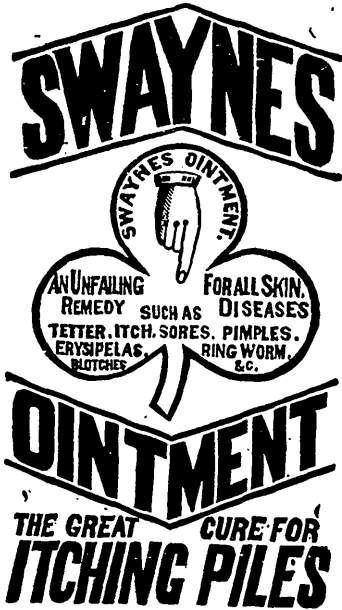
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2.75 ¼ GROSS.

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Are warranted to give **IMMEDIATE RELIEF** to those suffering from
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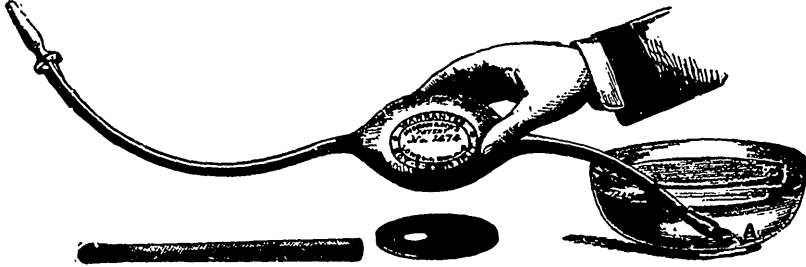
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⁶ N.B.—It having come to the notice of Messrs. ROBT. GIBSON & SONS, that some makers are not only closely imitating their label, but are actually putting their goods in Gibson's bottles, Chemists are respectfully informed that every original bottle of Gibson's is capsuled, and moreover, every Drop and Tablet is stamped "Gibson," without this none is genuine.

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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.

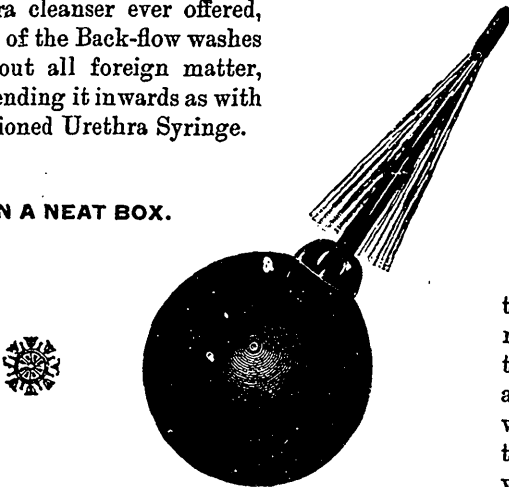
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Acknowledged to be the most efficient Urethra cleanser ever offered, as the action of the Back-flow washes and drives out all foreign matter, instead of sending it inwards as with the old-fashioned Urethra Syringe.

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.

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Ingram's Patent Seamless Collar or Rim Teat,

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Soothing Teat in the World.

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PATENTED		IN ENGLAND
No. 22458		DEC. 23RD, 1891
Patented in France, No 230745. April 7th, 1892.		AMERICAN PATENT APPLIED FOR.

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

ADVANTAGES :

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The above is also made up in the following styles of

Soothing Toys...



Fig. 30
 In two sizes, Small and Large.

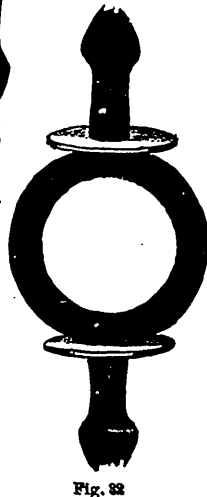


Fig. 32

THE RESPIROREGENERATOR

— OR —

Perfect Inhaler.

Patented in England, 16th August, 1892.

PATENT No. 14518

HEIGHT OF WATER. _____

Directions for using the Inhaler. □

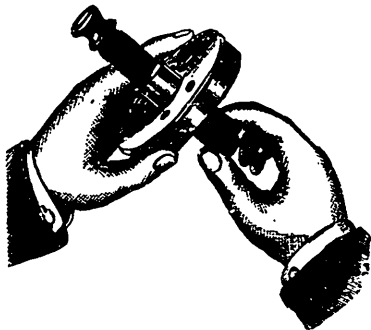


Fig. 1



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 indiarubber 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,

"That Excellent Antiseptic"—*Medical Chronicle*.

Packers' Tar Soap

"In which the well-known soothing and healing properties of Pine-tar are skilfully combined with Vegetable Oil and Glycerine."—*Medical Times*, New York.

Lathers freely, soothes while it cleanses, and is unrivalled for
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It is excellent for use in the treatment of Dermatic Diseases, such as chafing, eczema, erythema, seborrhœa, herpes, psoriasis, etc., for cleansing ulcers, foul wounds, fetid discharges, bedsores and similar conditions. It is Antiseptic, does not corrode, but leaves the skin smooth and supple.

Invaluable to Travellers. Wards off Contagion.

STEEDMAN'S Soothing Powders,

FOR CHILDREN CUTTING TEETH.

IN USE OVER 50 YEARS.

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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

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**STOPS
TOOTHACHE
INSTANTLY.**



(A SWELL AFFAIR.)

This is not a
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PILKINGTON'S Powdered Lye!

PERFECTLY PURE.

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Far Superior to any Solid Lye.

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BELL BRAND.

Absolutely Pure

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FOR

Fatigue of Mind and Body, Nervousness
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Meagher's Orange Quinine Wine.

Prepared strictly according to the formula
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For Loss of Appetite, Dyspepsia, Indigestion, Spring
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Quinine in this agreeable form is quicker in action and more re-
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USUAL DOSE—Half a Wineglassful.

MEAGHER BROS. & CO.,
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 \$6.25 per Case of 1 doz. Bottles.

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 The only Perfect Toilet Powder in the market.



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Sizes	0	1	2	3	4
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Full assortment, prices on appli-
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The true active principle of Parsley, differing from the so-called Apiole.
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In Dysmenorrhœa, (congestive and spasmodic) amenable to internal remedies, the suppressed, irregular or painful menstruation is promptly relieved.



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POWDERED EXTRACT LICORICE,
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STRICTLY PURE.

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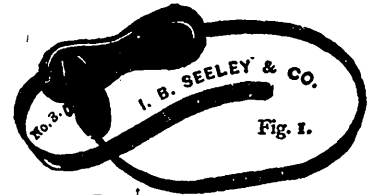


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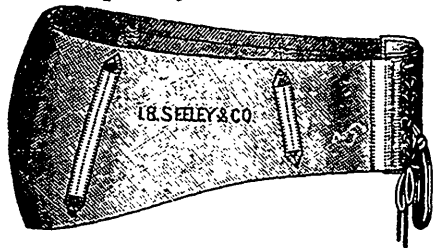
Experts in Hernia and other Anatomical Displacements.

The importance of druggists judiciously pursuing the mechanical treatment of every variety and condition of hernia, cannot be too strongly urged. With proper instruments it will be found a pleasant as well as profitable branch of their business.

We invite correspondence and cheerfully mail upon application our "Mechanical Treatment of Hernia," Illustrated Catalogue and Price List.

Abdominal Belts

For Corpulency or Umbilical Hernia.



SURGICAL ELASTIC HOSIERY DEPARTMENT.

The value of Surgical Elastic Hosiery depends largely on the quality and freshness of the rubber. We use none but the freshest and best, and have conveniences for executing at short notice orders for goods made to measure, usually by return mail.

- We Claim :** 1st. The Best Goods.
 2nd. Accuracy of Fit.
 3rd. Lowest Prices.
 4th. Quickest Execution.

TRY US, AND COMPARE.


I. B. SEELEY & CO.,

25 So. 11th St., PHILADELPHIA, PA.

Extensive Manufacturers of

Leather-Covered and Elastic Trusses, Abdominal and Uterine Supporters, Elastic Surgical Hosiery, Shoulder Braces, Suspensories, Body Belts, Crutches, etc.

All of our goods are manufactured from pure
 Spanish Licorice Paste
 of our own manufacture, and we guarantee the goods to
 be the best made.

LOZENGES **SCUDDER'S PURE** **PELLETTS**

BEST FOR COUGHS & COLDS.

Manufactured by

S. V. & F. P. SCUDDER,
 BROOKLYN, N.Y.

Mrs. Winslow's Soothing Syrup

is an OLD and WELL TRIED REMEDY, and for over FIFTY YEARS has been used by millions of mothers for their CHILDREN while CUTTING TEETH with perfect success. It soothes the child, softens the gums, reduces inflammation, allays all pain, cures wind colic, is very pleasant to the taste, and is the best remedy for diarrhœa. Sold by druggists in every part of the world. PRICE TWENTY-FIVE CENTS A BOTTLE. Be sure and ask for MRS. WINSLOW'S SOOTHING SYRUP and take no other kind, as mothers will find it the Best Medicine to use during the teething period.

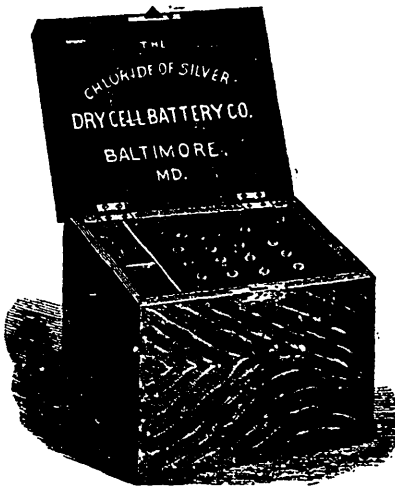
BUFFALO LITHIA SPRINGS. No. 2.

The waters from these Springs have been recommended by the leading doctors in the United States as very beneficial in cases of affections of the nervous system. The waters belong to the alkaline class, and can be used as a remedy for Gout, Rheumatism and Stone in the Bladder.

THOS. F. COODE, Proprietor,

Buffalo Lithia Springs, Va.

CHLORIDE OF SILVER



DRY CELL BATTERIES

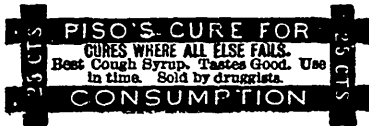
GALVANIC, FARADIC, COMBINED

Sole Agents for the Dominion of Canada.

We would recommend these Batteries for their compactness and portability, cleanliness, convenience and rapidity of action, constant and uniform current, extreme durability, cheapness in use.

LYMAN, SONS & CO.,

MONTREAL



"LUCILLINE."

The highest grade of petroleum jelly, chemically pure, sweet, and odorless. Put up in all sized packages, from one to fifty pounds.

MANUFACTURED BY

BOSSHARDT & WILSON Co.,

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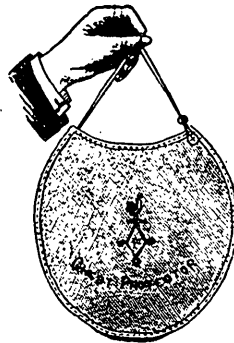
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Vincent Wood,

St. Andrews Street,
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Manufacturer by Power
of . . .

Surgical Appliances.



Elastic Hosiery, Trusses, Abdominal Belts, Suspensory Bandages, Splints, Corsets, Bath Cloves, Enemas, Roller Bandages, Eyeshades, Etc.

Established 1840.

V. W. Trade Mark—Eureka.

Cable Addresses: Acme, London. Elastic, Nottingham.

FACTORIES:

Russell St., - NOTTINGHAM.
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The Largest Manufacturer in the World.

Statuettes for Belts, Braces Show Cards, supplied on Loan Free to those stocking my goods.

A Sample Order requested.

DICK'S UNIVERSAL MEDICINES

FOR

Horses and Cattle.



DICK'S BLOOD PURIFIER is no sham made up to sell only, but is prepared from the best material. One package of Dick's Blood Purifier we confidently believe contains more real medicinal strength and virtue than ten times its weight of any other Powder in the market. It tones up the system, imparts new life and vigor, and is adapted for the cure of worms, loss of appetite, roughness of the hair or coat, stoppage of water and bowels, all coughs and colds, inflammation of the lungs and bowels, recent founders, swelling of the glands of the throat, horse distemper, hide bound, hotts, scurvy, loss of ear, horn distemper, black tongue, &c., and also will backen the heaves, and in recent cases effect a cure. In fact there is no case of disease among Horses and Cattle where Dick's Blood Purifier is not

called for, and by its timely administration will save the lives of many valuable animals.

- DICK'S BLISTER, for Spavins, Ringbones, Curbs Swellings, &c.
- DICK'S OINTMENT, for Cuts, Burns, Bruises, Saddle Galls, Sores, Fleah Wounds, Scratches, &c.
- DICK'S LINIMENT, for Swellings, Scalds, Contusions, Frost Bites, Cracked Heels, Chapped Hands, &c., but above all for Rheumatism.

RETAIL PRICE LIST.

- Dick's Blood Purifier, 50c
- Dick's Blister, 50c
- Dick's Ointment, 25c
- Dick's Liniment, 25c

Try DICK'S MEDICINES and be convinced of their merit. Ask for them and take no other. Advertising cards and circulars sent on application.

DICK & CO., Montreal.

P. O. Box 452



THE ONLY
Old and Reliable Remedy

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ASTHMA,
BRONCHITIS,
CATARRH,
COUGHS, COLDS, Etc.

Prices, 50c & \$1.00 per Box.

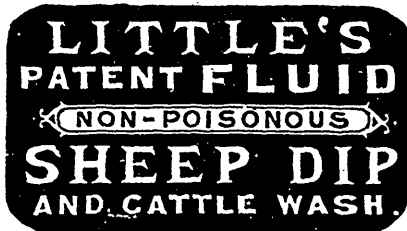
If your druggist does not keep it, remit price and you will receive a box, post paid:



W. E. Chester,

461 ¹⁰⁷⁷³ Lagachetiere Street,

MONTREAL.



FOR THE DESTRUCTION OF
TICKS, LICE, MAGE, and all Insects upon
SHEEP, HORSES, CATTLE, PIGS, HOGS,
&c., &c.

Superior to Carbolic Acid for Ulcers, Wounds, Sores, &c.
Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.

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

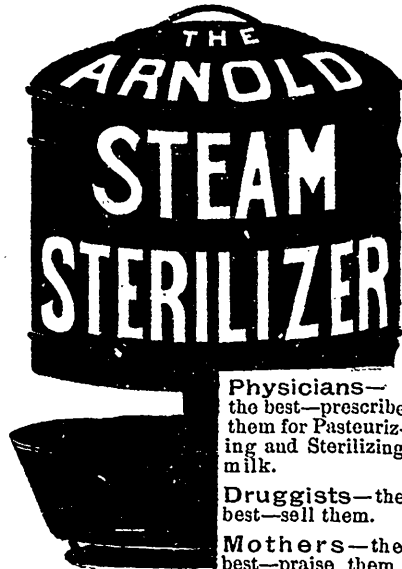
£17 Gold, Silver and other Prize Medals have been awarded to "Little's Sheep and Cattle Wash" in all parts of the world.

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 Wholesale Druggists in TORONTO HAMILTON and LONDON



Physicians—the best—prescribe them for Pasteurizing and Sterilizing milk.

Druggists—the best—sell them.

Mothers—the best—praise them.

Babies—all thrive on milk prepared in them.
We sell every kind of apparatus for Physicians, Hospitals and Laboratories.
Correspondence solicited.

Lyman, Sons & Co.,
Agents for Canada. MONTREAL.

THE FORREST CANNING COMPANY'S

"Jersey" Brand Condensed Milk.

Made from Jersey Milk and
Pure Granulated Sugar.
Acknowledged the finest made
where ever used.



J. A. TAYLOR,

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**AGENT FOR
MONTREAL.**

Fragrant, Delicious Coffee in a Moment!



LYMAN'S FLUID COFFEE.

Samples, (equal to 5 cups)	\$0 35	per doz.	Retail at \$0 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

CALVERT'S

**Carbolic
Disinfectants,**

**Soaps, Tooth Powder,
Ointment, &c.**

ARE THE

ONLY RELIABLE PREPARATIONS.

AWARDED 67 GOLD AND SILVER
MEDALS AND DIPLOMAS.

Descriptive Pamphlets on application to

F. C. CALVERT & CO.,

BRADFORD,

Manchester, England.

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- KENNETH CAMPBELL & CO., Montreal.



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, Horshound, and
Wine Essences.

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

HYSON GREEN WORKS, - NOTTINGHAM.

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

NO DRUG-HABIT INDUCED - NO TOXIC EFFECT

Antikamnia


OPPOSED TO PAIN



10 Gr.



5 Gr.



3 Gr.



2 Gr.



1 Gr.



5 Gr.
AND
CODEINE



5 Gr.
AND
QUININE



5 Gr.
AND
SALOL

OUR TABLETS WILL HEREAFTER BEAR MONOGRAMS AS SHOWN IN EACH FAC-SIMILE ABOVE. NONE OTHERS ARE GENUINE.

A SUCCEDANEUM FOR MORPHIA.

SPECIAL NOTICE.



In order to avoid vulgar imitation be sure that each bottle of Vichy Water State property bears the above neck label in blue, white and red colors.

MONGENAI, BOIVIN & O., Montreal, Sole Agents for Canada.



Decorated Tin Box, Sprinkler Top. Not Pasteboard.

MENNEN'S



Borated Talcum Powder

(STERILIZED)

LATEST—BEST.

. . . To Relieve . . .

Prickly Heat, Measles, Nettle Rash, Chicken Pox, Scarlet Rash, Chafed Skin, Etc.

DELIGHTFUL AFTER SHAVING.

Anti-septic, anti-zymotic, disinfectant. The combination of Purified Talcum, Silicate of Magnesia, Squibb's Boracic Acid and Oil of Rose, is recommended by all dermatologists and physicians for skin affections, and is combined in the best possible manner in this Powder.

Retail Price 25c. a box.

Per doz. - \$2.10
Per Gross - \$24.00

Sells at sight. Order from your

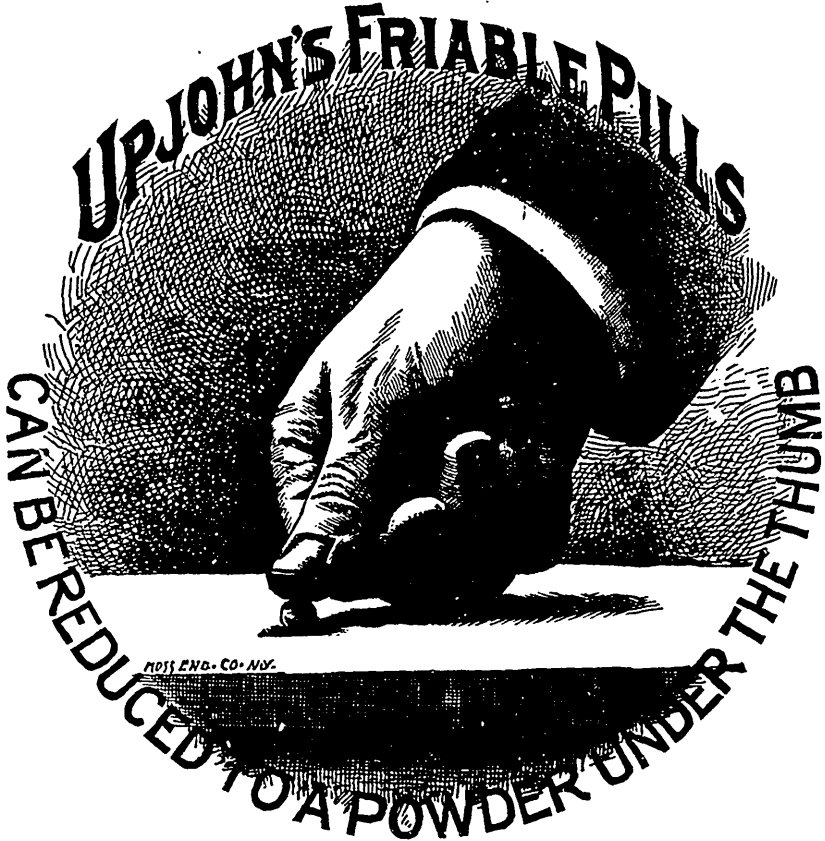
Wholesale Druggist. . . .

MANUFACTURED BY

GERHARD MENNEN CHEMICAL CO.,

577 Broad St., NEWARK, N. J.

The Upjohn Pill & Granule Co.
KALAMAZOO, Michigan, U.S.



Send for Price Lists
and Samples to
Lyman, Sons & Co.,
MONTREAL.

COUTTS' ACIDICURE

72 VICTORIA STREET
TORONTO.

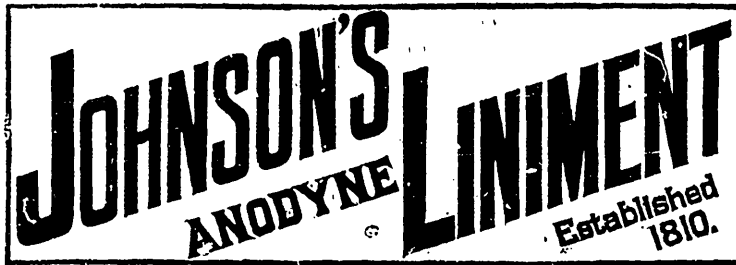
London, Glasgow and Manchester.

• ACETOCURA •

The most effectual remedy for **Spinal Complaints, Nervous Diseases, Rheumatism, etc.**, should be stocked by every druggist. You will be asked for it and it will pay you to push it.

From all Jobbers
Pamphlets and Advertising Matter Free. . .

COUTTS & SONS.



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.**

DOMINION OF CANADA PRICE LIST.

— FOR —

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

EACH INVOICE SUBJECT TO CONTRACT.

Goods to be Invoiced in all cases after December 1, 1893, as follows:—

JOHNSON'S ANODYNE LINIMENT	—\$2.00	per doz.	without rebate.
PARSONS' PURGATIVE PILLS	— 1.50	“	“
SHERIDAN'S CONDITION POWDER.	Small— 1.50	“	“
	Large— 8.00	“	“

REBATE IF PAID IN 4 MONTHS.—To Retailers for orders amounting to \$20.00 or more, 5 per cent.

To Jobbers “ “ \$120.00 “ 12½ per cent.

QUANTITIES as above may be made up of any one or more articles at the long prices, but in all cases must amount to \$20.00 and \$120.00 or more respectively.

FOR SPOT CASH we shall allow 5 per cent. discount extra after rebate as above has been deducted. Extra 5 per cent. not allowed after 10 days.

MONTREAL PHARMACEUTICAL JOURNAL.

VOL. V—No. 9.

DECEMBER, 1894.

\$1.00 per annum.

The Montreal Pharmaceutical Journal.

171 St. James St., Montreal, Canada.

JOSEPH E. MORRISON, Editor.

Subscription. \$2.00 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.

THE WHOLESALE DRUGGISTS have found it necessary to adopt terms relative to the giving of discounts for cash or for settlements by cash within the usual time allowance—4 months. The following we give from "Trade Notice" recently issued here:

"On and after January 1st, 1895, our terms will be as under:

MONTHLY ACCOUNTS, (four months' goods) paid on or before the fifteenth day of the month following that of purchase, will be subject to 5 p. c. discount.

If paid after that date, and on or before the last day of the same month, 3 p. c. discount will be allowed.

Settlements after above indicated periods and prior to maturity, (four months from fifteenth day of month of purchase) will be subject to allowance at the rate of 7 p. c. per annum for unexpired time."

Pass books, it is understood, will be discontinued to the city druggists. Invoices will be sent with each city delivery and monthly statements rendered promptly to enable all who wish to take advantage of the largest discount allowed for cash. Our wholesale drug

friends will appear to some as stepping into "mercenary concerns"—following the example of the grocer and dry goods merchant. Necessity seems, however, to urge and warrant a strict course and a common understanding between wholesale and retail druggists in this matter.

The ninth annual report of the Massachusetts Board of Pharmacy shows that the examiners are very strict or that the applicants have been of inferior attainments since out of 661 only 126 possessed the necessary qualification to obtain the license.

We are pleased to learn that Mr. H. M. Whitney, to whom is due much of the satisfactory working of the Massachusetts Pharmacy Law, has been reappointed by Gov. Greenhalge for another term of five years.

The arrest of G. M. Richardson and M. Kee'y, President and Vice-President respectively of the Costar Rat and Roach Exterminator Co., on a charge of manslaughter, has created some excitement in the American drug trade. It appears that a purchaser of this article relying on the statement on the label thereof that it was harmless did not take any special care in placing it out of the reach of his children, with the alleged result that two of them got at it, eat it and died. The Coroner ordered the article to be analysed and it is said that it was found to contain a poison. If the case be pushed and the verdict of the Coroners' jury be sustained, it will have a tendency to drive out of the market many of the patent medicines now advertised and make the proprietors of the remainder more cautious in their published statements.

THE AMERICAN PHARMACY FAIR.—The first Pharmacy Fair ever held in America, will open May 1st 1895 and remain open till May 25th in the Mechanic's Building, Boston. We would advise all our readers who possibly can, to visit it as it will be a great object lesson in modern pharmaceutical methods. Excursions are being arranged from various parts of the New England States, during these dates, and if a sufficient number of pharmacists from this city and vicinity desire to attend we have no doubt special rates can be secured. We have already obtained the names of several who wish to take part in this trip and will be happy to receive the names of others so as to make up a sufficiently numerous party to obtain reduced fares.

The students of Jefferson Medical College, Philadelphia, have adopted a resolution that they will use only the metric system in writing their prescription when they will have become physicians. Now that an example has been given it is to be hoped that a similar resolve will be made by the students of all the other medical colleges in the English speaking world. It is only in some such way that the metric system will attain the popularity with physicians and pharmacists which it should have. The adoption of this system in the U.S.P. leaves the British the only pharmacopœia which retains the old weights and measures, and its adoption in the proposed Imperial Pharmacopœia will be a necessity if it is to be up to date.

Vermont Pharmacists after many futile attempts have at last secured a Pharmacy Law. It is not all that it should be, but it is better than nothing, and as further additions and amendments will be found necessary they will probably be added by the State Legislature.

Dr. H. L. Bowker, of Boston, the well known manufacturer of soda water flavorings, etc., died on November 21st, at the age of 62. He was for many years State Assayer of Massachusetts, and served as member of the Boston City Council.

Prof. Dragendorff, the famous pharmaceutical chemist, who has made the University of

Dorpat, celebrated as a seat of pharmaceutical learning is about to resign his position after 30 years of service, and retire to private life.

A handsome new store has just been opened by Mr. Clark, of Renfrew, Ont. The fixture are of British Columbia cedar, artistically carved and finished and are a credit to the maker, Mr. McLaughlin, of Ottawa. Mr. Clark's facilities for carrying on business will be greatly increased by the change which gives him one of the most commodious and handsome drug stores of Canada.

BOOK REVIEWS.

Proceedings Minnesota Pharmaceutical Association, 1894.

Report of the Wisconsin State Board of Pharmacy. Proceedings of the Wisconsin Pharmaceutical Association.

Address by John A. Dadd, of Milwaukee, to the graduating class Dept. Pharmacy, June 1894, University of Wisconsin. A very eloquent and interesting account of the condition of pharmacy in Wisconsin, forty years ago, told by a man who served his apprenticeship in London, and then went out to what was the frontier. Mr. Dadd gives a fine description of the old time Western pharmacy and the methods in vogue in those days.

AN ILLUSTRATED MONOGRAPH ON KOLA, issued by F. Stearns & Co., of Detroit, is one of the best publications of the kind we have seen. It contains a study of the pharmacognosy and chemistry, of the plant, by J. O. Schlotterbeck, of Ann Arbor, while Dr. F. E. Stewart has written up the therapeutic and physiological action of Kola. The book will well repay study and can be obtained from F. Stearns & Co., Detroit, who first introduced Kola to the notice of the medical profession in 1881.

INORGANIC PHARMACEUTICAL AND MEDICAL CHEMISTRY by Frederic J. Wulling, Dean and Professor of Pharmaceutical Chemistry at the College of Pharmacy of the University of Minnesota. This work was originally published in parts in the *Pharmaceutical Record* and in its present form has been revised and improved upon. The subjects are well arranged and clearly explained, and for pharmaceutical and medical students who have not the advantages of the personal direction of a teacher in their chemical studies is one of the best books we have seen. It is published by Jno. Wiley & Sons, New York.



F. A. Flueckiger

PROF. FRIEDRICH AUG. FLUECKIGER.

The late Prof. Friedrich August Flueckiger was born on May 15th, 1828, at Langenthal, Switzerland. When old enough he was sent to a commercial school in Berlin, but his inclinations being more towards the sciences, he gave up commercial studies and matriculated at the University of Berlin, and afterwards studied at Berne. In 1846 he entered a pharmacy at Solothurn, and a little later went to Geneva, to study botany. In 1851, he entered the University of Heidelberg and afterwards became assistant to Prof. Wurtz at Paris. In 1853 he returned to Switzerland and purchased a drug store at Burgdorf near Berne, which he gave up in 1860 to become director of the state pharmacy at Berne, being appointed at the same time a member of the Sanitary Commission and of the Board of Examiners of Physicians and Surgeons. He was from 1857, to 1866 president of the Swiss Pharmaceutical Association and in 1872 edited the Swiss Pharmacopœia. In 1870 he was made Professor of Pharmacognosy in the University of Berne and in 1873 he accepted a call to the University of Strassburg, where he occupied the chair of pharmaceutical chemistry and pharmacognosy and was director of the Pharmaceutical Institute till his resignation in 1892, when he retired to Berne. In 1881 he was the recipient of the Hanbury medal being appropriately the first to receive it as he was the great co-laborer of the donor in the field of pharmacognosy, Prof Flueckiger's name with that of Daniel Hanbury will be

household words with pharmacists the world over. Their work "Pharmacographia" will remain a lasting monument of their zeal and love of science. In 1892, shortly after his retirement from Strassburg a testimonial was presented to him by his friends and admirers all over the world, it consisted of an address, medal, and a purse of nearly 20,000 fr. having been collected. Last summer he made a tour through the U. S., but as he did not wish any public demonstration, his visit passed almost unnoticed. Flueckiger has contributed numberless papers on pharmacal science to the various bodies with which he was connected, but his principal works apart from *Pharmacographia* are *Lehrbuch der Pharmacognosie* and *Pharmaceutisch Chemie* both of which have run through several editions.

We take the following from a recent issue of our valued contemporary "The National Druggist." It will be noted that, the experiments detailed therein were carried out with German cigars, and from their general reputation, we are not surprised that they are efficient microbicides, in fact those who have smoked them or rather tried to, tell us that they would kill anything :

Guadeamus Igitur

Science has uttered her supremest dictum; henceforth let no dog bark at tobacco, for it slays the monster that has slain millions; it is deadly to Koch's comma bacillus, the redoubtable Cholera Germ.

Dr. Wenik, of the Faculty of Berlin has just published his "Observations made during the Hamburg epidemic of '93," and the following conclusions:

1. In manufactured cigars, each of which was estimated to contain 1,500,000 cholera microbes, every bacillus was stone dead at the end of twenty-four hours.
2. The examination of cigars made at Hamburg during the epidemic failed to find a living cholera germ.
3. Cholera germs exposed to the smoke of Brazilian tobacco died in half an hour; those exposed to the smoke of Sumatra tobacco, in one hour, and those exposed to the fragrant fumes of the more delicate and refreshing Havana lived only two hours—the extra time being spent, supposably, in enjoying the fragrance of our favorite weed before giving up the ghost.
4. The smoke of any strong cigar or tobacco kills all cholera microbes.
5. The microbes of the saliva die in five minutes after the first puff of a cigar.

6. Not a single worker in the tobacco factories and cigar-making establishments was attacked by the epidemic, which entirely spared no other class.

What argument can the enemies of the Nicotian weed bring against these magnificent results? What if the Roman savant, Dr. Kerez, does declare that cigars are "a dangerous agent in the spreading of tuberculosis?" Who is afraid of tuberculosis when cholera is around?

LABORATORY NOTES.

J. E. MORRISON.

COLLODION. In making collodion according to the B.P., the spirit and ether are mixed together, the pyroxylin added and allowed to stand a few days. The directions should be changed to read add pyroxylin in small quantities to the spirit, shaking well after each addition, when all the pyroxylin has been added, pour in the ether and shake well. By this method a solution is at once obtained. In the first case, the outer portions of the cotton is dissolved and form a gelatinous mass which is only slowly permeated and dissolved by the menstruum, while in the latter, the cotton is thoroughly moistened by the alcohol and at the same time so divided up that the ether immediately exercises its solvent action upon it.

A REMEDY FOR EMULSIFICATION in the alkaloidal assay of drugs. The emulsion formed by chloroform with certain drugs is frequently a source of great annoyance and delay. A recent issue of the *Chemist and Druggist* contained a description of a method of breaking up the emulsion by filtering through cotton into a fractionating flask the side tube of which is connected with an aspirator bottle. We think this is a good scheme, but do not think the aspirator, etc., to be necessary as we have for a considerable time past simply filtered the mixed fluids through a pledget of absorbent cotton packed in the neck of a small funnel with a moderate degree of firmness and washing after the mixture has passed through. This method, which is generally successful was suggested by B. Proctor, in "Pharmaceutical Testing."

ASSAY OF KOLA. After trying several methods for the assay of Kola, the following has been found to give the most satisfactory results. 10 gm. of Kola in fine powder are mixed with 2.50 gm. calcined magnesia, slightly moistened with water, and put in a warm place till dried, the mass is then powdered, and macerated with 100 gm. modified Prollius liquid for 12 hours, frequently shaking. Then

filter off the liquid, washing residue and filter, pour the fluid into a tared dish, dry and in most cases the alkaloid will be pure enough to weigh as such, if not dissolve in dilute acid, add ammonia and wash out the alkaloid with chloroform as usual. In the assays made by the writer it has seldom been necessary to go through this purification as the alkaloid left after evaporation of the Prollius liquid was in fine white acicular crystals. One sample recently assayed by this process yielded 3.169% of alkaloids while another sample from the same same lot, treated with hot chloroform by continuous percolation in a Soxhlet extractor, yielded only 2.45%.

CREOSOTE PILLS. Innumerable formulas for creosote pills have been published during the last four or five years, but generally they fail to give satisfaction, the only thing which we have found to form a good mass with creosote is curd soap as recommended by W. Martindale. We generally take powdered curd soap grs. xxxv. add creosote ʒi and work well together, the resulting mass is easily worked and the pills are smaller than those made with powdered liquorice or any other excipient we have tried.

ACTION OF LIGHT ON EXTRACT OF MALT.—According to Prof. J. R. Green, extract of malt rapidly loses its diastasic power when exposed to light and even when placed in the dark the process continues till the diastase is entirely destroyed.

OPIUM ASSAY.—To remedy some of the inconveniences of the B.P. method of assay. D. B. Dott proposes the following process: Digest 10 gm. of powdered opium with 25cc. of water. A solution of 1.80 gm. of barium chloride in 12cc. of water is then added with sufficient water to make 50cc., the mixture is then filtered, and to 25cc., of the filtered liquid is added sufficient diluted sulphuric acid to precipitate the barium and filtered, to the filtrate is added about 50cc. of ammonia to neutralize the free acid. The mixture is concentrated to 6 or 7cc., and allowed to cool, after which are added 1cc. of alcohol, 1cc. ether, and a slight excess of ammonia. After three hours the precipitate is collected on a tared filter, washed and dried, and afterwards washed with benzine and chloroform, and finally dried and weighed. The morphine is then titrated with decinormal hydrochloric acid, and the number of cc. used multiplied by 0.0303 gives the quantity of the pure alkaloid. Barium chloride is superior to calcium chloride since it precipitates not only meconic acid but also a large proportion of the resins and other impurities which ordinarily are precipitated with and contaminate the final product.

Tinctures and Tincture-Making.

BY H. W. JONES, F. C. S.

The pharmacopœial tinctures are made by several methods, the bulk being produced by a combination of maceration, percolation and pressure. By those means it was intended to fully exhaust the drugs, and present the soluble constituents in a definite volume of liquid. The purpose was answered, but with more complex working than necessary. In the original edition of the 1885 Pharmacopœia tinct. zingib. fort. was directed to be prepared by percolation, but in the "additions" subsequently published three others were ordered to be made. The general instructions for tinct. hamamelidis and tinct. hydrastis were perfect, and it was to be taken as a sign of the times that the more modern method was recognised. That the bulk of the tinctures of the Pharmacopœia could, with advantage, be so prepared would not be controverted. The three essential points to be attended to were—(1) to damp as quickly as possible to avoid loss, and to store in a closed vessel during maceration; (2) to properly pack the moistened ingredients so as to avoid air-spaces; and (3) to keep the surface just covered with the menstrum during the entire process. Some operators packed straight-way into the percolator after damping, but, in most cases at least, the author found it advisable to store for 24 hours in a separate closed vessel, and to finally mix well together, adding a little more menstrum if really necessary before the final packing. The percolator was generally advised to be of a conical shape, but operating on a large scale, with a considerable amount of material, a vessel of that form had the disadvantage of giving a large surface to the upper layer of spirit, and consequent liability to loss from evaporation. Whatever form of percolator was adopted it was a distinct advantage to have the bottom part of it tapering. For the author's own part he preferred a tap, which could be closed or opened, to a simple tube; and showed a model of a percolator which he had devised. This consisted of an upright, somewhat narrow metallic vessel, with a funnel-shaped bottom part, provided with lap having a thread-screw on the outer part, so that tubes of various lengths could be screwed on or off; the special feature of the percolator being a band of metal around the bottom part, deep enough to enclose the tap when the tubes were removed. By means of the band the apparatus would stand erect on any plane surface. In use the percolators were arranged on a stout bench with diamond-shaped holes, through which the hand could be passed to turn on or off the tap, or fix the tubes.

In commenting on various tinctures it was considered that with tinct. camph. co. the

opium might advantageously be replaced by a corresponding amount of tinct. opii, as advocated by Squire. In the case of tinct. card. co., the author said he would venture to suggest that the variety of raisins known as "sultanas" might be used, as they contained no stones. As was well known, the B. P. instructions gave a product more than 10 oz. without making up. It was a tincture which could be prepared by percolation, if the various ingredients were well mixed together. Tinct. cascarillæ had been suggested to be prepared by means of a weaker spirit, but Groves found that even with proof-spirit it was nothing like so good as when the spirit was slightly stronger. Tinct. guaiaci ammon. would be better prepared with a stronger menstrum, Wright's proportions of 18 oz. S. V. R., and 2 oz liq. ammon. fort. giving 82 gr. per oz. of solids against 62 gr. for the present spirit of ammonia. Tinct. myrrhæ was an example of a tincture which could not be prepared by percolation without previous maceration; tinct. podophylli should not be fluorescent. The author had recently seen a tincture which was strongly so, and he had pointed some years ago that that result was due to the employment of resin precipitated in alum water instead of B. P. method. Heat was unnecessary in making tinct. quininæ; and the suggestion of Lunan as to the substitution of carbonate of ammonia for the hydrate was worthy of the attention of Pharmaceutical authorities, since the product formed a clear solution with 13 parts of distilled water, where the present tincture required 26 parts.

However made, tincture marcs retained a decided amount of spirit. By pressure a certain proportion could be obtained, but a relatively large quantity was left behind. He had found, for example, that a batch of 60 gallons of tinct. opii would leave something like 2 gallons in the marc, and a similar amount of spirit would be retained by marcs resulting from 16 gallons tint. cinchon. co., tinct. hyoscyam, and tinct. sennæ. In no case was it desirable to wash out that spirit with water if it were intended to form part of the finished product. On the whole, he preferred to percolate right through with the proper menstrum till the full bulk was obtained, and to recover the spirit from the marc by distillation in a large still with sufficient water to prevent the formation of clots of material. To wash certain marcs with water took considerable time, during which the mass was apt to become mouldy or decompose.

In reference to standardised tinctures, there was a definite statement as to the alkaloidal strength of both tinct. opii and tinct. nuc. vomicæ in the Pharmacopœia. Experience had shown that the menstrum did not exhaust

the opium; but by taking a tincture made with a strong opium and one made with a B.P. drug, the percentage required could be obtained by mixing the two in the proportions indicated by an assay. As to the method of assaying tinct. opii, he would prefer to follow the B.P. method as closely as possibly rather than attempt washing out with acetic ether and chloroform. Familiarity with tinct. nuc. vomicae had not strengthened the view that the use of extract was the best method of preparing it. Similarly, the employment of extracts of other drugs was not to be advocated. The subject had received particular attention at the 1893 meeting of the British Pharmaceutical Conference, and had been condemned. A tincture was supposed to contain the constituents of the drugs as they existed in the drugs themselves, unaltered by heat. Gerrard's statement had not been controverted, that with atropine a solution boiled even with alcohol for ten minutes lost 50 per cent. of its alkaloid; and other bodies would be equally liable to change.

At present there was no direct authority for standardising generally, but there was a demand for standardized preparations, and the result was that in the absence of official methods each wholesale house or each pharmacist was left to fix the standards, so that uniformity was not likely to exist. Something was wanted more than mere statements of percentages; the methods of analysis should be well defined. Mayer's solution was out of date, and it was hardly settled whether volumetric methods or gravimetric processes should be followed, or even in some cases, as in that of aconite, if the test should not be physiological. Messrs. Wright and Farr stood pre-eminent amongst British workers, and had for years been publishing the most important results, and he thought their methods of assay might well be adopted. Various standards had been suggested, in most cases of average good drugs, but the author of the paper had met with a practical difficulty which required some consideration. It was that it was not difficult to obtain drugs frequently above any average that might be fixed, and the question arose, Should we use less to produce a preparation of "average strength"? He thought not, as the Pharmacopœia distinctly ordered a definite weight to be taken, so that, for the present at least, he ventured to suggest that the standard adopted should be that approximating to the highest percentage.

Concentrated tinctures might receive some attention at their hands. They were more properly described as fluid extracts, and experience had shown that fluid extracts prepared with proof spirit at least were somewhat unstable. So that it might be asked,

What strength of spirit should be used for exhaustion? As an example they had tinct. catechu, and to produce a concentrated tincture four times the ordinary strength it was required to dissolve or exhaust 10 oz. of catechu with sufficient proof spirit, to form 1 pint of finished liquid. Could a permanent and satisfactory preparation be so made? Again, capsicum formed a tincture in which an excess of spirit might appear to be used for exhaustion, but the dose being small it was probably better for dispensing purposes than a stronger tincture given in smaller amounts. If concentrated tinctures were used, let them be employed for special purposes rather than for the preparation of the official tinctures.—Abstract from *Chem. and Drug*.

THE LIVERPOOL CHEMISTS' ASSOCIATION.

SOME PREPARATIONS OF THE BRITISH PHARMACOPŒIA.

R. C. COWLEY.

In the course of his remarks said he did not claim that the alterations he proposed were not capable of being improved; but in view of the coming revision of the B.P., he thought it would be well to review the preparations which might be improved. He dealt with the following articles and preparations:—

Gum acacia.—Although the B.P. does not state definitely that this gum should be derived from the *Acacia Senegal* of Kordofan, it certainly indicates that that gum is to be employed. *Acacia Senegal* from Senegambia has been generally substituted since the Egyptian troubles; but although it is from the same source botanically, the climatic difference has produced a change in the drug. It makes a thicker mucilage and becomes acid sooner, and has not the same emulsifying properties. The B.P. might be more explicit on the question of geographical source. The B.P. would also be a better book of reference if it mentioned the solvent power of water on this and on all drugs and chemicals of the B.P. and also the compatibles.

Acetum.—This preparation has been the cause of much bother; but if the article mentioned in the B.P. were sold, there would be no trouble. The total amount of solids should be given.

Acid. Hydrobrom. Dil.—The B.P. might give the optional method of making this from PBr_3 . The acid would not then be contaminated with H_2SO_4 , which is sometimes found in it when made according to the B.P.

Acid. Salicylic.—The terms used to indicate the method of making this acid are vague, and it would be better if the process were described more fully. The test for its purity is exceed-

ingly lax. The principal feature is the melting-point which the B. P. says should be about 155°C.

Aconite root.—The B. P. says the root must be grown in Britain or Germany. The tincture is to be made from British root, but in the liniment no description is specified.

Adeps Prep.—A test might be introduced for cottonseed oil. He suggested Mr. Conroy's.

Cataplasmata. These might be left out.

Chrysarobinum.—The description in the B. P. leaves much to the judgment of the pharmacist as to what is to be employed. Is Goa powder to be used in its crude state, or the article purified by solvents?

Conf. Opii, Piperis, Scammon, and *Terebinth*, appear to be nearly obsolete, and some of them will probably be deleted.

Elaterin.—This cannot very well be prepared according to the B. P. method. The amount of chloroform required for exhausting the elaterium keeps the elaterin in solution when the ether is added.

Ergot.—The B. P. should insist on ergot being as fresh as possible (not more than one year old). It is well known that some extracts of ergot have no effect. A standard should be fixed if possible so as to ensure an effective preparation.

Extracta.—The B. P. Committee might devote more attention to these. A well-prepared fluid extract contains more of the active principle of the drug than an infusion, and might well be substituted for these unsatisfactory preparations. The improved method of exhaustion of the B. P. Addenda in the manufacture of fluid extracts might be followed in the preparation of solid extracts such as aconite, belladonna, stramonium. All extracts which contain poisonous alkaloids should be estimated in order to have the alkaloidal strength constant.

Cascara Sagrada.—It would be well to exhaust with dilute alkali.

Ferri Arsenias.—This preparation usually contains a large percentage of ferric arseniate. He (Mr. Cowley) had estimated some samples which contained very little ferrous salt. The ferric arseniate is not so soluble as the ferrous salt, and, therefore, it is desirable not to keep the preparation for any length of time.

Ferri Carb. Sacch.—Stock should be replaced from time to time, as it does not keep well, becoming ferrous oxide with little or no ferrous carbonate. In the estimation of ferrous salts pot. permang. might be substituted for pot. bichrom.

Glycer. Tragac.—An unsatisfactory preparation, often too hard for a pill-excipient.

Infusions.—No doubt the original intention was that these were to be used fresh. A good method of preserving infusions is to pour them

when hot into bottles and corking at once, excluding air as much as possible.

Lin. Crotonis when made from freshly-pressed oils is much superior to that made from oil which has been expressed for some time. Fresh, or comparatively fresh oil should be indicated.

Lin. Terebinth varies very much in consistence, sometimes being like an ointment, at others like cream. A note on the consistency is desirable.

Lupulin.—The percentage of ash seems too high.

Manna.—The amount of mannite present might serve to distinguish true from spurious manna.

Opium.—The process for estimation is incomplete, and should be as indicated by Mr. Conroy.

Pil. Ferri Iod.—Too much water is ordered.

Syr. Ferri Iodid.—To keep this well amber bottles should be used.

Pulv. Rhei Co.—A more satisfactory preparation results when heavy magnesia is used in part.

Syr. Simp.—Crystallisation is a great drawback, but when made from lump sugar and made up to the weight with water after making it keeps very well.

Tinctura.—Percolation is preferable in all cases as far as possible in lieu of maceration, the time required for the latter process being too long.

Tr. Calumbæ.—The process given yields too much mucilaginous matter; a stronger spirit would produce a better result.

Ointment-bases might be improved; the paraffin basis is rather unsatisfactory and is too freely used in the B. P.

Mr. Cowley thought the B. P. Committee should not use different names for articles—*e g.*, saccharine=gluside, phenazone=antipyrin, &c.—as it occasions confusion and serves no useful purpose.

Mr. Conroy, in commenting on Mr. Cowley's paper, said, as to ergot, he feared no one could insist upon the stipulation suggested, as it would be impossible to certify as to the age of any parcel of the drug or its preparations. The list of fluid extracts in the B. P. might be extended with advantage. They were most acceptable preparations. As to the test for ferrous compounds, he thought the bichromate solution was sufficient. He always employed the latter, and found it answer very well. With reference to the percentage of ash in lupulin, he thought it would be better to leave it at 15 per cent., as it was difficult to fix an absolute standard for an article like this. The U. S. P. gives 10 per cent. as the limit. The processes indicated in the B. P. for making tinctures, he thought, were the best that could be devised for making small quantities, macera-

tion being preferable to percolation in most instances for small quantities. Mr. John Smith thought that poultices should be removed from the B.P. It was now no part of a chemist's duty to make them. He found the use of an alkali in making ext. cas. sagrad. seemed to render the active principle inert. Glycer. tragac. he had experienced some difficulty with, but it was always overcome by the addition of a little water. When tr. calumb. was allowed to settle he had found no difficulty in filtering that made according to the B.P. Mr. Wardleworth said that, in view of the fact that the circumstances which produced the scarcity of the Kordofan gums might arise again at any time, it would be desirable not to interfere with the latitude allowed by the B.P. Mr. J. S. Wokes said he had overcome the intractability of glyc. tragac. by the addition of a little syr. simp. producing a satisfactory article. He found that the addition of a little water to lin. terebinth produced a satisfactory creamy liniment. Mr. Hornblower said that, while it might not be the duty of a chemist to make poultices, they had to be made, and the B.P. fixed a standard for them. He thought, therefore, it would be a pity to delete them. The same remarks might apply to the confections more or less. As to the crystallisation of simple syrup, he thought the B.P. process was published when it was impossible to get such pure cane-sugar as at present. The sugar of to-day, as a rule, contained much less water than it did years ago, and this, no doubt, accounted to some extent for the trouble experienced by crystallisation.—*Read at a meeting of the Liverpool Chemists' Association and report in the Chemist and Druggist.*

RHUS TOXICODENDROT.

BY DR. H. M. WHELPLEY, PH. G.

Query No. 16—Is the poisonous constituent of *Rhus toxicodendron* altogether destroyed when the plant is dried?

Rhus toxicodendric acid, isolated by Maisch is now generally recognized as the active medicinal and poisonous principle of the plant. The prevailing opinion that this acid exists to a greater extent in the fresh than the dried drug is evidenced by the Pharmacopœia directing the fresh plant. Goss says that the leaves are the best, Potter believes that the dried leaves will generally prove inert, while Woodbury asserts that the dried leaves are worthless.

The writer being easily affected by the toxic properties of the fresh plant, determined to give the drug a practical test. The result leaves not a shadow of doubt in his mind, for the handling of the dried and compressed plant produced the well-known eruption.

Since making the above test we learn that workmen who handle the drug in the manufacture of fluid extracts are poisoned by it. So I conclude that while the poisonous action of *Rhus toxicodendron* may be impaired by drying, it is not altogether destroyed.

I am informed by the wholesale trade that practically no demand exists for the dried drug, while the sale of the fluid extract is limited. Out of 36,515 prescriptions filled in different parts of the State and reported to the Illinois State Pharmaceutical Association by A. E. Ebert, but four called for the extract of *Rhus tox.*, and one specified the tincture. Neither Bartholow nor Hare mentioned the drug in their work on Therapeutics. Shoemaker says it is only employed by the regular practitioners. Hauseman refers to it as an obsolete drug, while Wilcox claims that it is dangerous and probably useless.

The medicinal virtues of the plant were announced by the aborigines and vaunted by many of their successors. It was first used in England in 1798.

The medicine has been recommended for nocturnal incontinence, palsy, cutaneous diseases, delirium, herpes zoster, old ulcers, acute, subacute, and chronic rheumatism, ozena, sciatica, tympanitis, paraplegia, chorea, paralysis, stings of insects, typhus, burns, sprains, eczema, and pemphigus.

The poisonous action of the fresh plant is well known, and the antidotes are as numerous as the diseases in which the drug has been administered. Among them are a light and cooling regimen, solution of chlorinated lime, cold lead water sodium hyposulphite, saline purgatives, saturated tincture of lobelia, Mon-sell's solution, warm water and soap, sodium bicarbonate, alum curd, ammonia, sodium carbonate, petrolatum, sodium sulphite, solution iron perchloride, solution iron persulphate, grindelia squarrosa, hamamelis, stramonium, sassafras, elder, gelsemium, dulcamaria, serpentaria, spice bark, oak bark, tannin, bismuth subnitrate, potassium chlorate, phenol, oxalic acid, copper sulphate, black wash, bromine, human urine, grindelia robusta, mercuric chloride, lime water and linseed oil, opium, strong coffee, rest, laxatives, potassium permanganate, bryonia, verberna.

A PHYSICIAN wants a cure for the methylbenzomethoxyethyltetrahydropyridinecarboxylate habit. Let him try oleumpalatolaryngeopharyngeum.

ASEPTIC CARBOLATED VASELINE. To render carbolated vaseline completed aseptic weichard (Repert, de Pharm.) recommends that the vaseline should first be heated to 100—120° C. and then add the acid. The mixture while still warm is poured into collapsible tubes.

THE NATIONAL WHOLESALE DRUGGISTS' ASSOCIATION.



THOMAS. F. MAIN.

Mr. Main, who was elected President of the National Wholesale Druggists Association at their recent meeting in New York was born at Greenwich, England in 1849 and received his education at the Lewisham Grammar School. At the age of eighteen Mr. Main crossed the water to seek his fortune on this side, and in a few years entered the employment of the well-known wholesale and retail drug house of Tarrant & Co of New York City. This was in 1869, and in the same year he matriculated in the College of Pharmacy of that City which graduated him at the end of the regular two years' course.

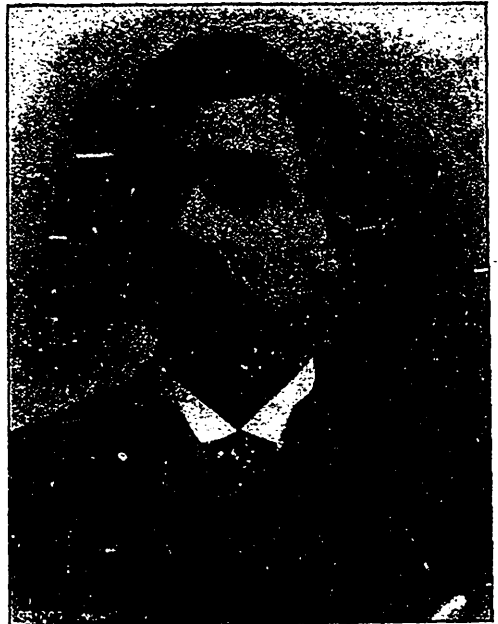
By his natural ability as a business man and a pharmaceutical chemist he rose from one position to another in the house of his employers until, in 1876, being then but a young man, he was made superintendent of their establishment, and five years later became the president of the company organised to conduct the business without change of name. This position he retains at the present time.

Mr. Main was for a short time interested in a retail drug business at New Britain, Conn., some sixteen or eighteen years ago. In addition to his business duties, the subject of this sketch has been connected in a prominent manner with several organizations whose influence is felt in the drug world. Being an ardent supporter of his alma mater, he has taken an active interest in her welfare, and has ever been ready to raise his voice and contribute his means in the cause of

her advancement. The new college building, completed this year, will long stand an imposing monument to the earnestness and foresight of the board of trustees, which was instrumental in its erection. That Mr. Main is a member of this board and among its most active workers it is hardly necessary to state. Nor is the college the only institution, outside of his own business, which has felt the influence of Mr. Main's progressive ideas, combined with unusual level-headedness. In 1889, he became one of the directors of the Board of Trade and Transportation of New York, which position he still fills. He was also an original member, and is now chairman of the Drug Trade Section of that board.

His business abilities have also been recognized by the American Pharmaceutical Association, of which he has been a member since 1872, and he has been called upon to serve on important committees of that body.

His services in the councils of the National Wholesale Druggists' Association are well known. It is sufficient to say that the high tribute which his confreres have just paid him is a fitting compliment worthily bestowed; the Association is to be no less congratulated upon its choice than is the new president upon his distinction.



ALFRED B. SCOTT.

A handsome broad shouldered, soldierly-looking man, with a fine gray mustache, and a face that is

the picture of a good fellowship, is Alfred B. Scott of Scott and Bowne, proprietors of "Scott's Emulsion." At present Mr. Scott is supervising the expenditure of more than \$1,000,000 a year in advertising. His firm uses three-fourths of all the cod-liver oil that comes to this country.

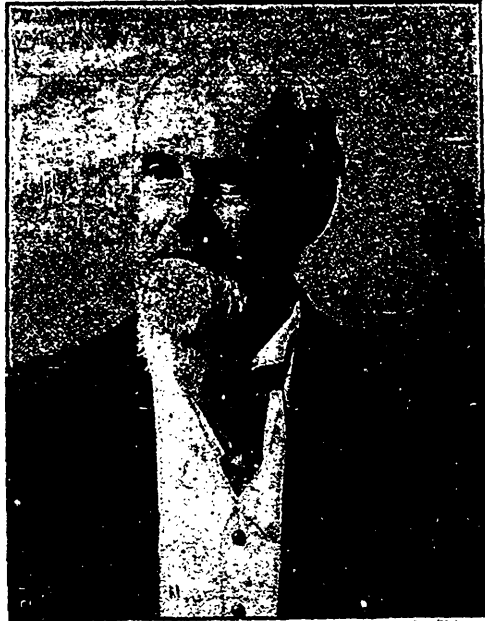
Less than twenty years ago he was working for a very modest salary. In 1876 Mr. Scott, who was a farmer's boy, went into partnership with Samuel W. Bowne. They started in a small way to manufacture an emulsion of cod-liver oil. They had experimented for three years before succeeding in getting a mixture that could be taken without producing the nausea which follows the swallowing of pure cod-liver oil.

They brought their product before the physicians of New York and then introduced it into other cities. It took at once with the medical men. The formula was published, and within four years the emulsion was firmly established with the doctors. Then the firm placed it before the laymen all over the world. Branch factories were established after a while, in Barcelona Spain; Oporto, Portugal, Milan, Italy, and in Paris.

Step by step the business has grown up until it touches every corner of the globe. Even Japan has received the emulsion gratefully, and John Chinaman is taking it. The firm recently received sets of photographs showing their workers in the Orient—natives in the gayest costumes, who go through the streets of cities distributing circulars, pictures, and all sorts of "matter" put into the tongues of the East.

Last Spring Scott & Bowne moved into a magnificent building of eleven stories, which they erected at the corner of Rose and Pearl Streets. On the rear wall of this building, facing the Brooklyn bridge, was painted, in herculean size, the figure of the Norwegian fisherman with a great cod on his shoulder, the trade mark of the emulsion. The story of this trade mark is interesting.

Some ten years ago Mr. Scott was seated in the office of the American Consul at one of the little seaport towns of Norway, looking into the details of the oil product of that country. Word suddenly came in that the largest codfish ever caught in the vicinity was outside. Mr. Scott went to view this extraordinary "catch." He saw a bronzed Norwegian bending over under the weight of a cod. A local photographer was immediately hunted up and a picture secured. The trade mark of the emulsion is an exact reproduction of this photograph. Mr. Scott kept the picture some time as a memento. Its appropriateness, from the business point of view, struck him, and ever since it has been used all over the world.



A. B. MERRIAM,

Mr. A. B. Merriam, the well known Secretary of the National Wholesale Druggists Association, is a native of the State of New York. At an early age he entered the Apothecary store of J. C. Ayer Lowell, Mass., then a young and enterprising, druggist of that city. While in the service of Mr. Ayer, he saw the conception of the immense business interest and fortune afterwards achieved by his employer in the world wide sale of the popular medicines which bear his name. A few years later he secured a situation in a prominent drug store in Cincinnati, Ohio, and rapidly rising from clerk to proprietor, was for many years identified with the business interests of that city as a member of the wholesale drug firm of Suire, Eckstein & Co., and later as the head of the firm of A. B. Merriam & Co. In 1875 when the demoralization of the drug trade was prevalent throughout the West and Northwest, occasioned largely by the competition in the sale of Patent Medicines, a meeting of the Wholesale Druggists of that city was called in March of that year, to consider what was best to be done to remedy the existing evils. Mr. Merriam, as secretary of that meeting, was instructed to issue a circular letter to the whole trade, covering the territory named, suggesting a convention at such time and place as the majority should elect. The City of Indianapolis was chosen as the most central point, and that gathering is memorable in history, as the parent organization of the National Wholesale Druggist Association. Mr. Merriam was elected its first Secretary and with the exception of two or three of the

earlier meetings when he was unable to attend, has been continuously elected to the honorable position he now holds. The wholesale drug trade of the country is largely indebted to the considerate action of the druggists of Cincinnati, which made possible the great organization which, with its enlarging membership in the United States and in these colonies, may justly be called International. Mr. Merriam is fortunate in being so prominently identified with its early history.



JOHN M. PETERS, NEW YORK, N. Y.
Chairman of Entertainment Com. of 1894 Convention.

Mr. John M. Peters was born in Genesee County, N. Y., June 1st, 1850. He attended school in his native town and in Buffalo until the age of 15, and then went for a few months into a retail drug store in the oil regions of Pennsylvania, with his brother who was an army surgeon, and who had, shortly after coming home from the war, opened a drug store at Shaffu, Pa., then the center of the oil fields. In 1866, he went to Maryland with his father who sold his farm in New York State, and bought heavily of Maryland lands. His operations turned out disastrously and in the fall of 1866, Mr. J. M. Peters went into a telegraph office at Ellicott City, Md., learned telegraphy and worked for the T. & O. R. R. Co. until Nov. 1868 when he came to New York and entered the employ of the W. U. Tel. Co. In 1870 after getting out of this business through participation in the strike of operators, he immediately went to work as a newspaper reporter, having had a previous experience of nearly a year as a reporter, on the *Evening Commercial Advertiser*,

during 1869, while he was also working as a night operator. For some years he was a reporter and correspondent on the *Commercial Bulletin* where Mr. W. O. Allison also worked, and in 1879, became editor of his paper the *Oil, Paint and Drug Reporter*, retaining this position until 1885, when he accepted the position of treasurer for Seabury and Johnson, and remained there until Jan. 1st, 1892, at which time he bought an interest in the Fraser Tablet Titurate Manf. Co, and became treasurer and took charge of the business of that company. Mr. Peter's connection with the N. W. D. A. meetings has been a most fortunate one for the association—for its welfare, success and for the comfort and pleasure of the members and their accompanying friends. He fairly outdid himself upon the occasion of the great New York meeting (October 1894) as chairman of the entertainment committee. With remarkable tact and energy he presided over an able committee and all whose privilege it was to attend the meeting found nothing imaginable that could be desired to enhance in comfort or enjoyment. Mr. Peters did not devote his time to discussion in the meeting—free alcohol for druggists and other problematical subjects and questions were left to the care of others but upon this as upon previous occasions his devotion was in the direction of making the assembly of the trade from everywhere a success in all and every social feature possible—"Nothing was left undone" was the verdict and the best judges—the ladies—rendered it most hearty.



S. M. STRONG, CLEVELAND, OHIO.
Treasurer of the National Wholesale Druggists' Association.



JOSEPH LEEMING.

Joseph Leeming was born in the City of Montreal, April 11th, 1869. His father Thomas Leeming, was a merchant in Montreal, between the years of 1857 and 1882. Mr. Leeming, senior is probably known by every merchant in Montreal. Joseph Leeming's grandfather established the firm of Joseph Leeming in 1843, and the house then founded has continued in direct line for the last fifty years.

At the age of thirteen Joseph Leeming having finished the course at the High School in Montreal, left for New York, where for three years he attended the Adelphi Academy of Brooklyn. He then entered the wholesale drug house of Lazell, Marsh & Co., later known as Lazell, Dally & Co., and for three years was with that house. After a year in Europe he entered his father's office (Thos. Leeming & Co., New York) and in 1890 was admitted as a partner in the firm. The business of Thos. Leeming & Co., is conducted through their offices in New York and Montreal, and the house represent a number of foreign manufacturers, among whom are the firm of H. Nestlé Vevey, Switzerland; P. L. Suchard, Neuchatel, Switzerland; John Sofio & Co., Messina, Sicily, etc. In 1891 Joseph Leeming was elected secretary of the Association of Manufacturers and Wholesale Dealers in Proprietary Articles of the United States, and has held that position until the present. He is one of those bright, delightful, men, to meet—a hearty, whole-souled friend and in business, an example in energy and application. Finally, a Canadian and a good one.

Pharmaceutical Association of the Province of Quebec.

PRELIMINARY EXAMINATIONS.

The next preliminary examinations for candidates entering the study of pharmacy will be held in the Montreal College of Pharmacy, 595 Lagauchetiere Street, Montreal, and Laval University, Quebec, on Thursday, January 3rd, 1895.

Candidates must give notice to the registrar, in writing, of their intention to present themselves at *least ten days* before the date fixed for the examination.

A printed form of application must be obtained from the registrar, which must be duly signed by the applicant.

The council of the association having instructed the registrar to strictly enforce the ten days' notice rule, no application will be accepted after the 24th day of December, 1894.

These preliminary examinations are held on the first Thursday in the months of January, April, July and October of each year.

E. MUIR, *Sec.-Registrar*

595 Lagauchetiere St., Montreal.

SENECIO VULGARIS AS AN EMMENAGOGUE.—W Murrel reports (Sem. Med.) that in his hands *senecio vulgaris* has proven an excellent remedy in suppression of the menses, particularly when due to colds or after confinement. It also increases scant flow, and relieves menstrual headaches. He administers 1 to 2 fluidrams of the tincture, or 20 drops of the fluid extract, three or four times a day. *West. Druggist.*

JOURNAL NOTES.

FREDERICTON, N.B.—Alonzo Staples, druggist has secured the services of Mr. Leonard Hubbard of London, England, as assistant. He is a very estimable young man and has all the elements to win his way and comes to this country highly recommended.

ST. GEORGE, N.B.—J. Sutton Clark has advertised his business for sale having determined to move into St. John.

R. O. CHRISTIE, druggist, Springhill, N. S. has sold out to H. Calkin formerly with Simson Bros.



THE DRUG STORE OF W. F. TEETZEL & CO.

The drug store of W. F. Teetzel & Co., in Nelson, British Columbia, is famed throughout that province and the Northern parts of the adjoining States of Washington and Idaho. No other town of the same size in America can boast of a drug store approaching it in either artistic features or amount and variety of stock carried. The store occupies 25 by 70 feet of the largest business block in Nelson, has a frontage on two streets, and is well lighted. The counters and fixtures were specially designed, and were manufac-

tured at Vancouver from native woods, red and white cedar and soft maple being used. The goods displayed on shelves are protected by glass, either in jars, cases, lockers, or show-cases. In addition to the shelving there are one hundred and seventy-six drawers, all uniformly fitted with labelled porcelain pulls. One of the unique attractions of the store is the display of flowers which grow in the show window, one of which is a fuchsia over eight feet in height. The store is lighted by electricity.

The Preparation of Cocaine.

The complete separation of cocaine from the accompanying alkaloids found in the leaves is a troublesome and tedious operation, and has been superseded to a large extent by methods based on our knowledge of the constitution of these alkaloids.

It has been shown that the chief alkaloids found in the leaves are cocaine (methylbenzoyl-ecgonine), isatropyl-cocaine, and cinnamyl-cocaine, and they may thus be considered as built up from methyl-ecgonine by combination with different acid radicals.

The principle of the process employed consists in the decomposition of the accompanying alkaloids by acids, the formation of ecgonine by splitting off the different acid radicals as methyl esters, and the subsequent partial synthesis of cocaine from the ecgonine thus obtained.

The method employed is as follows: The leaves are extracted by a suitable solvent, and the greater part of the cocaine is removed by fractional crystallization. The alkaloidal residue, containing a little cocaine, is then decomposed by boiling with strong hydrochloric acid into ecgonine and the methyl esters of the different organic acids. Finally, the ecgonine is separated and purified and converted into cocaine. Two methods can be employed for this conversion: (1) The ecgonine is first benzoylated and then methylated by treatment with methyl iodide and soda, or, better, by passing dry hydrochloric acid gas into a solution of benzoyl ecgonine in methyl alcohol (Einhorn); or (2) the methyl ester of ecgonine is first formed, and then benzoylated to form cocaine. In both cases we require to add the two groups, and for this two operations are necessary.

Einhorn has devised a method which necessitates only one of these synthetical operations, and this depends on the fact above stated, that the different alkaloids may be viewed as consisting of methyl-ecgonine combined with different acid radicals, and instead of decomposing the total alkaloid into ecgonine, the methyl ester of ecgonine is obtained, which then only requires benzoylating to yield the required alkaloid. The method is as follows: Fifty grams of the accompanying alkaloids are boiled with 300 grams of methyl alcohol and 100 grams of pure sulphuric acid for three to four hours in a water bath. The alcohol is then distilled off and the syrupy residue treated with a little water in which the methyl-ecgonine is dissolved, and the greater part of the organic acids precipitated as methyl esters. The aqueous solution is now extracted with chloroform, and then made alkaline with excess of potassium carbonate, when the ecgonine methyl ester separates as an oil,

which is then easily extracted by chloroform. A modification of this method consists in passing dry hydrochloric acid gas into a methyl alcohol solution of the accompanying alkaloids, and, after cooling, heating for two hours. The methylecgonine is separated by the same method as used when sulphuric acid is employed.

The yield is found to be theoretical, and the resulting methylecgonine was recognized as such by purification and the identity of the melting point of its hydrochloride with that previously recorded. It can be distilled with very little decomposition in a vacuum.

When the methyl alcohol is replaced by ethyl alcohol, the higher homologue of cocaine is obtained, and we have thus a simple method at command for forming any of the higher homologues by dissolving cocaine in the required alcohol, and saturating with dry hydrochloric acid gas and boiling for two hours.

The process above described depends on a very general method of preparation in organic chemistry; viz., the formation of a methyl ester by treatment with methyl in presence of sulphuric or hydrochloric acid. In this case the ecgonine is produced under conditions that at once induce the formation of methyl ecgonine, which then only requires benzoylating to yield cocaine. —*Pharm. Jour. and Trans.*

Sulphuric Acid as a Disinfectant for Cholera-contaminated Sewage.—In the Bulgarian *Meditzina*, Dr. M. Ivanov, of Sophia, details some experiments he has recently carried out, under Professor Pfuhl's guidance (in the Berlin Institution for Infectious Diseases), in order to study the influence of sulphuric acid on the vitality of cholera microbes living in water. The author employed a 60° commercial sulphuric acid (containing 98.5 per cent of pure H₂SO₄ and having sp. gr.—1.84), which he added to samples of water derived from the Berlin and Potsdam town canals, and artificially contaminated with pure cultivations of cholera vibrio, as well as with fæces from cholera patients. The following are the chief conclusions arrived at by the writer: 1. Even in the case of a highly contaminated canal water, an addition of .08 per cent of the 60° acid proves sufficient to totally destroy all the bacteria present therein within some fifteen minutes.

2. To secure the result it is necessary that the mixture should show "a fairly strong acid reaction." 3. The method is very cheap, in fact the cheapest after the disinfection by tar. The price of 100 kilogrammes of the 60° crude acid does not surpass 6.5 German marks, or 8.13 Bulgarian *levas*. —*National Druggist*.

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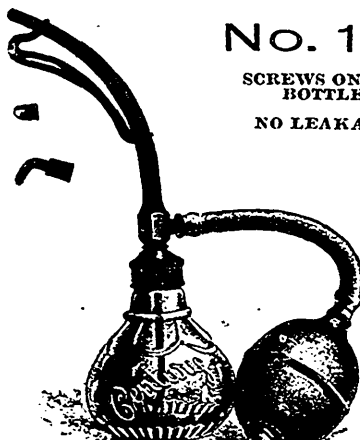
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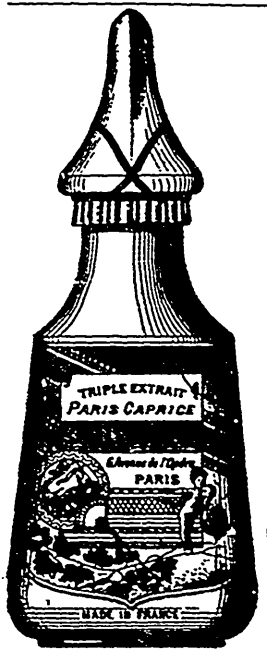
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EXTRACTS DOUBLES ET TRIPLES



MR. ED. GIROUX.

Mr. Ed. Giroux, Jr., is a member of the Board of the Montreal College of Pharmacy, whose portrait did not appear with those published last spring. Mr. Giroux is the son of Mr. Ed. Giroux, Sr., of Quebec, who was one of the founders and most earnest workers in the early days of the Association. Ed. Giroux, Jr., was educated at Dufresne College, St. Thomas, P.Q., and served his apprenticeship with the firm of E. Giroux & Bro., of Quebec, after following the necessary courses he graduated in April, 1882, and some years later entered the firm with his father and uncle. Later he commenced business in Valleyfield, but continued it for a short time when he removed to Montreal where he still carries on business as partner of the new National Pharmacy, although for some years past he was proprietor of the store, corner of St. Catherine and St. Charles Borromée, which he sold out about a year ago.

Ed. Giroux, Jr., is one of the younger generation who has always shown a lively interest in the advance of pharmacy in this province. He was second Vice-President of the P.A.P.Q. during 2 years, and was one of the Board of Preliminary Examiners during the same period and has also been a member of the College Board for the last two or three years.



MR. S. LACHANCE.

Mr. S. Lachance, the Vice-President of the Montreal College of Pharmacy, is a native of the City of Quebec, and was educated at the Quebec Seminary. His apprenticeship of five years was served with R. Dugal of the same city, and in August, 1868, he commenced business on his own account in Fraserville, but after several years of hard and unprofitable work he gave it up and secured a position as drug clerk in a Detroit pharmacy, where he remained about a year and returned to Canada. In 1876, he formed a partnership with R. Dugal, his former employer, which lasted for over two years when Mr. Lachance commenced business on his own account at 1538 St. Catherine Street, where he continued till last winter when he removed to his present palatial establishment, corner of St. Catherine and St. Christophe Street. Mr. Lachance is one of the best known members of the pharmaceutical profession in Canada. He has been president of the Association for some years and has also been a member of the Executive Board of the College for several terms. He has been examiner on Materia Medica for the Provincial Association for several years. Mr. Lachance is also a member of the American Pharmaceutical Association and has frequently represented the Quebec Association at the annual meetings.

ENGLISH PHARMACEUTICAL NOTES.

(By our London Correspondent.)

The question of the use of free alcohol in medicine is one that is constantly cropping up in England, but the general opinion is very much in favor of the ideas which prevailed in the discussion at Asheville, N.C. Several of our leading chemical manufacturers openly boast that they are steadily working in that direction but are not over sanguine of success. Nor is there any evidence of the advantage that would accrue to the retailer. If ever any such permission were accorded it would be hedged round with bonds and restrictions that would be objectionable and oppressive to the ordinary druggist. Wholesale firms have to give heavy bonds now for the proper use of methylated spirit, for the exportation of tinctures, perfumes and essences, etc., and one or two extra would make little or no difference to them. But to the retail pharmacist it would make a considerable difference. Apart from the difficulty of supplying sureties for large sums of money, any concession of this kind here means an open door to the Inland Revenue officers, whenever they may be pleased to come and spy around. In these days of pharmaceutical elixirs and medicinal wines it is almost impossible to desire a method by which alcohol in medicine could be freed without encouraging tippling of the worst kind. The last to care for any increase of business by this plan would be the reputable pharmacist. There is one point, however, which has hardly received the attention it deserves. By means of methylated or denatured spirit many preparations, destined for external use and incapable of being taken internally as a beverage, can be manufactured with duty-free spirit. A sensible spirit prevails with our own Board of Inland Revenue upon the subject. If good evidence is forthcoming that a liniment, by means of its poisonous nature or alkaline composition, is incapable of being taken internally, consent is readily obtained to prepare it with methylated spirit.

There is just one awkward point that sometimes occurs in connection with methylated liniments. It sometimes happens that the physician omits to distinguish on the prescription whether the methylated spirit is to be dispensed or that prepared from rectified spirit. In many of the leading dispensing establishments it is a rule in such cases to dispense only the rectified spirit preparation. But as this is not invariably the practice, it leads to a different charge for dispensing that considerably mystifies the patient. Some such discrepancy has just occasioned a newspaper controversy at Nottingham upon

the extraordinary variations in chemists' charges. The drug mentioned on the prescription appears to have been pure salicylate of sodium. It is well-known that the pure salt of the natural acid is very expensive, whilst that from the higher melting acid than the B. P. is frequently termed physiologically pure, and is a little dearer than the B. P. article, but much cheaper than the natural salicylate. *Hinc illæ lachrymæ!* All this has been duly pointed out by members of the craft; but it has afforded a very welcome opportunity to the managing-director of Boot's drug store, to boom their cheap prices for drugs and dispensing charges as compared with usual druggists' rates. Unkind persons are actually suggesting that perhaps the drug stores started the subject for their own special benefit.

The Fleuss Patent Vacuum Pump, manufactured by the Pulsometer Company, is an extremely effective exhaust pump of particular value where high rarification is required. The pump is devised upon the hydraulic principle with sunk working joints sealed with oil, so that friction is reduced to a minimum and the suction and delivery of air is perfect, no matter how slowly the pump may be worked. The vacuum obtained is equal to .001 of a millimetre. The apparatus consists of two upright pumps connected at the top with a handle which works the two at once. Oil is poured into the cups which seal the plugs and bearing and the pipes attached to a U-tube filled with calcium chloride and caustic potash. This dries the air abstracted from any piece of apparatus and preserves the efficiency of the pump. The pumping is done slowly and when the vacuum is nearly complete the piston meets with a resistance at the top of the pump. This resistance is caused by the automatic lift of the delivery valves against atmospheric pressure. These pumps cost about \$75. each, and are in great favor with incandescent lamp manufacturers and approved by research chemists.

The manufacture of aerated waters in this country is almost entirely in the hands of a few large firms. A few dozen chemists in the country towns find it a profitable extra, but of recent years the number has been decreasing, whilst the large manufacturers have been growing apace. It is at all times difficult to compete with the large manufacturer and the aerated water industry is calling for chemical superintendence and experimentation that the small maker cannot afford to supply. One of the largest London firms, particularly for the supply of syphons, is that of Idris & Co., who keep a chemist and research laboratories, whilst their factory is replete with every convenience and departments for every branch of the busi-

ness. Bottles are imported from Germany; but the block tin heads are turned and fitted on the establishment. Cases and boxes are made here and engraving of names and trademark done on the premises. Filling syphons and bottles from the machines is performed by girls, and although the bottles are encased in a cage (in the event of their bursting) the operators are compelled to wear goggles. By there side a tramway runs so that as soon as the bottles are filled and placed in boxes they are carried away to the packing floor. The filling machines are of familiar type and each one is capable of turning out 350 dozen bottles per day, but the carbonic acid gas is generated on a different floor and conveyed to the machines through solid tin pipes, whilst the syrupy is brought through glass tubes.

The two most interesting departments to pharmacists are the laboratory and essence room. The latter is fitted with percolaters, filter-presses, etc., and a rare stock of essential oils, flavoring syrups, etc. A special feature of the Idris lemonade is that it is guaranteed prepared from the fresh lemons and not by the usual process of flavoring acidulated syrup with essence of lemon. The result is certainly very satisfactory and the liquid has a creamy head that is quite unusual for this class of goods. The laboratories, for these are three rooms devoted to analytical and bacteriological work, are fitted up in a lavish manner. It would surprise many to know the investigations that have been undertaken here in subjects, such as bacteriological examinations of water, etc., apparently outside the industry. The general laboratory with its apparatus room adjoining, is most used as all the testing of chemicals takes place here. All the water used in the factory is softened by a modification of Clark's process and the lime allowed to deposit in salt tanks. It is then tested by the chemist before use and if ready is run off into the cisterns. Balances, polariscopes, microscopes, etc., are provided, and furnaces and rapid filter-pumps ready for any requirement. Saccharine determinations and standardisation of alkali waters are daily performances and even the examination of "sacch. ust" is a subject requiring great care and considerable time. The chemist to Messrs. Idris for several years was Mr. W. H. Symons, F.I.C., F.C.S., one of the chemistry examiners of the Pharmaceutical Society, but he has relinquished the post in order to enter the medical profession. In no industry is there such signs of the modern application of scientific principles with conspicuous success as in the manufacture of aerated beverages.

A phenomenal advance has taken place in caffeine. There is a complete absence of cheap denatured tea for its manufacture, so makers

have to pay comparatively high prices for the raw material. The new crop of Valencia saffron is arriving and prices are much lower. Otto of Rose, on the other hand, is being bought up by speculators and has already advanced. Most of the drugs and chemicals remain unaltered and in the presence of only a limited demand, very little improvement is chronicled.

SURGICAL DRESSINGS.

E. WHITE, B. S

The basis of nearly all these dressings is cotton, in the form of either wool, gauze, muslin, or lint. Woody-fibre and paper-pulp are also somewhat largely employed. The object is to absorb through surgical interference, and for the application of remedies to wounded surfaces.

There are now two systems of surgical treatments—the aseptic and the antiseptic. The latter marked great progress in surgical procedure. The aseptic treatment is very difficult to carry out in its entirety, owing to the necessary stringent precautions which have to be taken: thus the surgeon should wear no beard or moustache, he should undergo a most thorough shampoo, wear a head cap and don a special suit of clothes, and sterilise his hands and nails before entering the operating-room. The aseptic dressings possess the advantage of never causing inflammation or irritation, as antiseptics are sometimes apt to do. To render any of the dressings aseptic, prior to use they are cut off in appropriate sizes, as required, placed in a glass jar fitted with a glass lid. The jar, with lid by the side, is placed in a specially constructed iron cylinder, and for a period of one hour subjected to the heat of steam, which is forced into the chamber to a pressure of 18 lbs. to the square inch. The chamber is now opened, and as, on cooling, air would be drawn into the jar, and air containing germs would again render the dressing septic, a small sheet of sterilised cotton wool, sterilised at the same time as the dressing, is first placed over the jar, and the lid fastened over the wool. In this way, air entering is filtered by the wool, and any germs removed.

For the preparation of antiseptic dressings, the gauzes, &c. are soaked in solutions of the antiseptics and dried without access of air. It is a comparatively easy procedure. A piece of the material is taken and weighed; it is then soaked in water or spirit (as the case may be) drained, and weighed again; the increased weight shows how much solution it will take up and it is therefore an easy matter to so adjust the strength of the antiseptic solution, that the material will contain a desired amount,

Bichloride of mercury, carbolic acid, boric acid, iodoform, double cyanide of mercury and zinc, thymol, salicylic acid, and eucalyptus oil are the antiseptics principally employed. Some surgeons set a high value on one, some on another, of these, probably, according to the amount of experience in the use of any particular one. The double cyanide, however, Mr. White believes is most generally used. It is doubtful whether the volatile antiseptics are of real value, and resin has been employed in conjunction with carbolic acid to obviate its volatility, but now it is used as much on its own account as for this.

Mr. White then showed specimens of the different dressings, &c., gauze, muslin, flannelette, and flannel bandages, cotton and linen lint, absorbent and wood-wools, paper pulp, cotton-wool pads and gauzes. Referring to these severally, he said there was not much to choose in the material of the bandages. Flannel was to be preferred where additional support was required. The muslin had to be specially selected; a strong fabric was required that would tear in any desired widths without fraying, and if it frayed in tearing, it was necessary to trim the edges or the bandage when applied would be uneven. Cotton lint had almost entirely superseded the old linen lint; it is cheaper and equally serviceable. Paper pulp is coming into use largely; it possesses great absorbent properties. Mr. White showed how absorbent wools are prepared which are absorbent in different degrees. It is sometimes a desideratum to have an absorbent wool, but not absorbent to the full extent. Instead, now, of using marine sponges for cleaning out cavities, surgeons almost entirely use wool pads, prepared by tying gauze round a ball of absorbent wool. Prior to use they are rendered aseptic or a small quantity of a solution of an antiseptic is poured upon them, the solution gradually diffusing; were the pad immersed in the solution it would lose its shape. Unlike sponges, these pads are quite inexpensive, and can be thrown away after the operation.

Mr. White also exhibited the various ligatures and sutures, showing how they are prepared, and how kept before use. Finally he described the different kinds of protective coverings, pointing out the origin and advantages of each.

Replying to questions asked by members, Mr. White said, the efficacy of iodoform as an antiseptic had been several times questioned, and he had himself proved that it was not a perfect germ-destroyer. Remarking further about aseptic surgery, he said the idea was to prevent the access of bacteria to the wounds by the use of sterilised instruments and dressings. It has been found that an aseptically-treated

wound heal more quickly than one treated antiseptically. Before dressings were introduced into the apparatus he had described, to be rendered sterile, steam was passed in for fifteen minutes. It was then allowed to escape, and the dressings put in; after another fifteen minutes the steam was again passed in. In this way the dressings were at a high temperature when the steam came in contact with them; and they were barely moistened.

In acknowledging a vote of thank, Mr. White suggested that methods of estimating the various antiseptics in these dressings were needed, and the discovery of such would form good subjects for members of the Association to engage in elucidating.

Read at a meeting of the London Chemists' Assistants' Association, reported in *The Chemist and Druggist*.

The Antitoxine Treatment of Diphtheria.

Kössel, of Koch's Institute (Deut. med. Woch., October 25th, 1894) remarks that the diphtheria bacillus belongs to the eminently toxic bacteria. The diphtheria poison is obtained by inoculating bouillon-containing flasks with diphtheria culture, and in three week's time killing the micro-organisms by adding 0.5 per cent. phenol, or 0.3 per cent. tricresol. The clear fluid which separates out contains the diphtheria poison.

Behring and Ehrlich call normal serum such a serum that 0.1 Cc. will suffice to render inert ten times the fatal dose of the diphtheria poison, thus 1 Cc. of the normal serum contains 1 immunity unit. Therefore a serum of which 0.01 suffices, represents 10 times the normal serum; 500 such immunity units are necessary to cure a child with diphtheria. The clinical picture of diphtheria varies greatly, so that the diagnosis should be made by bacteriological examination. If the process has extended to the bronchi and lungs, the serum treatment is too late. When complications, including secondary infections are present, the antitoxine cannot cure with certainty, and if the poison has long been present in the body the prognosis is also doubtful.

Yet the most desperate cases should be treated, as the antitoxine cannot do harm. The mortality in Koch's Institute has permanently fallen to 16 per cent. Children treated on the first and second days have never died. Every fresh case of true diphtheria can undoubtedly be cured by a sufficient quantity of the antitoxin.

Under the treatment the membrane loosens and the improvement on the general condition is marked. In fresh cases thus treated there is little fear of subsequent paralysis, and the author has never seen extension of a hitherto

intact larynx. Meister Lucius and Bruning have taken over the manufacture of this antitoxin under the direction of Behring and Ehrlich. They supply flasks containing respectively 600, 1000, and 1,500 to 1,600 immunity units. For protection against diphtheria a quarter of flask No. 1 is only needed, but the author would not trust to such immunity lasting over two or three weeks.—W. Koerté (Deut. med. Woch., November 8th) reports on a series of cases of diphtheria treated at Berlin, between January 20th and October 27th of the present year. The total number of children treated was 132. The average results during the period from June, 1890, to December 31st, 1893, showed 54.9 per cent. of cures and 45.1 per cent. of deaths. Thus the serum treatment had diminished the mortality by 12 per cent. Besides the 121 cases referred to, 106 cases had been treated without serum during a period when none was procurable, with 46.2 per cent. of recoveries and 53.8 per cent. of deaths. The mortality in the same epidemic was, therefore, 20.7 per cent. higher in cases not treated with serum than in those treated with it. The results of injections made after the third day were less favorable. The larger the initial doses the better the results. No injurious effects were noticed; urticaria occurred only in nine cases. No influence on the temperature or on the local foci of the disease was observed in severe or moderately severe cases; on the other hand, a markedly favorably effect on the general condition was often seen in severe cases. The experiments, so far, are, in Koert's opinion favorably.

More extensive clinical observations, especially in cases treated early, are, however, necessary to determine the value of the remedy. It must be tested in a large number of severe cases in different epidemics and in different places—Damieno (Rif. Ted., October 30th) reports a case of diphtheria in Massei's clinic at Naples, which was successfully treated with antitoxin. Damieno also records (ibid., November 3d) a case of laryngeal diphtheria in a girl, aged 5, in whom, urgent dyspnoea having come on suddenly, intubation was performed by Massei. Immediately after an injection of 8 Cc. of Behring's serum No. 1 was given. Forty-three hours after the intubation the child's breathing was so easy that the tube was dispensed with. Rapid recovery took place. The bacteriological examination in this case does not appear to have been conclusive, but clinically the case was one of diphtheria. And there could be no doubt as to the very favorable effect of the serum on the after-course of the disease after intubation.

Amer. Druggist.

The following interesting letter appeared in the correspondence columns of the *Chemist and Druggist* of Nov. 10th:

THE GIANT LUMP OF AMBERGRIS.

SIR,—It may be in the recollection of your readers that notices appeared in your issues of September 12, October 16, and October 31, 1891, relative to a "Monster Find of Ambergris". As the whole of this "Find" passed through our hands as agents for the consignees of the drug, we think that an authentic account of it may be of interest.

About the end of August, 1891, a gentleman called upon us to consult us as to the best means of disposing of some ambergris, which had been consigned to his firm. We suggested that if it were brought to us we could examine it and report upon its value: but when we were informed that the case which contained it weighed close on 224 lbs., and was too large to go inside a cab, our first feeling was one of incredulity as to the consignment being ambergris at all.

It was finally decided that the case remain in the strong-room of the bank in which it had been deposited for safe custody, and that we should go there to inspect it. This we did, and were shown a box measuring about 2 feet 4 inches in each direction, and which we were told had, with its contents, been insured for £10,000.

In the presence of the merchant who consulted us and the bank officials, the lid of the case was opened, with the immediate result that everyone beat a hasty retreat from its vicinity for the horrible smell which issued from the box was overpowering. When the odour had lost somewhat of its intensity, we began to take out the packing, and found that the case (which was tin-lined) contained one huge mass of a blackish substance, measuring about 6 feet 4 inches in circumference, nearly spherical, and which was undoubtedly ambergris. On being turned out of the case it was found to be saturated with moisture, as were the packings of paper and old gunny which had been put round it to prevent it from chafing to pieces during the voyage; and it was the liberation of the gases generated by the salt water and the animal matter which had caused the stench alluded to. By proper treatment this smell was eventually completely got rid of, and the ambergris obtained in marketable condition.

The mass was next weighed, and the certificate signed by the interested parties; the exact weight being at that time 2603 oz., or 162 lbs. 11 oz. This is probably the largest piece of ambergris which has ever been seen by anyone living, and approaches nearly in weight to the lump of 182 lbs. purchased by the Dutch East India Company two hundred years ago.

The next thing to do was to split the lump, so as to see what the interior was like. This was accomplished with the aid of long chisels and crowbars. We then saw that the substance consisted of layers or laminæ rolled round a central core, the laminæ varying a good deal in texture, colour, and flavour.

Speaking generally, the outer layers were thin, friable, and shelly, dark, almost black in colour, and mixed to a considerable extent with the "beaks" of the "cuttle-fish," on which the whale feeds. As the layers approached the centre they were denser, greyer in colour, thicker and of better flavour, until the core itself was reached.

This core really consisted of two pieces—one, the shape of a rifle-bullet, but with a deepish depression, like the "kickup" of a wine-bottle, in the base. It was from 10 to 11 inches high, with a diameter of about 6 inches at the bottom tapering upwards to about 2½ inches at the top, which was slightly flattened it was detached from the surrounding layers with the greatest ease, and stood alone, a pure, solid, lump of the finest grey ambergris, weighing 83¼ oz. Beside this magnificent piece was a smaller one, almost spherical in shape, and about the size of a very large orange; it was rather darker in colour, and not of quite so good a flavour, but was as easily detached from the surrounding layers as the other. Neither of these pieces contained any of the "beaks," which were so common in the outer layers; and it is almost needless to say that they realized by far the highest price which was obtained for any portion of the mass.

The layers nearest to the core were of much finer flavour than the outer and darker. One of them was quite 4 inches in thickness, and the ambergris of which it consisted was of a silvery grey colour, different from the whitish grey of the core, and was of lower specific gravity. The layer outside this again was striated in places with the darker exterior, and the "beaks" began to show, though not to the same extent as in the black, shelly exterior layers.

It is a matter of some regret to us that we did not secure a photograph of this extraordinary lump, but the fact weighed heavily upon us that if the real truth about it leaked out the depression of the market would be so great that we should not be able to do justice to our clients, and, consequently, as few people as possible were let into the secret. It is true that reports about it were rife for a month or two but as nothing authentic could be ascertained, they gradually died out, and we have ourselves been repeatedly assured that the thing was a myth altogether—one gentleman going so far as to tell one of our partners, about three months afterward, that he held three-fourths

of the total quantity of ambergris in London, not knowing that we were controlling about 1½ cwt.

That the policy of secrecy was the right one has been amply borne out by the event, and it is only now that the last of it has been disposed of that we feel at liberty to place before your readers this brief account of the "Monster Lump of Ambergris." Yours faithfully,

T. HODGKINSON, PRESTONS & KING,
81 Bishopsgate Street Without, London.
E.C., November 6

EXERCISES FOR STUDENTS.

No. 36.—A straight cork 1.13 × 2 in., with a bullet weighing 101 grains in water, attached to it, floats ½ out of water. Find the density of the cork.

No. 37.—A cutter gives 1 lb. more of an article for 60 cents than his neighbor, equal to a cut of 2 cents per lb. What was the full rate?

No. 38.—How many circular cakes, 4 ins. in diameter weighing 25 grams each, should be obtained from ½ stère of Wax Δ '970? 2% loss in handling.

No. 39.—An opium eater has 8 oz. of a solution of Morphia, 4 grs. to 1 oz.; he takes a tablespoonful for a dose, and replaces the quantity taken out with water; having made this exchange several times, the solution is found to be slightly less than 2 grs. per oz. How many times has the exchange been made?

No. 40.—A mixture of dry Sodium and Potas. Carbonates weighs 76 grains—converted into dry Mixed Chlorides it weighs 83⅓ grs. Find the quantity of each Carbonate.

ANSWERS.

$$\text{No. 31.—} 7 \text{ feet } \sqrt[3]{\frac{2000 \times 10}{62.3}} = 7 = \text{cube in feet}$$

No. 32.—76. Vol. of plank $4\frac{3}{4}$ c. ft. = 316 lb. of water, weight of sinker in water $49\frac{1}{2}$ lb. Plank + sinker is supported by $\frac{1}{12}$ of 316 lb. ∴ weight of plank $240\frac{1}{2}$ lb. and $\frac{240.3}{316} = .76$.

No. 33.—Ag. I. 4.7 mgr., Ag. Br. 9.4 gr., Ag. Cl. 2.87 gr. The first treatment changes the Iodide into Bromide, the Iodin being washed away; the second changes the Bromide into Chloride, the Chlorin being removed. Method of solution: Multiply the mol. wt. of Ag. I. by the loss and divide by the difference 235 - 188, and obtain the first ingredient. Ag. I.: repeat the process, deduct the ingredient al-

ready found, in its changed form, and we get the second ingredient, the balance is of course the third ingredient.

No. 34.—11.2 gr. Sod. Chlorid., 30.3 Potas. Chlorid. Calculate the quantity of Sulphate that would be obtained if the powders were wholly Na. Cl. and then as wholly K. Cl., and proceed as in Problem No. 3.

No. 35.—(a) False Dichotomy.

(b) Secondary bark.

(c) The white spongy portion of lemon and orange peel.

(d) Maturation of pistils and stamens at different times.

(e) Abnormal position of organs.

Imperial British Pharmacopœia.

The General Medical Council commenced its autumn session on Tuesday, when Sir Richard Quain, Bart, M.D., the President, delivered an address. In the course of this, Sir Richard referred to the steps which have been taken for the revision of the British Pharmacopœia and proposal to make it Imperial in application. The Council have addressed various bodies in the Empire about the matter and to the communication twenty-eight replies have been received. "They have been," Sir Richard said, "received from the East and West Indies, and from the colonies and dependencies in South Africa and Australia. A full statement concerning the communications will be submitted to the Pharmacopœia Committee by Professor Atfield, and subsequently they will be laid before the Council by the Committee. I need scarcely remind you of that with which we are familiar—viz., the discussion which is now taking place as to the relations between the mother country and the colonies, and between the various colonies themselves. It will therefore be regarded as a fortunate coincidence that at this moment the Council should have determined that the members of the medical profession in this country and those members of the profession practising in the remote regions in which British thoughts, British feelings, British wants predominate, should become more closely bound together, and that the Council should be prepared to utilize the valuable suggestions which they have received from these dependencies, and and thus to render the Pharmacopœia not merely English but British in the widest sense of the term." He concluded his reference to this matter by thanking Sir Charles Peel and others for their assistance.

THE CITY DRUG CLERK.

He is well up in physic, has a recipe for phthisic, that will cure a case that's chronic in the quickest sort of style.

For while he was at college he absorbed all sorts of knowledge, with a keenness and avidity that made his teachers smile.

He can tell you to a fraction, writing out the full reaction, how much maltose is converted when you brew a pint of beer.

For on substances organic, whose origin's botanic, he's a lot of information and was never known to err.

He is up in mathematics, can explain electrostatics; when it comes to pharmacognosy, he is a perfect mine of wealth.

He can analyze a water, and can tell you what you ought to do to make it fit to drink without injuring your health.

He explains the metric system with an air of sapient wisdom, he knows a little Latin, on a pinch "spricht et was Deutsch."

He reads the leading journal and his wit springs even vernal, and when discussing politics he's never in the lurch.

He can draw you soda water with an air of freezing hauteur, that quite precludes necessity for having any ice;

Though when customers are pretty he can be very witty, and the girls unite in saying that he's everything that nice.

Such a brainy aggregation is quite fit to rule a nation, yet he deals out pills and powders with a condescending air.

For a paltry compensation that's a shame to his vocation, and I leave it to the public, do you think that this is fair?—*Pharmaceutical Era.*

PASKOLA.

The trial of W. J. Hall of Cincinnati, for selling Paskola has resulted in acquittal. The case was well contested, both sides bringing forward weighty evidence. For the State, Drs. Whitaker, Forchheimer, Eichberg and others testified that glucose alone would not support life as claimed. Prof. Fennel testified that he had not found any digestive ferments and that the article was principally glucose with some sulphurous and hydrochloric acids. For the defence all the chemists swore to having found digestive ferments, while the doctors testified that glucose was a food, consequently the claims made by the manufacturers that Paskola was a food, were well grounded. After a number of tests of the digestive power of Paskola and glucose the jury retired and after four hours returned a verdict of not guilty. The case is said to have cost the proprietors of the article over \$25,000.

Marking Ink for Linen.

The majority of marking inks contain as the prime ingredient nitrate of silver, and such inks give an excellent mark when fresh. By the action of the alkaline liquors in washing the impression after a time becomes yellowish, and finally leaves something like an iron stain upon the linen,

By the following method, it is said that a splendid red ink which gives an indelible impression upon linen can be manufactured at a small cost. Three solutions are first made as follows:—

(1) Carbonate of soda ...	12 grammes
Gum arabic	12 "
Water	45 "
(2) Perchloride of tin ...	4 "
Distilled water	64 "
(3) Protochloride of tin...	4 "
Distilled water	64 "

To mark the linen, the part upon which it is wished to write is damped with solution (1) and dried. The second solution is then used to write or stamp the name and left to dry. Finally the mark is covered over with the third solution. The colour (a purple red) soon shows up, and will be found to resist the strongest washing soda or soap liquors (*Revue de Chim. Indust. Manufact. Chemist.*)

Secretions and Their Formation.

By PROF. A. TSCHIRCH, BERLIN.

The author calls attention to the fact that in all the resins so far examined save in opoponax there was a certain general resemblance since they all consist of esters of aromatic acids together with a peculiar group of alcohols which Tschirch calls resinols. These latter may be divided into two groups, one of which consists of resinols in the narrower sense of the word and the other of resino-tannols, that is such as resemble tannin. Leaving out of consideration for the moment the colorless, crystallizable resinols, the benzo-resinol and the chironol (from opoponax), we find a peculiar relation on the one hand between the aromatic acids which form the resin esters (resins) and on the other, between the ester-forming resino-tannols. The following resin-ester-forming aromatic acids have so far been identified:

Benzoic acid = C_6H_5COOH (In tolu and Peru balsams and in Siam benzoin).

Salicylic acid = C_6H_4OH (1) $COOH$ (2) (In ammonia).

Cinnamic acid = $C_6H_5OH = CH. COOH$ (In tolu and Peru balsams, Sumatra benzoin and storax).

Paracumarinic acid = C_6H_4OH (1) $CH = CH. COOH$ (4) (In acaroid).

Umbelliferon = $C_6H_3OH. OCO. CH. CH.$ (in galbanum and sagapenum). This last is really more of an alcohol than an acid, but it is very readily converted into dioxycinnamic acid, which in turn is converted into umbelliferic acid.

The resino-tannols so far investigated are: Sia resino-tannols, $C_{17}H_{14}O_2$ (in Siam benzoin), Suma-resina-tannol, $C_{18}H_{20}O_2$ (in Sumatra benzoin).

Sto-resinol, $C_{17}H_{16}O$ (in storax).

Galba resino tannol, C_6H_8O (in galbanum).

Peru-resino-tannol, $C_{18}H_{20}O_5$ (in Peru balsam) and

Tolu-resino-tannol, $C_{17}H_{18}O_2$ (in Tolu balsam).

On studying these formulas a singular uniformity will be noted. Excepting the tolu-resino-tannol, it will be observed that in the molecule 6 atoms of carbo-hydrogen occur repeatedly. Tolu-resino-tannol and Peru-resino tannol are, however, members of a homologous series, (+ CH_2). Where the resino tannols belong according to their constitution is not yet clear. The constitution of the coniferus resins is not yet entirely understood. Only this much is determined; that in them not only fatty acids, but also resin acids, of the abietinic acid series which form esters can occur.

The author then spoke at some length on the formation of secretions, his theory that this was a function of the membrane having received general acceptance.

Read at the meeting of the Deutscher Naturforscher und Aerzte.—From the American Druggist.

HOOSIER CORN CURE.

Prune your corn in the gray of the morn

With a blade that's shaved the dead.

And barefoot go and hide is so

The rain will rust it red;

Dip your foot in the dew and put

A print of it on the floor,

And stew the fat of a brindle cat,

And say this o'er and o'er:

Corny! morny! blady! dead!

Gory! sorey! rusty! red!

Footsy! putsy! floory! stew!

Fatsy! catsy!

Mew!

Mew!

Come greasy my corn

In the gray of the morn!

Mew! mew! mew!

—James Whitcomb Riley.

—West'n Drugg.

M P P.

MALTO PEPTONIZED PORTER.

FOR INVALIDS, CONSUMPTIVES AND DYSPEPTICS.

THIS combination containing the finest quality of Porter, together with Pepsin (the digestive power of 10,000 grains of albumen to the bottle) Extract of Malt and Dandelion, appeals to the understanding of this profession as being well adapted to a numerous class of cases. In no single instance has it been rejected by the most delicate stomach.

It is especially adapted to the following cases:

- a. Convalescence from acute diseases such as Typhoid Fever, Cholera, etc.
- b. In Atonic Dyspepsia its effects have been most marvellous, enabling patients to take all kinds of food with comfort that would not otherwise be retained by the stomach.
- c. In persons of Consumptive tendencies it has been found to be a most perfect substitute for Cod Liver Oil, the extract of Malt supplying the fat-producing elements necessary to the supply of wasted tissue, besides the tonic and stimulating effects.
- d. In the treatment of cases of unnatural craving for Alcoholic Stimulants, or Alcoholism, it has been found to answer admirably in allaying the irritation, vomiting, and consequent desire for stimulants of an unhealthy nature.
- e. It is especially adapted for administration to Nursing Mothers.
- f. In wasting diseases of Children.
- g. Where there is sleeplessness from flatulence, over-taxed brain and nervous system.

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DISEASES OF THE BLADDER

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Coughs, Asthma, Consumption

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1 Doz, Small " 4.25

VIEL'S * VEGETABLE SYRUP, - - - CURES - - -
Dyspepsia, Constipation,
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WHOLESALE PRICE LIST—Viel's Syrup, 1 doz. \$4.25.
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SYRUP OF FIGS sells well and gives general satisfaction. It will be extensively advertised in Canada during the coming Winter and Spring.

☛ We offer it to the trade at \$6.00 per dozen, and it retails at 75 cents per bottle.

The remedy is a combination of the medicinal principles of plants known to be most beneficial for the purposes intended, and it is very pleasant to the taste, and gentle, yet effective in cleansing the system, dispelling colds, headaches and fevers, and permanently curing habitual constipation.

Your orders respectfully solicited.

Yours truly,

California Fig Syrup Co.,

San Francisco, Cal.

Louiseville, Ky.

New York, N.Y.

PRACTICAL PHARMACY.

PRESENT CONDITIONS.

BY FRANK EDEL, DES MOINES, IA.

It will be agreed without argument that it is the duty of the pharmacist to dispense nothing but the best. The purest chemicals and drugs and the most carefully made pharmaceuticals are not a whit too good to be used in prescriptions. A decent regard for the lives and health of others can call for nothing short of this, and the pharmacist who would dispense inferior goods is guilty of conduct little less than criminal. There is beyond question a growing sentiment in favor of more uniform pharmaceuticals; this sentiment was made very manifest before the last pharmacopoeial convention, and many pharmacists favored standardization on that account. I did not then favor such a move—not because I did not believe it to be a necessity, but because our knowledge of assay processes did not seem exact enough to warrant such a step. Neither did I believe that the profession was ready for it. But with improvement in process and increased knowledge of the active principles of drugs, there can be no question that the pharmacist will have to meet this subject fairly and squarely.

Another question is that of the palatability of drugs. There can be no question that many preparations can be made more palatable, and where palatability can be obtained without any sacrifice of medicinal activity it is the duty of pharmacy to see that it is brought about. It is bad enough to be sick, without being forced to take nauseating mixtures unnecessarily. But is not medicine allowing itself to be misled by this plea of elegant pharmacy? If it be the duty of the pharmacist to see to it that he dispenses nothing but the best, is it not also the duty of the physician to investigate the claims of these so-called "special preparations" before he prescribes them? Dose he not owe it to his patients at least to satisfy himself that the claims made are based on fact, before he asks them to spend their money? It seems to me that this is only reasonable—that it is nothing but right and proper. Without the aid of the physician these preparations could not live. There can be no question that some of them have merit, but are they any more meritorious than similar combinations prepared by the pharmacist himself? Is there any reason why one firm can make an elixir, syrup or tincture in any way superior to the product of another honest, reliable manufacturer or pharmacist?

I believe that there is great difference in the qualities of pharmaceutical preparations as placed on the market by different manufacturers. Recent experience with fluid extracts

would convince me of this, if nothing more. But it is a fact not to be denied that any pharmacist who will take the pains to investigate need have no difficulty in securing one brand of these goods as perfect in every way as it is possible to make them. If he does this, why should he be compelled by the physician to carry a half-dozen elixirs of the same name and strength made by as many different manufacturers?

Every day some new special preparation is placed on the market and great claims are made for it "By improved process and expensive investigation we have succeeded in making a preparation" of very ordinary drugs that has very extraordinary virtues. This has grown so common as to become a positive burden to the pharmacist, whose shelves are now the dumping-ground for these goods. How are we to remedy it? The writer believes that in many cases a proper understanding between physician and pharmacist would largely do away with this nuisance. He believes that where the pharmacist has the confidence of the physician this can be done. But does not the fault lie directly at the door of the physician? Let us illustrate. It is well established that a certain medicine is very valuable in certain diseases, but one of its greatest drawbacks is its nauseating taste and smell. Scientific investigation has demonstrated that it contains certain elements, not that these elements are the principles to which the medicine owes its activity, or that they even play any more important part than to help to make up the medicinal activity of the whole. This much is known to every reader of the current medical and pharmaceutical literature. But a representative of some manufacturing firm comes along, visits the doctor and tells him of the wonderful results that have followed investigations made by his house on this drug. Not only have they succeeded in isolating the active principles of this drug, but they actually reincorporate these principles with aromatics and thus do away entirely with the disgusting taste and smell while they retain the medicinal part in all its activity. Isn't this truly wonderful? How did they succeed in determining the seat of medicinal activity? Have they means for learning these things which the great body of scientific investigators have not? Who decided for them what parts were the active principles? But the physician doesn't think of this. He writes a note to the pharmacist asking him to buy some of the product, as he wishes to use it in his practice. Is this drawing the picture too strong? Is it not what is happening every week?

But this is not all. Only yesterday a pharmacist remarked to me that he had a prescrip-

tion which gave him considerable trouble; try as he would he could not avoid the formation of a precipitate. The prescriber had ordered iodide of manganese and chloride of gold in solution. A glance at the table of solubilities in either Simon's or Attfield's Chemistry shows iodide of gold to be insoluble. The pharmacist said he could obtain this preparation, or what purported to be such, off a certain manufacturer who issues it free from deposit.

Has this manufacturer a process for making soluble iodide of gold? Can he reverse the rule of chemistry that "where a solution of one chemical is mixed with the solution of another and by an interchange of radicals an insoluble one can form, it will be formed and precipitated?"

How long is medicine going to lend its influence to these things without investigation? How long are they going to allow animal extracts prepared by special processes under the special supervision of an eminent specialist as glycerin extractives of substances which scientific investigation has yet failed to show that glycerin is a solvent for, to be foisted on them? Palatability is all right. It is well to take from medicine its bitter if at the same time we retain its virtues as a medicine; but when by making a preparation palatable we take from it any of its activity, or when by hiding the bitter we destroy its tonic principles for which the drug is mainly used, the whole matter becomes a farce. Rational and scientific pharmacy demands that medicines be presented in as palatable a form as possible consistent with medicinal activity. And rational and scientific medicine can ask no more. We as pharmacists ask only that the claims of these special preparations be carefully investigated in the light of reason; that the same conservatism guide the physician in the use of these and in their recommendation as has in the past made that profession famous. The New York City Board of Health maintained a learned specialist in Berlin for seven months, investigating the new treatment for diphtheria. That was right and proper; it showed a fitting regard for the principles of true science; and a little of this same spirit applied by the great body of this profession to this special remedy nuisance would be a good thing for all concerned, except the particular manufacturer interested. It could not fail to benefit medicine, pharmacy, and the patient. —*Bulletin of Pharmacy.*

MR EDWARD EVANS, JUN. (of Evans, Sons & Co., Liverpool), has been elected Chairman of the General Committee of the National Federation, a choice which is heartily welcomed by earnest Liberals in London as well as in the North. The *Star*, referring to this election

says:—" Mr. Edward Evans, jun., who succeeds Mr. Schnadhorst as chairman of the General Committee of the National Liberal Federation, is 48 years of age, and has been the leader of the Liberal party in Liverpool for over a decade. He accepted the leadership when the Liberal party in the city on the Mersey was in a hopeless condition, but he reduced electioneering organisation to a science, and it was greatly due to his magnificent leadership that two years ago the Liberals secured a majority in the City Council for the first time within half a century. In celebration of this triumph the Liberals entertained him to a banquet, and presented him and Mrs. Evans with an elaborate service of plate. Mr. Evans had the rare distinction of being on intimate terms with Mr. Parnell. After the historical interview with Mr. Gladstone, Mr. Parnell went to the beautiful home of Mr. Evans, Spital Old Hall, near Birkenhead, and through the night they discussed Home Rule, and the Irish leader made the famous declaration that he was more than satisfied with the assurance which he had just received from the Liberal leader. Mr. Evans has entertained Mr. Gladstone and nearly all the leaders of the Liberal party. For many years he has been a regular speaker at the meetings of the National Liberal Federation. He is a perfect master of organisation a man of indomitable will, iron nerve, and unflinching courage, but possessing a genial temperament, which makes him exceedingly popular with all parties. More than one safe seat has been offered to the new organiser-in chief, but, like his great predecessor, he preferred to fight the Liberal battle out of the House of Commons. He is one of the senior partners of the firm of Messrs Evans, Sons & Co., of London, Liverpool, and Montreal, one of the largest firms of manufacturing chemists in the world. He is a Radical of a third and fourth generation, his father being Mr Edward Evans, J. P., President of the East Denbighshire Liberal Association.—*Chemist & Druggist.*

JOURNAL NOTES

WOLFEVILLE, N.S.—Geo. V. Rand the veteran druggist has moved his business into his new block and has increased his staff and maintains a busy oversight over his property and business interests.

MONCTON, N.B.—A. E. Holstead, druggist here was married on Nov. 21st to Miss Grace K. Thompson, daughter of E. D. Thompson, cashier of the Intercolonial Railway. The *Journal* extends congratulations.

OXALIC ACID FROM SAWDUST.

In large lumber manufacturing districts the utilization of waste products, such as slabs, sawdust, etc., in some way other than burning these as fuel, is worth considering. One of the methods whereby profit has been made from sawdust is the manufacture from it of oxalic acid, which is a simple process, producing a material in wide commercial demand in the arts of dyeing and other chemical arts. As intimated, the process is not only simple, but the outfit for conducting it does not involve a large investment. The principles involved are not complicated and the process can be carried out by cheap labour under the superintendance of a fairly intelligent director.

Oxalic acid is frequently met with in the vegetable kingdom, especially in combination with bodies which destroy its poisonous character. Oxalate of lime is found in considerable quantity in the rhubarb plant; oxalate of potash is found in the sorrel, and oxalate of soda in salicornia and allied plants. Formerly the acid was obtained from the sorrel, *Oxalis acetosella*, but more recently from sugar, by the action of nitric acid upon it. The nitric acid and sugar are boiled for some time; then evaporated to dryness, and the oxalic acid formed is purified by recrystallisation from water. A much cheaper material than sugar is sawdust. In this case an alkali must be employed instead of an acid, as well as a higher temperature. The operation is conducted in an iron vessel of suitable size and shape, and either caustic soda or potash is employed, the yield being greater with the latter.

Some recent experiments made by Mr. Thorn, in Stuttgart, go to prove that a mixture of 40 parts of caustic potash to 60 parts of caustic soda will produce as large a yield as when potash alone is used, provided the operation be performed in shallow vessels with thin layers of the material, avoiding as far as possible the fusing of the mass. Soft woods such as pine and fir, produce larger quantities of oxalic acid than hard wood like oak. The proportion of wood to alkali should not exceed 75 to 100, and the temperature should be about 480 Fahrenheit.

There are two methods of separating the acid from the mass. One consists in boiling the aqueous solution with milk of lime so as to precipitate the oxalate of lime; and the other allowing the oxalate of soda to crystallise out of the solution. The first method produces the following disadvantages: A considerable quantity of oxalate of lime is precipitated along with the oxalate, requiring the use of a larger quantity of lime and sulphuric acid; the precipitate contains humus bodies which cling tenaciously to it and render it

difficult to obtain pure oxalic acid; the alkali remaining in the lye, although caustic, cannot be employed directly for another fusion on account of the organic matter mixed with it. It must, therefore, be evaporated, calcined and again rendered caustic by means of lime.

The other method is a more rational one for obtaining the oxalic acid contained in the mass. It consists in five distinct operations: 1. Making the solution. The mass is boiled in water until nearly dissolved, and the solution concentrated to 1.35 specific gravity. 2. Separation of the oxalate of soda from the solution. A large quantity of humus substance, contained in the solution imparts to it, on concentration, a certain greasiness, and this makes it difficult to separate the soda salt which crystallises in little grains from the mother-liquor. When four parts alkali are taken to one part of wood, the mother-liquor can easily be poured off, but when two parts of alkali to one of wood are taken the liquid is so thick that it cannot be separated from the mass of crystals by pouring or ordinary filtration, but requires a special arrangement, such, for instance, as a Benson filter pump. After sucking through as much of the mother-liquor as possible, the crystals may be washed on the filter with a little cold water, until the wash water shows the oxalic acid reaction, and thus a tolerably pure, light brown oxalate of soda is obtained. When manufacturing it in large quantities a filter press or centrifugal machine can be employed. Instead of this method of dissolving the mass in boiling water some prefer to treat it with cold water of about 40° Fahrenheit, which dissolves the caustic and carbonated alkalies, but leaves the oxalate of soda undissolved. The objection here is, that any oxalate of potash present is dissolved and must be precipitated with lime. On the other hand, boiling converts all the oxalate of potash into oxalate of soda. 3. Conversion of oxalate of soda into oxalate of lime. The soda salt is now to be again dissolved in boiling water, and milk of lime gradually added, containing a slight excess of lime over the quantity theoretically required, and boiled for two hours. Less time is required and the conversion takes place sooner in dilute solutions. A portion of the liquor is filtered and tested for oxalic acid by adding acetic acid and chloride of calcium; if the conversion is complete the alkaline lye is drawn off, the precipitate boiled a few times with water and filtered out. 4. Decomposition of the oxalate of lime. This is accomplished by adding sulphuric acid, stirring, adding water, and finally heating one or two hours and filtering. 5. Separating the oxalic acid from its solution. For this purpose it is first concentrated 1.16

specific gravity—and allowed to stand three or four hours, in which time the sulphate of lime crystallizes out. After this is removed the solution is further concentrated, and, on cooling, the oxalic acid crystallises out. It is purified by re-crystallisation.—*Pharm. Era.*

A PHYSICIAN ON INCOMPATIBILITIES.*

A certain amount of chemistry, medical chemistry, is essential to the physician, and is not always to be gotten in books. He who would ignorantly combine sulphuric acid and a carbonate would certainly need to restudy his chemistry. I wish only to point out a few principles and some of the errors in prescriptions which are committed daily.

MIXTURE OF SOLUBLE SALTS.

Two soluble salts in solution which can by decomposition form and throw down an insoluble salt, such as an iodide, a chlorate or a bromide and sulphate of morphine or strychnine, etc., etc., should never be combined, unless the compound is desired for its therapeutic effect such as acetate of lead and sulphate of zinc, or lead and opium wash, etc. A tyro in pharmacy might filter such prescriptions and thereby thwart your object. A dangerous habit is to prescribe an alkali and an alkaloid, always bad pharmacy. I have seen prescriptions of the following kind: Cocaine hydrochlorate, glycerole of pepsin, syrup and lime water, which is also bad pharmacy.

CAUTIONS TO PRESCRIBERS.

Glucosides, such as santonin, colocynthin, etc., should never be prescribed with free acids.

Tannic acid is incompatible with alkaloids, albumin, gelatin, etc.

Iodine and iodides should not go with the alkaloids.

Death has been caused by the combination of iodide of potash and sulphate of strychnine.

Iodide of potash should be prescribed with no drug except iodine and bichloride of mercury; with the latter it forms a double salt, biniodide, but as it is soluble in the excess of iodide it is not objectionable.

Bichloride of mercury is incompatible with almost everything. As a rule it should be prescribed in simple syrup, it being incompatible even with compound syrup of sarsaparilla, as it forms calomel.

Syrup of squills is incompatible with ammonium carbonate but not with ammonium chloride.

MERCURY AND IODINE.

One of our South Side druggists, just at the beginning of his apprenticeship, recently re-

ceived a prescription for mercury (liquid) and iodine (resublimated), with instructions to triturate the two and add other ingredients. The drugs fused with an active emission of smoke or fumes, leaving the residue a hardened mass to be broken up with the pestle.

INCOMPATIBLE PRESCRIPTIONS.

Many members of the medical profession daily write prescriptions which are incompatible. If a little judgment and forethought were exercised there are very few but would know better. The following is an illustration:

Tincturæ ferri chloridi,
Potassii chloratis,
Syrupi tolutani,
Mucilaginis acaciae.

In this mixture the acacia, acid and iron are incompatible.

The following prescription was a favorite for years and some physicians are still writing it. It is a very good one to vex and make trouble for the druggist:

Ferri pyrophosphatis,
Aquæ bullientis,
Syrupi zingiberis,
Tincturæ cinchonæ compositæ,
Acidi phosphorici diluti.

Unless prepared after a special process this will form a gelatinous mass.

On a certain occasion when I was in a drug store the following came in:

Mentholis, ʒ ss.,
Aquæ ammoniæ,
Collodii,
Tincture iodii aa f ʒ vss,
Ft. lin.

In place of a liniment a plaster is the result.*

During my experience in the apothecary business I received the following:

Potassii chloratis,
Sacchari aa ʒ i.

Triturate, and acidulate with a drop or two of sulphuric acid and add water sufficient to make three fluid ounces.

If the instructions for preparing this are carried out active combustion is bound to result.

A common mistake is as follows:

QUININE, LIQUORICE AND SULPHURIC ACID.

Quininæ sulphatis gr. x.
Acidi sulphurici aromatici q. s.,
Extracti glycyrrhizæ fluidi f ʒ i.

The acid in this is incompatible with the liquorice. It precipitates and renders tasteless the sweet principle. A better method is to suspend the quinine in the liquorice.

*C. C. Hersman, M.D. in *Pittsburg Medical Review*.

I have filled the following a number of times, but it is decidedly unsafe :

Potassii permanganatis ʒ ss,
Glycerini,
Aquæ destillatæ aa. f ʒ iii.

Not long ago I saw the following :

Morphine hydrochloratis gr. ii,
Ammonii chloridi ʒ ii,
Tincturæ aconiti ℥ xx,
Aquæ camphoræ f ʒ ii.

The camphor water should be replaced by some other vehicle, otherwise there will be a deposit formed.

Finally, "as directed" is a perfunctory direction often added to prescriptions. As the memory of the nurse or patient is likely to be weak, errors may be easily made under such lax directions.

There is a mistake, this mixture at first solidifies, but after standing for about 24 hours forms an almost colorless liquid. (*Ed. M.P.J.*)

THE VANILLA BEAN IN MEXICO.

By CHARLES SCHAEFFER.

U. S. Consul at Vera Cruz.

This bean is too well known to require a description at my hands. It is not difficult to grow, neither is it very laborious to cultivate. The district in which it is principally produced in Mexico is in the canton of Papantla, southwest of Tuxpan, about thirty miles back from the Gulf, in that section of country lying between the Nautla and Tuxpan rivers. In the forests, on the low hills of the above-named canton, it grows wild and in such profusion that the odor from it is sometimes sickening. In its wild state, it is considered common property, and gathered by the natives without cost to them, except the labor of picking. A French colony settled along the River Nautla, has gone into the cultivation of the bean pretty extensively, and seems to have improved it.

The soil on which the bean grows is a rich sandy loam or a vegetable mold, not too dry, and shaded—the wild by the forest trees, and the cultivated by the small trees planted for the purpose. The temperature where it grows is a mean of about 85° F. for the year—never very cold and never very hot, and the altitude up to 1,000 feet above sea level.

Planting.—The bean grows on a vine larger than the hop vine, but similar in its growth.

Slips of the vine are planted, about three in number, at the foot of small trees, in ground prepared by spading or turning over the soil close to the tree; no other cultivation seems to be needed. These trees are planted 8 or 10 feet apart, the vine running or climbing to the top, whence it is conducted by poles from one tree to another, resembling a hop field. The ground between the trees is not disturbed, except immediately about the roots, where it is cultivated twice yearly. The vine does not produce during the first year, and very little the second, but in the third it is supposed to bear a full crop, which is about 10 to 12 ounces of first-class beans, 10 to 16 ounces of second-class beans, and 15 to 20 ounces of third-class beans. This weight is after curling. The life of the plant is two years.

Gathering.—From October 1 to January 1, the beans are picked or harvested, and I am told care must be taken that they are not bruised or packed close in large quantities, as overheating spoils them.

Curling.—Some place the beans in bake ovens heated to about 120° F. for twenty-four hours. After that they are placed in woolen blankets and expose to the sun—that is, the blankets are exposed, the beans being covered by them. Others tell me that the beans must be dried in the shade and never exposed to the sun, because such exposure would damage them by discoloration.

Preparing for market.—After the beans have been treated as above, they are made up in bundles of fifty beans each, and wrapped in tin foil. The best are generally put in tin cylinders covered at both ends and holding one package of fifty beans, or about one pound each, in which condition they are considered fit for market.

Cost and Price.—The people who gather the vanilla are the natives (Indians) of the country, who are paid at the rate of about 50 cents per diem, Mexican money, without food or lodgings. Prices for labor, however, fluctuate, and it is the old question of supply and demand that governs prices.

The vanilla bean in this market is worth at present about \$7 per pound, Mexican money (about \$3.50 American money). This is the average price; the best is much higher, and the poorest much lower. The cultivation of vanilla is considered very remunerative, and is a business easily learned.

Growing of vanilla and preparing it for market are two entirely different occupations, there being as much difference as there is in growing sugar cane and making sugar. There are about three men in the whole Republic of Mexico who seem to understand the correct process of curing the beans, and these men have made fortunes out of the business.

SMALLPOX AND VACCINATION.

Dr. P. Beveridge has issued a succinct analysis of the epidemic of smallpox at Leith in 1893-94. From Nov. 10th, 1893, to Aug. 20th, 1894, there had been 405 patients admitted to hospital; 22 of these were not cases of smallpox. Of the 383 smallpox cases, 217 were males and 166 females; 69, or 18 per cent., were under fifteen years of age, and 314, or 82 per cent., were above that age. There were 50 deaths, giving a fatality of 13 per cent., which, Dr. Beveridge remarks, is above the average fatality in smallpox and indicates a severe type of the epidemic. The mortality among the male sex was higher than that among the females, the ratio for the former being 15 per cent. and for the latter 10 per cent. There were 7 deaths among those below fifteen years of age—i. e., 7.4 per cent. of the whole number—while 43 of the fatal cases, or 86 per cent. of the whole number, were above that age.

As regards vaccination, 332 were vaccinated, 25 of whom died, giving a mortality of 7.5 per cent.; 20 were unvaccinated, of whom 10, or 50 per cent., died; and 31 were returned as doubtful; i. e., were stated to have been vaccinated, but bore no marks. Analyzing these according to age, it is shown that among the 54 vaccinated subjects below fifteen years of age, there were no deaths, the 25 fatalities occurring among the 278 above 15 years. Of the unvaccinated, 13 were below fifteen years of age, and 7 of them died; 7 were above fifteen years, and three of them died. Of the doubtful group, all but 2 were over fifteen years of age, and among these occurred the fifteen deaths. It is further shown that the mortality rose in each decennial period beyond the age of fifteen years of age. An instructive table is given in which the degree of vaccination in relation to mortality is brought out. Thus, among those (all being above fifteen years of age, since no vaccinated subject below that age died) who bore "one good vaccination mark," there were 75 cases and 6 deaths, or 8 per cent.; among 28 with "one different mark," there were 8 deaths, or 28.5 per cent.; among 134 with "two good marks," there were 8 deaths, or 5.9 per cent.; among 28 with "two different marks," there were 2 deaths, or 7 per cent.; among 9 with "three (and one with four) good marks," there were no deaths; and among 4 with "three different marks," there was one death, or 25 per cent. "There was no case in the revaccination class. In this connection it may be mentioned that there were several patients suffering from concurrent vaccination and smallpox, but the course of their illness showed that they must have received the infection of smallpox previous to the time that they were vaccinated. In no

case did a person who had been successfully revaccinated and had recovered therefrom suffer from smallpox." Dr. Beveridge further points out that 9 infants admitted with their mothers (who were suffering from smallpox) did not contract the disease; of these infants, 4 were successfully vaccinated, for the first time in hospital, and 5 had been vaccinated when younger. This testimony to the efficacy of vaccination is further strengthened by the statement that "during the epidemic there was a total of about fifty servants (nurses, etc.) in connection with the hospitals; none had suffered from smallpox previously; all had been successfully revaccinated, and none of them developed smallpox."—*Lancet*.

BITTER KOLA NUTS.

The new products which are brought into the drug-market from time to time are often interesting from other points besides that of their possible commercial value. It not infrequently happens, indeed, that plants are thus brought to light that are new to botanical science, or that the seeds or fruits in their developed or ripened state are seen for the first time in this country through the channels of trade. We are reminded of this by the appearance during the past month or so of samples of some seeds from the West Coast of Africa, which, though known by some of the dealers as kola, are so distinct from the true kola (*Cola acuminata*) as to have baffled some of those who have seen them for the first time. The seeds to which we refer are from 1 inch to 1½ inch long, and ¾ inch in diameter across the centre; they are of an oval-cuneiform shape, rounded on the external and somewhat flattened or angular on the internal face. In the fresh state they are covered with a light-yellowish pulp, but as seen in commerce, this is replaced by a thin brownish skin—indeed, so thin is it that it is easily broken, and, falling away, discloses the actual seed. This seed is externally of a dirty-brown colour with a rough or irregularly channelled surface; a section shows a hard yellow-white substance of somewhat mealy appearance, thickly studded through with small dark spots, which are vessels containing resin. These seeds have a strong bitter, astringent, but rather aromatic taste, quite different from that of true kola, and somewhat reminding of the flavor of green coffee. Although the use of these seeds does not produce any notable stimulant effects or ward off fatigue they are as much sought after, and fetch nearly as high a price on the eastern coast of Africa as the true kola. MM. Heckel and Schlagdenhaufen, who have paid considerable attention to the kolas, give it as their opinion that the seeds of the bitter kola owe

their properties to the resin they contain, which is slightly stimulant. The negroes consider them to possess an aphrodisiac action, but the authors to whom we have referred think this doubtful. As a masticatory they are said to be a very useful remedy for colds.

The history of the bitter kola is somewhat remarkable, for, notwithstanding that the seeds themselves have been known to botanists for nearly forty years, having been sent home by Baxter and other African collectors, it is only within the last ten years or so that full botanical specimens have been received sufficient to determine its scientific name. For about a quarter of a century it has been well known that the bitter kola of the West Coast belonged to the order *Guttiferae*, and not to the *Sterculiaceae* of which the true kola is a member. From time to time specimens of the plant have been received, either fruits, seeds, or branches with leaves but without flower, so that its generic identification could not be determined. Dr. Masters, in an article in the *Journal of Botany* for March, 1875, figured the fruit, leaf, and seeds, and, described it, in the absence of flowers only, as a plant belonging to the *Garcinia*. Some few years later M.M. Heckel and Schlagdenhauffen went further and named the plant *Garcinia Kola*, under which name it is now generally known. It is described as a tree of variable habit, from 10 to 20 feet high, large oval leaves sometimes 12 inches long and 7 inches broad, green on the upper side and greyish beneath. It bears a fleshy fruit about the size of an apple. The seeds occasionally find their way to the English market, and it remains to be seen whether those recently arrived will establish for themselves a reputation sufficient to make them a regular article of trade.—*Chemist and Druggist*.

COMPOSITION OF BAKING POWDERS.

Georgia Phar. Asso. Proceedings.—Condensed.

By GEO. F. PAYNE, ATLANTA, GA.

The ingredients most commonly entering into the manufacture of baking powder are bicarbonate of sodium, cream of tartar, tartaric acid, phosphate of calcium, and alum. Every ingredient which goes into a first-class baking powder always is thoroughly dried. If this is not done the slight amount of moisture present enables chemical action to go on steadily, and the leavening power of the powder rapidly decreases. To retard still further any such action which may take place from the moisture absorbed from the air a certain percentage of dry starch is used to protect the particles of the powder as much as possible from action upon each other. Flour is sometimes used in place of starch. Baking powders should always be kept thoroughly dry, and, in making bread, should never be mixed with water first, as is some-

times done, but should be first thoroughly mixed with the dry flour before making into dough.

A baking powder made of cream of tartar and bicarbonate of sodium leaves only rochelle salts in the bread, one composed of tartaric acid and bicarbonate of sodium leaves only tartrate of sodium. Another compound of acid phosphate of calcium and bicarbonate of sodium will leave in the bread reverted phosphate of calcium and phosphate of sodium and still another, manufactured from alum (dried ammonia alum is the kind ordinarily used) and bicarbonate of sodium, will leave hydrate of aluminum, sulphate of sodium and sulphate of ammonium. If sesquicarbonate or bicarbonate of ammonium is used as a baking powder, which is sometimes done by bakers in making their finest cakes, the only residue left in the bread will be possible traces of ammonia, as the carbonates of ammonium are completely volatile in the heat of an ordinary cooking stove.

There have been many conflicting statements made by the manufacturers of various baking powders. To believe them all would be to give up baking powders altogether, as most of them make the most astounding statements in regard to the goods of their competitors.

In judging the merit of the different baking-powder claims, there are some important facts which bear heavily upon the subject and may influence a manufacturer's mind very decidedly in some cases. In the first place, cream of tartar is a harmless salt, which separates from grape juice when it is made into wine. Tartaric acid is made from cream of tartar, and is the acid of grapes. The residue left by either of them in the bread, by their action on the bicarbonate of sodium, being mildly aperient, is inclined to correct indigestion. A powder made with either is considered an excellent one, but cream of tartar and tartaric acid are expensive substances. Acid phosphate of calcium is cheaper than cream of tartar or tartaric acid, but leaves reverted phosphate of calcium, as well as the gently purgative phosphate of sodium, in the bread. Alum baking powders are usually made with thoroughly dried ammonia alum. On using such a powder the bicarbonate of sodium decomposes the alum into hydrate of aluminum, sulphate of sodium and sulphate of ammonium. Dried alum is cheap when compared with cream of tartar or tartaric acid, costing about one-fifth as much. The manufacturers of dried alum for use in baking powders usually sell it as "C. T. S.," or cream of tartar substitute. It is also known as burnt alum. It is used on account of its cheapness. The carbonates of ammonium are not used to any great extent in baking powders; they have been used in one or two instances in small quantity to increase the leavening power, but, having found none in our recent analyses, its use has probably been dropped, in anticipation of a prejudice that might be stirred up against the use of any form of ammonia, by

the unreasonable attack of interested manufacturers seeking to push their own less efficient combinations.

The alumina left in bread by alum baking powders, if in an insoluble form, is perhaps harmless. It is claimed, however, that some alum baking powders are made up in such a manner that they leave soluble alumina in the bread. Such a residue would be likely to produce dyspeptic troubles. In England the use of alum in bread is prohibited by law, and, while there is no legislation against its use in baking powders, the sale of bread made from such baking powders, of course, comes under the same prohibition. Dried alum, when not decomposed by bicarbonate of sodium, is poisonous, no doubt; a fatal case being on record where death was produced by one ounce of it being taken by mistake for epsom salts. The proprietors of alum powders, however, claim complete decomposition of the alum by the bicarbonate of sodium present in their baking powders.

Interested manufacturers have raised a great hue and cry against ammonia in bakings powders. The truth of the matter is, there are three or four important alkaline bodies in common use in the world: soda, ammonia, potash and lime. All four of these are used in making baking powders, and all four are exceedingly caustic when in an uncombined state but are never used for such a purpose unless combined with an acid which changes their character completely. In fact, ammonia is the only one of these four alkaline substances which is dissipated by heat, and is "the volatile alkali." It is doubtful if any but the smallest traces of it would be left in bread even if it were used alone as a leavening substance, which would not be true of either of the other three materials.

To examine the subject of baking powders fully we purchased in person samples from various grocery stores in the state, giving no notice of what we intended to do with them. The results of the analyses are shown in the accompanying table:

Name of Baking Powder	Leavening Pow. or Per cent of Carbonic Acid Gas.	Character of Powder	Percentage of Ammonia	Percentage of Sulphuric Acid Combined as Sulphates	Percentage of Phosphoric Acid
Royal.....	13.86	Cream of tartar..	Trace.	Trace.	0
Dr. Price's...	11.82	With tartaric acid	"	"	0
Cleveland....	13.17	Cream of tartar..	"	"	0
New South....	12.59	"	"	"	0
Turpin's.....	12.27	"	"	"	0
Dixie.....	11.90	"	"	"	0
Horford's...				5.56	23.14
Bread Prep.	5.67	Acid phos of cal			
		Am.alum ac phos			
Linden.....	12.65	cal.....	1.59	14.61	6.31
Campbell....	11.83	Ammonia alum..	1.74	15.70	0
One Spoon...	16.33	"	2.60	24.23	0
Gem.....	9.16	"	.90	22.04	0

At the special request of several brother pharmacists the following receipts for baking powders

are suggested with the cost of making them. These figures are based upon the tartaric acid selling by the ton at 25c. a pound, cream of tartar at 22½c, acid phosphate of calcium at 7½ cents, dried alum at 4½ cents, starch at 2½ cents and bicarbonate of solution at 3½ cents. That these powders should keep well, each ingredient should be first thoroughly dried by a gentle heat, and they should be kept securely closed in dry fruit jars, corked bottles or sealed cans.

CREAM OF TARTAR BAKING POWDER.

- Cream of tartar..... 2 Pounds
- Bicarbonate of sodium... 1 "
- Starch (powdered)..... 3-4 "

Costs about 13⅓ cents a pound.

TARTARIC ACID BAKING POWDER.

- Tartaric acid..... 1 Pound
- Bicarbonate of sodium... 1 "
- Starch (powdered)..... 1-2 "

Costs about 11¾ cents a pound.

ACID PHOSPHATE BAKING POWDER.

- Acid phosphate of calcium . . 1-2 pounds
- Bicarbonate sodium..... 1 "
- Starch (powdered)..... 1 1-4 "

Costs about 1-4 cents a pound.

PHOSPHATE AND ALUM BAKING POWDER.

- Acid phosphate of calcium 2 Pounds
- Dried ammonia alum..... 2 "
- Bicarbonate of sodium..... 3 "
- Starch (powdered)..... 5 "

Costs about 4 cents a pound.

ALUM BAKING POWDER.

- Dried ammonia alum..... 1 Pound
- Bicarbonate of solution..... 1 "
- Starch (powdered)..... 1 Pound

Costs about 3 1-2 cents a pound.

The ingredients, all finely powdered, should first be sifted separately to get rid of all lumps, then the soda and starch should be well mixed together, and finally the acid ingredients should be added, and all thoroughly incorporate, either by rubbing together in a mortar, or by sifting, at least, three times. Flour can be used in place of starch, and is considerably cheaper. The amount of starch may be increased in any of the receipts. Each receipt will produce a baking powder equal to the very best of its respective kind, if the very best chemicals are used. Adulteration is so common in cream of tartar that this chemicals should always be carefully tested when purchased. First-class materials, of course, cannot be purchased in small lots at the figures given above.—*Western Druggist.*

DIPHTHERIA ANTITOXINE.

FORMULA OF DR. ROUX; MADE IN NEW YORK AT THE PASTEUR INSTITUTE.

The following statement has been furnished by Dr. PAUL GIBIER, Director of the New York Pasteur Institute:

THE SERUM.—It is obtained according to the method of Dr. Roux from the blood taken from horses which have been made immune by being injected with the toxine of diphtheria for at three months. It is transparent, yellow or reddish least in color, and is undiluted. It is supplied in bottles containing 25 c. c. each, a quantity sufficient for an ordinary case of diphtheria at its incipient stage, and in bottles containing 7 c. c., which is sufficient to protect one or two adults or children exposed to infection. The immunizing power of the serum exceeds the proportion of 1 to 500000, the standard thus far achieved by Roux and others; this signifies that 1 ccm. of antitoxine serum will immunize a body weighing up to 50 kilo, or 100 pounds. Owing to the precautions observed in obtaining the blood, preparing the serum, and introducing it into sterilized vials in which are placed small pieces of camphor, to prevent deterioration, the serum can be preserved for several weeks in a cool and dark place, as in the ice chest.

THE DOSE.—In ordinary cases a dose of 15 c. c. is injected when the disease is suspected and before the diagnosis is absolute, and after a period of twelve hours the remaining 10 c. c. are injected. Adults require larger doses. In serious cases the quantity should be larger: 25 c. c. more within twenty-four hours, and even 100 c. c. can be injected within a few days, the serum being wholly innocuous. The injections are given subcutaneously, preferably in the lateral parts of the abdomen after the site of injection has been carefully washed with a 4% solution of carbolic acid, or a 1% solution of lysol. The injections are almost painless, and massage is unnecessary, as the swelling caused by the fluid disappears quickly. In a family in which a case of diphtheria occurs, it is recommended to immunify the other members, especially the children, with a small quantity of serum (3 to 7 c. c.).

THE SYRINGE.—The instrument made according to our directions has a capacity of 25 c. c. It can be thoroughly disinfected by washing it and the needle carefully two or three times with sterilized water and immediately after with a 4% solution of carbolic acid or a 1% solution of lysol, before and after the injection.

THE PATIENT.—Although the serum is the essential agent in the treatment of diphtheria, the throat and the nares should be frequently irrigated with a sterilized solution of boracic acid. No local reaction follows the injection of antitoxine; general reaction frequently appears within twenty-four hours, sometimes accompanied by erythema. The temperature rises only one or two degrees and the pulse in children may attain 120 and 130. These phenomena are more apparent in patients who have been treated preventively with the antitoxine. The reaction rarely lasts more than twenty-four hours. A period of twenty-four hours generally elapses before a favorable result follows the injection, but in mild cases the improvement may appear within

twelve hours, and in serious cases it may be delayed for thirty six hours. It must be understood that if in the last mentioned class the treatment be postponed too long, instead of improving, the patient may not be benefited. In twenty four hours after the false membranes lose their gray appearance and become white. This decoloration is a good indication. Shortly after this change the false membranes become detached, a simple irrigation causes them to be expelled, and generally they do not reappear.

If engaged, the glands undergo a simultaneous improvement; instead of forming one solid mass they become distinct, and oedema which surrounds them disappears. It is expedient to watch for the modification of the respiration caused by the sudden detachment of the false membranes, as they may cause obstruction of the air passages, and intubation or tracheotomy may be necessary. In those cases of croup, in which operative treatment has been resorted to, the general and local improvement following the exhibition of the serum is rapid.

The albuminuria so prevalent in diphtheria, is prevented or much less marked when the treatment is adopted promptly.

The persistence of this symptom is a manifestation of the general systemed intoxication by the products of the bacillus diphtheriae and is an indication for the continuance of the injections with the object of preventing further complications.

The latest statistics of the Paris Hospitals, collected since the new treatment has been better understood and applied earlier, show that the death rate of diphtheria has been decreased from 50% and 60% to 12%.

THE DIPHTHERIA ANTITOXINE SERUM described above, made under the direction of Dr. Paul Gibier at the N. Y. Pasteur Institute, has been supplied in limited amounts and utilized successfully in New York City, Yonkers, Syracuse, Port Jervis, New Orleans and elsewhere. A preliminary report from Dr. Dupaquier, of New Orleans, relates that this product was employed in eleven cases, specially selected of advanced and severe type, and the results were: ten full recoveries, and one death from suffocation. Other reports of single cases in cities above mentioned are also favorable. We mention these facts briefly just before publication, because this issue cannot be held for further details. Clinical reports will be published elsewhere; and, at any rate, the facts stated on this page given sufficient assurance of the reliability of this product—the first actually manufactured in America.

A SIMPLE WAY OF OBSERVING THE HARDNESS OF WATER.

PREPARE a solution of soap by heating 10 parts of pure soft soap in 250 parts alcohol of 55 per cent. Let the solution cool, and filter into a stoppered bottle for use.

Test: Put 40 c. c. of water to be tested into a 100 c. c. bottle. Fill a burette, graduated in tenths of c. c., with the soap solution. Commence by running in one-tenth c. c. (one-tenth c. c. means about two drops) at a time of the soap solution into the water tested, and shake bottle violently after each addition, and continue this until the point where a permanent foam remains over the water in the bottle.

If the least soap solution is added to a pure water, a permanent foam is at once formed. If water contains lime salts, the foam will disappear after each addition of soap and shaking until just that quantity is added which overcomes the power of the lime to dissolve the soap, when the foam remains permanent. By this means the hardness of water can be expressed in degrees.

One tenth of a c. c. of soap solution added indicates 1 degree of "hardness," and is about equal to one part of calcium or magnesium carbonate (in a trifle more of the sulphate) in 100,000 parts of water:

	Degree of Hardness.
Pure water	= 0
Water + 1/10 c. c. of soap solution =	1° hardness.
" + 1 c. c. "	= 10° "
" + 2 c. c. "	= 20° "

Roughly, by addition of soap solution, the hardness of the water can be immediately seen.

The expression of hardness in degrees is used in French and German beet sugar houses.

The estimation of the amount of lime salt in water which is used for boiler purposes is, if well known, important. It is also of vast importance that the water used in diffusion sugar houses should be carefully tested, since the greater portion of the lime salts contained in the water which goes into the battery cells remains in the sugar products.

If the examination of water is made chemically, the lime is estimated as an oxalate, and the remaining acids may be considered as hydrochloric and carbonic acids. This, however, means a full chemical analysis of the solids in the water; and is lengthy.—*Walter Maxwell, in Louisiana Planter.*

PHARMACEUTICAL NOTES.

SALIFEBRIN is a white powder, insoluble in water and soluble in alcohol. It is a combination of acetanilide and salicylic acid in molecular proportions.

DRODORIZED BENZINE, a German journal recommends for this purpose a method which was, we believe, first published some years ago, by Geo. M. Beringer, in the *Amer. Jour. of Pharmacy*. The benzine is agitated with a 2% solution of potassium permanganate with 16 per cent. sulphuric acid, after 24 hours the benzine

is drawn off and treated with a similar solution in which the sulphuric acid is replaced by 2 per cent of caustic potash. We have found this method the best of any for the purpose.

ZINC SUBGALLATE, is recommended for eczema, and other skin diseases applied in powder or ointment, for gonorrhoea, suspended in mucilage, and internally in doses of 1/2 to 5 grains in fermentative disorders of the intestines.

COPRAOL is a solid vegetable fat recently introduced by a German firm and is said to be prepared from palm oil. It resembles cacao butter in physical properties, it melts at 30° C and solidifies at 21° C., a property which makes it particularly useful for the preparation of suppositories, etc., it may be mixed with glycerine to the extent of 50 per cent and with the addition of 10 per cent of anhydrous lanoline aqueous liquids may be added to the same extent without losing the property of solidifying on cooling. Hypodermic Injections of Quinine. Mr. Marty uses the monohydrochlorate of quinine, combined with antipyrine for this purpose. The following formula has been adopted in the hospital service of the French army at his suggestion.

Quinine mono-hydrochlorate.....	3 gms.
Antipyrine.....	2 "
Distilled water boiled and cooled to 15°C.	6cc.

prepared with the necessary aseptic precautions.

LOSS OF WEIGHT OF CASTORFUM SIBIRICUM according to *Pharmaceutische Zeitung*, 1894, p. 544, proved to be remarkable and has been brought to notice only lately. A so-called sac of this substance was bought January 10, 1888, and weighed ninety-three grammes. Dried over sulphuric acid it lost weight rapidly, after a while slowly but after seven months it remained permanent and weighed fifty-seven grammes. The loss in this case proved to be 38.7 per cent.—*Meyer Bros Druggist.*

AMMONIATED MERCURY OINTMENT.—J. W. England recommends that this be prepared by finely powdering 50 grs. ammoniated mercury, rubbing to a smooth paste with twelve grs. of glycerine and then adding the simple ointment.

TO MASK THE BITTERNESS OF QUININE.—The *Therapeutische Monatshefte* gives the following for masking the bitterness of quinine:

Quinine sulphate	gr. xvj
Acid sulphuric, dilute	gtt. xv.
Tincture of peppermint.....	ʒ ij.
Syrup simple.....	ʒ ss
Distilled water to make.....	ʒ iv.

Mix.

National Druggist,

Nervous System in the Vegetable World.*

BY PROFESSOR GREEN, M.A., D.Sc.

The study of natural history at all times was to him very fascinating, and perhaps in no case more so than in the comparisons of plant and animal life. For some time the idea that all living matter, both plant and animal, had its origin in the same original groundwork had been gaining ground. One by one the old division lines had broken down, and it was now that there scarcely remained even the one crucial distinction, that of feeling.

DEFINITION OF NERVOUS SYSTEM.

Firstly, what was meant by a nervous system? Though it may be a very small matter in the case of the low organisms, it is not by any means a simple one. Three main ideas are involved:— (1) The origination of movements and other processes, depending on some vital molecular change; (2) the reception of external stimuli, as in the case of our own senses, and the responses to these as exhibited by special movements, etc., brought about by (3) the power of co-ordination, which connects and sways the stimulus and the response. As the groundwork from which to start, he would show them examples of the simplest plant and animal life which existed. Slides of the *Amœba* and of *Æthelium* ("flowers of tan") one of the *Myxomycetes* were then thrown up on the screen. The responses of both of these organisms to external stimuli were then briefly described.

INFLUENCE OF ENVIRONMENT.

While animals, went on Professor Green, chiefly respond to stimuli by motion and locomotion, plants are far more restricted on account of their surroundings. Now, when an individual is in perfect harmony with its surroundings, it is in a "healthy state." Therefore plants must, in order to reach the acme of perfect health, adapt themselves completely to their surroundings. Now, as these are stationary, the chief points are that they are exposed only to gaseous contact, except in the case of the root, and the air therefore plays an important part in their life history. The chief factors of change in the surroundings of the plant will therefore be the temperature, light, and humidity, while in the root, the fineness of the particles, humidity and nutritive power of the earth will be the most variable elements. The plant, therefore, must adapt itself to these changes. The advantages to itself by these adaptations are obvious, as seen by the broad expanse of the leaf, with its chlorophyll grains exposed to a large surface of light. The root, on the other hand, will adopt itself by means of its root-hairs to the absorption of nutriment from the soil. Extreme variations of external condition, often amounting to positive danger, have often to be met. For example, the

light may be too strong or too weak, the temperature may be too high or too low, the air may be too dry, or the soil too poor. As an example, the chlorophyll grain, which in normal light, set with as much surface as possible to the light when exposed to excessive sunlight will retreat into the

corners of the cell, and hide from the light as far as possible. There is certainly no doubt that many plants show what is at least the foreshadowing of nervous movements. For example, the common telegraph plant (*Desmodium gyrans*) shows in normal light and other conditions a regular rotating of its leaves which move round in a wavy manner about once every two minutes. In bad light, or when other circumstances are unfavorable, this power is lost; thus the idea of real sensitiveness is strengthened. The normal and optimum condition for these phenomena to be observed is termed phototonus, and the plant is said to be in a phototonic condition, and in this condition the plant is able to respond to nervous stimuli. A specimen of *Mimosa pudicans* was then showed, but its condition was not such that its irritability could be shown, as it had been out of the greenhouse for a whole day.

DIRECTIONS OF THE IMPULSE.

There are two chief directions in which nervous impulses may be turned. (1.) The motor mechanisms or efferent impulses such as the power of movement brought about by an electric stimulus. This was well seen in the case of the *Alga mesocarpus*, which, when under the influence of an electric current, split up into cells on account of the strong effect of the current. But the more important were sensory or efferent impulses, brought about by a special response to an external stimulus, such as our sense of smell or taste. As a rule, a special response follows in a different part of the organism to that which has received the stimulus. As the Jew said, "Tickle us and we do laugh." And certainly in some ways plants are more sensitive than animals. They might not believe him, but plants had a distinct rudimentary sense of vision. For vision is only an appreciation of the difference of the intensity of light, and among ourselves we have every gradation from the blind man to the one who can see perfectly. The spores of numbers of plants he could mention, when placed on the stage of a microscope, would exhibit a perfectly indifferent kind of movement, but if illuminated by a beam of light in a given direction they will exhibit very definite movements. These spores, and others of like nature, will move toward or from the source of light, according to whether they like the light or not. In botanical nomenclature this is known as heliotrophy. Two specimens of plants were then shown, one having been grown in the open with its stems in their normal position, and one having been grown under

*Read at an evening meeting of the British Pharmaceu-

a box with a small window in it; there, all the stems had grown toward the window.

THE PLANT SEEKS LIGHT.

Darwin had made a number of experiments on this question. Some small plants were placed in a dark room at 12 feet from a small lamp. The light was so small that a pencil mark on a paper could not be detected at the place where the plants were. In $7\frac{1}{2}$ hours every plant had made a distinct curvature toward the lamp. Moreover, it was just the tip of the stem which was sensitive, and that only, for the tips of the stem of the sensitive plant *Mimosa*, were covered with tiny cups, and found to behave exactly as if they were in the dark. Rudimentary it might be, but it appeared to be a sense of vision. With regard to the sense of touch, he would divide that into three headings:—1. Difference in temperature; 2. Contact proper; 5. The sense of moisture. These are all possessed by us and by plants in common.

"SLEEP" MOVEMENT IN PLANTS.

The so-called sleep movements at night, when the temperature has fallen and the light becomes less, were examples of the first. They were well seen in *Desmodium* and *Cassia*, or the crocus flower. In *Mimosa*, the organ which is responsible for the movements is the pulvinus, a swelling at the base of the petiole. Certain changes occur in the cells by which water is driven out of certain cells into others, causing the change in the curvature of the stem, aided by the weight of the plant. In the cases of the roots they grow downward, but must often come in contact with small impassible particles, such as pieces of stone. They must then simply grow round them. Darwin illustrated this well by placing small pieces of cardboard in the way of the tips of roots of haricot beans. The result was that they curved until they almost tied themselves into a knot. The tip was found to be, as in the case of the stem, the only sensitive part of the root.

SENSITIVENESS OF THE DROSERA.

One of the most peculiar movements of plants, however, was that of the tentacles of *Drosera*, the sun-dew. Thus, when a fly became entangled in its tentacles, they all moved towards the same point in response to a stimulus, and devoured the insect. The movement is due to what Darwin termed aggregation of the protoplasm. A piece of human hair, weighing $\frac{1}{10000}$ part of a grain, was sufficient to cause the same stimulus as the fly, and thus the *Drosera* tentacles are $2\frac{1}{2}$ times as sensitive as the tip of the human tongue. *Pinguicula* is another plant which, though less sensitive than *Drosera*, will entrap the insects by a similar response. Climbing plants are the only example of this. Plants, too, have some appreciation of flavor, for *Dorsera* will refuse anything it does not like, and accept what it does. It is

not in the least affected by olive oil or tea; it does not like water—nor gum, nor sugar, nor strange, to say, alcohol. Meat in any form, milk or albumen, however, are much appreciated by it, as is ammonium carbonate. *Dionea* is also possessed of the sense of taste. Smell with us is closely associated with the sense of taste. When we have a cold for example, we cannot appreciate our wine so much. This is due to our not being able to appreciate its "bouquet." Now, in the prothallus of the fern plants, the antherozoids manage to find their way to the archegonia in order to fertilize the oosphores. It was found by Pfeffer that the archegonia secreted malic acid, and that malic acid was very attractive to antherozoids. But as for a taste effect, they would have to come in actual contact before the stimulus would be effected. It is only fair to think that they possess some powers of smell. The comparisons were then brought to a close by references to the effect of forces on us and on plants, as illustrated in the latter by the centrifugal machine, in which it is shown that they do respond directly to gravity and other forces. There are then afferent impulses which receive definite expression by movements in other parts of the plants, and it seems only fair to consider that these are transmitted by some kind of co-ordinating organs analogous to our own veins, which, though structurally ill-defined in plants, are by their action exceedingly well marked.

British & Colonial Druggist.

THE NATIONAL FORMULARY.*

By E. H. BARTLEY, M.D.

Brooklyn College of Pharmacy.

The demands of our time, make it an impossibility for the physician, in the large cities at least, to be his own pharmacist. There are those who have attempted it, but the busy practitioner has neither the time nor the training to do it successfully. The training of modern medical students is based upon the assumption that they will not be called upon to act in such a capacity, hence no instruction is given in this branch of education. That is left to special schools maintained for that purpose.

THE PHYSICIAN'S DEPENDENCE UPON THE PHARMACIST.

For the present then, and for years to come the physician must depend upon the pharmacist to prepare his remedies for administration. This may be done by a wholesale manufacturer of ready made mixtures, pills, triturates, tablets, solutions, etc., etc., or he may trust to the dispensing pharmacist to prepare extemporaneously just the

*Read before the Medical Society of the County of Kings, October 16, 1894.

combination of remedies suited to the peculiar conditions presented by the case before him.

THERAPEUTICS NEGLECTED.

This last method presupposes, in the physician, a knowledge of the action of drugs, and more or less acquaintance with the physical and chemical properties of these drugs and their preparations. It is to be supposed that this knowledge is imparted in medical schools or that the physician informs himself after graduation. It is to be feared, however, that there is a tendency in the present day of spending a disproportionate amount of time in the study of diagnosis, pathology, and clinical history of disease and neglecting the most important study of the exact action of drugs and their preparations.

THE TENDENCY TO PRESCRIBE PROPRIETARIES.

For this reason, perhaps, there seems to be a growing tendency to use mixtures which are to be found in the market ready made. It saves the effort of studying out nice points of how to obtain certain therapeutic effects. It often, no doubt, leads to the selection of an elegant mixture which is not the exact one to meet the case, but near enough to quiet a pliant conscience, and saves time in writing the prescription. Indeed there seems to be no other way of making five minute calls. But even here there are difficulties to be met. The number of ready recipes is becoming so great, and there are so many of these thrifty manufacturers in the market that the ready-made practitioner becomes confused as to which of the rival preparations is the best, and is good for the most diseases.

THE PHYSICIAN MAKES THE DIAGNOSIS—THE PATIENT DOES THE REST.

The experience of any physician who attempts to keep pace with the enterprise of the manufacturers of patented, copyrighted, proprietary, sole agent preparations of this class must sooner or later lead him to the practice of medicine with a list of favorite recipes, or to disgust and nausea. Unless the prescribers of these nostrums are more careful than they now are it will be but a few years when the more intelligent portion of the community will only call them in for a diagnosis, and they will do the rest. Or, as is now becoming quite general, they will make their own diagnosis and treat themselves with exactly the same remedies. The labels of many of these preparations name a list of diseases in which they may be used and the dose to be used. When the name of such a remedy is once secured there is no further use for the physician. How often are we called to see cases of neglected serious illness directly due to this cause. What better, we may ask, are these proprietary preparations than the patented ones?

READY MADE PRESCRIPTIONS.

The habit of specifying a particular make of a standard pill or mixture is also hurtful. In the first place the physician who thus specifies is not in a position to be a competent judge as to the merits of this or that maker's goods. He makes his choice usually on the recommendation of a salesman, the literature supplied with the sample, or the result, accidental or otherwise, of a trial of the sample on a single case. Or, perhaps he made his choice after reading a few testimonials from men he never heard of before, and published in one of the large number of so-called medical journals owned and published by the manufacturer.

TEMPTATIONS TO SUBSTITUTE.

This practice of naming the maker throws a strong temptation in the way of the druggist to substitute. How many makers' pepsins are kept by first-class pharmacists? Twelve to twenty-five. Suppose you prescribe an unusual maker's pepsin, of which you can not know the digestive strength. Suppose that one is not among the twenty-five dollars worth of ounce packages of pepsins on his shelves. Suppose another better pepsin in every respect is used, from those the druggist has in stock. Although you could not detect the substitution and the patient might be far better off, you would condemn this action should you ever hear of it. Suppose the next day you should conclude to try another brand.

A PLEA FOR HOME INDUSTRIES.

It is fair to your neighbor, the druggist, to ask him to buy and put upon his shelves every new preparation to which your attention is called by the ever present drummer? It is fair to your patient, to impose upon him the expense of buying an iron preparation costing twice as much as the same intrinsic value can be had for, on a regular prescription? Is it fair that the enormous profits on these proprietary preparations should be deliberately sent to Detroit, St. Louis, Philadelphia, New York, Germany, France, everywhere but to Brooklyn.

The claim is sometimes made that the average physician does not know enough about drugs to be able to write a prescription that will at the same time meet the conditions of the patient, be compatible, sightly, safe and half way tolerable to take. Whether this be true or not, we are in danger of forgetting how to prescribe; or rather the science of prescribing is being greatly neglected.

It must be admitted that there is in these days a stronger demand for more elegant pharmacy than was known years ago. This is especially true among Americans, many of whose stomachs will not tolerate nauseous, bitter or even unsightly mixtures. A gelatine coated pill or a palatable well seasoned elixir may be given with much more

satisfaction to physician and patient. For example I here present a Compound Elixir of Buchu that one would hardly suspect of containing that nauseating drug.

AGE IMPROVES ELIXIRS.

There is here a point of interest that I think is not generally appreciated. When these elixirs are allowed to stand for some months after preparation, they undergo a ripening process similar to wines and become much more palatable. Compare the fresh and old samples of Elixir Buchu Co. From conversations with practitioners I have been impressed with the fact that the profession generally are not as familiar with the National Formulary as they should be. This is especially so, perhaps, with the younger practitioners. Indeed I have frequently been told by such that they did not know that such a collection of elegant mixtures were to be had at any drug store. For this reason I have thought it might be a matter of interest and real service to the members of this society and to the pharmacists of the city to present here through the kindness of the Committee on the National Formulary of Kings Co. Phar. Society, a series of some of these preparations.

THE NATIONAL FORMULARY.

Before doing so permit me to state briefly what this Formulary is. I have already stated some of the reasons which led the New York College of Pharmacy, the German Apothecaries' Association of New York and the Kings County Pharmaceutical Society in 1883, to appoint a joint committee of five from each association to confer and form an unofficial formulary of standard preparations to compete with those put upon the market by certain wholesale houses.

A GAIN TO THERAPEUTICS.

It was believed that it would be a gain to therapeutics if a standard formulary could be agreed upon, so that the preparations could be kept in stock and be everywhere the same in composition. After three years of work, during which time this committee of fifteen held weekly meetings, they published the New York and Brooklyn Formulary, in 1885. This was sent to the members of the medical and pharmaceutical professions of these cities and elsewhere. The work was highly commended by the National Pharmaceutical Association, whereupon the committee presented the copyright to the Association.

The American Pharmaceutical Association appointed a committee, including the former committee, to revise and enlarge it and prepare a National Formulary. After between three and four years the National Formulary was published in 1888.

A GREAT WORK.

In its present form it represents the best efforts of the pharmacists of America, and has received the highest praise of foreign lands. The American association has continued a standing committee to keep it up to date.

These preparations can now be had in any part of the United States or Canada, and we can expect to find them of uniform composition everywhere.

Moreover, we can know what we are prescribing. They are not proprietary or patented, and are not sold at exorbitant prices. These preparations which I have the pleasure of showing you were collected from stores in various parts of the city, and were not prepared expressly for the exhibition. They certainly deserve careful examination and more extended use.

ANTI-KAMNIA.—The adoption of the monogram on the new tablets and the recall of all the old stock from the market, will prove of benefit to this firm and the many physicians who may hereafter desire to afford relief by its use. It will henceforth be sold only in tablet form.

MUCILAGE PENCILS.

S. APPLE. — *Pharmaceutische Post.*

Dextrin.....	7 drachms
Glue (best).....	13½ drachms
Zinc white.....	1 drachm
Glucose.....	5 ounces
Water.....	1 fl ounce

Dissolve the dextrin by the aid of heat in one fluid ounce of water, and glue, and sift in the zinc white. After standing eight hours, warm in a water bath until the glue is melted; then add the glucose previously melted in a water bath, mix, and pour into pencil-shaped moulds.

Camphor Ice with Glycerin.

Spermaceti.....	ʒiv
Cera alba.....	ʒiv
Camphor pulv.....	ʒiv
Sodii boratis.....	ʒij
Stearin.....	ʒxvi
Glycerin.....	ʒxxxij
Ol. lavendulæ.....	
Ol. limonis.....	
Ol. caryophyll.....	
Ol. bergamot aa.....	℥xxv

Melt the wax, spermaceti and stearine, then dissolve the camphor in the warm mixture; mix the borax with the glycerine and stir into the hot mixture gradually constantly agitating. Then pour into suitable molds.

WANTED situation as assistant by student of Junior Course O. C. P. Good Dispenser etc, address, W. H. Andrew, 157 Jameson ave., Toronto, Ont.

PRICES CURRENT.

DECEMBER, 1894.

Acetum cantharides.....lb	\$0 60	
“ colchici corm.....lb	50	
“ ipecac.....lb	40	
“ opii.....lb	1 20	
“ scilla.....lb	12	
Acetanilid.....lb	90	oz. 15
Acid. acetic glac.....lb	50	demi 16 00 ea.
“ “ fort P.B.....lb	15	carboy 11
“ benzoic German.....oz	15	lb 1.75
“ “ “ ozs. Hwds	25	Bulk 20
“ boracic.....lb	14	pulv. 16
“ butyric conc.....oz	30	lb 3.75
“ camphoris.....oz	60	
“ carbolic No. 5 Cal..gl	1 50	
“ “ common.....gl	90	
“ “ cryst.....lb	30	10 lbs 25
“ “ 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	50	10 lb. 45
“ “ pulv.....lb	55	
“ 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 F. 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 en.
“ ceresine bottles).....		1 lb “ 1.25
“ lactic dilutum.....lb	1 15	
“ “ conc. pur.....lb	2 50	
“ nitric.....lb	15	Wins. 12 carb 8½
“ “ C.P.s.g.1.40.lb	30	Wins. 25
“ oleic pale frozen.....lb	40	
“ 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	50	Whr. 45
“ picric.....lb	75	
“ pyrogallic Schering's oz	35	8 oz. 30
“ “ Merck's.....oz	33	8 oz. 28
“ pyroligneous.....lb	10	gall 50
“ salicylic.....lb	1 50	
“ sulphuric.....lb	5	carboy 2½
“ “ C.P.s.g.1.84.lb	25	Wins. 20
“ “ pur Eng.....	20	Wins. 18
“ “ aromat.....lb	65	
“ sulphuros.....lb	12	
“ tannic.....lb	80	5 lb 75
“ tartaric pulv.....lb	35	10 lbs 30
“ valerianic.....oz	40	
Aconitina exot.....gr	4	60 gn. 3
Adeps benzoatus.....lb	35	
Ether S. G. 785.....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
“ “ “		½ lb tins 0.55 “
“ “ “		¼ lb tins 0.30 “
Alcohol brl.....cush	-8-85	10 gall 4.15 5 gall
		4.20 1 4.25 in/c

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THE ORIGINAL KIDNEY PILL



KIDNEY=LIVER

THE ONLY KIDNEY=LIVER PILLS



PILLS

T. DAWSON, Manager Standard Bank, Bradford, Ont., says, Chase's Kidney-Liver Pills are a grand medicine for the Kidneys and Liver.

W. F. CARRIER, 115 McCaul St., Toronto, representing Montreal Star, says, Chase's Pills act like magic for the relief of head-ache, bilious attack and constipation. Sold everywhere, or by mail on receipt of price, to EDMANSON, BATES & CO. 45 LOMBARD ST. TORONTO, ONT.



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ROACH FOOD

FATAL TO COCKROACHES AND WATER BUGS.

“NOT A POISON”

It attracts Cockroaches and Water Bugs, as a food they devour it and are destroyed, dried up to shell leaving no offensive smell.

... Kept in stock by all Wholesale Druggists ...

EWING, HERRON & CO., MONTREAL

Sole Manufacturing Agents for the Dominion.

The Great South American Nervine Tonic

cures all Nervous Diseases and Stomach Troubles by its direct action on the nerve centres located in or near the base of the brain.

Price \$8.20 per doz. less 5 p.c.

The Great South American Rheumatic Cure

for Rheumatism and Neuralgia absolutely cures in from one to three days.

Price \$6.10 per doz. less 5 p.c.

The Great South American Kidney Cure

relieves Distressing Kidney and Bladder Diseases in six hours, and speedily effects a cure.

Price \$6.20 per doz. less 5 p.c.

Alcohol absolut.....lb	1 00	Wr. 90
" methylatedgal	2 00	5 gals 1.90 Brl. 1.70
Aloes Barb opt.....lb	30	10 lb 25 cash
" " pulv.....lb	35	do 32
" Cape.....lb	15	10 lbs 18
" Cape pulv.....lb	25	do 23
" Socotrina.....lb	60	do 55
" " pulv.....lb	70	do 65
Aloin.....oz	30	
Alumen lump.....lb	3	brl 1 1/2
" pulv.....lb	4	brl 2 1/4
" chrom.....lb	15	
" exsiccac.....lb	20	
Alumol.....25 gm	50	each
Ammonii benzoas, from gum.oz	25	lb 3 00
" bromid.....lb	65	
" carb.....lb	15	
" " kegs.....lb	11	
" " pulv.....lb	20	
" " resub.....lb	55	c. b.
" chlorid.....lb	12	100 lb 10 1/2
" " gran.....lb	12	100 lb 11
" " pulv.....lb	18	
" " pur.....lb	25	
" hydrosulph sol...lb	40	
" hypophosph.....oz	25	lb 3.00
" iodid.....oz	45	lb 5.50
" molybdas.....oz	25	
" monocarb.....lb	35	
" nitras gran.....lb	32	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	
Amylam pulv.....lb	9	cwt. 3
Anatto Hispan opt.....lb	50	
" Fullwood 1/2 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	5oz 1.05 10-25oz 1.00
" Swiss.....oz	85	10 oss. .30
" ".....lb	12 50	
Apiol green.....oz	65	
Apomorph hydroch.....gr	2	5 and 10 grain tubes.
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
" florida.....gl	5 00	
" lauro-cerasi.....lb	25	Whr qt 20
" menthae pip.....lb	10	
" rose.....lb	25	Whr qt 20
" sambuci flor.....lb	25	
Argentii chloridum.....oz	2 50	
" iodide.....oz	2 50	
" nitras cryst. L.B. & Co.oz	85	8.50 lb cash
" " fus (4 to oz)oz	1 00	
" oxidum.....oz	2 40	
Aristol.....oz cartons	1 85	
Arsenicum alb. pulv.....lb	10	
" rub.....lb	15	
Arsenici bromid.....oz	40	
" sodid.....oz	60	

Bird Bread

THE WONDER OF THE AGE.

PATENTED 1891.

SAY! do you know that in every 10c. packet of Cottam's choice imported, re-cleaned and well-mixed Bird Seed, a 5c. Cake of Bird Bread, Bird Invigorator, or

SONG RESTORER

is positively given away? No bird should be without this excellent preparation, especially during sickness, moulting or incubation, as it improves the vocal organs, increases song,

MAKES BRILLIANT PLUMAGE,

eradicates disease, promotes the healthy operation of the gizzard, strengthens and sharpens the beak, gives tone and vigor to the whole system, and is strongly recommended for

BIRDS TROUBLED WITH MITES.

DON'T forget that one pound of Cottam's choice imported Bird Seed and a 5c. Cake of Bird Bread can be got for 10c. or Bird Bread without Seed at 5c. per cake, through druggists, grocers and seedsmen. If you really desire healthy birds, with choice song, and brilliant plumage, use

"COTTAM'S BIRD SEED."

which has been awarded first prizes and diplomas, and is the result of many years' study of and experience with birds. Send 30 cents in stamps and we will send you post-paid six cakes of Patent Bird Bread.

BART. COTTAM,
MANUFACTURER AND PATENTEE,
London, Canada.

Salable and Eligible Specialties.

STEARNS' FLUID EXTRACT

Cascara Aromatic (The Original.)

Of full fluid extract strength. It is not BITTER and does not GRIPE.
Price, \$1.20 per lb., \$5.50 per 5 lb. bottle.

STEARNS' Wine of Cod Liver Oil

With Peptonate of Iron.

Contains the alkaloids and active principles of pure Norwegian Cod Liver Oil in solution in a delicious wine. Palatable and nutritious. Superior to any other form of Cod Liver Oil.
Sold only in original triangular bottles @ \$3.00

Hæmoferum

[Blood Iron.]

A natural proteid compound of iron aseptically prepared from fresh bullock's blood. It is hæmoglobin in its best form, viz., Oxyhæmoglobin. Soluble, non-styptic, non-constipating, non-irritating. In pilloids only.
Put up in flasks containing 100 pilloids @ \$6.00 per dozen flasks.

Stearns' Kola Cordial

A palatable preparation prepared from true Kola Nuts (Sterculia Acuminata) which possesses all the valuable active medicinal principles of the drug yet is free from its acrid bitterness.
In 12 oz. oval bottle @ \$8.00 per dozen.

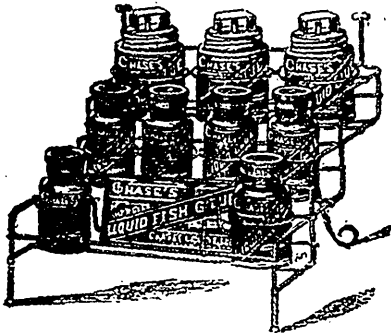
These Specialties are prescribed by physicians everywhere and are kept in stock by the leading wholesale druggists.

Frederick Stearns & Co., MFG. PHARMACISTS

WINDSOR, Ont. LONDON, Eng. **DETROIT, Mich.** NEW YORK CITY

Arsenici tersulph pulv.....lb	25		Cantharides Chinese.....lb	—	pulv. 75
Asphaltum Egyptian.....lb	18		Cantharidine.....grain	8	
Atropina pure.....dr	80	oz. 4 00	Cap papav. alb.....100	1	00
Atropinae sulphas.....dr	80	oz 4 00	Carbo animalis pur. pulv...lb	12	
Auri chloridum (16 gr)....doz	4.00,	8 doz 3.75, 6 doz 3.50	“ ligni.....lb	6	
“ “ L. B. & Co, doz	4.25		“ ligni pulv.....lb	10	brls 5.50 each
Baccæ aurantii.....lb	25		Carbon bisulphidum.....“	16	Whr qt 13
“ capsici.....lb	25	pulv. 30	Carmine.....“	40	lb 5.25
“ cassia.....lb	35	pulv. 40	Caryophyllum, Zanzibar...lb	15	20 Pulv.
“ cubebæ.....lb	40		“ Amboya.....lb	25	
“ “ pulv.....lb	45		“ Penang.....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		Celloidine Schering's.....oz	1	20
“ pimentæ.....lb	12		Cera alba.....lb	65	sec 45
“ “ pulv.....lb	14	25 lb boxes 13	“ “ paraffin, opt.....lb	25	50 lb 20
Balsam canad.....lb	65	Winch. 35	“ “.....lb	18	50 lb 13
“ copaibæ.....lb	60	Whr. qt. 55	“ flav opt.....lb	40	secs 35
“ peruvian.....oz	25	lb 3.00	“ “ lithographers.....lb	50	
“ totu.....lb	55		Ceri oxalæ.....oz	10	lb 1.20
Barii carb pur.....lb	35		Cetaceum.....lb	55	10 lb 50
“ chlorid pur.....lb	25		Cetrar Iceland.....lb	16	
“ hypophos.....oz	25		Chirata Incis.....lb	45	
“ nitras exsic.....lb	20		Chloralamid.....oz.	35	
“ nitrate C. P.....lb	35		Chlorodyne Lyman's.....lb	2	00
“ sulphate pur.....lb	50		Chloral Hydrate recryst.....lb	1	10
“ sulphide “.....oz	10		Chlorof pure Smiths 1 lb g.s. bs. lb	90	10 lb 80 Whr. qt 65
Bath Pipe.....lb	40		“ D. F. & Co's pur.....lb	1	80 5 lb 1.75
Bay rum St. D.....gal	3	75 sec. 2.75	“ “ meth.....lb	90	5 lb 85
Beberinæ hydroch.....dr	50		“ “ blue label.....lb	90	
Beberinæ sulphas.....oz	90		“ Merck 1 s.....lb	65	
Benzine refined.....gal	40		“ “ 48-lb tins.....lb	55	
Benzoyl Guaiacol.....oz	2	00	Cinchonidin sulph.....oz	15	Hds. 20
Bismuthi Benzoes.....oz	1	00	Cinchoninæ murias Hds.....oz	18	
“ carb.....lb	2	75	“ sulphas “.....oz	18	
“ citras.....oz	20		Civet.....dr	1	00
“ et ammon-cit.....oz	35	lb 4.50	Cocaine hydrochlor crys.....oz	6	50 Merck's 7.00
“ salicylas.....oz	25	lb 3.50	“ phenate.....qt	10	
“ subgallas.....oz	80	lb. 4.00	Cocculus Indicus.....lb	10	pulv 20
“ subiodid.....oz	50		Coccus cacti S. G.....lb	40	pulv 45
“ subnitras.....lb	2	00	Codeina pure.....dr.	90	oz 6.50
“ valerian.....oz	50		“ Phosphate.....dr.	1	25
Bismuthum (metal).....lb	2	25	“ Sulph.....dr.	90	oz 6.00
Bole armen.....lb	6		Colchici corm.....lb	30	
Borax.....lb	9	keg 7	Colloidum.....lb	50	
“ pulv.....lb	10	do 8	“ vesicans, P. B.....lb	2	25
Bromine.....oz	20		“ flexile.....“	65	
Bromoform.....oz	30		Colocynthis Turc select.....lb	60	pulv 85
Cadmium.....oz	15	lb 1.75	Confectio rosæ Gallic.....lb	50	
Cadmii bromid.....oz	20	lb 2.25	“ sennæ.....lb	40	
“ iodid.....oz	45		Cortex aurantii Ang.....lb	70	
“ sulphas.....oz	20		“ “ coml.....lb	15	
Caffeina pur.....oz	65	lb 8.50	“ “ opt. 1/8.....lb	20	
“ citras.....oz	65		“ canellæ.....lb	20	pulv 25
Calamina præparata.....lb	7		“ cascara sagrada.....lb	25	
Calci bromid.....oz	20	lb 2.25	“ cascarilla.....lb	25	
“ carb. præcip.....lb	25	V. Creta precip.	“ cassia.....lb	15	pulv 18, 25 lb box 16
“ chlorid. cryst.....lb	30		“ cinchop flav.....lb	90	pulv. 1.00
“ “ fusum pure.....lb	30		“ “ coml.....lb	30	pulv. 35
“ “ fused crude.....lb	15		“ “ rub quill.....“	60	pulv. 70
“ hypophosphis.....lb	1	40	“ granat fract.....“	20	
“ iodid.....oz	50		“ “ radicias.....“	60	
“ lactophosph.....oz	15	lb 2.00	“ limonia ang opt.....“	65	
“ nitras.....lb	75		“ “ com.....“	18	
“ phosphas præcip.....lb	20		“ mezerel.....“	25	
“ sulphas.....lb	4	1 2	“ myricæ (bayberry).....“	20	
“ sulpho-carbolas.....lb	2	50	“ pruni virginianæ.....“	15	20 lbs 12
“ sulphid.....lb	50		“ quillaisæ.....“	15	grd. 20 pulv. 25
“ sulphis.....lb	18	pulv. 20	“ sassafra.....“	15	pulv. 22
Calx chlorinata.....lb	5	keg 3 1/2 brl. 2 1/2	“ ulmi.....“	16	pulv. 16 grd 14
“ “ in packets 1 lb 7, 1/2 8, 1/2 9			Creolin, Pearson's.....“	70	litre bot. 1 25 each.
Camphora Ang. Hd's.....lb	60		Creosot. Ang (Morson's).....oz	20	lb 2.00
“ “ ozs.....lb	65		“ (Beechwood) Merck's.....lb	1	50 Whr. 1 1/2
“ “ flowers.....lb	75		“ (Beechwood) French.....lb	2	75
“ Dutch.....lb	55		“ white, from coal tar.....lb	75	
“ “ ozs.....lb	60		“ Carb.....oz	1	00 lb 12 00
Camphor monobromid.....oz	20		Creta gallic.....lb	18	
Cantharides Russian.....lb	1	40 pulv. 1 50	“ “.....lb	5	bgs 3 1/2.

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 tonic-stimulant 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 WINES

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 while Teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures all Wind Colic, and is the best remedy for Diarrhoea. Retail price 25cts 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 every where 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,
185 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., L'd, 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., L'd, 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 ridding the Breath. Used daily it prevents trouble from bad teeth and soft gums. Retail price, 25 cents a bottle. Prepared by JOHN I. BROWN & SONS.
THE CURTIS & BROWN MFG CO., L'd, Proprietors,
217 Fulton Street, NEW YORK, N.Y.

How is your Stock of

Lyman's Emulsion of Cod Liver Oil?

PRICE TO THE TRADE:
50cts Size, \$3.00
\$1.00 " 6.00

If you cannot procure from your jobber, order from the manufacturers.

LYMAN, SONS & CO.,

MONTREAL.

THE CANADIAN CAPSULE CO. TORONTO

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

TRADE MARK

OUR CAPSULES ARE TRANSPARENT, ELEGANT IN APPEARANCE, UNDETECTABLE ART MANUFACTURED OF THE FINEST & BEST MATERIALS SAMPLES FREE

MANUFACTURERS OF

ENTIRE Crystal Gelatine Capsules

SIZES & QUANTITIES

N70	1/2	6 GRS DRY POWDER
N71	1/2	FILL MASS
N72	1/2	DRY POWDER
N73	1/2	FILL MASS
N74	1/2	DRY POWDER
N75	1/2	FILL MASS
N76	1/2	DRY POWDER
N77	1/2	FILL MASS
N78	1/2	DRY POWDER
N79	1/2	FILL MASS
N80	1/2	DRY POWDER
N81	1/2	FILL MASS
N82	1/2	DRY POWDER
N83	1/2	FILL MASS
N84	1/2	DRY POWDER
N85	1/2	FILL MASS
N86	1/2	DRY POWDER
N87	1/2	FILL MASS
N88	1/2	DRY POWDER
N89	1/2	FILL MASS
N90	1/2	DRY POWDER

Oreta præcip	lb	10	keg 8
" præparata	lb	5	50 lbs 4
Crocus stigmat amer.....	lb	65	
" " Valent.....	oz.	80	Alicante 65c oz.
Croton chloral-hydrate.....	oz	45	
Gudbear.....	lb	20	
Cupri ammonio-sulphas....	lb	1	00
" chloridum pur.....	lb	60	
" nitras pur	lb	60	
" oxidura nigr. pur.....	lb	1	75
" " coml.....	lb	50	
" sulph.....	lb	7	keg 5 brl 4½
" sulph recryst.....	lb	25	
Cuprum scales.....	lb	40	
Curare.....	grain	6	
Currie powder.....	lb	35	
Cusso "	oz.	10	
Damiana.....	lb	40	
Daturine, pure xtls.....	gr	10	
Dextrine, white.....	lb	10	50 lb 8
" yellow.....	lb	8	" 7
Diapente.....	lb	30	
Diatase.....	oz	1	25
Digitaline.....	oz	50	each
Diuretin "Knoll"	oz	1	75
Dolichos pruriens pubes....	oz	60	
Dubosin, pure Amp 5 gr. tube		60	each
" sulphate	gr	12	
Eikonigen.....	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
Eser ne sulph 5 or 10gr. tube.gr		10	
" salyolate, 5 gr. tube gr		10	each
Ethyl, Benzoate.....	oz	40	
" Bromide.....	oz	35	
" Butyric.....	oz	15	
" Chloride	tubes	35	each
" Iodid.....	oz	75	
" Knanthylate.....	oz	1	00
" Succinate.....	oz	60	
" Valerian.....	oz	50	
Eu'alyptel.....	oz	25	lb 3.00
Eucophen	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.....	oz	10	lb 1.25
" anthemides	oz	20	lb 2.50
" belladon ang.....	oz	25	lb 3.50
" " pulv.....	oz	25	lb 2.50
" " aqueos.....	oz	15	lb 1.50
" Belladon alcoh	oz	25	lb 3.00
" calumb.....	oz	25	lb 3.25
" cannabis indica.....	oz	25	lb 3.00
" cascara sagrada.....	oz	25	lb 3.50
" cinchona 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 P.B.....	oz	20	lb 2.00
" conii pulv.....	oz	20	lb 2.50
" copaiba resin	oz	15	lb 1.50
" digitalis.....	oz	20	lb 2.50
" " pulv.....	oz	30	lb 3.50
" ergotæ pulv.....	oz	60	
" gentianæ.....	lb	45	
" filicis maris ether.....	oz	25	
" hamamelis dest	gr	1	25
" glycyrrh mol.....	lb	0	75
" " p.....	lb	0	75
" hellebor.....	oz	25	
" hamatox i.....	lb	80	
" hyocyan	oz	20	lb 2.5. 0
" hyocyan aquos	oz	10	lb 1.00

Is it a **GOOD THING?**
 Or is it not; a **GOOD THING?**
 To recommend a **GOOD THING**
TO YOUR CUSTOMERS.



VELROSE SHAVING CREAM

—IS—

Good Thing

So is **VELROSE** Shaving Stick
 And **VELROSE** Barber's Soap

You sell them once.

They sell themselves after.

Order Sample ½ dozen with next lot of goods
 from wholesale house.
 On application we supply samples for free
 distribution and with first orders.

THOS. LEEEMING & CO.,
MONTREAL.

TO DRUGGISTS 

WE RESPECTFULLY CALL ATTENTION TO OUR SPECIALTY

Gibson's • Golden • Malt • Tablets

. . . This is a confection of the highest standard, and rapidly growing in favor on account of the recognized purity, great excellence, and delicious flavor. It is an article druggists can safely recommend

Price : $\frac{1}{5}$ -lb. Bottles, per dozen, \$4.80
each 1.80

For Sale by the Wholesale Drug Trade.

GIBSON MALT TABLET CO.,

TORONTO.

Argoline Petroleum Jelly



**U. S. P.
STANDARD.**

A CONDENSED PETROLEUM FOR
PHARMACEUTICAL, MEDICAL
AND TOILET PURPOSES.

We also Manufacture:

Argoline Cold Cream

“ Pomade

“ Carbolated

“ Camphorated

ORDER . . .
FROM YOUR JOBBER.

SHEPHARD MANUFACTURING CO. 

HOMESTAD, PA.

Extract hyocycara pulv.....oz	25		erri sulphur pur.....lb	7	10 lb 6
" " exot.....oz	15	lb 1.50	" sulphid.....lb	15	
" ignatia amara.....oz	60		" valerian.....oz	35	
" ipecac acstio.....oz	1 50.		Ferrum dialysatum.....lb	40	
" jaborandi.....oz	60		" redactum.....lb	75	
" jalapa.....oz	25	lb 3.50	" tartaratum.....lb	80	10 lb 75
" " pulv.....oz	35		Flor. anthem. opt. French..lb	35	
" krameria.....oz	25	lb 3.50	" " Roman.....lb	30	
" lactuce.....oz	20	lb 2.20	" " German.....lb	30	
" logwood.....lb	11	(15 & 30 lb boxes)	" arnica.....lb	25	
" logwood 1 lb pkts..lb	15	(80 lb boxes)	" lavand.....lb	15	pulv. 25
" " 1/2 lb pkts..lb	16	"	" rose gall.....lb	1 75	
" " 1/4 lb pkts..lb	17	"	" " white.....lb	75	
" " asst. pkts..lb	16 1/2	"	Folia aconiti.....lb	25	pulv. 40
" lupuli.....oz	25	lb 3.00	" belladon.....lb	25	pulv. 35
" malt.....lb	25		" buchu.....lb	20	
" mezerei ether.....oz	60		" cocca green.....lb	50	
" nucis vomie.....oz	40	lb 5.40	" conii.....lb	20	pulv. 35
" " " pulv.....oz	40		" digitalis.....lb	20	pulv. 35
" opii.....oz	90	lb 13.50	" eucalypti glob.....lb	18	
" " pulv.....oz	1 00		" hyocyc. exot.....lb	25	powd. 40
" " liquid.....lb	1 25		" jaborandi.....lb	90	
" papaveris.....oz	16	lb 2.25	" mat. cocca.....lb	40	
" physostigmatis.....oz	2 00		" pullegii.....lb	20	
" podophylli.....oz	25	lb 3.00	" sanna alex.....lb	60	
" quassia.....oz	20	lb 2.40	" " tanny.....lb	20	15, bale 10,
" rhamni frang.....oz	50	lb 5.00	" " " pulv.....lb	25	
" ramni pulv.....oz	40		" vivs rca.....oz	12	
" sarsae jam.....oz	30	lb 4.00	Fruct. ansthi.....lb	30	
" rhei F. I.....oz	21	lb 3.50	" anisi German.....lb	15	
" sarsae jam co.....oz	28	lb 3.25	" " pulv.....lb	20	
" sarsae hond co.....oz	20	lb 2.75	" " Star.....lb	45	
" stramonii fol.....oz	20	lb 2.50	" capsici.....lb	27	10 lbs 25
" stramonii pulv.....oz	25	lb 3.00	" " pulv.....lb	30	" 25
" taraxaci.....lb	50		" carni.....lb	19	" 11
" valerian.....oz	15	lb 2.00	" " canad.....lb	11	" 10
" veratri viride.....oz	45		" carni pulv.....lb	18	
Fabae physostigmatis.....lb	50		" conii.....lb	30	
" " tonca para.....f.....lb	1 00		" coriandri.....lb	10	bag 7 1/2
" " surinam.....lb	1 75		" " pulv.....lb	18	
" " angostina.....lb	2 75		" foniculi.....lb	15	pulv 20
" vanille, short.....lb	3 00		Fuller's earth.....lb	4	100 lb 3
" " medium.....lb	5 00		" " pulv.....lb	6	100 lb 5
" " 7 1/2 in.....lb	6 50		Gadual.....oz	40	
Fehling's solution.....lb	1 00		Galleae cornis.....lb	38	bag 95
Fel bovinum purificat.....oz	30	2.00 lb	" " pulv.....lb	30	grd 28
Ferri ammon chlorid.....lb	60		Gasoline, 76°.....gal	60	
" " persulph(iron alum)lb	40		Gelatine, black label.....lb	35	10 lb 30
" " protosulph.....lb	25		" bronze label.....lb	40	" 35
" " tartas.....lb	75		" silver ".....lb	45	" 40
" arsenias.....oz	15	lb 1.60	" gold ".....lb	60	" 55
" bromidum.....oz	20	lb 2.00	" pink gold label..lb	75	
" carb. precip.....lb	15		Glue, black.....lb	12	
" carbonas sacch.....lb	30		" amber.....lb	15	
" citras soluble.....lb	65		" white.....lb	20	
" et ammenii citras.....lb	70		" cooper's.....lb	39	
" et quin. cit., 4%.....oz	15		Glycerine (double dest)1260 deg lb.20	56 lb tin 15 case 14	
" " ".....lb	1 75		Glycerine Price's.....lb	70	W. qt 65
" " 10%.....oz	18		Grana paradisi.....lb	20	
" " ".....lb	2 50		" " pulv.....lb	30	
" " P. B.....oz	20		Guaiacol.....oz	80	
" " ".....lb	2 75		" benzoate.....oz	1 50	
" " Hd's.....oz	25		" carb.....oz	1 75	
" " amorph.....oz	15		Guarana pulv.....lb	3 00	
" " ".....lb	1 75		Gum acacia, No. 1.....lb	60	
" " et strych. cit., oz	35		" " " 2.....lb	40	
" " Hd's, oz	40		" " " 3.....lb	35	
" et strych. citras 1%.....oz	15	10 oz 13 lb 1.75	" " " 4.....lb	30	
" hypophosphis.....oz	20	lb 2.50	" " " 5.....lb	25	
" iodide.....oz	40		" " pulv.....lb	65	
" lactas.....lb	75		" ammon in guttas.....lb	50	
" perchlorid.....lb	35		" asafetid. opt.....lb	45	sec. 35
" phosphas.....lb	85		" " pulv.....lb	40	
" pyrophosph.....lb	30		" benzoin opt.....lb	75	
" succinate.....oz	35		" catechu nig.....lb	12	20 lb 11 pulv 25
" sulphas commercil.....lb	2	brl 90 gross	" catechu pallid cubes..lb	16	10 lb 15
" sulphas exsic.....lb	9		" copal.....lb	1 00	

SHIRLEY'S No. 42 MENTHOL CONE.

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	3/8
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.

IF

you have anything to place before the drug trade of Canada or Newfoundland, communicate with us.

You can reach the druggists twelve times a year at about the cost of sending circulars out once.

For rates, etc., address :

Montreal Pharmaceutical Journal, - Montreal.

P.O. BOX 1114.

**GARFIELD
TEA FOR CONSTIPATION
AND
SICK HEADACHE**

The trade supplied with free samples and other advertising matter prepaid by addressing . . .

D. DENSMORE & CO.,

271 QUEEN ST., EAST,

TORONTO, Ont

Gum damar.....	lb	30	
" elemi.....	lb	45	
" euphorb. pulv.....	lb	40	
" galban opt.....	lb	3 50	
" gambogia.....	lb	1 00	pulv 1 20
" guaiacl.....	lb	65	Sec. 40 pulv 50
" juniper.....	lb	45	50%
" kino.....	lb	1 50	pulv 1 80
" mastiche select.....	lb	1 00	
" myrrh. turc opt.....	lb	70	
" " " sorts.....	lb	45	pulv 65
" olibani.....	lb	25	
" sang. draconis.....	lb	45	reed 90
" " pulv.....	lb	75	
" scammon. aleppo	} lb	6 50	
opt. (pulv)			
" scammon resin.....	lb	3 75	
" seedlac.....	lb	40	
" shellac, orange.....	lb	40	
" " bleached.....	lb	40	50 lb 35
" sprace.....	lb	30	10 lb 25
" storax liquid.....		50	
" " dry.....	lb	50	
" thus.....	lb	15	
" tragacanth Ribbons.....	lb	90	
" " Alleppo opt.....	lb	65	
" " Alleppo No.2.....	lb	50	
" " pulv. opt.....	lb	70	
Gun cotton.....		90	1 oz box
Hæmoglobol, 10 gm. vials....		50	each
Hæmol " " " " " " " "		35	"
Homatropine Hydrobrom.....	gr	30	
Humulus lupulus.....	lb	20	assorted packages
Hydrarg. bichamid.....	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	
" " a la vapeur.....	lb	1 50	
" sulph flav.....	lb	1 50	
" " alb.....	lb	90	
" " sulph.....	lb	1 00	
" tannas.....	oz	35	
" ammon.....	lb	1 20	
" c. creta.....	lb	60	
" oleas.....	5% lb	55	
" " " " " " " "	16% lb	65	
" " " " " " " "	20% lb	80	
Hydrargyrum.....	lb	30	10 lb 70
Hydrastine alcaloid C.P.....	dr	50	
" hydrochlor C.P.dr		90	oz. 6.00
Hydrastine mur. Marck's			
15 grain tubes.....		90	oz. 22.00
Hydrochinone.....	oz	30	1 oz cartons
Hydrogen peroxid, Peuchot's.....	lb		doz. 8 00
" " " " " " " "	1/2 lb		" 6 00
" " " " " " " "	1/2 lb		" 4 50
" " Coml.....	lb	35	
Hyoecine, hydrobrom, 5 gr. tub.....	1	75	each
lyescyamine " " " " " " " "	25		sulph gr 35
Hypnal.....	dr	40	
Hypnon, pure.....	oz	1 50	
Isinglass Brasil.....	lb	3 25	
" Gridley's oz.....	doz	1 80	
" Russian.....	lb	5 09	
Ichthyol, Merck's.....	oz	40	1/2 lb 6.00 lb
			1/2 lb 5.75 lb
			1 lb 5.50 lb
Indigo Madras opt.....	lb	75	sec 65
" " pulv.....	lb	90	
" Paste.....	lb	20	
Insect powder Dalmatian.....	lb	35	25 lb 28 56 lb 25
" " Persian.....	lb	30	25 lb 21 56 lb 20
Iodoformum.....	oz	40	lb 5.90
" præcip.....	oz	40	lb 5.90



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.

COUNT OF St. Michel Wine,



The world renown TONIC. Prescribed by the most eminent Doctors.

Over 25,000 certificates states its success to cure

WEAKNESS, DEBILITY, POVERTY OF BLOOD, DYSPEPSIA, INSOMNIA, LOSS OF APPETITE, CHRONIC DIARRHOEA and BLOOD DISEASES.

A WINEGLASSFUL TAKEN DAILY IS SUFFICIENT TO RESTORE HEALTH.

For Sale by all first-class Druggists and Wine Dealers

MONGENAI, BOIVIN & CO.,

SOLE AGENTS FOR CANADA,

MONTREAL.

SPECIAL OFFER 

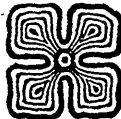


Antitoxine

■ ■ ■ ■ ■ ■ ■ ■ ■ ■ **ANTI-DIPHTHERIA SERUM.**

Put up in Vials containing
7 c. c. and 25 c. c.

SUPPLIES RECEIVED WEEKLY.



Lyman, Sons & Co.,

MONTREAL, Canada.

Iodol.....oz	1 40			Magnesium, wire or ribbon .oz.	75	Powder 50
Iodum crude.....oz	30	lb 4.50		Maltopain 1/2 lb bots.... lb	5 85	
" resub.....oz	40	lb 5.25		" bots..... doz	6 35	
Iodum resub.....oz	40	lb 5.25		Maltose xtls.....oz	1 50	
Jalapin ang.....oz	1 00	lb 18.50		Mangan chlorid.....lb	50	
Kamala.....lb	60			Maganese hyphosphate.....oz	30	
Kouso.....oz	10			" oxyd. nigr.....lb	10	brl. 7 1/2
Kava Kava.....lb	90			" sulph. pur.....lb	60	
Lactopeptin oms.....doz	8 50			Manna flak selecti.....lb	1 50	
" 1/2 lbs.....lb	10 50			Maranta Bermuda.....lb	45	10 lb 42
Lactucarium ang.....oz	70			" Jamaica.....lb	15	
Lanolin.....lb	85			Mel. canadensis.....lb	15	10 lb 14
Lapis calam. prosp.....lb	7			Menthol.....oz	55	lb 8.00
Lapis pumicis select.....lb	6	ordinary 6		Morphine acetate.....oz	1 90	10 ozs. 1.80
" pulv.....lb	7	100 lb 5		" hydrochloras.....oz	1 90	" 1.80
Leptandrin.....oz	45	Keiths 50		" sulphas.....oz	2 00	" 1.90
Lichen Hiberna opt.....lb	20	Sec 15		Moschus in grain..... dram.	5 00	4.50 3.50
Licorice Corig.....lb	35			Myrtol.....oz	1 00	
" Solana.....lb	45			Naptha mineral.....lb	50	
" Zuvia.....lb	30			Naptha vegetable.....lb	60	
" Windsor, 4,8 or 161.5 lb	35	25 lbs 30		Napthaline resublimed.....lb	30	
" Y. & S. stick.....lb	35			Naphthol Beta.....oz	10	lb 1 .40
" Pellets Y. & S.....lb	40			" " Bengoate.....oz	40	
" " M. & R.....lb	40			Nickel sulph cryst.....lb	75	
Lignum guaiaci rass.....lb	7			" ammon. sulph.....lb	30	
" quercine incis.....lb	10	50 lb 9		Nux. areca select.....lb	20	pulv 35
" sant. flav. grd.....lb	65	Rub 10		" kola.....lb	50	
Liniment aconiti.....lb	90	Whr. qt. 80		" myristica (lmed).....lb	90	pulv 1.00
" belladon.....lb	95	" 85		" " opt.(unlmed)lb	1 00	
" camph.....lb	55			" vomica.....lb	12	pulv 25
" camph comp.....lb	60	Whr. qt. 55		Olio Resin Capsici.....oz	85	
" iodi.....lb	1 50			" Cubeb.....oz	50	
" opii.....lb	90			Ol. absinth.....oz	30	lb 4.00
" saponis co.....lb	45			" amygd. dulc.....lb	45	Whr. qt. 40
" " e pot iod. lb	90			" " essent. sine acid		
" terebinth.....lb	30			" pruss.....oz	50	
Liquor ammon. acet conc...lb	35			" anethi Ang.....oz	35	lb 4.50
" ammon fort s. g. 880lb	12	12 Whr. qts. 10		" anisi.....lb	3 50	Whr. qt. 3.25
" antim. chlor.....lb	22	W. qt. 20		" anthem Ang.....oz	2 00	
" arsenicallis.....lb	10	pt. Whr. qt. 8		" aurantii.....lb	2 00	
" arsenii et hyd. iod. lb	25	W. qt. 20 (Donovans)		" bergam super.....lb	8 00	
" ferri Acet.....lb	35			" buchu.....oz	3 00	
" " Ft.....lb	60			" 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 90	
" plumbi subacet.....lb	12	Whr. qt. 10		" casiae.....lb	1 50	
" potasse.....lb	7			" cedri opt.....lb	70	Whr. qt 65
" santal flav comp.....lb	1 50			" chaulmoogra.....oz	60	
" sodii chlor.....lb	18			" cinnamomi ver.....oz	1 70	
" strychnine.....lb	50	Whr. qt. 45		" citroneis.....lb	80	bot. 70 lb
Lithii bromid.....oz	25			" cocoanut.....lb	15	
" carbonas.....oz	25	lb 3.20		" cognac.....oz	1 75	
" citras.....oz	20	lb 2.75		" cologne.....oz	60	
" hippurate.....oz	1 00			" conii.....spruce lb	70	Whr. qt. 65
" iodid.....oz	50			" copaibe.....lb	1 25	
" salicylat.....oz	30			" coriandri.....oz	70	
Litmus.....lb	60			" crotonis.....oz	12	bot. 1.50 lb
Lucilline.....1 lb tins	20	each		" cubebes.....oz	30	3.50 lb
"5 lb "	90			" cymini.....oz	50	
"10 lb "	1 60			" erigerontis.....lb	3 25	
"25 lb tubs	13	lb.		" eucalypti.....lb	1 25	
"50 lb tubs	12	"		" fenticulae dulc.....lb	1 50	
Lupulinum.....lb	60			" gaulther.....oz	25	lb 3.00
Lycopodium.....lb	95			" " synthetic.....lb	2 00	
Lysol.....1/2 kilo bottles	1 00	sach		" geranii roas.....oz	50	
Macis.....lb	75	pulv 85		" " super.....oz	1 00	
Madder compound.....lb	10	carboy 9		" juniperi bacc.....oz	15	lb 2.00
" Dutch.....lb	12	brl 10		" " lig.....lb	60	Whr. qt. 55
Magnes citr. gran. Bishop. lb	80	7 lb 75		" lauri.....lb	40	
" " Lyman. lb	35			" lauri essent Bay.....oz	40	lb 4.50
" calcined.....1 lb tins	50			" lavand ang.....oz	2 00	
" " " bots	65			" lavand exot.....lb	3 50	sec 2.50 1.50
Magnesi carb levis 1 oz pkt lb	22	10 lb 20		" limonia super.....lb	1 50	copper 1.25
" " " 2.....lb	20	" 18		" macis.....oz	25	lb 3.50
" " " powd.....lb	25	1 lb tins		" menth. pip. Amer.....lb	3 50	Whr. qt. 3.25
" chloride.....lb	30			" " English.....oz	1 00	lb 14.00
" sulphas.....lb.	8	Brl. 1.50		" " Japan.....lb	4 00	

Torske Lever Olie.



HUILE

DE

Foie de Morue

+
D'IZDAHL

Norway Cod Liver Oil.

PURE, FRESH
NEARLY TASTELESS.

Packed in Half-Pints.
\$3.00 per dozen.
Pints, \$5.00 per dozen.

FOR SALE BY

LYMAN, SONS & CO.,

Wholesale Druggists,
MONTREAL.

NO MORE ROUND SHOULDERS.

THE IMPROVED

Kinckerbocker Shoulder * Brace.



These braces are made in three different qualities for ladies and gentlemen:—

No. 1—Price	- -	\$15.00 doz.
" 2 "	- -	12.00 "
" 3 "	- -	9.00 "

Every pair is measured and marked or stamped with the number indicating the size of chest measure—chest measure means the tailor or coat measure—the number of inches entirely around the body under the arms. Wear the number corresponding, or one size larger (not smaller).

Adults' Sizes: 32, 36, 38, 40 inches, etc.
Youths' " for boys and girls:
24, 26, 28 and 30 inches.

Kinckerbocker Brace Co.,

EASTON, PA.



Ol. menth virid.....oz	25	lb 8.50
" morrhugNorweg.....gl	1 50	brl. 1.20
" " Munn's Nfld. by Norweg. process }	95	kegs 18 gals 85
" myrbane.....lb	35	Whr. qt. 30
" myristica.....oz	30	bot. 25
" neatsfoot, pale.....gl	1 00	
" neroli, opt.....oz	3 00	
" olive sublime salad .gl	2 50	
" olive sublime salad 1 gal	original tins incl.	2.50 each.
" " green.....gl	1 40	brl. 1.20
" " opt.....gl	1 50	brl. 1.35
" " yellow.....gl	1 40	brl. 1.15
" " opt.....gl	1 50	brl. 1.25
" " (Salad American)gl	90	brl. 80
" origani.....lb	85	
" " Sec.....lb	50	Winch 45
" palmæ select.....lb	15	
" patchouli opt.....oz	1 25	Sec. 75
" petit. gran.....oz	75	Sec 45
" picia.....lb	12	Whr. qt. 10
" pimenta.....oz	25	lb 3.20
" pini silvestris.....lb	1 50	
" pulegii hed.....lb	2 00	
" rapii.....gl	1 05	
" rhodii.....oz	80	
" ricini E. I.....lb	11	case 7½ tins 8
" " Gal water pale..lb	12	brls 7½
" " Virgin.....oz	15	tins 12
" " Ital.....lb	20	tins 17
" rosmarini exot.....lb	70	W. qt. 65
" ruta.....oz	25	
" sabinæ.....lb	1 30	
" sambuci vir.....lb	33	
" santali ang.....oz	50	lb 7.50
" " "W.I.....oz	40	lb 4.00
" sassafras.....lb	65	Whr. qt. 60
" sem. santon.....oz	25	lb 3.20
" sesame.....gl	1 35	cask 1.25
" sinapis essent.....oz	65	lb 8.50
" sperm.....gl	1 60	
" spike.....lb	25	
" succin. rect.....lb	65	Whr. qt. 60
" tanacetii opt.....oz	25	lb. 3.50
" terebinthina.....lb	50	
" terebinthina coml.....gl	65	
" 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 50	
" " pulv.....oz	45	lb 5.50
Os sepiæ.....lb	25	select 40 pulv 35
Otto-rossa coml.....oz	6 50	
" " virgin.....oz	9 00	opt 17.00
Pancreatine, Morson's.....oz	1 00	
" " Merck's.....oz	50	
" " absolnte oz	75	
Papoid.....oz	8 25	
Paraffinum durum.....lb	15	50 lb 18
Paradalyde.....oz	20	lb 2.00
Paris Green.....100 lb irons	14	
" " 25 lb "	15	
" " 1 lb tins	18	
Pelleteriae Tannate.....gm	45	
Pepsin.....lb	225	
" 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
" Jenson's scales ".....oz	1 25	
" Armour's.....oz	90	lb 12.00

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.

WALTER BAKER & CO'S

Soluble

2525252525252525

Chocolate.

25252525252525252525

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 preparation.

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

IMPORTANT INFORMATION FOR RETAIL DRUGGISTS.

"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 Live r-Pill: 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.
Murray Street,
NEW YORK.

SMALL PILL.	CARTER'S LITTLE LIVER PILLS.
—o—	
SMALL DOSE.	
—o—	
SMALL PRICE.	
A POSITIVE CURE FOR SICK HEADACHE.	

It is only to Men who can appreciate a good cigar that this remark is addressed.

We stake our reputation on the statement that - -

"La Sonadora" is as good a cigar as can be produced by any manufacturer in any country.

Now, give it a fair and honest trial, and tell your friends what you think of it.

15c or 2 for 25c.

**CREME DE LA CREME CIGAR FACTORY,
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 wholesale houses.

Petrol Barbardens.....	lb	15	
Petroleum, see Lucilline			
Phenacetine Bayer.....	oz	35	lb 4.50
Phenocoll.....	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	25	5 or 10 gr. tubes
nitras.....	gr	25	5 or 10 gr. tubes
Pipe clay.....	lb	5	100 lb 4
Pipe ins.....	oz	1	00
Pipe azin Bayer, 1/2 oz bottle.	oz	3	50
tablets.....	10x16 gr	2	00 each
Piper alba.....	lb	20	pulv 22
cayenne.....	lb	25	10 lb 20
nigrum.....	lb	17	pulv 18 25 lb 15
Fix Burgund bladders.....	lb	10	20 lb 9
Platinum Bichlor.....	oz	8	00
" 10% solut.....	oz	1	25
Foil.....	grm	60	
Wire.....	gum	45	
Plumbi acetas brown.....	lb	10	50 lb 9
" Xtls.....	lb	12	50 lb 10
" C. P.....	lb	25	
iodid.....	oz	85	lb 4.50
nitras coml.....	lb	16	
oleas.....	lb	1	00
oxyd pulv.....	lb.	9	keg 7 1/2 (litharge)
rub.....	lb	8	keg 6 (red lead)
Pod ophyllin resin.....	oz	35	
Potassa caustica sticks.....	lb	55	
sulphurata.....	lb	35	
Potassii acetas.....	lb	45	gran 50
bicarbonas.....	lb	16	
" pulv.....	lb	17	
bichromas.....	lb	15	keg 12 1/2
binoxias.....	lb	28	10 lb 22
" pulv.....	lb	25	10 lb 23
bitart.....	lb	80	keg 24 brl 28
bromid.....	lb	60	5 lb 55
carbonas.....	lb	14	10 lb 12
carbonas pearl ashes	lb	10	100 lb 9
chloras.....	lb	22	keg 20
" pulv.....	lb	24	keg 21
chlorid. pur.....	lb	30	
chromas.....	lb	50	
citras neutral.....	lb	70	
cyanid. C. P.....	lb	1	00
" gold plater.....	lb	75	
" fused.....	lb	40	
hypophosph.....	lb	1	50
iodid.....	lb	4	00 5 lbs \$3 75
nitras.....	lb	10	112 lb keg 7
" gran.....	lb	10	" " 7 1/2
" O.P. Mercks.....	lb	30	
oxalas, neutral.....	lb	25	
permangan pur.....	lb	35	10 lb 30
pruss. flav.....	lb	85	
" rubr.....	lb	75	
silicas.....	lb	30	
" Liq.....	lb	20	
sulphas.....	lb	12	pulv 13
sulpho-cyanid.....	oz	15	
sulphocarb.....	lb	1	60
sulphuret.....	lb	35	
tartas.....	lb	80	
Potassium.....	oz	2	00 dr. 40
Propylamine.....	oz	75	
Pulv. aloes c. canella.....	lb	40	
antimonialis P. L.....	lb	60	
catechu comp.....	lb	70	
cinnam comp.....	lb	75	
cretas aromat P. B.....	lb	1	20
" c. opii P B lb	lb	1	50
" comp Ph. Sd.....	lb	50	
" comp. c. opii.....	lb	75	

P cretas c. camph.....	lb	25	10 lb 20
glycyrrh comp.....	lb	30	
ipecac comp.....	lb	1	40
jalap comp.....	lb	75	
kino comp.....	lb	1	25
rhei comp.....	lb	75	
sapo cast.....	lb	25	
" alb.....	lb	85	
scammon comp.....	oz	30	
seidlits Howards.....	lb	25	7 & 14 lb
Pyoktannin.....	25gms	1	25
Pyridin Purias.....	oz	25	
Quassine, 1/2 oz vials.....	oz	4	00
Quininas bisulph.....	oz	50	
bromid.....	oz	75	
citras.....	oz	80	
hydrobrom.....	oz	90	
hydrochlor.....	oz	85	
hypophos.....	oz	1	50
iodid.....	oz	1	00
phosphas.....	oz	75	
salicylas.....	oz	65	
sulph German.....	oz	40	100oz tin 30 25 oz 32
" Howards.....	oz	45	
" " 4 oz	oz	40	
sulphocarbolas.....	oz	1	50
tannate.....	oz	50	
valerian.....	oz	85	
Rad. aconiti.....	lb	20	
" contus.....	lb	25	pulv 30
anchusa.....	lb	20	
angelica.....	lb	30	pulv 35
arctii (burdock).....	lb	15	
belladon.....	lb	18	contus. 30
calam. aromat.....	lb	30	
calumb.....	lb	20	pulv. 20
curcumæ Madras.....	lb	10	" 12
enula.....	lb	20	
galangal minor.....	lb	15	
" pulv.....	lb	25	
gentian, select.....	lb	10	
" ground.....	lb	12	
" pulv.....	lb	15	
ginseng.....	lb	4	50
glycyrrh decort.....	lb	25	10 lb 22
" incis.....	lb	60	
" dec't pulv.....	lb	60	
" bundles.....	lb	12	
" small bundles			
" super.....	lb	18	
" grd.....	lb	12	brl. 11
" helleb alb.....	lb	12	
" " pulv.....	lb	16	keg 14 br. 13
ipecac.....	lb	2	00
" pulv.....	lb	2	25
irisidis Florentine.....	lb	50	
" pulv.....	lb	60	
jalapa.....	lb	45	
" pulv.....	lb	55	
krameria opt.....	lb	30	
pareira brava.....	lb	40	
pyrethri.....	lb	35	
rhei E. I. opt.....	lb	1	25 cubes 1.00
" " sec.....	lb	75	
" " elect opt.....	lb	2	25 fingers 1.50
" pulv elect opt.....	lb	2	50
" " E. I. opt.....	lb	1	25
" " " sec.....	lb	80	
sanguinaria.....	lb	14	pulv 16
sarsæ Hond.....	lb	35	incis 50
sarsæ Jam.....	lb	70	" 75
" Mexican.....	lb	18	20 lb 16
scilla sicc.....	lb	12	
" pulv.....	lb	30	
senega.....	lb	65	
spigelia.....	lb	45	pulv 65
sumbul.....	lb	90	
taraxac sicc.....	lb	18	10 lb 15

Green Mountain : : : : :

Pills, Salve,
Balm, Syrup.

GEO. TUCKER'S GREEN MOUNTAIN SALVE HAS NO EQUAL FOR RHEUMATIC PAINS, & WEAKNESS OF THE SIDES & BACK LADIES.
 ARAPAHO OR
GEO. TUCKER'S GREEN MOUNTAIN BALM
 THE WELL KNOWN INTERNAL-EXTERNAL REMEDY
 THE SAFEST, SUREST AND MOST SPEEDY RELIEF FOR ALL NERVOUS AND INFLAMMATORY ACRES 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
 GEO. TUCKER'S BOTANIC SYRUP WARRANTED TO CURE COLDS INFLUENZA AND WHOOPING COUGHS
 \$5000 REWARD FOR BETTER PATENT MEDICINES SOLD BY ALL RESPECTABLE DRUGGISTS AND GROCERS SOLE AGENTS
 LYMAN, SONS & CO. WHOLESALE DRUGGISTS 51 PAUL STREET MONTREAL
 THOUSANDS OF PERSONS SUFFERING FROM VARIOUS DISEASES. IMMEDIATELY HAVE RECOURSE TO GEO. TUCKER'S INDIAN REMEDIES 429 CRAIG STREET MONTREAL

Chocolate
Worm Bonbons.

Preparations.

SIMPLE BUT SURE.

SOMERVILLES'

M. F. COUGH

C. H. E. W. I. N. G G. U. M,

Five Cents per Bar.

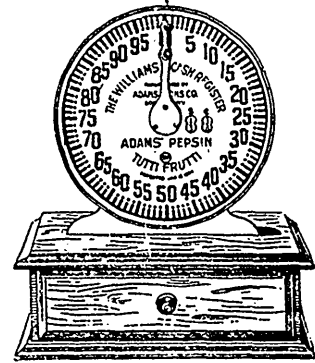
Twenty Bars on a Handsome Standing Card.

The Wholesale Trade have it.

Price 65 cents per Card.

C. R. SOMERVILLE, LONDON, ONT.

Rad tormentilla.....lb	40
“ pulv....lb	50
“ singib. Afric. u. b.....lb	18 25 lb 16
“ “ pulv...lb	20 25 lb 18
“ “ Jam. u. b.....lb	20 brl 18
“ “ bleached lb	25 10 lb 24
“ “ pulv opt. lb	30 10 lb 28
“ “ sec. lb	25
Resin flav.....lb	4
“ pulv.....lb	5 50 lb 4
Resorcin xtls.....oz	25 lb 3.00
“ resublim.....oz	50
Rhizoma arnicæ.....lb	30 contus 40
“ cimicifugæ.....lb	15
“ podophylli.....lb	14
“ serpentariæ.....lb	55 pulv. 90
“ valerianæ.....lb	15 pulv. 22
Rouge-Jewellers.....lb	75
Rubidium chloride.....gm	40
Saccharine..... dram	20 oz 1.20
Sacch. lactis pulv.....lb	25
Sago perlat. parv.....lb	5 bag 4
Sal prunellæ glob.....lb	20
Salicinum.....oz	20 lb 2.60
Salipyrine..... 50 grms	2 50 each
Salol.....oz	30 lb 8.75
Salophen Bayer.....oz	1 50
Santoninum.....oz	20 lb 2.50
Sapo Castile Alb. Contis....lb	16 box 15
“ “ Shell....lb	12 “ 10
“ “ Virgin....lb	12 “ 10
“ “ “ cakes box.	5 00
“ “ Mottled opt....lb	12 box 11
“ “ com....lb	10 “ 9
“ “ “ cakes gross	4 75
“ mollis ang.....lb	10 20 lb 8
“ “ German Green lb	35
“ “ Green opt....lb	55
Scammonia resin pulv.....lb	3 75
Scoparii cacumin.....lb	25
Secale Cornut.....lb	75
Seidlitz Mixture hds.....lb	22
Sem. canary.....lb	6 bag 5
“ cardam.....lb	1 25 1.00 & 75
“ cardam decort.....lb	1 00
“ pulv.....lb	1 50
“ celery.....lb	30
“ chenopodii.....lb	25
“ colchici.....lb	55 pulv. 65
“ cydoniæ.....lb	50
“ cymini.....lb	20 pulv. 25
“ fœnugræci.....lb	5
“ pulv.....lb	7 ground 6 brl 5
“ hemp.....lb	5 bag 4
“ hyoscyam.....lb	60
“ jambul.....oz	20
“ lini sifted.....lb	4 brl. 3½
“ lini crushed.....lb	5 brl. 4
“ “ No. 2....lb	4½ brl. 3½
“ “ No. 8....lb	4 brl. 3½
“ lobeliæ inflas.....lb	50 pulv. 55
“ maw.....lb	15 10 lb 14
“ millet.....lb	6 bag 4½
“ pumpkin.....lb	25
“ rapii.....lb	7
“ santonicæ.....lb	18 pulv. 28
“ sinapis alb.....lb	10
“ staphisagriæ.....lb	35
“ stramonii.....lb	25
Soda caustica stick.....lb	45
“ caustica cake.....lb	40
Sodo crystals.....lb	2 *brl 1.25 per 100 lbs
“ tartarata.....lb	28
Sodii acetat pura.....lb	25
“ arsenias.....oz	10 lb 1.20
“ benzoas.....oz	15 lb 1.50
“ bicarb. pulv Morson's lb	10
“ “ lbHd's....	16 14 lb 15



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ADAMS' TUTTI-FRUTTI

Cash Register.

A substantial and reliable article.
Send for descriptive Circular.

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Granular Effervescent Bromo-Pyrine,
Large size, \$9.00 doz. Small size, \$2.25 doz.
Medium " 4.75 " Sample " 8.50 gros
1 lb. Bottles, 2.37 lb.

Comp. Sy. Hypophosphites, \$8.50 \$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 " 4.00
Alvinine Suppositories, (Adult Size) .. 2.75
(Children's Size) .. 2.75

Glycerine Suppositories, (Adult Size) .. 3.17
(in a new and original Package) Per Doz. Boxes (Children's Size) .. 3.17

White Pine Com., 5 pt. bottles 2.65
Per dozen 6.85

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HENRY K. WAMPOLE & CO.,

Manufacturing Pharmacole

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New additions made to our World Renowned
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ANEMONE DE FRANCE,
LIS DE FRANCE,
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The above are put up either 1 or 3 bottles in
elegant packages.

Do not fail to include in your orders
..... for Holiday trade

ED. PINAUD'S Bouquet Marie Louise.

The gem of Parisian Novelties.
The most refined extract for the handkerchief.
Put up in elegant boxes in Louis XIV style.

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.*

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PERFUME to the celebrated and well-
known make of the establishment,
"LUBIN,"
of which they are
the
Proprietors.

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NOTICE.

Sodii bicarb pulv. coml. . . lb	4	keg 2 75
" bisulphis. lb	25	
" bisulphas pure lb	30	
" bromid. lb	65	
" carb. recryst. lb	15	
" carbolas pur. lb	3 50	
" chlorate xtls. lb	1 00	
" citras lb	1 00	
" hypophosphis. lb	1 40	
" hypsulphis. lb	5	keg 2.75
" iodid. oz	40	lb 5.50
" nitras pur. lb	25	coml. 8
" oxalas. lb	50	
" phosph pur. lb	15	pulv. 25
" potass tait pulv. lb	25	
" salicylas 1 lb. boxes . lb	1 60	5 lb bulk 1.50
" silicas xtls. lb	15	
" " solut conc. lb	10	
" sulphas. lb	3	brl. 1 1/4 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	60	
" nitro glycerin 1%. . . . lb	1 75	
Somatose—Bayer, 2 oz tins. oz	70	
Sparteïn sulph. oz	30	ea. 1 oz, 1 75
Spice pickling. lb	40	
Spt. ætheris comp. lb	60	
" " nit S. G. 845. . . . lb	65	Whr. qt. 60
" ammon. arom. lb	60	" 55
" " foetid. lb	85	
" camphor. lb	70	" 65
" chlorof. S. G. 871. . . . lb	70	" 65
" cinnam. lb	2 00	
" mentha pip. lb	1 10	
" methylated. gl.	2 00	Brl. 1.75 cash
" myristica. lb	90	
" rectificatus 65 o/p. . . . gl	4 25	5 gl. 4.20 in a/c.
" " " " Brl	3 85	cash.
" vini gall. gl	4 75	opt. 6.50
Spongia usta. lb	2 50	
Stanni chlorid. crist. . . . lb	40	
" oxid (putty-powder). lb	50	
Stannum gran. lb	50	
Stearin. lb	15	
Strontii nitras exsicc. . . . lb	20	10 lb 18
" chloridum xtls. lb	30	
Strychnina cryst. oz	1 00	10 oz 85
" sulph. oz	1 20	in 1/2 oz bots
Styrax liquid. lb	50	25 extra
Succus conii. lb	75	
Succus limæ fruct W. I. . . . gl	90	brl. 80
" rhamni. lb	25	
" scoparii. lb	70	
" taraxaci. lb	65	
Sulphonal—Bayer. oz	35	lb 4.50
Sulphur Lac. lb	12	10 lb 11
" præcip (B. P.). lb	20	10 lb 18
" round. lb	3	brl 2
" sublim. lb	4	bag 110 lbs 2 1/2
" vivum. lb	6	10 lbs 5
Sulphuris iodid. oz	40	
Swapsin, 1/2 oz bottles. . . . oz	5 00	
Tamarindus, W. I. lb	14	10 lb 12
Tapioca flake lb	6	
" pearl. lb	6	
Terebene. lb	65	
Terebinth canadensis. . . . lb	45	
" " chian. oz	35	
" " Venet. lb	1 1/2	

Terpine Hydrat oz	20	
Terpinol. oz	30	
Terra Japonica (Gambier). . lb	10	
Thallin Sulphate pure drgm	40	
Thiol liquid. oz	60	100 gm. tins 1 25
Thymol. oz	40	
Trional-Bayer. oz	1 25	
Tripoli oz	90	
Triticum repens. lb	20	
Troch. acid carbolic G's T. H. lb	75	
" " tannic " lb	1 25	
" aconite lb	90	
" bath pipe lb	45	
" black currant, Gibsons lb	90	
" boracic acid . . T. H. lb	90	
" " bronchial F. D & Co.		5 lb can 1.75 each
" cachou dwf bouquet. lb	52	
" " floral gems. . . . lb	52	
" camphor lb	75	
" capsici Gibson's lb	65	Domestic 35
" catechu " lb	80	
" chlorodyne. lb	65	Gibson's 90
" coltsfoot. lb	40	
" cubeb T. H. lb	90	
" gelatine lb	60	
" glycerin [jubes]. . . . lb	75	
" gnaiaici T. H. lb	1 10	
" ipecac. lb	75	
" kramaria T. H. lb	1 25	
" lactuse, . . . T. H. . . . lb	1 25	
" licorice (pipe) lb	35	
" mentha pip C.S Gibson's lb	65	11b bottles 75
" mentha pip [XXX] . . . lb	50	
" morphings. lb	1 00	
" " et ipecac. lb	1 00	
" mosch Gibson's lb	80	
" opii lb	75	
" " paregoric. lb	70	
" pontefract. lb	30	
" potass. chlor. lb	50	Tablets 60
" pyrethri T. H. lb	90	
" rose Gibson lb	80	
" sedative T. H. lb	30	
" tolu. lb	70	
" tussi [cough]. bot	1 20	Gibson's
" " " " lb	50	[Preston's]
" " " Watsons. tin	1 25	each
" vermifuge. lb	50	worm
" voice [jubes]. lb	85	
Uranii acetat. oz	75	
" nitras oz	60	
Urethane oz	60	
Veratrina. oz	1 75	
Verdigris. lb	35	powd 40
Vinum rubrum [port]. gl	3 00	qr. caak 2.90
" " opt " " gl	3 50	" 3.25
" " xericum [sherry] gl	1 75	" 1.65
" " " opt. " " gl	3 00	" 2.75
" " " fine. gl	3 50	" 3.25
Witch Hazel extract. lb	1 50	5gals 1.25
Whiting. lb	1	brl 60c per 100 lb
Xylo lb	60	
Zinci acetat. lb	45	
" bromid. oz	25	
" carb. lb	35	
" chlorid. sticks. oz	15 1/2	lb 45, lb 75, bt. free
" iodid. oz	60	
" oleas. lb	1 20	
" oxidum Howard's P.B lb	70	
" oxidum Coml. lb	15	10 lb 12
" phosphas pur. lb	1 25	
" phosphid. oz	60	
" sulphas com. lb	6	10 lbs 5
" " pur Merck's lb	10	10 lbs 9c.
" sulphocai oz	10	lb 1.00
" valerian oz	30	b 4.00
Zincum granulatam. lb	30	
Zinci sesquiodol. oz	1 50	

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**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, 3 & 5 grs.	} in 1 dr.
EXALGINE	1, 2 & 5 grs.	
IRON CARB. (form. Bland'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.	

"VICHY" 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.

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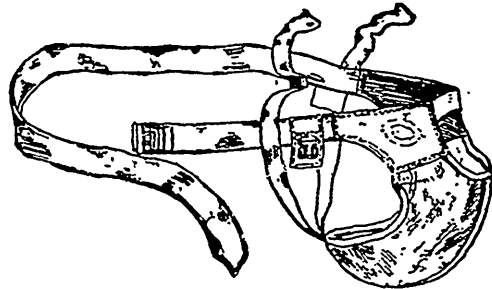
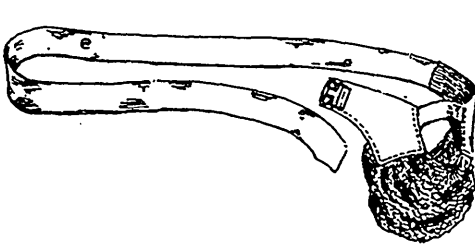
5 grs. in each drachm.

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).		

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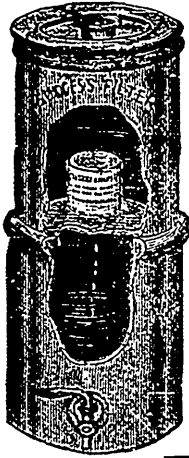


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This cut shows a sectional view of the

Stoneware Filter

Styles 1 and 2,

Set up ready for use. There are two crocks, each of four gallons capacity—an upper one holding the Filter Block as shown, and a lower one, which can be used as a water cooler, if desired.

This block is four inches in diameter by the same in height, and is hollowed out on inside. This fits on a metal tube, which fastens by means of the nut, shown in separate cut, to bottom of Filter Jar. Block can be lifted off tube, cleaned and replaced in two minutes, and with no trouble at all. Water passes from outside of block, through the walls, into the hollow chamber and from thence, by means of the Drip Tube, into the lower receptacle.

PRICE LIST.

All Best Glazed Stoneware, Matches Mahogany Rosewood or Walnut Furniture.

No. 1.	Family or Office size, as shown, 4 gallon capacity,	\$5 00
No. 2.	“ “ “ 2 blocks, 6 “ “	7 50
No. 3.	Hotel or Restaurant size, 3 blocks 3 “ “	10 00

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BEST POLISH IN THE WORLD.



DO NOT BE DECEIVED

with Pastes, Enamels, and Paints which stain the hands, injure the iron, and burn red. The Rising Sun Stove Polish is Brilliant, Odorless, and Durable. Each package contains six ounces; when moistened will make several boxes of Paste Polish.

HAS AN ANNUAL SALE OF 3,000 TONS.

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Applied and Polished with a Cloth.

Manufactured by Morse Bros., Canton, Mass., Proprietors of “RISING SUN STOVE POLISH.”

LYMAN, SONS & CO.,
DEARBORN & CO.,

St. John, N.B.
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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.”

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NEW YORK CHICAGO BOSTON.
LYMAN, SONS & CO., Sole Agents for Canada, MONTREAL.

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ABSOLUTE PURITY GUARANTEED BY USING

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CHLOROFORM PURE *

[Answering all Recognized Purity Tests]

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