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Vol. VI—No 6.

SEPTEMBER, 1895.

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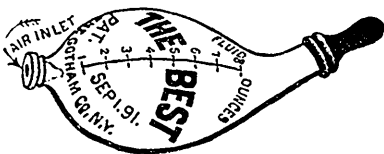
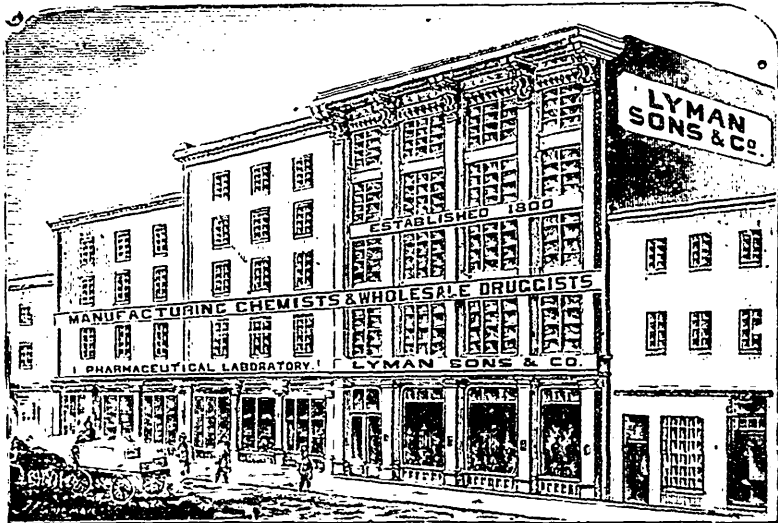
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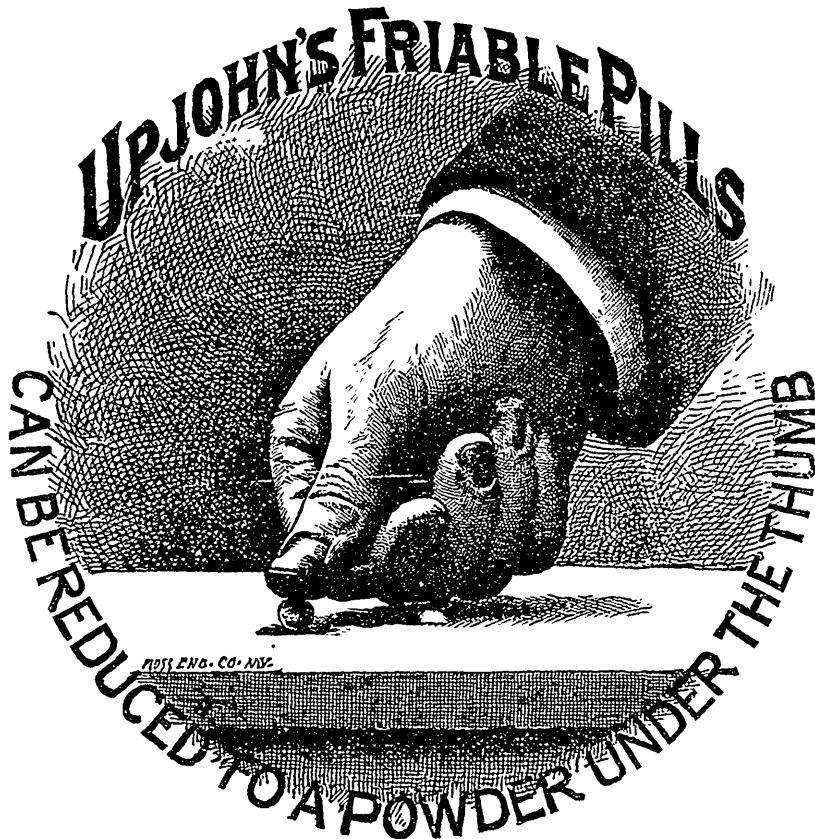
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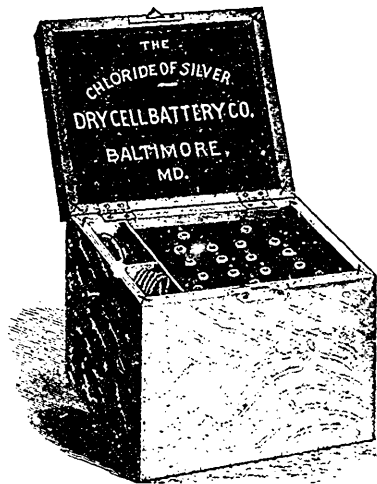
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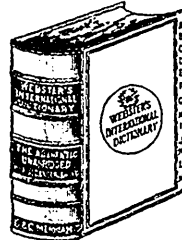
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It is a Stimulating Expectorant, Analgesic, Antipyretic, Antiseptic, and Cholagogue.

It aids Digestion.

Ammonol is put up in one ounce bottles only.

Samples sent free to any physician on application.

The Ammonol Chemical Co.,
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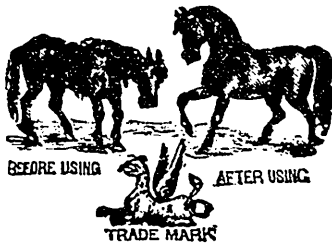
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A Household Panacea guaranteed to cure Sprains, Sore Throat, Bruises, Headache, Stiff Joints, Catarrh, Rheumatism and all pains, human flesh is heir to. All travellers should have a bottle in their satchel, it can be used internally or externally.

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Messrs. Lyman, Sons & Co., at Montreal, are prepared to furnish the trade either in doz. or gross, lots at the above prices.



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Most ruptured persons are inclined to wear trusses wrong. They don't know any better. Many trusses are made to suit the inclination. Seeley's Hard Rubber Trusses are not. They are made to be worn right. If anybody fails in making one of these work satisfactorily, it is because his efforts are not properly directed. A person who knows how to use a truss properly will have none but Seeley's. We say so because we are an authority. For thirty-five years we have made a specialty of fitting trusses. We fit and make more trusses than any other firm. We make all kinds. We use Seeley's Hard Rubber Trusses always, because they are better than any other. We get big prices for fitting trusses. The same trusses we use when getting big prices, druggists and dealers can buy from us and learn how to fit them at about the price of ordinary goods. If we knew how to make them better, we would do so and charge more money. We have a trade for the best, and so have dealers.

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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.

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LIBBIG'S EXTRACT OF MEAT & MALT WINE
Is a delicious beverage and tonic made from Port Wine,
Liebig's Extract of Meat, and Extract of Malt.

WINCARNIS
Is a New Name Registered to prevent fraudulent Imitations.
OVER TWO THOUSAND
Unsolicited Testimonials have been received from Medical Men
IMPORTANT UNSOLICITED TESTIMONIAL FROM
T. POYNTZ WRIGHT, Esq., Medical Officer of
Health, New Street, St. Neots.

New Street, St. Neots, January 26th, 1904.
I have much pleasure in giving you my experience as to the "Meat and Malt Wine" received from you some time since, and in bearing testimony as to its value as a recuperative and restorative agent.
In the early part of last year my wife was extraordinarily unwell, suffering from loss of flesh and appetite, together with mental and bodily exhaustion, and sleeplessness. She was under treatment for a considerable time without relief, and I at last determined to try "Wincarnis."
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Best Cough Syrup. Tastes Good. Use
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Piso's Remedy for Catarrh is the
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The highest grade of petroleum jelly,
chemically pure, sweet, and odorless.
Put up in all sized packages, from one
to fifty pounds.

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BOSSHARDT & WILSON Co.,
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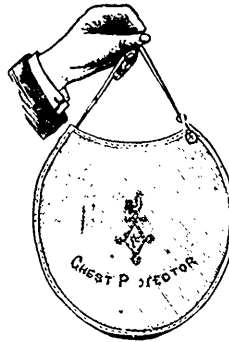
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Manufacturer by Power
of . . .

Surgical Appliances.



Bandages, Eyeshades, Etc.



A Sample Order requested.

**Elastic Hosiery, Trusses,
Abdominal Belts, Sus-
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Splints, Corsets, Bath
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Statuettes for Belts, Braces
Show Cards, supplied on
Loan Free to those stocking
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— FOR —
Horses and Cattle.



DICK'S BLOOD PURIFIER is no
sham made up to sell only, but is pre-
pared 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, im-
parts new life and vigor, and is adapted
for the cure of worms, loss of appetite,
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also will backen the heaves, and in
recent cases effect a cure. In fact there
is no case of disease among Horses and
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ASTHMA,
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Prices, 50c & \$1.00 per Box.

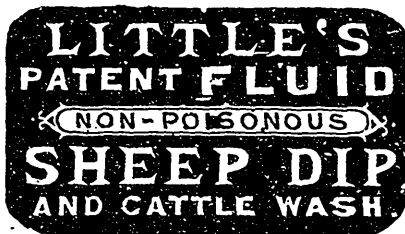
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FOR THE DESTRUCTION OF

TICKS, LICE, MAGE, and all Insects upon
SHEEP, HORSES, CATTLE, PIGS, HOGS,
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Superior to Carbolic Acid for Ulcers, Wounds, Sores, &c.
Removes Scurf, Roughness and Irritation of the Skin, make
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Removes the unpleasant smell from Dogs and other animals

"Little's Sheep Dip and Cattle Wash" is used at the
Dominion Experimental Farms, at Ottawa and Brandon; at
the Ontario industrial Farm, Guelph, and by all the principal
Breeders in the Dominion—and pronounced to be the cheap-
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17 Gold, Silver and other Prize Medals have been awarded
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Sold in large Tins at \$1.00 Is wanted by every farmer
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To be had from Wholesale Druggists in TORONTO, HAMILTON and LONDON

The Silver Truss.

The Silver Truss is acknowledged to be the
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It is easy to fit,
It is easy to wear,
It is perfectly clean,
It is light and cool

and has no understraps.

It is made by

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We also Manufacture

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THE FORREST CANNING COMPANY'S

"Jersey" Brand Condensed Milk.

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

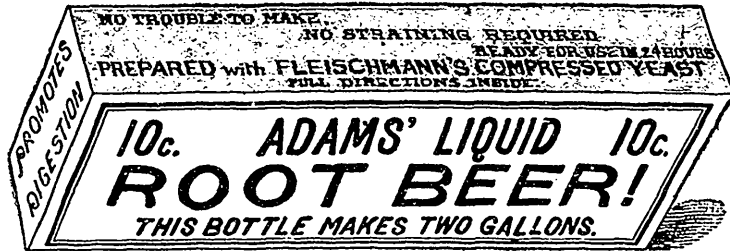


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Good value, Easily Sold, and Price not named on
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Coal Tar Soap, Pine Soap, Carbolic
Soap, Carbolic and Sulphur Soap.

Paper-wrapped Tablets, averaging about 4 to the pound.
1 dozen boxes, each 1s. 8d. } Subject to Trade Discount.
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** Order above as Calvert's *HYGIENIC* Brand.

Fuller's Earth Soap, Pumice Soap,
and Petrofenic Soap (for the Hair).

Neat paper-wrapped Tablets, averaging about 2½ oz. each.
1 dozen boxes, each 1s. 3d., less Trade Discount.

** Order above as *CALVERT'S*.

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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.

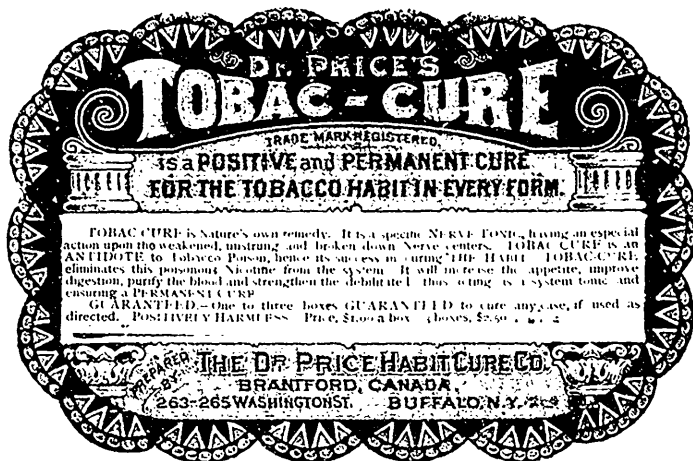
WE ARE ALSO MAKERS OF

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Extract of Herbs, Ginger Ale Extract, Ginger Extract,
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Wine Essences.

Inventors and
Manufacturers: **NEWBALL & MASON,**
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WRITE TO US FOR RATES.

MONTREAL PHARMACEUTICAL JOURNAL

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MENNEN'S



Borated Talcum Powder

(STERILIZED)

LATEST—BEST.

To Relieve . . .

Prickly Heat, Measles, Nettle Rash, Chicken Pox,
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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
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Sells at sight. Order from your
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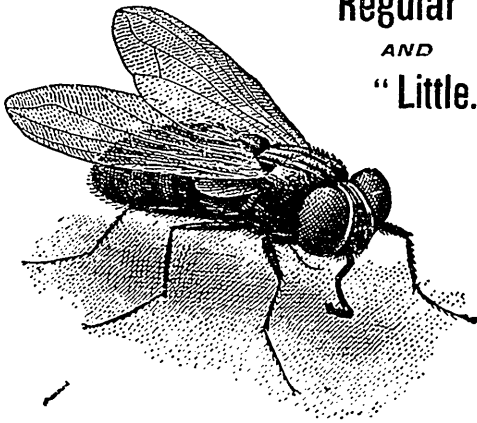
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Sticky Fly Paper

Gives the Same Satisfaction under all Conditions.

MADE IN TWO SIZES.



Regular
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Both sizes, Best Quality.

Both with the New Patent Corrugated Border.

Size $5\frac{1}{4}$ x 9 inches. Ask to See it.

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REGULAR:

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"LITTLE" TANGLEFOOT.

Per Box	- - -	20 cents.
Per Case (15 Boxes)	-	\$2.50

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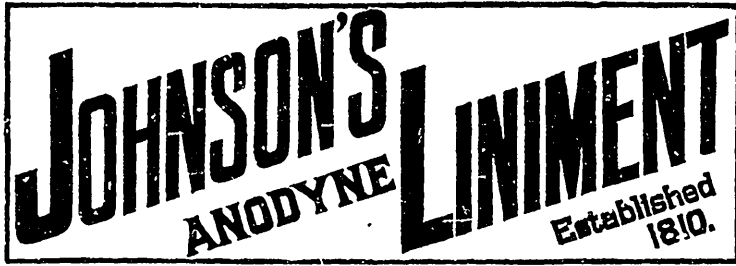
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The most effectual remedy for **Spinal Complaints, Nervous Diseases, Rheumatism, etc.**, should be stocked by every druggist. You will be asked for it and it will pay you to push it.

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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.

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.**

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.

DOMINION OF CANADA PRICE LIST.

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**Johnson's Anodyne Liniment,
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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.		
PARSON'S PURGATIVE PILLS	— 1.50	“	“
SHERIDAN'S CONDITION	Small— 1.50	“	“
POWDER.	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.

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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. VI—No. 6.

SEPTEMBER, 1895.

\$1.00 per annum.

The Montreal Pharmaceutical Journal.

171 St. James St., Montreal, Canada.

JOSEPH E. MORRISON, Editor.

Subscription. \$1.00 per Annum.
Advertising Rates will be made known on application.
All remittances, matters intended for publication, new advertisements or changes should be addressed,

MONTREAL PHARMACEUTICAL JOURNAL.
P. O. Box 744, Montreal.

F. L. BENEDICT, Secretary.



Prof. Ramsay and Lord Rayleigh have been awarded Hodgkins prize of \$10,000, by the Smithsonian Institute for the discovery of argon, the greatest addition to our knowledge of the constitution of the atmosphere.

The election of Mrs. M. O. Miner, as third Vice-President of the American Pharmaceutical Association, marks an epoch in the history of Woman in Pharmacy, as Mrs. Miner is the first lady ever elected to office in this society, and the honor is well deserved.

Prof. Vogl, Professor of Pharmacology and Pharmacognosy in the University of Vienna, has been awarded the Hanbury medal for his labors in the study of the anatomy and natural history of drugs. His greatest works are the "Commentary on the Austrian Pharmacopœia," and his "Anatomical Atlas."

According to predictions of those experienced in such matters, Montreal will have the largest number at the next convention that have ever attended. The members are enthusiastically in favor, and big parties are already in course of formation. Jos. Jacobs, of Atlanta, Ga., is going to come all the way from Savannah by boat, and will have a jolly crowd of Southerners with him, the famous Polk Miller among the number. Mr. Jacobs was one of our best workers and spared no efforts for Montreal, and as he likes a like excitement money was up to the extent of 10 to 1 his on Montreal, but there were no takers even at these odds.

The editors of the *New England Druggist* after a few complimentary remarks with regard to our "indomitable perseverance and irresistible determination" in agitating Montreal for the A. Ph. A. Convention of 1896, expresses the belief that the forty-fourth Convention will equal, if not surpass in profit and pleasure, any or all of the forty-three that have gone before.

We thank our esteemed contemporary for his flattering, and we feel, undeserved praise, and also for the efforts they too have made for Montreal. Frequently during the past year, the *New England Druggist* has given us encouragement to carry on the fight, and it certainly will not be our fault if the forty-fourth convention be not the most successful in the history of the association.

The selection of Montreal as the next place of meeting of the A. Ph. A. was a graceful answer to the proffered hospitality of the famed Canadian city and also to the sectional rights

of the stately and cultured east as distinguished from the "wild and woolly" west. The pendulum swung last year from central Chicago to Eastern Asheville, this year to western Denver and for next year it very properly swings to northeastern Montreal. Destiny points its direction for 1897 to the twin cities of Minnesota on the sylvan shores of Minnetonka. A pressing invitation was issued from these shores at Denver for next year's meeting, but with a kindly shake of its majestic looks the phar-macal patriarch embraced the fair emissaries of Montreal and whispered to the disappointed charmers of Minnetonka "next time."

The twin cities of Minneapolis and St. Paul made a gallant fight for the convention in 1896. Mr. W. A. Frost of St. Paul and his committee made many converts, but the Montreal delegation, headed by Mr. J. E. Morrison of that city, carried away the prize.—*Western Drug.*

The acceptance by the American Pharmaceutical Association of the invitation of the Montreal pharmacists and other public bodies, to hold the next convention in this city is a source of great satisfaction to all interested in the advancement of Canadian Pharmacy, and from which it will receive the greatest impulse along a higher plane in its history. Although the invitation came from the Provincial Association and the Montreal College of Pharmacy, it is not a matter confined to druggists of the city or province. but it is one of interest to all Canadian pharmacists, one in which all are interested and one which all should endeavor to bring to a successful issue. The example set by the druggists of St. Louis and of the State of Kansas is one which we hope and believe the druggists of Canada will profit by, that is in entertaining the visitors passing through on the way to the convention. The work in connection with obtaining the convention has been in the hands of one or two, now that it is an accomplished fact, every pharmacist in this city must take an active interest in making the '96 meeting the greatest in the history of the A. Ph. A. and it will be done. Montreal has many advantages as a convention city which our American brethren fully appreciated. The many historical points

of interest recalling some of the most important events in the early history not only of Canada but also of what is now the United States, the more practical advantages of handsome buildings, well paved and well kept streets, its many modern hotels, its beautiful surroundings, and the important fact that it can be easily reached by rail or by boat, in which it is different from most of the American cities at which the meetings have been held in recent years, and as a starting point for trips through some of the finest scenery on this continent, and the well known hospitality of its citizens all combine to make Montreal an ideal convention city, and will draw a larger crowd than any other place in America. And we must prepare to entertain our visitors properly and in keeping with Montreal's reputation in this line, and every pharmacist in this city must fall into line and help along the good work.

The address of President Martin, of the British Pharmaceutical Conference, which we hope to publish in full shortly, contains many points that should form food for thought for pharmacists, not only in England, but in this country also. Mr. Martin aims at a high ideal in pharmacy, one which, unfortunately, is too high for the majority, but the remedy which he offers for the present evil state of pharmacy is worthy of consideration, as he says, "my last word is the conviction of my life, that in order to benefit pharmacy, we must approach it from the side of education, and raise it to the rank and position of a profession, and not from the side of trade. If it is a question of barter, of pecuniary gains and losses, Parliament will not and ought not to interfere to assist and protect the pharmacist any more than the grocer and draper, but if it is wise in the interest of the health of the community that a class of men should at the outset spend time and money in acquiring special and sufficient knowledge of pharmacy, then Parliament may be expected to restrict the practice of it to such men."

Here, we think with Mr. Martin, is the only solution of the problem, pharmacy must be made a profession or pharmacy laws will be of little or no use. We often ask ourselves why should pharmacists be protected by special laws when we hear the manner in which many

look upon their position in regard to the public? Pharmacy is looked upon solely as a business, and once the final examination passed, and the legal right to open a drug store is obtained, all question of profession is put aside and the business aspect only is looked after. In such cases we see no reason why one business man should be protected by law more than another. We say that in cases like this pharmacy laws have been obtained by false pretenses, and should be repealed.

We are in favor of pharmacy laws and laws much more stringent than we now have, we would make the preliminary examinations equal to that of the medical profession, we would have the course of study long enough to give the student a fair idea of the necessary subjects of Pharmacy, Chemistry, Pharmacognosy, and Botany, we would give him sufficient laboratory work while at College that the making of an analysis or assay would not be the impossible job that it is to-day at least in the most of the Provinces. No one, physician or other, should be allowed to practise pharmacy until he had passed the Pharmaceutical Board of Examiners, and no physician living within a certain distance of a pharmacist should be allowed to dispense his prescriptions, and such other modifications, similar to the laws in force in France and in Germany. But before we can ask for these privileges, we must have something to offer for them, we must show that pharmacy is a profession, that our members are educated up to the necessities of such a position and we must have colleges capable of turning out men fitted for the position. Until then, we cannot ask for more than we have. But if pharmacists are satisfied that pharmacy is only a business and nothing more, then they must expect competition from others and cannot hope for aid from the government, and as we have already said, why should one line of business expect to be aided by Act of Parliament and guarded from competition? but if pharmacy is more than business and each and all of us do our best to make it what it should be, a profession, then only can we expect to obtain protective laws, and the only way to do so is by demanding a high standard of education both preliminary and final.

The Ontario College of Pharmacy and the Canadian Pharmaceutical Association.

The refusal of the Ontario College of Pharmacy to endorse the proposed Canadian Pharmaceutical Association, was no doubt a surprise to some, but to those acquainted with the freaky actions of this institution during the last few years it was not unexpected. However, this action on the part of the O. C. P. will not have any very disastrous results for the proposed Association, as although the Council is supposed to represent the pharmacists of Ontario we are sure the latter are more public spirited, more enlightened, and possess more foresight than the gentleman who happen to represent them at present.

It is not necessary that the proposed Association should receive the endorsement of any of the official bodies, since it will in no way interfere or have any official connection with them, but it was thought that it would simplify the process of organization by obtaining support from the provincial associations and we are happy to say that with the aforementioned exception, all the replies so far received have been in favor of the idea, and we do not understand how pharmacists claiming to be modern or practical, can refuse to acknowledge the advantages of such an organization. The excuse or reason offered by the O. C. P. for its action is too silly to require any discussion, "in face of the failure of the druggists of this province to maintain a Provincial Association on somewhat similar lines, we cannot look for any great measure of success from the attempt to form a Dominion Association, and we cannot therefore recommend the co-operation of this council." This resolution is at least egotistical, if Ontario cannot make a success of such an Association, therefore the Dominion of Canada cannot do so, but fortunately this reasoning is not well founded, it is poor logic, and we believe the majority of Ontario druggists think so.

The Council of the O. C. P. may keep out, we can manage without them, there are enough progressive, educated pharmacists in Canada to organize and carry on the Canadian Pharmaceutical Association, and Ontario will not be behind in the work, the Council to the contrary notwithstanding.

THE UNIVERSAL TRADE ASSOCIATION.

We have refrained so far from making any comment on this organization in these columns because we did not think that Mr. Hayes would try to gain adherents to his scheme in Canada, but the advent of one of his agents in Montreal and the calling of a meeting of the Montreal Chemists Association impell us to utter a note warning regarding this man and his methods. We, do not think, that a successful campaign can be carried on here, since, as a rule Canadian pharmacists are a well educated, intelligent body of men, and would carefully scrutinize any scheme before taking shares in it.

Some of our contemporaries in referring to the U. T. A. have said that it contained some good ideas, but we cannot find them. No doubt it would be a grand thing to organize the druggists into one solid body, but in order to do so, some influential organization must commence the work, not an unknown individual.

The plan as outlined by Mr. Hayes, as we understand is as follows: The retail druggists are to join this society by paying \$5 per share; when 20,000 or 30,000 of the 40,000 druggists of the United States and Canada have become members, the manufacturers will be asked to protect the retailers by using the U. T. A. stamps, by means of which cutting can be traced and the cutter cut off. This looks like a brilliant scheme at first sight, but on close scrutiny, one sees the folly of it. Each of the 20 or 30,000 will pay in \$5 on joining, if this number join all right, but if this number be not secured who gets the amount subscribed? If it does not come back to the subscribers they will be out just so much, with the odds all in favor of the latter; a game of "heads I win, tails you lose," for Mr. Hayes. Now this society has been in existence two years, and the manager claims a membership of 5,000 (which we do not believe); how long will it take to get in the 40,000 druggists in North America admitting that this number has joined in two years?

Then considering the constant changes in the drug business, and also the fact that the additions will be slower, the absurdity of the scheme will be seen at once. By the end of

five or six years a great number of those who join during the first years will have got tired and dropped out, so that the requisite number will be as far off as ever, but if druggists continue gullible, Mr. Hayes will have an inexhaustible gold mine to draw from. We fear that it will not be long however before he finds that he is off in his calculations and if he expects to find any "suckers" among Canadian pharmacists he is making a mistake, he will have to show something tangible and more sensible before he rakes in any of our \$5 bills. We append an editorial from the *Western Druggist* of this month on this subject, which came to hand as we go to press:

The "Universal Trade Association" of Detroit and its organ, the *Retail Druggist*, continue to solicit subscriptions to a scheme which, in view of known facts, makes it little less than an imposition. Druggists should understand that the plan it proposes for the prevention of price-cutting has been endorsed by no representative body of the drug trade, that it has no recognition from a single manufacturer of note, that an investigation showed that it was practically without capital or means, that its officers are for the most part not connected with the drug trade, and that the scheme has every appearance of being wild and visionary excepting as to the subscription end of it which, thanks to the innocence of certain druggists, seems to bear some grateful results. The Chicago Retail Druggists' Association, after a personal visit by its secretary and a thorough investigation, pronounced the corporation unworthy of recognition or support.

The Montreal Chemists' Association.

A meeting of this society was held on the 19th inst. for the purpose of hearing the explanations of Mr. Bogue of Detroit, an agent of the Universal Trade Association, of the objects of this society. There were present Messrs. S. Lachance, president; D. Watson, J. A. Nicolle, C. E. Scarff, A. Lanctot, A. J. Laurence, Lecours, Leonard, J. T. Lyons, Papineau, J. A. Knox, J. E. Morrison, T. E. Barbeau; and others, Mr. Lachance opened the meeting by stating its object, and called upon Mr. Bogue, to state the purposes

of the U. T. A., which he proceeded to do in a manner which seems to be characteristic of U. T. A. business generally. Mr. Bogue talked for nearly half an hour and said so little that his audience was as wise when he finished as when he commenced. Apparently this organization is designed for the salvation of the retail druggists by means of a series of stamps, how the stamps were going to do the work was not made very plain. Mr. Bogue handed around a lot of typewritten documents which he said were endorsements or at least so the majority understood, of the scheme by manufacturers and jobbers. Mr. Bogue also paid his respects to the American Pharmaceutical Association for its action at Denver anent the U. T. A. and its manager Mr. Hayes, he then stated that he was ready to answer questions on the subject, no one seemed to have any questions at the moment, the explanations of Mr. Bogue being of such a nature that the first question with the listener was "Where am I at?" However, as there were no very eager questioners ready, Mr. Bogue stated that he would like to hear from Mr. Morrison. Mr. Morrison is usually of an obliging nature, and responded to the kind invitation, but in a way that did not please Mr. Bogue at all. Mr. Morrison in commencing stated that he did not think any one would be likely to charge him with being opposed to organization, as he had always been strongly in favor of pharmaceutical societies tending to benefit pharmacy, but in this case he felt impelled to perform a very disagreeable duty, and although Mr. Bogue might be a very estimable gentleman, still his work was of such a nature that it should be exposed. The U. T. A. was not endorsed either by retailers, manufacturers, or jobbers, and the retail druggists had come to the conclusion that the only one who would benefit by this society was Mr. Hayes, the organizer and general manager. Mr. Morrison, then went over the experience of the Chicago druggists with this individual, as related by the gentlemen interested, at the Denver meeting of the A. Ph. A., and gave his views on Mr. Hayes and his methods as gathered in interviews with the retailers who were at Denver and who had any transactions with this individual.

Mr. Watson rose to a point of order and wanted to know what it was all about, he had heard a great deal this afternoon about the U. T. A. and as a jobber and manufacturer he would like to know how the stamps were supposed to work? Who would enforce the agreement? And several other very pertinent questions.

Mr. Bogue then offered some explanations regarding Mr. Watson's questions, and proceeded to reply to Mr. Morrison's strictures, the burden of the reply being vituperation and defamation of the A. Ph. A., which was characterized as an old fossil; Holmes, Von Herman, Goetz, and the others who had given their experiences with Mr. Hayes, being everything evil.

Mr. Morrison read a telegram which he had received from Mr. T. V. Wooten, president of the Chicago Retail Druggists' Association, stating that report of Commercial Section, A. Ph. A. as published in the journals was correct, and that the experience of the Chicago Retail Druggists' Association with the U. T. A. was extremely unsatisfactory.

Mr. Bogue presented some letters from a few wholesalers which were supposed to be endorsements of the scheme, but on examination proved to contain nothing more than the general statement that any practical scheme for stopping cutting would be a good thing.

Mr. Morrison said, Mr. Bogue I understood you to say that the bundle of papers signed by J. C. Ayers and others were endorsements of your scheme.

Mr. Bogue, Oh, no, I did not say endorsements of our scheme.

Mr. Morrison, Well, nine tenths of those present understood you to say so.

Mr. Watson and others, That is so, but Mr. Bogue denied it. The object of the questioner was to find out where or which one of the letters of these manufacturers could be any construction or twisting or hair-splitting be made into an endorsement, but Mr. Bogue when corrected denied that he had made any such statement although the majority so understood. After some further talk Mr. Watson suggested that if anyone wanted to take shares in the U. T. A., they had better move up and put down their names, and if

not that it would be a good idea to adjourn and as no one offered to subscribe for stock, the meeting adjourned.

A New Wrinkle in Standardization

During the last ten or fifteen years a vast amount of knowledge has been acquired by the labors of many workers in the field of standardization of pharmaceutical products, but the latest effort of a Western Canadian drug house in this line is worthy of special mention. We quote their advertisement verbatim. "We take pleasure in informing the medical profession and drug trade, that we have made arrangements for the standardization of twenty of the Staple Fluid Extracts of ———-manufacture." This is a good idea, only a little late, as most manufacturers have already standardized all their extracts of alkaloidal drugs. Then follows the way in which this firm proposes to carry out their programme. "In future, therefore all Fluid Extracts listed on pages 16 and 17 of our new price list will bear the certificate of analysis of Dr. ———, Professor of Chemistry, ——— Medical College. Our arrangements with him have been submitted to and endorsed by leading men in both professions and are briefly as follows: Large lots of each of the lines referred to are made up in accordance with Prof. ———'s requirements; samples of each of these are retained as standards for all future manufacture. Afterwards, at periods suitable to himself, but not less than five times a year, Dr. ——— is to purchase samples in the open market, make analysis, and report to us. If it is found the products so examined are not up to the standard, he will of course insist on the withdrawal of his certificate.

It will be impracticable to have a separate analysis for every lot made in the future, nor would the result justify so large an expense, but we feel sure the contract with Dr. ——— will be accepted as sufficient guarantee that ———'s Fluid Extracts are worthy of confidence."

This is one of the most ridiculous attempts at standardization we have ever heard of, in fact we do not believe that it is at all necessary to point out to our readers the glaring inconsistencies of this announcement. But as

the authors of it are either entirely ignorant of the meaning of standardization or appear to consider the pharmacists of Manitoba to be in that condition, a few remarks upon the subject may not be out of place. Standardization means that each lot of the preparation shall contain a certain fixed percentage of alkaloid or alkaloids, when assayed by the same process, and as no two lots of the same drug will yield exactly the same percentage, extracts made therefrom will vary in proportion to the alkaloidal yield of the crude drugs, and in order to obtain standardized fluid extracts, each lot of the finished product must be assayed to see that it is up to the standard, and if not it must be brought up to it by appropriate treatment. But this firm considers that if a large lot be made according to the requirements of Dr. ——— and a sample be put aside as a standard, that they have done all that is necessary. We will admit that the lot examined is entitled to be designated as a standardized fluid extract, but who is to guarantee that the second lot of extract made from the same drugs will be the same alkaloidal strength, although it may answer the physical description of the first exactly. For instance, take Fld. Ext. of Belladonna Leaves, the first lot may be made from a drug yielding 0.20 p.c. of alkaloids, will anyone pretend that exactly the same product can be obtained by the same treatment from a drug yielding 0.40 p.c., it is simply preposterous. The claim that the chemist is to analyse lots purchased in the open market and if not satisfactory will withdraw his certificate, is of a piece with the rest of it. We fear this concern has the worst end of the bargain, as no one knowing anything of drug variation and standardization, would enter into any such agreement, since they would be cognizant of the fact that it would be impossible to give any such guarantee under the circumstances.

As with everything else there is but one way of standardizing fluid extracts and that is by assaying each lot made and in no other way, but according to this concern, "It will be impracticable to have a separate analysis for every lot made in the future, nor would the result justify so large an expense," if so then it would be better to leave standardized

fluid extracts alone, although for our part we do not see any impracticability in assaying each lot if one only knows the way, and we think that any pharmacist capable of making a "standard fluid extract" should be able to assay it without aid from any professor of chemistry in any medical college. We would recommend that this firm, if they desire to send out standardized fluid extracts, should adopt the method outlined above which would yield such a result, but any such scheme as laid down in their advertisement will only render them objects of ridicule in the eyes of all pharmacists who know anything of pharmacy.

THE Montreal *Herald* recently published the following editorial comments on the A. Ph. A. Convention:

AN INTERESTING CONVENTION.

The convention is a good thing. The delegates from afar enjoy first of all what the advocates of a travelling vacation call the broadening of the intellect. Then presumably they profit by the discussion of means to the advancement of the cause in which they are interested. The hosts, that is to say, the citizens of the place of meeting, profit to the extent of the money which the delegates leave behind them and which otherwise would not have been spent in the town. And, moreover, their attention is drawn more or less directly to matters in respect of which they can afford to be better informed, and which in any other way would not have been brought to their notice. Montreal has become a favorite meeting place for the people of the whole continent. It is an ideal convention city. It is so well served by the railways as to be central in location. It is provided with ample and first-class hotel accommodation. Its people are not unjustly noted for a substantial hospitality. And in itself it is one of the most interesting and beautiful cities on the continent, and a prominent spot in the itinerary of every well-informed tourist. It is gratifying to learn that by reason of the efforts of a Montreal delegate, an important organization, the American Pharmaceutical Association, will hold its next annual convention in Montreal in the summer of '96. The association represents one of the most substantial interests on the continent, and as its deliberations are not usually confined to technical matters, its session here should be of much interest and profit to Montrealers. It is estimated that some 900 delegates will attend this convention, and the labors of the Montreal delegation should elicit the thanks of the citizens.

OBITUARY.

PAUL MATHIE.

The sudden death by drowning of Mr. Paul Mathie, of Quebec, was a shock to his many friends in the drug trade. Mr. Mathie, for many years, has had a drug store at Murray Bay during the summer months, to which he devoted a certain number of hours daily, the rest of his time being taken up with rod or gun, as he was a most devoted disciple of Ike Walton, and it was while on one of his fishing trips which he intended to be his last for this season, that he lost his life. Mr. Mathie was a Frenchman, and emigrated to Quebec about 24 years ago. After passing the examinations he purchased the business of A. Leclaire, and in a few years had built up the most successful retail drug business in the city. During the first years of his business career, no one ever paid stricter attention to his work, which was the secret of his success, but of late years he had given more time to the pleasures of life taking things easy, and being an enthusiastic sportman, spent a good part of the summer and fall in the woods, with gun or rod.

Mr. Mathie was for several years a member of the Council of the Pharmaceutical Association, and of the Board of Examiners, and was 1st Vice-President of the Association for two years.

MONTREAL ITEMS.

Dr. Darrach, of Kensington, P. E. I., recently passed through the city on his way home from an extended trip to the west, in which he combined business with pleasure.

H. S. MacDonald and wife, of Peterboro, were among our visitors recently. Mr. MacDonald is taking a holiday for the good of his health, which has been run down of late from over work and too close attention to business.

Mr. R. T. Geary, of Sarnia, also called on us last week on his way home from the Lower Province, where he has been make a short sojourn.

Jno. Lewis, not satisfied with two good paying drug stores, recently purchased the well known establishment of W. A. Dyer & Co. Mr. Lewis now owns the old original stand on Victoria Sq., the west end branch, 2612 St. Catherine St., and his latest acquisition, 2208 St. Catherine. The latter has been for years one of the best prescription businesses in the city, so that at present Mr. Lewis has three of the choicest positions in Montreal. But he is one

of enterprising kind known as "hustlers" and is thoroughly competent from the financial and pharmaceutical points of view to handle all three, and will make a success of his new establishment, as he has of his other two. The firm of W. A. Dyer & Co., was well known for a number of specialties, such as Dyer's Food, Extract of Malt, Surgical Dressings, etc., which Mr. Lewis, with his usual energy, is going to place more prominently before the medical profession, and to push by advertising, etc.

BOOKS, ETC., RECEIVED.

NOTES DE PHARMACIE PRATIQUE, (1894), par Georges Dethan. Is a beautifully bound volume of about 400 pages, containing a mass of very interesting matter for the practical pharmacist. The manner in which the previous edition for 1893 was received convinced the author that such a work was needed and in this volume he has set out to produce even a more valuable work than the previous one, and in it he has collected only articles which will be of practical value to the pharmacist in his work, new methods of preparation, new analytical procedures, recent improvements in asepsis and antiseptics and new remedies, and as brought together these notes should be of great service as they are condensations from all the scientific journal of 1894.

This volume is properly an annual scientific encyclopedia of Pharmacy as the *Notes professionnelles* of the same author constitutes an Encyclopedia of Philosophy.

The work costs 5 frs., and is published by the Société d'Etudes Scientifiques, 4 Rue Antoine Dubois, Paris.

THE POCKET MATERIA MEDICA AND THERAPEUTICS. A Résumé of the Action and Doses of all Official and Non Official drugs now in common use. By C. Henri Leonard, A.M., M.D. Professor of the Medical and Surgical Diseases of Women and Clinical Gynecology in the Detroit College of Medicine; member of the American Medical Association, etc., etc. *Second edition*, revised and enlarged; cloth, large 16 mo., 367 pages, price, post-paid \$1 00: Detroit, 1895. The Illustrated Medical Journal Co., Publishers.

The second edition of this popular therapeutic work has had 67 pages added to it, besides typographical errors corrected, etc. A new and complete cross-index has been prepared, which renders the quick finding of a non-familiar drug possible. This is an important feature lacking in many ready-reference books. It is a "down-to-date book," and this with unique arrangement of its description of drugs and compounds secured for the first edition an order by cablegram for 1,000 copies

from Bailleire, Tindall & Co., one of the largest medical publishing houses in London; a compliment rarely paid any American book. It has also been a popular book with physicians, pharmacists and students on this side of the water, judging from the early exhaustion of the first edition.

The only faults we find are confusion of metric denominations, gram being used invariably instead cubic centimeter in the doses of liquids, a few typographical errors and in several cases, rather loose phraseology. But taken altogether the work is very useful and up to date.

Prospectus of the National College of Pharmacy.

Prospectus, Washington, D. C.

Prospectus of the Philadelphia College of Pharmacy.

Prospectus of the Chicago College of Pharmacy.

Prospectus of the St. Louis College of Pharmacy.

Prospectus of the Illinois College of Pharmacy.

Prospectus of the Montreal College of Pharmacy.

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 Lagachetiere Street, Montreal, and Laval University, Quebec, on Thursday, October 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.

No application will be accepted after the 24th day of September, 1895.

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 Lagachetiere St., Montreal.

WANTED.—Position in Drug Store, North West or British Columbia, 5 years experience, wholesale and retail; East and West. Apply Cardamon, c/o Pharmaceutical Journal.

PEPTONE.

BY W. D. HALLIBURTON, M.D., F.R.S.

It was in the early years of the present century that the most important discovery was made that the secretion of the glands of the stomach is an acid one, and Carl Schmidt was the first to show with analytical certainty that it is hydrochloric acid which is *par excellence* the acid of the gastric juice. The presence of other acids like lactic acid is more or less accidental. The absence of putrefaction in the normal gastric contents was noted by Spallanzini, and is caused by this acid. There can be no doubt that the antiseptic action of the juice, which is very great, serves us in good stead by protecting us very largely from the evil results which would otherwise follow the introduction of numerous microbes with every meal. But it is with gastric juice as a digestant that we have now to deal. The first observers were inclined to attribute the solvent power of the juice to its acid, but as Dr. Beaumont showed in his classical observations on Alexis St. Martin, which have laid the foundation of all our modern knowledge on digestion, this could not be the case. An acid of the same strength is a less powerful solvent, and therefore the gastric juice must contain a special solvent principle. This Eberle supposed to be the gastric mucus, a supposition easily refuted. It was Schwann who discovered this special principle and called it pepsin. He gave the name albuminose to the product of its action on albumin; Lehmann's name peptone, however, has since been generally adopted. Lehmann recognised that peptone is not coagulated by heat as albumin is.

The modern conception of the process of proteolytic digestion in the stomach is the following: Gastric juice acts on proteids in virtue of the compound between pepsin and the acid which it contains. This compound may be styled pepsin-hydrochloric acid. Like that of most other ferments its action is a hydrating one, and similar products may be obtained by other hydrating agencies, such as heating with dilute mineral acids or superheated steam. The final product of this action is called peptone, and this substance compared to the original albumin is very diffusible. But between the albumin and the peptone are several intermediate stages of intermediately diffusible substances. One of these produced in small quantities is acid albumin, but the greater number come under the general heading of the proteoses.

The pancreatic digestion of proteids is closely similar; it, however, occurs in an alkaline medium, and is more energetic, and, moreover, if long continued leads to a breaking-up of some of the peptone into simpler nitrogenous

substances like leucine, tyrosine, aspartic acid, and ammonia.

It should be mentioned that though highly diffusible compounds like proteoses and peptone are formed in the alimentary canal, none find their way as such into the circulating blood, even during the periods of most energetic digestion. These substances are, in fact, pretty powerful poisons when injected into the blood stream. The epithelial lining of the alimentary canal normally protects us from these toxic products by once more dehydrating the peptone in virtue of the vital activity of its cells. Though lymphoid tissue, which is abundant in the intestinal walls, has been considered by some to have a share in this action, most observers are pretty well agreed that it is the columnar epithelium which is the main agent in the "regeneration of albumin."

But to return to the products of digestion, it was very soon recognised that they are numerous. Meissner described the varieties of peptone as parapeptone, dyspeptone, metapeptone, *a*, *b*, and *c* peptone. Schmidt-Mulheim distinguished between parapeptone, propeptone and peptone. Parapeptone is the acid albumin, and propeptone is a very good name for what we now call the proteoses. Nearly all of our present knowledge of the chemistry of digestion is due to the work of Kühne and those associated with him in his researches, particularly Chittenden and Neumeister. A most valuable method of isolating peptone was discovered by Wenz, one of Kühne's pupils. It consists in the use of ammonium sulphate as a reagent; when added to saturation this salt readily precipitates all proteids except peptone. Pure peptone was never obtained previous to this, but always more or less mixed with proteoses.

The earliest of Kühne's observations showed him that there are two varieties of peptone, hemi-peptone, which by the pancreatic juice is further split into leucine, tyrosine, etc., and anti-peptone, which resists this action. The corresponding intermediate proteoses may be termed hemi-albumose and anti-albumose respectively.

More recent observations have shown that albumoses may be classified in another way, according to their reactions and solubilities, into:—

1. Proto-albumose; soluble in hot and cold water and dilute saline solutions, but precipitated by saturation with sodium chloride or magnesium sulphate.
2. Hetero-albumose; insoluble in water, and therefore precipitable by dialysing out the salt from its solutions. Otherwise it closely resembles proto-albumose.
3. Deutero-albumose; soluble in hot and cold water, and not precipitated by saturation with sodium chloride or magnesium sulphate,

but it is by saturation with ammonium sulphate. It is thus in its reactions nearest to the peptones.

Peptone itself resembles these albumoses by giving the biuret reaction (pink color with copper sulphate and caustic potash), but differs from them in not being precipitable by ammonium sulphate nor by nitric acid.

Neumeister has succeeded in discovering the relationship between these two classifications of the albumoses. Albumin may be considered to be composed of hemi-albumin and anti-albumin. The hemi-albumin in the first stage of hydration is split into proto-albumose and hetero-albumose; the anti-albumin yields hetero-albumose and acid albumin. The next stage in hydration is deutero-albumose, and the final step is the conversion of the deutero-albumose into peptone of the hemi and anti varieties.

The albumoses (proto and hetero) formed directly from the albumin may be called primary albumoses. Deutero albumose is a secondary albumose, and is thus nearest to the peptones not only in its reactions, but also in its order of formation.

The similar products formed in the digestion of globulin may be called globuloses; of vitellin, vitelloses; of casein, caseoses; of myosin, myosinoses. There are individual minor differences, but all are closely similar to the albumoses already described, and the general term proteoses includes them all. The products of digestion of elastin and of gelatin have also a general resemblance to the proteoses and peptone.

Such, briefly, is a summary of our knowledge of proteolysis produced by gastric digestion. But within the last year or two further points of detail have been taken up and worked out, and it is to these that it is the special object of this paper to draw attention. In so doing it will be necessary to restrict our consideration to those papers in which peptones and albumoses are treated from the digestion point of view. It would lead us too far to take up another branch of this subject which has recently attracted so much attention, namely, the chemical action of micro-organisms, and the poisons they produce. Suffice it to say that in numerous instances the toxins and antitoxines of bacteriologists are proteoses or substances closely allied to them.

Pekelharing* has attempted to throw doubt upon the individuality of peptone and upon the ammonium sulphate method of isolation, claiming that proteoses are only partially precipitated by the ammonium salt, and that the so-called peptone is merely a mixture of albumose or proteose with some unknown substance or substances. In support of this view he apparently finds it impossible to prepare a

peptone which will not yield some proteose by treatment with ammonium sulphate, or which will not show the presence of proteose by such reagents as trichloroacetic acid.

This criticism has led to renewed research on the part of Kühne† in Heidelberg, and of Chittenden‡ who now works independently of his old master in the laboratory of Yale University.

In his first paper Kühne states in general terms that a solution containing a mixture of proteoses and peptone gives a precipitate of proteoses when saturated with ammonium sulphate, the peptone remaining in solution. After filtration the filtrate, if set aside, will subsequently give a further precipitate if more salt is added. This has been explained by supposing that the saturation was in the first case incomplete or that the peptone is partially changed back into proteose. He proceeds to show that the former is the more probable explanation. There are many precautions necessary in order to precipitate the last traces of proteose. It is necessary in the first instance to use large volumes of the saturated solution in addition to merely adding crystals of the salt to the proteid mixture. Further, it is found that whereas the greater part of the proteose is precipitated by the salt if the reaction of the mixture is made acid, the residue, which is difficult of precipitation, comes down more readily if the reaction is made alkaline. It is further necessary, after the solution of peptone is obtained to remove the salt employed. This may be accomplished by the use of barium carbonate after concentration. If pancreatic juice is used for the preparation of peptone, care must be taken to remove leucine and tyrosine also. In drying, concentrating, etc., especially if sulphuric acid is used, a brownish product is formed; this is minimised by care in the manipulations. This substance is precipitated by ammonium sulphate. It is not, however, albumose; it gives no biuret reaction. Further, if a precipitate forms on dialysis, it is not necessarily of proteid nature; if hard water is used it may be calcium sulphate.

Pekelharing does not seem to have recognised the necessity of these and other precautions and details, and, moreover, the differences between peptone and proteose are very striking. This aspect of the subject is considered more fully in Kühne's second paper. There are not only differences in solubility, but differences in elementary composition, differences in behaviour to such reagents as metaphosphoric and trichloroacetic acids; and peptone when dry stands alone among the products of pro-

* *Centralblatt f. Physiol.*, vii., p. 43.

† *Zeit. Biol.*, xxix., pp. 1 and 308.

‡ *Journ. of Physiol.*, xvii., p. 43.

teolysis, by hissing like phosphoric anhydride does on the addition of water.

Chittenden takes up the matter from rather a different point of view. He has considered it necessary to repeat his old experiments with as pure a specimen of proteid as he has been able to obtain, instead of using white of egg or other similarly impure raw materials. The proteid he has selected is the crystallised globulin or vitellin from hemp seed. He also entirely disagrees with Pekelharing, as under these more stringent conditions he confirms his older work; he, however, makes out a few new points, and so a brief *résumé* of the entire paper may not be unprofitable.

He performed two separate digestions on a large scale, one of which was continued for three, the other for ten days. The products of digestion were carefully separated from one another and analysed; their reactions are exhaustively described, including their specific rotatory power. In separating proteoses from peptone the difficulties of manipulation are recognised, and so far as is at present possible obviated. The investigation, however, lends no support to Pekelharing's views, but is in complete accordance with Kühne's contention that peptone is a definite, well characterised substance. Its amount increases, and that of proteose diminishes as digestion progresses, but an artificial digestion in which all proteose is converted into peptone has not yet been obtained. The progressive changes from primary proteose to deuteroproteose and peptone are most marked in the early stages of digestion; the disappearance of deuteroproteose and the formation of peptone is subsequently a very gradual process.

In the proteolytic process, at least four products of hydration and cleavage are easily recognisable, namely, proto-proteose, heteroproteose, deuteroproteose, and peptone. The examination of the percentage composition of these substances shows a gradual and progressive falling off of carbon as digestion progresses. But the tables given show another very noticeable feature, and that is that the percentage composition of the individual proteoses differs in the two digestions; the substance called proto-vitellose, for instance, in the digestion carried on for three days, cannot be the same as that with the same name in the digestion carried on for ten days, although both give the same reactions, specific rotation of the plane of polarised light alone excluded. This cannot be due to analytical errors; a skilled investigator of Professor Chittenden's eminence could not fall into such a mistake; besides other proteids, egg-white, for instance, under the influence of superheated steam gives similar results.

The explanation advanced is that the four substances named merely represent the main steps in the hydration process, but that there are further links in the chain mixed with these which cannot at present be separated, and which manifest the same general chemical behaviour.

Such a result is not altogether unexpected; it only shows how, in spite of the advance of chemistry as a whole, it is practically at a standstill so far as the proteids are concerned; nor can we hope to understand the steps in proteolysis until the chemists are able to give us some idea of the chemical constitution of the proteids which these digestive juices act upon.

One of the properties alluded to, which the proteoses and peptones agree in possessing, is their power of diffusing through membranes; and although these products of digestion do not avail themselves of this to the full, for we never find them in the blood, it can hardly be doubted that the formation of diffusible from indiffusible substances must fulfil some useful end. It appears to be the main object of all digestion, whether of proteids or carbohydrates. It may be held that it enables the substance to be absorbed to start on its journey, though in the progress of that journey bloodwards the property in question is lost.

The same two names are associated with the investigation of this point with accuracy. They worked independently and arrived at the same result. To take Chittenden* first. He found that the proteoses though diffusible were not nearly so much so as peptone.

A curious fact which was unexpected was that deuteroproteose is less diffusible than proto-proteose. Proto-gelatose is fairly diffusible, but it has a somewhat lower endosmotic equivalent than the corresponding proteose. Elevation of temperature increase the rate of osmosis, especially of the proteoses.

I give in conclusion the figures from Kühne's paper,† which illustrate these facts. Heteroproteose is the least diffusible of the proteoses; in neutral saline solutions it is precipitated, and none passes through the dialyser; dissolved in ammonia it loses 5.22 per cent. Deuteroproteose comes next (loss 24.1 per cent.); then proto-proteose (loss 28.3 per cent.); while peptone loses 51 to 51.8 per cent.

—*Science Progress.*

NOTES AND NEWS.

THE TREATMENT OF "BLACK-EYE."

According to the *Practitioner*, in the treatment of "black-eye," there is nothing to compare with the tincture or strong infusion of

* *Journal of Physiol.*, xiv., 483.
† *Zeit. Biol.*, xxix., 1.

capsicum mixed with an equal bulk of mucilage and a few drops of glycerin. The bruised surface should be painted with a camel-hair pencil and when dry the operation should be repeated once or twice. Blackening of the bruised tissue may sometimes be prevented if the application be used directly after the injury is inflicted. The same remedy is said to be beneficial in rheumatic sore or stiff neck.

CITRIC ACID FROM CANE SUGAR.

Dr. I. L. Phipson maintains his position with respect to the possibility of preparing citric acid from cane sugar (see *Ph. J.*, June 29, p. 1193, and July 27, p. 74). He now refers (*Chem. News*, lxxii., 100) to the fact that Mau-mené had announced the formation of two new organic acids under similar conditions (see *Ph. J.*, May 4, p. 961), and suggests that those who have failed to confirm his results used too much sulphuric acid in the experiment, and did not separate the organic acid by alcohol.—*Br. & Col. Drug.*

ALBUMIN AND DEPOSITS IN URINE.

BY FERDINAND LASCAR, PH. G.

I have long since drawn attention to the fact that the pharmacist is destined to seek new and worthier fields in which to earn his subsistence as grocery and dry goods stores make inroads on his revenues by the keenest kind of competition, and this fact becomes more evident as years pass by. To-day we find a growing disposition among pharmacists to enter the analytical field and many of them have built up lucrative practices as analysts; many of our prominent pharmacies now have departments where fibers, milk and other foods and pathological substances are systematically analyzed, the work yielding a fair revenue.

This induced me to contribute to the *Circular* the article on the examination of urine for sugar, which appeared in its issue for May of this year, and it has occurred to me to supplement that paper with some facts in regard to the detection of albumin and the examination of deposits in urine.

In so doing I will try to avoid all points which are of a minor interest to the analyst proper and which are only in special instances demanded as a basis for proper diagnosis. My aim is to specially dwell on those points which facilitate the work in hand and by which quick and at the same time correct results can be arrived at.

When a specimen of urine is sent in for analysis, the physical examination is of course a preliminary one and yet very frequently it is very important to have the physical points minutely stated in the

final report. After the specific gravity, color, opacity and odor have been described one ascertains if the specimen is either neural, acid or alkaline. In the latter case it is well to then test with turmeric paper (which turns brown on contact with alkalies), and the paper so colored should then be carefully heated over an alcohol flame; if it loses its brown color and becomes yellow again, the reaction has been due to ammonia present, probably due to decomposed urea; when the brown color remains, the alkaline reaction is due to fixed alkalies.

To properly note these reactions is important, because a knowledge of them is necessary when the nature of deposits in the urine is to be investigated, and to arrive at a proper diagnosis of the disease, as some such deposits at times are normal in an acid urine and abnormal in an alkaline one. For example, in an acid urine, we often find uric acid deposits while it would be abnormal in such a specimen to find oxalate of calcium. Again in alkaline urine a calcareous deposit would be normal and the presence of ammonio-magnesium phosphate would be abnormal.

To obtain a deposit for examination, the urine may be sterilized either with boric or benzoic acid and set aside for from 12 to 24 hours, when, by the aid of a pipette, the precipitate is carefully withdrawn. But this result may be obtained almost instantly by another method. Several months ago Dr Stowell exhibited before the New York Academy of Medicine a new apparatus which I, by his kind permission, now employ in the examination of urine in the pathological department of the Demilt Dispensary, and by which I, in two minutes, can separate every particle of undissolved matter from urine. The apparatus consists of an electric motor which turns a metal disc at the rate of 1,800 revolutions a minute; on the edge of this disc are fitted metal cylinders in which are placed conical graduated glass tubes. The urine is poured into these tubes and the centrifugal power to which they are subjected at once separates the undissolved parts completely from the liquids. With the aid of a pipette the precipitate is easily withdrawn from the conical bottom of the tube and is ready for the chemical and microscopical examination.

I would advise any of my colleagues who make a specialty of urine analysis to procure such an apparatus. By unscrewing any of the horseshoe-burners in the store and screwing the wire of the electric motor on instead, which can be done at once, the centrifugal apparatus can be easily started.

I may state that the apparatus is a great saver of time in the analysis of milk also, because the amount of butter can be ascertained equally quickly; it is also valuable in

ascertaining the consistency of blood. For the latter purpose the blood is diluted with a weak solution of bichromate of potassium in water and then exposed to centrifugal action in small graduated glass tubes. After a few minutes time the red blood corpuscles will have gathered at the bottom of the small tubes with the white corpuscles as a layer between the former and the blood serum on top.

It is well to bear in mind that the chemical examination of a deposit is as essential as a physical analysis. The deposit may contain various kinds of casts, such as fatty, granular, waxy, amyloid or hyaline; it may contain various kinds of epithelium from the urethra, bladder or vagina, to determine which it takes some practice; or the deposit may be pus or blood.

But beside the above there may also be found yellowish wedge-like or whetstone-like crystals of uric acid, the crystal at times being lanced or rosette shaped, but always of the peculiar tint mentioned. If any doubt of their nature exist it can easily be verified by touching them with a little nitric acid and afterwards with ammonia, when their color will change to purple. However, if much uric acid is present no mistake can ever occur; the brick-like deposit of that acid especially, can never be confounded with any other when viewed under the microscope.

In the obtained deposit we may find also a few or a great number of star-like crystals, sometimes appearing like closed envelopes; these are crystals of oxalate of calcium and when once studied they will readily be recognized again. In the report it is essential to approximate how much oxalate of calcium one finds, because sometimes its presence in the urine may be due to the partaking of much fruit by the patient, while in other instances oxaluria or other disorders may be diagnosed.

Beside the uric acid and the oxalate of calcium crystals, there frequently appears in the deposit the beautifully-shaped rhomboid crystals of tribasic phosphate of calcium. If any doubt as to their nature exists, a very simple device will at once prove their identity. A small fiber or thread of cotton is inserted between the cover glass and the slide, so that part of the fiber rests in the deposit and the other part rests outside. When the outside part is wetted with acetic or diluted hydrochloric acid, the acid will penetrate into the deposit in the field under observation and the crystals will be readily dissolved and will disappear where they have come in contact with the acid. If crystals of cystin should be present, which, however, rarely is the case, they are also soluble in mineral acids, but their scale or "table" form cannot be confounded

with that of crystals of other substances met with in urine.

In addition to the above mentioned crystalline bodies, we at times some square, coffin-shaped ones, consisting of ammonio-magnesium phosphate ($2\text{MgONH}_2\text{PO}_4 + \text{H}_2\text{O}$) which, as already stated, frequently appears in an alkaline urine.

The most ordinary deposits found, however, are the urates, which appear either in an amorphous form or in a different, sometimes fantastic, crystalline shape.

In submitting the report of a urine analysis the presence of urates and their nature ought to be embraced, as the physician frequently wishes to know this as well as to have the amount of urea present determined correctly.

After a specimen of urine has been subjected to the physical analysis, the next step is to determine the presence of albumin. In my paper on the examination for sugar, above referred to, I mentioned some tests, such as the bismuth, the chromate and the picrate. The generally adopted method, however, is employment of heat. The urine is placed in a test tube and if alkaline or neutral, a drop or two of acetic acid is added. The upper layer is now carefully heated and if it becomes opaque, a few drops of c.p. nitric acid are added. If the turbidity then becomes permanent or a flocky deposit is separated, albumin is present. The addition of the nitric acid is necessitated by the presence of phosphates. Heat will also produce a cloudiness, which disappears on the addition of the nitric acid.

To determine the quantity of albumin in urine, a great many methods have been suggested. Many prefer the albuminometer; others prefer titration with potassio-mercuric iodide, the latter generally giving excellent results. This is Tanret's method and his solution is made after the following formula:

Potassium iodide.....	3.22 grams
Mercuric chloride.....	1.25 "
Water to make.....	100 "

One minim of this solution precipitates 5 mg. of albumin. The test is a very delicate one and faint traces of albumin can even be demonstrated by it (the presence of 1 cg. of albumen in 250 c.c. of urine can be shown).

New devices spring up continually for estimating albumin in urine, many such as the one described, and those I have not mentioned, as the carbolic acid, the resorcin and other tests, which are equally trustworthy, but in the analysis of urine it is well, as it generally is in life, to stick to one's friends. If for example one, as it is the case with the me, has found the potassio-mercuric iodide test a reliable one and has become absolutely familiar with its working, he will only too often regret having abandoned it for some other which

again needs new study and new experimentation. This is especially the case when time is pressing and many specimens have to be examined. How properly to examine urine cannot be learned from books alone, a good deal of practice and of observation is necessary to become proficient therein, nor can preliminary observations always be relied upon. For instance, a urine is submitted containing albumin and one at once of course looks for casts, which, however, may not be present; and again not a trace of albumin may be found, and the supposition is of course, that one will not find casts, but still they are frequently found by the microscope. I mention this to draw attention to the fact that one is easily led to overlook important points because there are many things not yet mentioned which often add to the work in hand. Often it is required to look for lead or mercury; often it is desired to find the amount of chlorides. For this the titrating, with a normal nitrate of silver solution, using chromate of potassium as an indicator, is preferable.

The analysis of urine can be conveniently divided into a physical, a chemical and a microscopical one, all three of which require equal attention; none can be said to be very difficult to perform. Practice and strict attention to the minutest details soon makes the master here also, and many small devices will suggest themselves from time to time to facilitate the work in hand. To demonstrate this fact I will mention the often tedious methods in looking for bile in urine, which all generally can be dispensed with. If the urine be carefully added to a layer of nitric acid, containing nitrous acid, the presence of bile will often be shown; and the peculiar color imparted to white filter paper or pure white absorbent cotton by urine when bile is present is also an indication of that fact.

When one considers the outlay for a microscope and the minor apparatus, the inexpensiveness of the reagents required and the little time needed for one who has become proficient to perform such work as we have described, it will soon be found worth the while, to look in this direction for an increase of revenue where spare time often is abundant in drug stores.

The microscope is, of course, the heaviest expense at first. However, it is not necessary to start in with too expensive lenses; if it is desired later on to extend investigations in other directions and to do bacteriological work, to examine blood for plasmodium, etc., it is time enough then to invest in immersion lenses or lenses of a very high power. For all practical purposes, a 1.5 inch lens will suit

well for the examination of all kinds of deposits from urine.

If the pharmacist turns to analytical work he is for once sure that the modern grocer and dry goods man can make him no opposition here. Our large "emporiums" may continue to sell low-grade pharmaceutical preparations, of which I hold samples in my desk; they may humbug the public and do it undisturbed by our authorities who lay more importance on the sale of sterling silverware than upon pure medicines, but they cannot sell spurious analytical reports cheap for cash. They can sell pharmaceuticals by the bushel, but they cannot sell science by the yard,—*Drug Cir.*

Lucky in Finding Ambergris.

There is a whaler in Provincetown nicknamed Ambergris Johnson, because his vessel on the voyage is almost sure to pick up some of that strange and valuable commodity. He now writes home from the West African coast that his vessel had taken 350 pounds of sperm oil and forty pounds of ambergris. As ambergris is worth \$300 a pound this about as good as a gold mine. One singular thing about this curious secretion in a whale's entrails is that, while it has very little scent in itself it vitalizes and gives great power to other perfumes, and is therefore used for that purpose by the manufacturers of the highest grades. A drug firm in Boston owns three-fourths of the stock in hand and has substantially a monopoly.—*Boston Herald.*

MUCILAGES IN PLANTS.

Instead of the usual primary classification of mucilages into two groups—cellulose mucilages and true mucilages, M. L. Mangin (*Bull. de la Soc. Bot. de France*) proposes to distinguish them first of all into simple and mixed mucilages. The former are then classed under three heads—cellulose mucilages are very rare, being nearly confined to the salep derived from the roots of the orchidæ. Among pectose mucilages are included those of the malvaceæ, tiliaceæ; rosaceæ and abietinæ, and the mucilaginous sheath of certain algae, such as *zygnema*, *gloeosporium*, *nostoc*, etc. Callose mucilages occur in sieve-tubes, the membrane of the sporangia of *mucorini*, etc. Among mixed mucilages the only combination known to the author is that of cellulose and pectose mucilages in varying proportions. These occur especially in seeds and pollen grains, and are formed at the expenses of cell-walls in contact with the air. Indeterminate mucilages which cannot be included under either of the above categories, also occur, such as that of the endosperm of the seed of the carob.

Anti= Diphtheritic Serum.

THIS
Antitoxin

IS PREPARED IN

OUR OWN BACTERIOLOGICAL DEPARTMENT.
BY EXPERT BACTERIOLOGISTS.

Every precaution known to the science has been taken to insure its reliability.

\$3.50 PER VIAL.

Each vial contains 1000 normal Antitoxin units, the full curative dose for average cases.

Directions for injecting the Serum accompany each vial.

Correspondence upon this subject respectfully solicited.

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Proprietors and Manufacturers of

Mellin's Food

For
INFANTS AND INVALIDS

FOR THE DOMINION OF CANADA.

Sold by all Wholesale Druggists
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READ THIS

Dear Sir,
St Marys, August 3rd, 1892.
The following may be of use to you: "A customer of mine, who keeps a butcher shop in this town, bought a 10 cent package of your Fly Pads from me and in ten days killed over A BUSHEL MEASURE OF FLIES." Yours truly,
F. G. SANDERSON.

IT WOULD TAKE OVER
300 SHEETS OF STICKY PAPER
TO HOLD THIS BUSHEL OF FLIES

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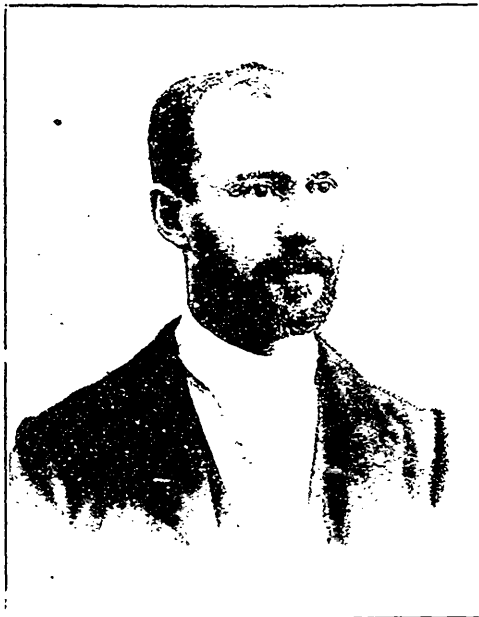
Archdale Wilson & Co. Hamilton, Will supply these pads with name and address to all retail Druggists who will undertake to distribute them faithfully.

THE BEST
ROOT BEER
IS WILSON'S.

We are receiving almost daily assurances that our **ROOT BEER EXTRACT** is the best on the market and that dealers have increased their sales ten fold since handling Wilson's.

Each 10c. Bottle makes 5 Gallons.

ARCHDALE WILSON & CO.
Wholesale Druggists,
HAMILTON.



RICHARD WELLINGTON WILLIAMS.

President of the Pharmaceutical Association of the Province of Quebec.

Mr. Williams was born in Montreal, July 15th, 1853, and educated at Nicolet College. After graduation he was apprenticed to M. G. Edson at Three Rivers, in 1870, with whom he remained five years coming to Montreal in order to attend the College of Pharmacy. He passed the minor examination in 1876, being first on the list, and passed the final at the spring examination 1877. Mr. Williams was for a considerable period assistant to Dr. J. Baker Edwards, public analyst and lecturer at Bishop's College and Montreal Normal School, with whom he acquired a more intimate knowledge of analytical and practical chemistry than falls to the lot of most pharmacists. But in April, 1878, Mr. Williams decided to return to pharmacy proper, and entered into partnership with L. A. Hoerner who had bought out Mr. Edson at Three Rivers, and after 11 years Mr. Williams became sole proprietor of the pharmacy in which he commenced his apprenticeship, and and has since carried on business very successful and is now one of the leading business men of the city, being vice president of the St Maurice Tool & Axe Works, member of the council of the Board of Trade, etc.

But it is principal in connection with his work in pharmacy that the subject of this sketch is best known as he has been prominently identified with the Association for

many years past, both as an individual and as a member of the council or an officer, in all of which positions he has always done his duty. Mr. Williams is well known as an amateur botanist of great ability and has been examiner on that subject for the Association during the last seven or eight years.

Mr. Williams is also a well known figure in temperance work, particularly in connection with the Good Templars, of which society he was Provincial President for two years, twice represented this Province at the meetings of the supreme body, and is now the Provincial Deputy of the supreme officers

Trade-Marks Relating to the Drug Trade.

The following synopsis of Trade-Marks relating to the Drug trade, registered during the month of July, 1895; in the United States Patent Office, is compiled for this journal by James Sangster, Patent Attorney, Buffalo, N. Y.

26,758. Medical Plasters. The Dr. D. P. Ordway Plaster Company, Camden, Me., filed May 20, 1895. Essential feature. A fac-simile of the signature of D. P. Ordway. Used since March 24, 1895.

26,759. Medicinal Remedy for Dyspepsia, Charles E. Lavery, Newton's Corners, N. Y., filed May 31, 1895. Essential feature. The word "Cupepsa," arranged in ornamental letters and associated with a branch of the cubeb plant. Used since March 11, 1895.

26,760. Blood Purifier, Louisa A. Krehbiel, Dayton, Ohio, filed May 18, 1895. Essential feature. A bust portrait of King William and the word "Wilhelm." Used since March, 1895.

26,761. Cough Balsam, Van Vleet Mansfield Drug Company, Memphis, Tenn., filed May 16, 1895. Essential feature. The word "Hungarian" and the representation of a patient seated in a chair, a woman standing in front of the patient, and an angel appearing above, in clouds, and handing the bottle to the woman, whose hand is outstretched to receive it. Behind the woman is a small circular table, upon which are a cup and saucer. Used since 1848.

26,762. Certain Named Medicinal Remedies. The Zem Zem Medicine Company, Fort Worth, Tex., filed May 20, 1895. Essential feature. The word "Zem-Zem" and the representation of a well and a woman dispensing water therefrom to a procession of people passing around the well. Used since April 5, 1895.

26,763. Powdered Substance for Relief of Headache, Everett A. Graves, Boston, Mass.,

filed April 23, 1895. Essential feature. The word "Maqueina." Used since June 1, 1891.

26,764. Certain Named Toilet Preparations and Medicinal Remedies, Soap, Bluing, and Mucilage. The Red Seal Remedy Company, Rockland, Me., filed May 9, 1895. Essential feature. The representation of a red seal. Used since September 15, 1893.

26,766. Cleaning and Disinfecting Preparation for Material and Fabrics. Lariat Manufacturing Company, Jersey City, N. J., and Boston, Mass., filed May 31, 1895. Essential feature. The compound word "Clean-Lo" and the representation of an irregular portion of a floor with a bottle standing upright and bearing a label showing the said compound word "Clean-Lo." Used since March 1, 1895.

26,767. Water-Bug and Roach Exterminator, John S. Juno, Schenectady, N. Y., filed May 11, 1895. Essential feature. The words "Mrs. J's. Bug Exit." Used since December 5, 1894.

26,783. Liniment, Henry L. Lohmeyer, Pittsburg, Pa., filed June 5, 1895. Essential feature. The words "Nancy Hanks." Used since March, 1893.

26,784. Chemical and Medical Products. Vereinigte Chininfabriken Zimmer & Co., Frankfort-on-the-Main, Germany, filed Mar. 23, 1895. Essential feature. The representation of a heraldic eagle with an escutcheon on its breast, containing a monogram of the letters "C Z." Used since April, 1887.

26,785. Tonics, Willtam F. Maass, Brooklyn, N. Y., filed June 12, 1895. Essential feature. The word "Apicola." Used since April 20, 1895.

26,786. Condition Powders for Horses, Henry L. Lohmeyer, Pittsburg, Pa., filed June 5, 1895. Essential feature. The words "Nancy Hanks." Used since March, 1893.

26,797. Polishing and Cleaning Preparation, Laurence Dana Colony and Benjamin Sargent Osgood, Keene, N. H., filed May 31. Essential feature. The word "Cando." Used since May 1, 1895.

26,788. Disinfectants, Alfred Noback, Rahway, N. J., filed May 8, 1895. Essential feature. The representation of a cylinder and the words "The Rapid Cleaning Cartridge." Used since January 30, 1892.

26,789. Syringes. The Butler Hard Rubber Company, New York, N. Y., filed May 17, 1895. Essential feature. The word "Eureka." Used since May 1, 1895.

26,813. Remedy for Headache, Barton L. Brown, Philadelphia, Pa., filed May 31, 1895. Essential feature. The words "Griffin's Ten Minute." Used since January 2, 1890.

26,814. Remedy for Catarrh and other Nasal, Head, and Throat Affections, George B. Evans, Philadelphia, Pa., filed June 18, 1895. Essential feature. The word "Brintine." Used since March 1, 1894.

26,722. Mineral Waters, Veronica Mineral Water Company Santa Barbara, Cal., filed May 31, 1895. Essential feature. The word "Veronica" and the representation of an old Mission church. Used since September 6, 1893.

26,830. Levi Emig, Woodview, Ohio, filed Feb. 5, 1895. Essential feature. The representation of a Rocky Mountain sheep in red upon a yellow back-ground. Used since April 13, 1893.

26,832. Portland Cement, Societe Anonyme Union Fraternelle, Calonne, Lez Antoing, Belgium, filed June 22, 1895. Essential feature. The word "Parrot." Used since May 1, 1895.

26,833. Portland Cement, Societe Anonyme, Union Fraternelle, Calonne, Lez Antoing, Belgium, filed June 22, 1895. Essential feature. The figure of representation of a parrot. Used since May 1, 1895.

26,854. Medicinal Beverages, Apohaqui Alkiline Spring Water Company, New York, filed June 11, 1885. Essential feature. The word "Apohaqui." Used since April 1, 1893.

26,856. Certain Named Medical Compounds, Charles R. Ray, Chicago, Ill., filed May 6, 1895. Essential feature. The representation of a segment of a disk with rays extending therefrom and the name "Dr. Ray's" appearing above the disk and across the rays. Used since January 1, 1895.

26,857. Certain Named Medical Compound, Alfred H. Wells, Hyattsville, Md., filed June 8, 1895. Essential feature. The word "Glandine." Used since May 30, 1893.

26,858. Remedy for Coughs, Colds, and Pulmonary Complaints, Bartlett & Villinger, Augusta, Ga., filed June 19, 1895. Essential feature. The representation of two ornamental shields, one showing a pine tree and the other showing a crane standing near a shrub, together with the words "Bartlett's Yellow Pine & Crane Willow Balsam." Used since June 1, 1895.

26,859. Blood-Purifier and Remedy for Rheumatism, Winnie G. O'Donnell, Lewiston, Me., filed June 10, 1895. Essential feature. The representation of a shield and a druggist's emblems at the corners, and the name "Durrands" diagonally across the face of it. Used since May 8, 1895.

26,860. Remedy for Anemia, Chlorosis, Megrim and Neuralgia, Knoll & Co., Liesthal, Switzerland, filed April 6th, 1895. Essential feature. The word "Ferropyrin." Used since May 15th, 1894.

26,861. Liniment, Junius Barnes, Burlington, Vt., filed June 14th, 1895. Essential feature. The word "Mysterious." Used since 1890.

26,862. Salve, William F. A. Neynaber, Chicago, Ill., filed June 12th, 1895. Essential feature. The word "Theobromaline." Used since October 1, 1894.

26,863. Salve. Jeremiah Hubbard, Afton, Ind. Ter., filed April 30th, 1895. Essential feature. The hyphenated word "Car-Nur-Lea-Yea-Tee." Used since January 1, 1895.

26,868. Infusorial Earth for Cleaning and Polishing Purposes, Laurence Dana Colony and Benjamin Sargent Osgood, Keene, N. H., filed June 7; 1895. Essential feature. The words "Silver Diamond." Used since May 1, 1895.

26,869. Horse Washing or Cleaning Preparation, Loren B Lord, Burlington, Vt., filed May 4, 1895. Essential feature. The words "Golden." Used since January 8, 1894.

Sentenced by Justice Jerome.

The Carter Medicine Company has been engaged for the last month in running down a gang in this city who have been making and selling a counterfeit of its trademark "Carter's Little Liver Pills." Notices have appeared of several arrests which the Company has made, for a week past one of these cases has been on trial in the Court of Special Sessions, before Justices Jerome, Jacob and Hayes. The prisoner was Thomas B. Hughes, a druggist at No. 281 Tenth-ave. On Wednesday the prisoner was found guilty and sentenced to three months in the penitentiary. In delivering the sentence of the court, Presiding Justice Jerome said :

"Hughes, the Court after a long and careful trial, has come reluctantly to the conclusion that you are a guilty man. The whole value of many of these articles lies in the trademark. Thousands and hundreds of thousands of dollars are spent annually in placing them before the public. If the public cannot rely upon these articles, then a fraud is being practised upon them, and upon the proprietary rights of those persons who own trademarks. New York is a great commercial city and trademarks are as important to this city as

integrity is to a coiner. This is a class of cases which this Court does not look upon with any leniency at all. The sentence of the Court is that you be confined in the penitentiary for a term of three months."

The Justice also intimated that but for the prisoner's previous record and the fact that he had been in jail for some time the sentence would have been much heavier.

A FINE DRUG STORE.

IN A FIRST-CLASS BUSINESS STAND—MR. G. A. SCHOFIELD
IN HIS NEW STORE.

Mr. Geo. A. Schofield, druggist, is now fully installed in his handsome new premises on the northwest corner of George and Hunter st., the old Mercer stand. Than this corner there is no better business stand in Peterborough, and Mr. Schofield by the exercise of good taste and the employment of first class workmanship has made the most of the store, which has a bright attractive interior.

The main entrance is in the corner of the store, with two of the largest plate glass windows in town on either side, one fronting on George and the other on Hunter St. There is also a side entrance on Hunter St. The windows are lighted from above by two electric reflectors, while they have been carpeted and will be surrounded by a heavy brass curtain suspended from a massive brass rod. The interior of the store has been fitted up with strict regard to style and harmony. The fixtures are of black ash, with walnut trimmings. The tables, sixteen feet in length, are of highly polished black ash, and will be surmounted by handsome square show cases of quartered oak and British polished plate glass. The scale counter has been made of ash in special design, while the floor is of polished maple and ash. The walls have been papered with a beautiful robin egg ingrain, with a handsome border, and the ceiling has been decorated in light colors to harmonize with the whole interior. The store is lighted by electricity, the fixtures being elegant in design, and a combination for the incandescent service and for gas. In the rear of the front store is the dispensing case, with a front of mirror plate, and the office workshop and laboratory. The store is complete in all its departments, and has a splendid well-lighted cellar underneath for storing purposes. The paper was purchased at the Peterborough Book store, while Messrs. Watson & Son did the painting and decorating, and the Peterborough Canoe Co. supplied the show cases, tables, and interior fixtures. They have done their work well.

Mr. W. H. Manning, dental surgeon, will occupy the second storey of the block about the fourth of the month.—*Evening Review*, Peterborough.

ENGLISH PHARMACEUTICAL NOTES

(By our London Correspondent.)

The annual meeting of the British Medical Association has just taken place in London and the museum of drugs and instruments has consequently been of special interest. It was only natural that some of the the leading London firms who do not care to exhibit when the meeting is held in the provinces should make special display on this occasion. Our American cousins always come strongly to the front at these exhibitions and Messrs. Burroughs, Wellcome and Co. were *facile princeps*. It was stated on very good authority that this firm had to pay the exorbitant price of \$960 for their special position, fronting the main entrance, which was only some 16 feet square! In fact, all the exhibitors had to pay special prices as the committee is understood to have plainly stated that they wanted a clear profit of \$75,000 in order to cover expenses in receptions, etc. It would be impossible in the space at my command to give a detailed description of the museum and I must content myself with referring chiefly to novelties. The new anti-diphtheritic serum in the form of dry scales was shown by Burroughs, Wellcome & Co., and they are the first firm in this country to produce it. Their series of compressed tabloids has been extended so as to include all the animal organic remedies such as ovarian substance, orchitic, kidney, spleen and the grey matter of the brain. Messrs. Oppenheimer & Co. exhibited their patented palatinoids, consisting of two convex discs of soluble jujube, which have grown in favor immensely during the last 2 years. A decided novelty was Fehling's test for sugar put up in this manner, on dropping one into water the standard test is immediately produced and boiling the same with diabetic urine produces the well-known cupric oxide precipitate. Similarly they have introduced a ferrocyanic test for albumin. Messrs. Allen & Hanbury had glass capsules containing the anæsthetic A. C. E., mixture (alcohol, chloroform and ether) hermetically sealed, so that on breaking the tip the contents are gently expelled by the heat of the hand. Messrs. Savory and Moore showed an improved form of medication in gelatine—sheets of thin gelatine impregnated with drugs so that a division represents a dose. They have recently extended the idea to administer tinctures in this way and with success. Duncan, Flockhart & Co., of chloroform and capsule fame, exhibited chloroform in sealed flasks that effectually prevent loss by evaporation in transit. They had a very complete list of flexible medicinal capsules and some new combinations such as cascara and extract of malt, syrup of the hypo-

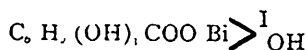
phosphites, Gregory's powder, etc. Fairchild Bros. and Foster of New York had some ingenious tablets containing an inner kernel of calcium lactophosphate and Zymine (pancreatin) coated with keratin and then an outer layer of pepsin, the whole sugar coated. Southau Bros. & Barclay had a very crowded show including their well-known sanitary specialties. Their ureometer is adapted from that devised by Doremus and is a convenient little apparatus for determining urea in urine. Cerebos Salt Company of Newcastle showed in an imposing manner the non-caking advantages of their article by allowing it to trickle slowly through an immense funnel. It is steadily growing in popularity and is exceedingly dainty and of more delicate flavor than common salt. Christy & Co., exhibited Stearns' Hæmoferrum and their pepsin and cascara combinations. Willows, Francis and Butler had a crowded space devoted largely to organic preparations, such as thyroid extract, etc. Parke Davis & Co., had a dual exhibition, as not satisfied with the space at their command, invitations were given to medical men to call at their laboratories and show rooms in the West end. A very interesting show was made and tablet triturates were largely in evidence as well as the new Taka-Diastase. Ferris & Co., of Bristol, had an elaborate stand reaching nearly to the ceiling, exhibiting a very full line of wholesale druggists' goods. Their plaster caddy is a useful square box from which the end of the plaster protrudes and can be pulled out and sufficient cut off as required. Armour & Co. dispensed small cups of beef tea, prepared merely by the addition of boiling water to their Vigoral or Concentrated Extract of Beef. Hewlett & Son showed their well-known Liquor Santal and also their Mist Pepsinæ, whilst among their novelties were tests for urinary analysis, and a cresylic acid disinfecting fluid. Mr. W. Martindale had an unique show indicating what the dispensing pharmacist is capable of producing. His pearl-coated pills and granular effervescent preparations would have been creditable to any factory with the best machinery at command. Evans, Lescher & Webb were represented in a very small space in which prominence was given to the Montserrat specialties.

The annual meeting is generally associated with a number of social functions which are greatly appreciated by the members. Many were disappointed that the corporation of the city of London did not officially recognize the meeting. Complaints were also rife that at several of the entertainments, such as the fête at the Botanical Gardens members were charged for refreshments, and at a high rate too. But the fact is that London is such a big

place that even the advent of some 5 or 6000 medical men creates no impression and surfeiting of congresses, international conferences, etc., renders our municipal authorities a trifle tired of the honor of entertaining. Some of the more private functions, such as the garden party given by the Baroness Bardett-Coutts at Highgate were voted successes.

The British Pharmaceutical Conference at Bournemouth was fortunate in having fine weather, so that visitors from London could appreciate the lovely surroundings of this famous winter resort. Nothing very remarkable transpired although Mr. Martin again allowed his poetic imagination to run riot in endeavoring to establish the professional status of pharmacy. The ordinary retail pharmacist is always conspicuous by his absence at these meetings, except the local brethren who mustered in force. One dare not imagine what would happen if some dozen devoted men, chiefly teachers, laboratory managers and analysts, were to drop giving their annual papers at these meetings. Some there are who do not hesitate to say that the conference would benefit by such a drastic change, and the meeting might become then a reality, what it is now all but in name and an annual pharmaceutical picnic.

Airol is the name of one of the latest substitutes for iodoform and is manufactured by Hoffman, Traub & Co., of Basle. It is an iodo-gallate of bismuth and represented by the formula



It is a very light greenish powder, perfectly inodorous and insoluble in water. In contact with the serous liquid of wounds iodine and gallic acid are liberated and a basic bismuth residue is left as a protective. It is therefore claimed that it possesses the antiseptic properties of iodine, the astringency of gallic acid and the desiccative action of bismuth. As it is quite free from irritating and toxic properties and is so much more voluminous than iodoform it may be found useful and more economical. It has already been employed with success as a dusting powder for ulcers, burns, etc., and internally in doses of three grains for tuberculous enteritis.

Variations in the drug market have been only slight during the month. Camphor has advanced and is firmly held at the increased rate. Bismuth, on the other hand, has suffered an important drop and may possibly still further recede, as the manufacturers are determined to stop outside dealings. Cod Liver Oil maintains its value and opium is without change. This week there was more enquiry for quinine, which is fractionally higher.

Forty-third Annual Convention of the American Pharmaceutical Assoc'n.



DENVER, COL., Wednesday, Aug. 14, 1895.

3.30 P. M.

The forty-third Annual Meeting was opened in the Ladies Ordinary of the Brown Palace Hotel, by Vice-President, Chas. M. Ford, who after a short speech welcoming the guest, introduced the Hon. A. W. McIntyre, Governor of the State of Colorado, and also Mr. McMurray, Mayor of Denver, both of whom welcomed the Association to the state and city.

On behalf of the Association, Second Vice-President J. N. Hurty applied to the address of welcome.

Vice-President Hurty then took the chair, while President Simpson read his address.

ANNUAL ADDRESS OF THE PRESIDENT.

"Fellow-members of the American Pharmaceutical Association: The meeting of the association which took place last September at Asheville, North Carolina, important as it was both in its aims and its results, will be remembered chiefly. I think, for the interest attaching to the place in which it was held. Those who were present will not easily forget the beauty and grandeur of the mountain region of North Carolina: but I may mention the fact that our place of meeting last year was within sight of the highest mountain summits east of the Mississippi, and now again we 'meet upon the high places of the earth,' amid aspects of nature grander and more impressive still. Here we are almost upon the very roof of the continent, that great 'divide' that sends its streams on the one hand to the Pacific Ocean, and on the other to the Gulf of Mexico, and so to the Atlantic.

"From such a height as this it is easy to take broad views of our country as a whole; and with the 'mind's eye' to include in our vast survey Canada in the north—for Canada is really a part of this country—there the Atlantic and Gulf States of the Union; here the great basin of the Mississippi, next this magnificent system of mountains and plateaus, and beyond this still the States of the Pacific slope. It is easy from such a height to perceive that throughout this endless variety of surface, soil and climate, there runs a grand simplicity and unity of plan—easy, too, to believe that this unity is typical of a yet

grander unity which is to make of our present diversity of tongues and temperaments, of customs and convictions, one truly great and matchless American people, able and worthy to lead the world.

"It has been said that most great men are born within sight either of the mountains or of the sea. If this be true, what may we not expect of a people reared amid influence like these? Where, if not here, shall we seek for men of energy and enterprise, of lofty purpose, of breadth of view and of steadfast devotion to principle?

"But we are not here to wonder or to speculate, but to do the work that lies before us, with the earnestness to which the importance of that work may well incite us. Allow me to add, not as a matter of speculation, but as a matter of assured knowledge, that to whatever influence it may be attributable, we can always count with absolute certainty on large-hearted Western hospitality, and we all know upon what a scale Denver builds welcome to her guests.

"In the regular course of official duty, I have appointed the usual committees, and in addition to these, a committee called for by a resolution passed at our last meeting, with reference to the status of pharmacists in the army and navy, with a view to securing for them by Congressional action, the rank and pay of assistant surgeon. I have in accordance therewith appointed a committee consisting of one member for each State and Territory, whose names will be found on page 6, Vol. XLII., of the proceedings.

"And now, before proceeding further, I must make one complaint against my distinguished predecessor. In looking over the subjects which come within the province of this association, and upon which I, as your presiding officer, might naturally be expected to comment, I find that he has left nothing unconsidered, except the one who might succeed him in this chair, and that one he has left with very little indeed to say. Still there is one subject which even he could not exhaust, a subject of such vital concern both to the pharmacist and the public at large as to be always full of interest, and indeed to demand your repeated and most earnest consideration—I mean, of course, the subject of education; and while what has just been said applies to the subject as a whole, I would recommend that the attention of this meeting be given first and chiefly to that aspect of it which relates to the qualifications of druggists. The great importance of the matter will, I trust, warrant my treating it at some length.

"Judging from our choice of meeting places lately—in the White Mountains of New Hampshire, the Alleghanies of North Carolina, and

now in the Rocky Mountains—the motto of the association would seem to be 'Excelsior,' and it is to be hoped that a corresponding onward and upward tendency may continue to be characteristic of our work; but let us not forget another characteristic of mountains, without which their elevation would be impossible, I mean their stability, their sure foundation; and let us put into our work this quality also of the 'everlasting hills.' Let us seek to establish our profession on the broad foundation of living, active intelligence; and then we may hope by conscientious endeavor to build it up to any desired eminence of usefulness and honor.

"We have now among us, it is true, experts and specialists of whose attainments any profession might well be proud. The work and the influence of such men is, I know, of incalculable value—still all this is not enough.

"The schools of pharmacy throughout the country are doing excellent work. They have no serious difficulty, I believe, in maintaining a satisfactory standard of requirements for admission to their classes. As yet, however, the number of their graduates is comparatively small, and their influence for good, though certainly great, is still inadequate to our need. Our ranks are recruited mainly from among drug store apprentices, the majority of whom are poorly equipped educationally for the work they have undertaken to do. Just here lies our trouble. This is the weak point in the structure we are seeking to erect, and I beg you to notice that this weakness is in the foundation. The State boards are doing what they can to insure a fair amount of technical knowledge in those whom they license to practice pharmacy; but they can never correct the evil of which we complain so long as their powers are restricted to testing the merely technical knowledge of candidates.

"But I need not argue this point further. All present are agreed, no doubt, that our weakness—nay, our danger, lies in this lack of intelligence, this inadequate intellectual discipline and attainment on the part of those now crowding into the profession. The difficulty of the situation, as I understand it, is to agree upon the right application of the only possible remedy, namely, improved general education as a prerequisite to apprenticeship. Two years ago at the meeting of the International Pharmaceutical Congress, held in Chicago, resolutions were adopted declaring what should be the educational qualifications of apprentices seeking to enter the drug business, and the time that they should be required to serve. At the Asheville meeting last year I had the honor to introduce a similar set of resolutions which were adopted by this association. (See page 353 of the proceedings.) It has been

thought by some that these requirements are perhaps a little too far in advance of the present status of pharmacy to receive the support they merit. Recognizing this fact, and at the same time feeling the great importance of the subject to the future welfare of our profession, and recognizing also the fact that it is desirable to make an early beginning, no matter how modest or unpretentious that beginning may be, I therefore recommend that resolutions embodying the following features be passed by this body :

"In the opinion of the American Pharmaceutical Association, the best interests of pharmacy as a profession demand that a definite minimum standard of preliminary general education of all persons entering drug stores to learn the art of pharmacy ought to be enforced by the boards or commissioners of pharmacy of the respective States, and that the preliminary education possessed by all such persons ought to be at least equivalent to that required for admission to the public high schools; that all persons applying for registration as pharmacists or assistant pharmacists should be required to give satisfactory evidence of sufficient general education, by examination or otherwise, and should not be registered or licensed as pharmacists or assistant pharmacists if deficient in that respect: and that a copy of this resolution be transmitted by the permanent secretary of this association to each pharmaceutical examining board or commission or board of pharmacy in the United States.

"It may have occurred to some present that the end we have in view might be secured by simply requiring applicants for license to pass an examination in some prescribed course of general study in addition to that of pharmacy. A little reflection, however, would show that such a plan would be impracticable. For an ordinary apprentice to pursue a course of study in addition to what is already required of him is out of the question; he has neither time, strength nor inclination for it, to say nothing of the lack of a teacher. If a boy has already completed the required course before beginning his apprenticeship, it would be unreasonable to expect him to stand a satisfactory examination in it after four years of enforced neglect. Besides all this, we are not concerned to know how many facts of history or rules of grammar the candidate may happen to remember; the important thing is that, before undertaking the study of pharmacy, he shall have acquired a good degree of intellectual strength and training, the habit of systematic application, some knowledge of himself and the world about him, and, above all, that he shall have acquired such appetite for knowledge that in his own chosen branch at least he may be trusted to do thorough work. The value of a good general

education, in its bearing upon the particular pursuit in which one may be engaged, is not commonly well understood. Some good people look upon a college education as a key to ail prosperity, a sort of 'open sesame' to fortune's treasure house; while, on the other hand, many, who are nothing if not practical, hold that the earlier a young man devotes himself exclusively to his chosen pursuit the better his chance of success. I need hardly say to a body like this that neither of these views contains the whole truth. It is possible, of course, to spend too much time in aimless study, and we may even acquire at college the indolent habits of the bookworm; but these are by no means the necessary results of education properly so called. They are rather the results of faulty methods and ideals, which are now happily giving way to something better.

"A young man may be said to be well educated, I think, when, having first been trained to right use of his senses, he has further learned to digest and to assimilate what he reads. The maxim 'through hand and eye to the brain,' points us, no doubt, to nature's way, the wisest and best way, of training the young; but education ought not to stop here. The mind also needs to be developed and trained till it is able, not only to interpret rightly what the senses report, but to deal intelligently with words and ideas, to seize their meaning with as firm a grasp and as clear an insight as belong to hand and eye in the world of matter and motion. Indeed, I am not sure but the ability to read intelligently (by which I mean the power not only to get from the printed page all that the writer intended to convey, but to compare the matter thus acquired with similar matter already known, and to estimate it at its true value), I am not sure, I say, that the ability to read in this way ought not to be ranked even higher than the ability to observe for one's self, however keenly, the objects and phenomena of the material world. There is no need, however, to measure these powers one against the other. There is no necessary antagonism between the two. On the contrary, they go hand in hand, each aiding the other and doubling its efficiency. Nothing is understood that stands alone. To understand a thing is to place it in its right relation to surrounding objects, and the more numerous the points of contact the more complete the understanding. To be able to give from memory the name of an object and one or two of its properties is hardly to know it at all; but in a profession like ours, certainly 'a little learning is a dangerous thing' It is with a view to saving our apprentices from mistakes on this point that we would insist upon their postponing the study of pharmacy till the mind has been so far developed

by previous study as to have a wholesome appetite for genuine knowledge, and has been so far trained as to be able to acquire it. If such a requirement should have the effect of excluding the incompetent and the indifferent, so much the better for them, for us and for the public; for, to repeat what has been expressed above, in a profession like ours, with its grave responsibilities, incompetence is sin.

"The advice, 'know something of everything and everything of something,' seems especially appropriate to druggists. Some knowledge of Latin, as we are all aware, is of direct use to the apprentice in throwing light upon the nomenclature of the business, but its chief value lies in its power to illumine the mind itself—to light up the whole intelligence by cultivating a sense of the right use of words, the real nature of language. Substantially the same may be said of mathematics, science, history—in fact, any study that teaches one to consider the meaning of words, to compare, to discriminate, to classify, to reason—in a word, to think for one's self. Consider for a moment the difficulties in the way of an apprentice without such mental discipline. He must commit to memory an endless succession of disconnected facts, which he, through ignorance of general principles, has no power to arrange and classify. These facts are conveyed in language that to him is virtually an unknown tongue; and all these difficulties he must encounter with a mind untrained to habits of systematic application.

"But I need not dwell longer upon this subject. There can hardly be two opinions as to the desirability of the end we have in view. Just how that end is to be secured is for you to determine. The obstacles in the way are serious enough, but are not, I trust, unsurmountable."

On motion of W. J. M. Gordon, the address was referred to a committee of three, for consideration. The President named J. P. Remington M. W. Alexander, W. C. Alpers to form this committee.

The minutes of the council for the past year were then read by the secretary, G. W. Kennedy, and also the minutes of the 5th session of the council, all of which were adopted. The minutes of the 6th session were also read but after discussion were referred, on motion of Geo. J. Seabury back to the council with the recommendation to withdraw the motion to publish the names of members dropped for non-payment of dues.

The reports of various committees were received and a recess of five minutes was taken in order to select members of the Nominating Committee, which was composed of the following delegates.

Alabama, E. C. Andrews; Arkansas, E. F. Klein; Colorado, John Best, C. H. Wells; Florida, S. P. Watson; Georgia, Jos. Jacobs, J. Solomon; Illinois, W. N. Sempill, Chas. Zimmerman; Indiana, F. R. Carter, C. W. Eichrodt; Iowa, F. Howard, C. D. Wangler; Kansas, Mrs. M. O. Minor, G. Leis; Kentucky, A. J. Troettlein, A. J. Dimmitt; Louisiana, N. P. Roux, L. F. Chalin; Maryland, C. Caspari, jr., A. R. L. Dohme; Massachusetts, E. H. La Pierre, E. W. Robinson; Michigan, C. C. Sherrard, G. McDonald; Minnesota, W. A. Frost, L. A. Harding, Missouri, A. Brandenberger, H. M. Whelpley; Nebraska, C. A. Sherman, N. A. Kuhn; New Jersey, S. W. Williams, W. C. Alpers; New York, E. H. Bartley, C. W. Holmes; N. Carolina, O. N. Royster, J. W. McCrea; N. Dakota, J. Davison; Ohio, C. T. P. Fennel, G. L. Hechsler; Pennsylvania, E. A. Cornell, F. G. Ryan; S. Carolina, E. P. Wilhite; Texas, J. Burgheim; Virginia, T. Roberts Baker; District of Columbia, W. S. Thompson; Province of Quebec, J. E. Morrison.

Delegates at Large: A. E. Ebert; J. P. Remington; M. W. Alexander; W. J. M. Gordon and J. N. Hurty.

Communications from the Mayor, Boards of Trade and Pharmaceutical Societies were read by the Secretary inviting the Association to hold the next annual meeting at Montreal.

From the Commercial Club of Hot Springs, Ark., and from the Commercial Clubs of Minneapolis and St. Paul, to hold convention at Lake Minnetonka. The invitations were referred to a committee composed of W. B. Frost, of Minnesota; J. E. Morrison, Montreal; W. S. Thompson, District of Columbia; S. P. Watson, Florida, and J. A. Legendre, Louisiana. The session then adjourned.

SECOND GENERAL SESSION.

THURSDAY, August 15.

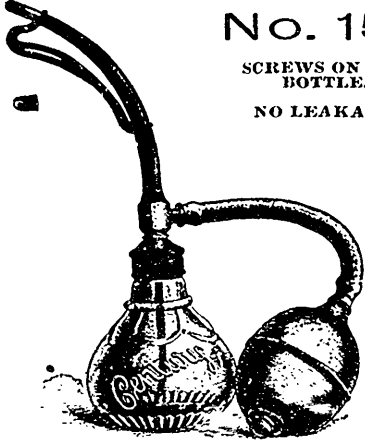
The meeting was called to order by President Simpson, and after the reading of the minutes, the minutes of the council were read, and as the latter body has not adopted the recommendation offered at the previous meeting. Mr. Alexander moved the minutes be again referred back to the council with instructions not to publish the names of delinquents. After considerable discussion, during which it was shown that those members whose names were to be published did not deserve the amount of sympathy expended on them, as they were mostly men who joined for advertising purposes, and that in any case, really deserving members who might be temporarily in hard luck were not published. The motion was withdrawn.

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Your orders respectfully solicited.

Yours truly,

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The secretary's report was received and after some discussion regarding the so-called library of the Association, it was decided to hand over to Prof. Lloyd, all the volumes which were of no value to the association.

The Treasurer's report showed a balance on hand of \$3,284.24.

The report of the committee on membership showed that the association had a total membership of 1,435 regular members, 98 life members, and 15 honorary members, making a total of 1661.

The Committee on Prizes reported first prize to H. Kraemer, of New York for his paper on "The Examination of Cloves," second to A. R. L. Dohme, "Investigation of Ipecac and Stramonium," third prize to L. F. Kebler, "Analytical Alkaloidal Chemistry." The Ebert prize was not awarded.

The report of the Committee on the Revision of the Pharmacopœia was read and referred to the section on Scientific papers.

ELECTION OF OFFICERS.

The Nominating Committee reported the following nominations: President, J. M. Good, of St Louis; 1st Vice-President, C. E. Dohme, Baltimore; 2nd Vice-President, A. Brandenberger, Missouri; 3rd Vice-President, Mrs. M. O. Minor, Kansas. Reporter on the Progress of Pharmacy, C. Lewis Diehl, Louisville, Ky.; Treasurer, S. A. D. Shephard, Boston; Secretary, Chas Caspari, jr., Baltimore. Members of the Council: C. M. Ford, W. J. M. Gordon, Ohio and J. Burgheim. Upon motion of Mr. Torbert, the Secretary was instructed to cast a unanimous vote in favor of the Candidates named.

Prof. Sayne offer a vote of thanks to the retiring reporter on progress of Pharmacy, Mr. Kramer, who is about to go to Europe.

The Committee on Time and Place of next meeting reported in favor of Montreal, and the time, August 12th, 1896. The report after some discussion was adopted.

The report on Natural Formulary was read by Prof. Diehl. Among other changes noted was the adoption of the metric system, aca-cia is recommended as the emulsifying agent for oils, etc., instead of the many ordered in the previous edition, and a general formula for effervescent powder. The report was adopted and referred to the Publication Committee.

Mr. Hallberg's report on the revision of the constitution was referred to the Council.

Mr. Ebert gave notice of a motion to amend the constitution so that no one would be eligible for election to the council unless he had been a member of the Association for at least five years.

The session then adjourned.

SECTION ON COMMERCIAL INTERESTS.

This Section was called to order by the chairman, Geo. J. Seabury, who opened the proceedings with an address in which he reviewed the commercial history of the trade since 1882. The address was very lengthy and went into the details of the commercial side of pharmacy in a very exhaustive and able manner.

Mr. Seabury's address was referred to a committee composed of M. W. Alexander, T. V. Wooten, and G. McDonald.

SECOND SESSION.

AUGUST 1895.

The meeting was called to order by Chairman Seabury and after reading of the minutes of the last session, the committee appointed to consider the chairman's address presented their report.

R. N. Girling, of New Orleans, presented a paper on "The Patent Medicine Evil," which we publish elsewhere in this issue.

Mr. Ebert, in the discussion which followed said that the suggestions contained therein were impracticable and could never be enacted and enforced as the patent medicine was too well backed financially. In the speaker's opinion the new pharmacy law of Illinois fully protected the pharmacist, and would to a certain extent hinder the sale of drugs and medicines by department stores, and prevent retailing by wholesalers.

Dr. F. E. Stewart, of Detroit, read his paper on "Non-Secret Remedies" which was discussed by Messrs. Ryan, Sherman, Klein and others, and was followed by Jos. Helfman, with a paper on the same questions, but taking a directly opposite stand. These two papers created quite a lively discussion and caused considerable excitement for a while.

After the reading of a paper entitled "A Final Remedy" by Clay W. Holmes, of New York, the section adjourned.

THIRD GENERAL SESSION.

AUGUST 17th.

Prof. Remington in the chair in the absence of Pres. Simpson.

The minutes of the third session of the council were read and approved.

The Secretary of the Council announced the receipt of some additional applications for membership. The session then adjourned.

SECTION ON SCIENTIFIC PAPERS.

The first session was called to order Aug. 17. A. R. Dohme in the chair. The chairman called Mr. Good to preside while he read his address, which was an exhaustive resume of the scientific discoveries of the past year. On

resuming the chair, Dr. Dohme announced that he had appointed a committee on the question of indicators for use in alkaloidal titration, composed of L. A. Kebler, Caspari, Dohme, Prescott and Lloyd. Mr. Caspari read the report of this committee in abstract.

Mr. Sayre moved a vote of thanks to the committee, and the report was referred to committee on revision of the Pharmacopœia.

The nominations for officers being in order, Mr. Ryan nominated for chairman, S. P. Sadtler of Pennsylvania, Mr. Good nominated Dr. Dohme. For Secretary of the Section, W. C. Alpers, of Bayonne, was nominated.

The Section then proceeding to the reading of papers.

Prof. Lloyd presented a paper on "Examination of Elm Bark, Flax Seed, Mustard for Starch." Mr. Hallberg in the absence of the author read a method for the Estimation of Starch in Powdered Elm Bark, by W. B. Day of Chicago. Both of these papers were of special interest in view of the Pure Food agitation now going on in certain States, and caused considerable discussion. "Taraxacum Root and Taraxacin" was the subject of a paper by L. E. Sayne and "What is the pure Aconitine of Commerce" by A. R. L. Dohme, the latter paper was discussed by Dr. Prescott, Morrison, and the author. Dr. Whelpley read an abstract of a lengthy paper on "Cherry Bark" by E. S. Bastin of Philadelphia. A. B. Stevens, of Arm Arbor, presented a paper on the "Assay of Wild Cherry Bark" in which he showed that contrary to the contrary to the opinion of most pharmacists, the thick was more valuable than the thin bark.

Pepsin and its valuation was the subject of two lengthy papers by C. C. Sherrard of Detroit, the reading of which drew forth objections from Mr. Hallberg regarding the loss of time devoted to this subject, which was about worn threadbare. L. E. Sayne took an opposite view, and considerable discussion took place over the question.

The session then adjourned.

At the afternoon session the following papers were read.

"The Assay of Ergot," "The Alkaloidal value of Jaborandi Leaves," "The Alkaloidal value of Ipecacstems," "Assay of Coca," all by A. R. L. Dohme; "Statistics on 50,000 prescriptions," by E. L. Patch; "The Extracts of Cod Liver Oil," by F. E. Stewart; "Cod Liver Oil," by C. C. Sherrard; "Chinquapius," by H. Kraemer; "Analysis of Kola," by J. C. Schlotterbeck, Ann Arbor; "Notes on Pepsin," by L. F. Kebler; and "Need of Authoritative Standards for Surgical Dressings," by S. W. Williams, of Orange, N. J. The latter was the cause of a lengthy discussion, in which most of the members present took a hand.

There being no further business, the section adjourned.

SECTION ON EDUCATION AND LEGISLATION.

MONDAY, August 19th

After the reading of the address of the chairman, J. M. Good, Prof. Hallberg read his report on "Poison Sales" which produced a lengthy discussion on the question as to what constituted a poison and the precautions to be observed in the sale of poisons. Prots. Prescott and Remington, and M. W. Alexander were appointed a committee to draft resolutions on this subject. Nominations for chairman and secretary were next in order. Messrs Hallberg and Beal were nominated for the first, and Dr. Bartley for the second.

Mr. Sheppard read a paper on "Requirements for Graduation," and Prof. Oldberg, one on "The Better Education of Pharmacists," by Prof. Nagelvoort. Prof. Prescott in discussing the first paper gave as his opinion founded on many years experience that a college training previous to practical store work produced the best results.

Mrs Minor said that in her experience of ten years her best employees were those who had a practical experience of one or two years, followed by a year at college than another year in the store and after that completing the college course.

The discussion which was participated in by Messrs Hallberg, Simon Caspari, Alpers, Sheppard, Hurty, Whelpley and others took a very wide range and consumed a great deal of time without any very practical results, one side contending for practical experience before graduation, the other that the college having no control over the store experience of its graduates could not and should not guarantee its quality, as they must if experience be compulsory before graduation, that that was a question for the state boards of pharmacy not for the colleges. At the afternoon session, Prof. Hallberg was elected chairman of the Section, and Prof. Beal of Scio, Secretary. Mr. Sheppard presented the report of the Committee on Graduation, Requirements, as follows:

Resolved, That it is the sense of the American Pharmaceutical Association that the cause of pharmaceutical education would be advanced if all schools that confer the degree of Graduate in Pharmacy should adopt these suggestions.:

1. That the standard for admission shall be not less than the equivalent for admission to the public high schools of the larger cities of the United States.
2. That each student shall attend not less than two courses of didactic instruction, each course extending over a period of not less than twenty-eight weeks, the student to be in attendance

upon not less than six hours of such instruction in each week and not less than one hundred and sixty (160) hours in each session. That the time devoted to this instruction shall be limited to the subjects of pharmacy, chemistry and materia medica or botany, and not to include that in collateral branches. That not less than three hundred hours of laboratory work shall be required of each student in each term.

3. That every student, in order to graduate, shall be familiar with all the teachings of the United States Pharmacopoeia, and fully capable of performing all operations mentioned in it.

4. That as far as practicable students shall give their whole time to the work of the college during its sessions, and not divide their time between work in a store and work in a college. That no student shall be retained at college whose outside duties will not permit him to do full justice to his studies or laboratory work.

5. The student should not be admitted to the school or college at less than eighteen years of age; and the degree should not be conferred upon any person who is less than twenty-one years of age at the time of completing his final course.

6. That the degree of Ph. C. should be conferred upon any person who has successfully passed the required examinations without regard to practical experience in a drug store.

Mr. Oldberg moved that the report be received and Dr. Whelpley moved seconded by Mr. Ebert that the report be laid on the table as the members apparently would not adopt it with the last paragraph. After some further discussion, Mr. Sheppard then offered another resolution, on the same subject, namely, that state boards of pharmacy should demand on the part of candidates that they should have received at least six hundred hours instruction in a pharmacy school before being examined.

This resolution was withdrawn in favor of a substitute offered by Dr. McGill, which was adopted after a few minor changes.

Resolved, that the American Pharmaceutical Association recommended to the State Pharmaceutical Association the requirement of the following qualifications precedent to the registration and licensing of pharmacists:

1. An academic education equivalent to that required for admission to the public high schools of our larger cities.

2. A professional education in the branches of study taught in the best pharmaceutical schools equivalent to that acquired by regular attendance upon at least six hundred hours' instruction in such a school during a period of not less than six months.

3. A practical experience in pharmacy of at least thirty-six months, including the time spent in regular attendance upon a school of good standing having adequate laboratory courses.

Mr. Beal read a paper on "A National Pharmacy, Food and Drug Law," after which the session adjourned.

At the evening session, Mrs. Miner read the report of the Committee on Chairman's address and after the reading of other reports, W. C. Alpers read a paper "On a Proposed Curriculum, for Candidates before Boards of Pharmacy," which was highly commended and on motion of Mr. Oldberg, a vote of thanks was passed.

Mr. Jos. Jacobs, of Atlanta, read a paper on the practical side of the drug business, which contained many suggestions of great importance. This was followed by a number of others "College Attendance," "Pharmacy Board Regulations," "Registration Statistics," by J. H. Beal; "Adulteration of Drugs," by C. T. P. Fennel; "The Position of the A. Ph. A. towards Pharmaceutical Education," by Ed. Kremers.

A paper on "The Metric System," by Hon. E. Saurhering, of Wisconsin, brought up the question of the adoption of this system in the U. S. Prof. Hallberg, suggested the adoption of a resolution asking for the enforcement of the metric system in 1900, to which J. M. Good objected, as the change could not possibly be made by that time; Prof. Oldberg admitted the fact, but said that the evident object of the resolution was the moral effect it would have. The motion was carried and after the installation of the new officers the section adjourned.

LAST GENERAL SESSION.

TUESDAY.

After the reading of the minutes, the meeting took up the proposed amendments to the by-laws, the most of which were adopted. The reports of the Auditing Committee, and the Committee on Apothecaries in the Army and Navy were referred to the publication committee. After some other resolutions had been adopted the new officers were installed. Pres. Good then appointed several committees after which the meeting adjourned, to meet in Montreal, August 12th, 1896.

JOURNAL NOTES.

Arthur W. Reddin, graduate of Ontario College of Pharmacy and Phm. B., Toronto University, opened up in business in Charlottetown, P. E. I., July 29th. The journal extends congratulations.

W. G. Pettingell, has resigned the position of Registrar Treasurer of the Pharmaceutical Association of the North West Territory.

ACETIC EXTRACT OF IPECACUANHA.

By F. C. J. BIRD.

Read at the Pharmaceutical Conference at Bournemouth.

The loss of alkaloid which occurs when the acetic extract of ipecacuanha is prepared by the process of the present Pharmacopœia has been frequently commented on by pharmaceutical writers, and anyone who is in the habit of making this article must have been struck by the disproportion which always exists between the percentage of alkaloid in the root used and the alkaloidal value of the finished extract. The recent researches of Paul and Cownley have demonstrated that both emetine and cephaeline are affected when their acetic solutions are evaporated to dryness and exposed to the temperature of a water bath for any length of time, and it is evident that in the manufacture of the acetic extract the period of evaporation should be shortened as much as possible. In Dr. Attfield's recent report to the Pharmacopœia Committee of the Medical Council, certain improvements in the formula are suggested which will doubtless tend to decrease the amount of alkaloid destroyed. One of these consists in the evaporation of the percolate in separate fractions a departure from the letter of the official directions of which probably all manufacturers have been guilty for along time past, another lies in the reduction of the quantity of acid to one fourth of the present proportion. This latter, especially, will probably have a very decided influence on the yield of alkaloid, as it is apparently the tenacity with which the pectinous matter of ipecacuanha retains acetic acid which is responsible for the long-continued heat necessary to render the extract sufficiently dry for powdering.

Before seeing Dr. Attfield's report I had made some experiments with a semi-alcoholic extract, and thinking they may be of interest to the Conference, I give the details below. Twenty-four ounces of Brazilian ipecacuanha was reduced to No. 20 powder, and divided into three equal parts of 8 ozs. each; A, C, and C.

A was macerated with 8 fl. ozs. acetic acid and extract made exactly as directed in the Pharmacopœia, the only divergence from the official instructions being that the percolate was evaporated in fractions.

B was macerated with 4 fl. ozs. acetic acid and 8 fl. ozs. S. V. R., percolation being continued with S. V. R. to exhaustion. The marc was then removed from the percolator and stirred up with 4 fl. ozs. acetic acid and 4 fl. ozs. distilled water. After standing twelve hours the marc was returned to the percolator, and exhausted with distilled water. The aqueous extract having been evaporated to dryness the spirit was distilled from the alcoholic percolate, the resulting syrupy liquid added to the dry aqueous extract, and the whole

dried and powdered. The effect of this was disappointing, as the aqueous residue appeared to re-absorb acetic acid, and evaporation took much longer than was anticipated.

C was reduced to No. 60 powder and macerated with glacial acetic acid, 1 fl. drachm, and S. V. R., 8 fl. ozs., percolation being continued with S. V. R. to exhaustion. The liquid was then distilled and the syrupy residue evaporated to dryness. The marc having been treated with acetic acid, 4 ozs., and distilled water, 4 ozs., and allowed to stand twelve hours, was returned to the percolator and exhausted with more distilled water, the aqueous percolate evaporated to dryness, mixed with the dried alcoholic extract, and the whole powdered.

In working on any quantity by the above process the spirit in the marc would, of course, be recovered before treatment with water. The alkaloid in the three extracts was estimated by Ransom's process, as modified by Braithwaite and Umney, with the following results:—

Percentage of alkaloid in the powdered, root used (by Ransom's method of assay) 1.63 per cent.

	Quantity of extract from 8 ozs. root.	Yield of extract per cent.	Calculated percentage of alkaloid in extract if no loss occurred.	Actual percentage of alkaloid in extract.	Loss of alkaloid per cent.
A	D. P. process	16.6	9.82	7.18	26.8
B	Alcoholic, 113 grs. Aqueous, 219 grs.	623 grains 18.06	9.02	7.93	12.08
C	Alcoholic, 398 grs. Aqueous, 269 grs.	697 grains 19.05	8.56	7.8	8.96

2.5 grammes of powdered extract C, after treatment with 50 C. c. distilled water, left a residue of .3 gramme undissolved.

No difficulty was experienced in percolating C in 60 powder with water, after exhaustion with spirit, and the second percolation with acid continued to remove alkaloid, even after apparent exhaustion of the marc with rectified spirit.

The process C certainly effects a considerable reduction in the loss of alkaloid, and it might I think, be still further improved by spreading the syrupy alcoholic extract on glass plates and drying at a low temperature like a scale compound. The bulk of the alkaloid is taken up in the first percolation with spirit, and this at no time is exposed to a very high temperature, and, moreover, is very quickly dried. The powdered extract differs but slightly in appearance from the B. P. product, and has a much more decided odour of ipecacuanha.

The standardisation of ipecacuanha wine will probably become authoritative in the next Pharmacopœia, and in connection with this recommendation to the Medical Council it will be noticed that the wine alone is to be standardised, a constant strength being ensured by the use of a quantity of powdered extract containing a stated amount of

alkaloid. Would it not be better to fix a definite strength for the extract itself, and direct any variation from that standard to be adjusted by the addition of some harmless diluent as sugar of milk. Acetic extract of ipecacuanha is a regular article of commerce, and it seems desirable, in the interests of convenience and the prevention of errors, that such a preparation should always be of the same alkaloidal strength, and be capable of being used in unvarying proportion for the production of ipecacuanha wine.

SYRUP. HYPOPHOS. CO. B.P.C.

By W. A. II. NAVLOR.

Read at British Pharm. Conference at Bournemouth.

At the Oxford meeting of the Conference last year a paper entitled "Laboratory Notes" was read by Mr. F. C. J. Bird, in which the statement was made that the sulphuretted odour sometimes emitted by syrup. hypophos. co., B. P. C., resulted from the reduction of sulphates by the free hypophosphorus acid present in the preparation. To me the statement was a startling one, but my inability at the time to disprove it by reference to experiments of my own or those of others induced me to refrain from comment. The desire to prevent the fixation of what I believe to be a wrong impression must be my apology for presenting this simple note. To arrive at a decision on this question, the following experiments have been made:—

(a) Potassium, sodium, and calcium sulphate were dissolved separately in a 15-per-cent. solution of hypophosphorus acid in the proportion of 20 gr. to the fluid ounce. To detect faint traces of sulphuretted hydrogen or sulphurous acid the operation was conducted in the apparatus to be presently described for the test of phosphoretted hydrogen, the reagents (cup content) in this instance being starch iodide or free iodine V.S. At the moment of mixture no odor was recognisable and during the fortnight the several solutions were under observation the liquid in the cup did not become decolorized. In a second series of the same solutions, coils of filter-paper, impregnated with lead acetate and kept continuously moist, were suspended for three weeks. At the end of that period no discoloration of the paper had taken place in any of the solutions. On the addition of 0.2 per cent. of sodium sulphite to any one of the solutions, evidence was shortly afforded of the liberation of sulphuretted hydrogen.

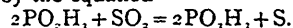
(b) Ten grains each of potassium, calcium, and manganese hypophosphite, and the equivalents of ferrous hypophosphite in solution, all of which contained small quantities of sulphates, were severally shaken up with $\frac{1}{2}$ dr. of hypophosphorus acid (30 per cent), $3\frac{1}{2}$ dr. of water, and $1\frac{1}{2}$ oz. of syrup. No sulphuretted odor could be detected either at the time or during the period it was set aside.

(c) Alkaline sulphates were dissolved in a 15-per cent. solution of hypophosphorus acid and boiled, with the result that neither sulphuretted hydrogen nor sulphurous-acid gas was evolved, nor was sulphur precipitated.

(d.) Syrup. hypophos. co., B.P.C. made from ingredients containing small quantities of sulphates, but free from sulphites, afforded no trace of sulphites, of sulphurous acid or sulphuretted hydrogen.

These results distinctly negative the idea that sulphates are reducible by hypophosphorus acid under conditions that would be likely to exist in the making and storing of syr. hypophos. co., B.P.C.

If the bad odour occasionally emitted by this syrup be not traceable to the reduction of sulphates by hypophosphorus acid, to what it is due? My experience points distinctly to sulphites as the incriminating substance. When to an alkaline sulphite in aqueous solution is added an excess of hypophosphorus acid, sulphurous acid, then sulphuretted hydrogen are formed, and can be recognised by their smell. After the solution has stood for a time it will be found that all unpleasant odour has disappeared, sulphur has deposited, and an equivalent portion of hypophosphorus acid has become converted into an alkaline acid phosphite. Poncorf has shown that dry sulphur dioxide reacts with hypophosphorus acid in the manner indicated by the equation—



the principal products being phosphorous acid and free sulphur. He further remarks that at the same time hydrogen sulphide is evolved, and some phosphoric acid is formed.

It may be mentioned, as the result of direct observation, that 1 gr. of sodium sulphite in 1 pint of syrup. hypophos co. suffices for the production to a pronounced degree of sulphuretted hydrogen.

I have not met with a sample of a hypophosphite which contained a sulphite or hyposulphite, or any impurity other than a sulphite to which a sulphuretted odour could be referred.

As a phosphoretted is not dissimilar to a sulphuretted smell, and as the presence of one or the other could not be identified by the nasal organ in a mixture of both, it seemed desirable to apply some chemical test by which this recognition could be effected. The required test, the efficiency of which has been repeatedly verified by me, is based upon the ready solubility of reduced silver and the insolubility of silver sulphide in dilute nitric acid. It may be advantageously applied in the following way:—To a strong aqueous solution of a hypophosphite in a W.M. glass stoppered bottle add a little diluted sulphuric acid and shake vigorously. If, after standing, a bad odour develops, the glass stopper is replaced by a sound cork. In the centre of the under-surface of the cork there has been inserted a narrow glass tube, the opposite end of which is bent upwards and shaped like a small

cup. Into this cup a few drops of silver-nitrate solution have been placed. By this means the test-solution is brought into immediate contact with the vitiated atmosphere above the liquid. After a short time the blackened contents of the cup are collected on a filter, washed free from soluble silver salt, and treated with dilute nitric acid. If the liquid (filtrate) responds to the tests for silver it must be assumed that phosphoretted hydrogen was present; if the deposit remained insoluble, or was only partly soluble, in dilute nitric acid; and if sulphur separated when it was heated with nitric acid; it must be inferred that sulphuretted hydrogen was present. Of a number of samples of hypophosphites which I have recently examined, not one gave, when suitably treated, an odour that could be traced to phosphoretted hydrogen.

The results of my examination of commercial samples show that, of five samples of the potassium salt, all contained traces of sulphates, phosphites, and calcium, one contained sulphite, and two traces of chlorides. Sulphates, and phosphites, of calcium were found in five samples of sodium hypophosphite, and sulphite and chloride were absent from one only; but of five samples of calcium hypophosphite none contained sulphite or chloride, although all showed more or less markedly the presence of sulphate and phosphite, and three the presence of sulphate. Barium and manganese hypophosphites contained sulphates, phosphites, and chlorides, and hypophosphorous acid traces of sulphuric and hydrochloric acid, and 0.232 per cent. of H_3PO_3 .

It thus appears that phosphites were present in every sample save one. To detect phosphites an aqueous solution of the hypophosphite was acidified with acetic acid the precipitate decomposed either with sulphuretted hydrogen or diluted sulphuric acid, the latter reagent being the more convenient. To the clear filtrate from the lead sulphide, or sulphate, was added a slight excess of mercuric chloride, and the whole was heated for about an hour to $80^\circ C$. The precipitate in every case was tested, and proved to be wholly or in part mercurous chloride. In testing for chlorides the Pharmacopœia of the United States requires that after heating 10 c.c. of a 5-per-cent. aqueous solution of sodium hypophosphite with 1 c.c. of nitric acid, the solution should remain clear upon the addition of silver nitrate T. S. For the direction "after heating" I would substitute *after heating in a test-tube in a water-bath for a hour*. By following this more definite instruction the object in view is attained.

The precipitate thrown down by lead acetate is not necessarily a single compound, but it may consist of lead sulphite, sulphate, phosphite, and phosphate respectively, or a mixture of two or more of these, and, possibly, other impurities. As a test it is severely exclusive, but is lamentably lacking

in discriminative qualities. One word on the keeping-properties of syrup. hypophos. co., B.P.C. When made with commercially pure ingredients, the syrup can be stored in bulk in glass-ware for three or four weeks without becoming cloudy or depositing. It must not be forgotten that its tendency to change is inherent, and that upon its natural instability, or the facility with which it decomposes, its value as a remedy is understood to depend. If it be desirable to prolong the period during which the syrup ordinarily remains bright, this may be done by adding to the present formula potassium citrate in the proportion of 80 gr. to the pint.

HANDSOME DRUG AND BOOK STORE.

Mr. W. G. Smith, the well known druggist for so many years on the corner of Wyndham and Macdonnell streets, has moved his drug business to much larger and handsomer premises just four doors further west from the corner. During the past month extensive alterations have been going on at No. 20 Wyndham street, under Mr. Smith's personal supervision, until now they are nearly complete and Mr. Smith is doing business in the new stand. He has added to his drug stock the book and stationery business which has been carried on in the premises by his father for the past twenty years—and has now one of the handsomest and most complete business stands in the city.

No. 20 Wyndham street has put on a new front. The stone walls have been whitened and pointed and a handsome new plate glass front, with stained glass over the door and windows, gives the entrance to the store a very fine appearance. After entering the store, to the right hand will be found the book and stationery department. To the left is the drug department. The whole interior has been painted and papered with very choice paper. Elegant quartered oak fittings have been placed in the store by the well known firm, "The Canadian Office and School Furniture Co." of Preston, whose work must be seen to be appreciated. Two large mirrors on each side and two at the end, one on each side of the handsome stairway, add very greatly to the beauty of the store. The prescription department will be found just in the rear of the drug department, which has been fitted up in modern style, and the private office will be found in the rear of the prescription department.

The second floor is reached by a massive oak staircase from the centre of the store. On this floor will be found a large show room to display wall paper, window blinds, fancy goods, and druggist's sundries. In rear of this room is the laboratory, where tinctures, syrups, and extracts are manufactured, also the proprietary articles, such as Smith's Blood Tonic, Cherry Balsam, Worm Powders, Winter Fluid and other preparations which have had such an extensive sale.

On the third flat the extra stock is kept which is necessary for such an extensive business.

The store is lighted by incandescent lights. Electric call bells are placed in each of the flats so that clerks may be summoned to the front from any part of the establishment at a moment's notice.

With such comfortable surroundings we predict for Mr. Smith a largely increased business. It is not necessary to inform the public of Mr. Smith's ability to serve them as his record for so many years in the old stand proves his ability to do so. In fact his name has become quite a household word.—*Guelph Daily Mercury.*

Weight of Drops of Various Liquid Medicaments.

Frederich Eschbaum has recently made an exhaustive study of the question, propounded at the meeting of the German Pharmaceutical Association last year, "Is it possible to obtain from the same liquid, at all times, drops of identical size and weight?" The study is published in full in the *Deutsche Medizinische Wochenschrift*, from which we extract the following conclusions:

The size and weight of a drop is determined by two circumstances or conditions, viz: (1) The adhesion existing between the liquid and the glass, and (2) the specific cohesion of the liquid.

In regard to the first condition, the author says; Drops of uniform size can not be obtained by uniformity in the size or shape of the neck of the container, since the quantity of liquid in the latter has an influence on the quantity, massing itself into the drop. They can be obtained, however, from a burette, and the sharper the point of the latter the smaller the size of the drops, and vice-versa; but it is the size of the external circumference of the point of exit which determines the size of the drop.⁽¹⁾

To demonstrate this proposition, Eschbaum gives the following figures:

External diameter of point of pipette.	Weight of a drop.
0.67 mm	0.0134 gm.
1.39 mm	0.0262 gm.
2.80 mm	0.0492 gm.
3.67 mm	0.0522 gm.
4.17 mm	0.0630 gm.
6.56 mm	0.1000 gm.
8.32 mm	0.1350 gm.
14.30 mm	0.2550 gm.

SPECIFIC COHESION OF THE LIQUID.

The specific cohesion of various liquids varies within very wide bounds, being greatest in water and least in ether, glycerin and alcohol standing in that order between the two. To illustrate this, Eschbaum let the liquids drop from a burette of 6.56 mm external diameter at 15° C., and found

that 50 drops of each named liquid had the following weight :

Water	5.00 gm.
Glycerin	3.90 gm.
Absolute alcohol	1.54 gm.
Alcohol, 94°	1.70 gm.
Alcohol, dilute, G.P.	1.87 gm.
Ether	1.22 gm.

The specific cohesion of a fluid is affected by temperature, but, according to our author, in small amounts the variation from this cause is too small to be taken into account practically.

The specific cohesion of a solution of solid substance in a liquid is lower than that of the liquid.

The drops of a solution, all other circumstances being equal, are therefore smaller than those of the menstruum.

The specific cohesion of liquids is therefore in inverse ratio to their specific weight, so that the absolute weight of a drop of a salt solution, for instance, is almost identical with that of a drop of the original menstruum. All these results demonstrate the absurdity of our present methods, and leads Eschbaum to formulate the following proposition for

RATIONAL DOSATION BY DROPS.

As a standard of unity, let a pipette be chosen having an external diameter of point of delivery of 6.56 mm. Such a pipette delivers drops of distilled water weighing 10 cgm. each, or 10 drops to the gram; or 26 drops of a tincture made of dilute alcohol to the gram.

While the ordinary medicine dropper, with a gum bulb, seems to Eschbaum the most convenient for the patient, on account of its inaccuracy and the careless habits of the majority of nurses he advises a measuring apparatus for lay use, described as follows :

THE RATIONAL MEDICINE DROPPER.

Take an ordinary medicine glass, holding from 30 to 60 ccm., and fit it with a bored cork through which pass a strong glass tube from 2½ to 3 cm. long, the inner end of which is even with the lower surface of the cork, and the outer end projects, say a centimeter, from the top to the latter. The delivery point is not drawn to a point, but is so molten as to leave a very small opening in it, while the lower end of the tube is molten only sufficient to remove the sharp edge, and even this may be omitted. The outer end should have a diameter of from 7 to 7½ mm. (from .28 to .30 inch) and be nearly flat, or only slightly rounded at the edges.

The dropper thus formed should be not more than half filled, and when it is desired to use it, it should be grasped in the palm of the hand and turned upside down over the spoon or other receiver. The heat of the hand, expanding the residual air, will slowly drive out several drops, each of exactly the same size. A well-made dropper of this sort may be turned upside down and left thus for several minutes without a drop escaping until the hand (or other external source of warmth) is applied.

1. Quicksilver is the only fluid that forms an exception to this rule. The size of the drops of this substance is determined by the diameter of the opening in the clear.

While the use of the "drop" as an unit of measure in medicine and pharmacy is to be discouraged, and no one is more convinced of the fact than our author, he recognizes the impossibility of reforming the professions all at once, and the futility of such an attempt. He has therefore done the next best thing, and has, with most commendable patience and accuracy, worked out a table of the weight of drops of the various medicaments in common use, selections from which we present below.

The results presented in the following table were obtained by the use of a burette with an external diameter of 6.56 mm. (say .26, or a full quarter of an inch). It is unnecessary to remark that a burette should be firmly held in measuring, as a trembling hand causes the drop to be shaken off the point before it has completely formed.

TABLE OF DROPS TO THE GRAM OF LIQUID.

Acetum.....	13	Oil, mustard.....	22
Acid. acetic liq.....	18	Oil of turpentine, rect.....	27
Acid. hydrochloric.....	11	Oil, paraffin.....	23
Acid. hydrochloric dil.....	10	Paraldehyde.....	27
Acid. phosphoric.....	10	Syrup of iodide of iron.....	10
Acid. sulphuric aromatic.....	25	Spirit (alcohol).....	29
Acid. sulphuric dilute.....	10	Spirit of ether.....	21
Amylene, hydrate.....	31	Spirit of nitrous ether.....	29
Amyl, nitrate.....	32	Spirits camphor.....	25
Bromine.....	17	Spirit, dilut (alcohol dilute).....	27
Cresote.....	19	Tinctures prepared with al-	
Chloroform.....	26	cohol.....	29
Ether.....	41	Tinctures prepared with di-	
Ether, acetic.....	30	lute alcohol.....	27
Ether, bromic.....	29	Tincture, ethereal acetate of	
Extracts, narcotic, dissolved,		iron.....	26
according to the solvent,		Tincture, ethereal chloride	
which see.....	17-20	of iron.....	30
Formaldehyde, solution.....	16	Tincture of malate of iron.....	14
Glycerin.....	13	Tincture of iodine.....	29
Liquor, ammonia aromatic.....	27	Tincture of musk.....	21
Liquor, ammonia caustic.....	11	Tincture of opium (G. P.).....	25
Liquor, ferri subacetat.....	12	Tincture of rhubarb, aqueous.....	14
Liquor, ferri sesquichlor.....	9	Tincture of rhubarb, vinosus.....	17
Liquor, potass, arsenic.....	15	Tincture of strophanthus.....	25
Oil of almonds.....	20	Tincture nux vomica.....	25
Oil of anise.....	20	Tincture of Valerian.....	25
Oil of caraway.....	21	Tincture of Valerian, etheric.....	30
Oil of clove.....	20	Water of bitter almond.....	19
Oil of cinnamon.....	21	Water, chlorine.....	10
Oil of croton.....	21	Water, distilled.....	10
Oil of lemon.....	25	Wine of camphor, colchicum.....	17
Oil of peppermint.....	24	ij-scac, etc.....	17
Oil, olive.....	21		

TO THE DOCTORS.

In conclusion, Eschbaum gives the following very good advice to the physicians: Either regulate your doses after the information conveyed to you in this table, or, what is better, name the absolute weight or measure of the dose prescribed.

—National Druggist.

Annual Museum British Medical Association.

LONDON, August, 1895.

By far the most prominent exhibit at the Annual Museum of the British Medical Association, held at the examination Hall of the Colleges of Physicians and Surgeons, in the first week of August, was the artistic display of Burroughs, Wellcome & Co., of Snow Hill Buildings, London. Occupying as it did the central position in the central room, it arrested the attention of the visitor directly he entered, and a close in-

spection revealed the care with which it had been arranged.

This firm has fitted out every important British exploring expedition for many years and it made a prominent show of the trophies of these highly satisfactory outfits. The chests, etc., brought back by Stanley, by Surgeon Major Parkes, by Captain Stairs, by Julius Price, by Col. Burland, and a host of other explorers and hunters of world wide fame were on view. As an instance of what this firm is capable, in the matter of compactness of medical outfits, a tiny medicine chest, the smallest in the world was shown. It was about the size of a locket and contained 500 doses of medicine. A great variety of unused medicine cases and chests fitted with "Tabloids" of compressed Drugs and adapted for every conceivable purpose were exhibited.

The most interesting parts of the section devoted to "Tabloids" was undoubtedly that where preparations of organic remedies of animal origin were shown. It was not until prolonged experiments proved the unreliability of the various processes for the preparation of extracts of animal organs that the "Tabloid" form was adapted for this class of medicament. The whole substance of the organ is thus secured, and the presence of the active principles assured. Clinical experiments made by leading physicians and repeatedly published in the various medical journals, prove the reliability of these laboratory experiments. Among the better recognized "Tabloids" of animal substance prepared by this firm, may be mentioned those of Thyroid, and Thymus Gland; supra-renal capsules; didymin; cerebrin; pituitary body; pineal gland; bone medulla, ovarian, kidney, and uterine wall substances.

In Burroughs, Wellcome & Co's. bacteriological laboratory in which the application of the "Tabloid" system to animal organs was worked out, a very important discovery was made. This firm was the first in Great Britain to prepare liquid Anti-diphtheritic-serum for general supply to the medical profession, and as some doubt was thrown on the keeping qualities of the liquid form of this substance, research was undertaken to ascertain whether the serum could not be prepared in a dry form. After the expenditure of vast sums of money a method was discovered, and once more Burroughs, Wellcome & Co. were first in the field. As the result of these investigations, they now prepare a serum of full potency and high concentration in the form of beautiful golden non-deliquescent but readily soluble scales. These scales keep much better than the old liquid serum, and are therefore well adapted for export to the tropics, and for physicians who wish to keep a supply of the serum by them ready for emergencies.

In view of the proximity of another important exhibit, that of Fairchild Bros., & Foster of New York, a little bottle in one of Burroughs, Well-

come & Co's. cases was of surpassing interest. This bottle contained some of the first pancreatic extract ever made and was exhibited by Dr. George Harely at the Leeds Meeting of the British Association for the Advancement of Science in 1857. At this meeting the learned doctor showed for the first time that pancreatin possessed within itself the digestive properties of saliva, gastric juice and bile, being able to convert starch into sugar, dissolve albuminous substances and emulsify fats. Unfortunately his process for the isolation of active principles was too expensive for practical work and it was not till many years afterwards that Dr. Fairchild of New York hit upon a simple, cheap, and effective process. In order to distinguish his preparation from the many worthless pancreatins and pancreatic emulsions then on the market, he gave it the distinctive name of "Zymine," and as such it has been since known and was exhibited at this Museum by Fairchild Bros., & Foster. "Zymine" is a patent pancreatic extract containing all the active principles of the organ from which it is prepared in a pure dry powder. It contains in an exceedingly active form the following ferments: Trypsin, converting albumen into peptone; Diastase converting starch into dextrine and sugar. The emulsive ferment essential to the assimilation of fats and oils, and the milk curdling ferment.

Pepsencia was another preparation in strong evidence at Fairchild Bros., & Foster's exhibit. This is obtained by direct maceration from the stomach of the pig and calf and is either taken as a digestive aid diluted with water, or used for the preparation of digestive junkets.

The Tinctures of the British Pharmacopœia
 A REPORT ON THE STRENGTH OF COMMERCIAL SAMPLES.

Read at the Pharmaceutical Conference at Bournemouth.

BY E. H. FARR, AND R. WRIGHT, F.C.S.

The work previously published by us upon the subject of alkaloidal drugs has been done with the following objects in view:—

1. To ascertain the menstrum best adapted for securing perfect exhaustion of the drug.
2. To devise accurate and reliable methods for the estimation of the alkaloids in the tinctures.
3. To find the average alkaloidal strength of the tinctures.
4. To ascertain in what cases it might be feasible and desirable to set up definite alkaloidal standards for the tinctures.

These branches of our investigation having been fairly well worked out, it was thought that an inquiry into the strength and quality of commercial tinctures as sold and dispensed by retail phar-

macists might be attended with good results, and that a report upon such tinctures might also prove of interest to the members of this conference. In order to obtain the requisite samples, several pharmacists residing in different parts of the country were approached, and through their kind instrumentality we obtained the samples now reported upon. In making application for samples it was requested that they be obtained from pharmacies of at least average class; our object being, not to get up a case against our fellow-pharmacists, but simply to ascertain to what extent the case for the standardisation of the alkaloid tinctures might be strengthened or otherwise by an examination of commercial samples.

In addition to the estimations of alkaloid and extractive matter, we have in the present series of experiments taken the specific gravity of each tincture, thinking it desirable to ascertain whether the official menstrua were closely adhered to in preparing the tinctures. In this particular our results indicate no very important deviation from the official instructions.

In estimating the alkaloids present in tinctures we have followed in each case the process originally used by us, and which will be found fully described in various numbers of the *Pharmaceutical Journal* for the year 1891-2, and of the *Chemist and Druggist* for 1892-3, under the headings of notes on the individual tinctures.

TABLE I.
 Showing the Amount of Alkaloids in Grammes of 100 C. c. supplied by the Tinctures.

Tincture.	1	2	3	4	5	6	7	8	9	10	11	12	Average.	Range.
Aconite.....	0.23	0.10	0.18	0.16	0.18	0.14	0.16	0.14	0.12	0.51	0.44	0.50	0.11	0.30
Belladonna.....	0.16	0.16	0.17	0.20	0.15	0.08	0.11	0.18	0.18	0.18	0.17	0.23	0.11	0.36
Chloroform.....	0.22	0.16	0.14	0.16	0.16	0.15	0.15	0.15	0.84	0.58	0.56	0.78	0.58	0.76
Camellia.....	0.28	0.10	0.23	0.30	0.16	0.26	0.15	0.13	0.10	0.20	0.21	0.69	0.13	0.83
Gallesium.....	0.52	0.23	0.33	0.14	0.11	0.23	0.20	0.21	0.11	0.25	0.26	0.27	0.32	0.14
Hyoscyamus.....	0.10	0.11	0.16	0.28	0.08	0.10	0.09	0.09	0.11	0.08	0.10	0.09	0.10	0.05
Jaborandi.....	0.18	0.16	0.28	0.16	0.14	0.36	0.34	0.30	0.44	0.18	0.24	0.62	0.15	0.65
Labrella.....	0.05	0.10	0.20	0.16	0.10	0.24	0.16	0.20	0.24	0.14	0.18	0.20	0.13	0.28
Nux Vomica.....	0.28	0.24	0.34	0.68	0.18	0.23	0.20	0.17	0.18	0.25	0.15	0.17	0.19	0.20
Stramonium.....	0.32	0.16	0.24	0.16	0.16	0.18	0.20	0.17	0.18	0.25	0.15	0.17	0.19	0.20
Veratrum.....	0.01	0.32	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32

The amount of extractive was ascertained by the evaporation of 10 C. c. of the tincture in a porcelain dish having a flat bottom and drying the

extract at 212° F. until constant; and the results obtained are given in Table II.

TABLE II.
Showing the Amount of Extract in Grammes from 100 C.c. yielded by the Tinctures.

Tincture.	Average.													
	1	2	3	4	5	6	7	8	9	10	11	12		
Aconite.....	1.961	1.08	2.441	1.791	1.08	1.41	1.00	2.022	2.732	2.08	1.982	2.11	1.66	2.30
Belladonna.....	1.251	1.00	1.181	1.141	1.00	1.24	1.00	1.122	1.22	1.00	1.081	1.201	1.01	1.21
Cinchona.....	3.703	3.06	3.643	3.404	3.35	3.54	3.68	3.70	3.61	3.50	3.61	3.54	3.52	3.50
Colchicum.....	0.061	0.81	0.44	0.00	0.78	0.70	2.32	2.18	1.50	1.31	0.81	0.91	0.91	1.27
Conium.....	0.019	1.91	0.981	1.01	1.00	1.14	1.48	1.82	2.21	1.74	1.81	1.81	1.81	1.80
Gelsemium.....	1.701	3.81	7.42	3.65	1.4	1.54	1.35	2.30	3.70	3.03	2.98	3.03	3.47	3.02
Hyoscyamus.....	3.30	3.32	3.43	3.83	3.83	3.25	3.25	4.02	5.03	3.72	4.6	5.23	4.24	4.95
Jaborandi.....	0.20	0.80	0.96	1.06	1.0	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Lobelia.....	0.20	1.14	1.22	1.12	1.22	1.22	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Nux Vomica.....	3.70	3.80	3.80	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68
Opium.....	1.10	1.11	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Veratrum.....	1.50	1.23	1.21	1.25	1.30	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14

being twice or three times the strength of others, and it may be a matter of surprise to find that this is the case with such tinctures as opium and cinchona, both of which are directed to be made from standardised drugs. In the case of the tincture of *nux vomica*, too, it might be anticipated that the variation would be practically *nil*, but it appears that such is not the case, for whilst, in no instance is the B. P. standard exceeded, one tincture is only about two-thirds as strong, as it should be, and several others are deficient in alkaloid.

The tinctures of conium were most of them absolutely worthless, and in only one instance did the same appear to have been made from dried green fruit as directed in the B. P. A reference to the tables of results also serves to bring out another fact, viz., that the relative proportions of alkaloid and extractive contained in different samples of the same drug vary between very wide limits. Attention has been directed to this point on several previous occasions, and its bearing upon the question of tincture standards is obvious.

In conclusion we take this opportunity of thanking those gentlemen who kindly assisted us in procuring the samples from their various districts

PHARMACEUTICAL NOTES.

MEDICATED GRANULES. — Of recent years French pharmacists have put upon the market a number of these preparations which have had a considerable sale. They are the old fashioned saccharates slightly modified, M. Mansier in *Jour. de Phar. et de Chim.* gives a process for their preparation. The sugar is granulated by rubbing the loaf sugar in a mortar, sifting through a coarse sieve and retaining the granules, but the ordinary coarse granulated sugar will do. In mixing with the extract it is of course evident that the latter must be either alcoholic or chloroformic, other wise the sugar will be dissolved. The following will serve as a type of this class :

- Extract of kola 7 gr. 50
- Granulated sugar..... 150 gr.

Dissolve the extract in twice its weight of 60 per cent alcohol then pour it over the sugar keeping the mixture well stirred, then spread out in a thin layer to dry, turning it over occasionally to prevent the granules adhering.

CAFFEINE AND CAFFETANNIC ACID—In a thesis for the degree of Sc. D. presented to the Faculty of Science of Marseilles, Dr. Gaucher has completed the history of caffeine, his principal objects being to find by micro-chemical methods the parts of the coffee plant containing the alkaloid and also caffeotannic acids. The conclusions at which he arrives after a series of experiments, are: Caffeo-tannic acid is found in all parts of the plant and at every period, caffeine does not exist in the peri-

TABLE III.
Showing the Specific Gravity of the Tinctures.

Tincture.	Average.													
	1	2	3	4	5	6	7	8	9	10	11	12		
Aconite.....	0.81	0.87	0.84	0.87	0.87	0.87	0.84	0.84	0.87	0.86	0.87	0.87	0.85	0.85
Belladonna.....	0.92	0.92	0.93	0.90	0.90	0.95	0.93	0.93	0.90	0.93	0.95	0.91	0.91	0.91
Cinchona.....	0.951	0.940	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945
Colchicum.....	0.980	0.923	0.935	0.925	0.912	0.91	0.925	0.93	0.925	0.93	0.931	0.931	0.931	0.931
Conium.....	0.98	0.90	0.97	0.90	0.931	0.90	0.945	0.940	0.908	0.931	0.931	0.931	0.931	0.931
Gelsemium.....	0.912	0.914	0.90	0.90	0.93	0.923	0.928	0.928	0.924	0.920	0.937	0.935	0.935	0.935
Hyoscyamus.....	0.933	0.91	0.928	0.93	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935
Jaborandi.....	0.95	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Lobelia.....	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Nux Vomica.....	0.929	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Opium.....	0.920	0.927	0.927	0.927	0.927	0.927	0.927	0.927	0.927	0.927	0.927	0.927	0.927	0.927
Veratrum.....	0.917	0.854	0.855	0.860	0.861	0.841	0.842	0.860	0.861	0.857	0.857	0.857	0.857	0.857

In the tables we also give the average of our former experiments.

Reference to Table I. disclose a very wide range in alkaloidal value, some of the tinctures

carp of the fruit, nor in the root nor in the stem of plants grown in the hot-house.

The young plant while free from chlorophyll does not contain caffeine.

The mesophyll of the leaf contains the alkaloid, and in the seed it exists in the embryo and in the albumen.

CITROPHENE—is a new remedy obtained by Roos of Francfort. It is a compound similar to phenacetine and phenolactine; as citric acid is tribasic it required three molecules of the phenetidine group for complete saturation, the molecule of citrophene therefore contains two groups more of phenetidine than phenacetine or phenolactine, consequently the analgesic action is more energetic than in the later two. It is a white powder soluble in 40 parts of cold water, and is decomposed by acids and alkalies. The dose is .50 to 1 gm. ($7\frac{1}{2}$ to 15 grs.) repeated as required.—*Repert. de Pharm.*

METHYL SALICYLATE IN COCA.—Mr. Romburgh has proved the presence of this body in the distillate from coca leaves. It seems to exist naturally in the leaves but in very small quantities.

JABORANDI AND PILOCARPINE.—At a recent meeting of the *Société de Pharmacie de Paris*, Mr. Petit drew attention to the fact that a large proportion of the jaborandi recently imported into France contained a very small percentage of pilocarpine, and some did not yield any. He showed a sample of leaves sold to him as jaborandi which yielded about 3 gm. per kilo, of an alkaloid which is neither pilocarpine nor pilocarpidine and upon which he proposed to continue his researches.

ADHESOL.—Is a new preparation proposed by Mr. Dufau to replace steresol.

Copal	35
Benzoin.....	3
Balsam Tola.....	3
Oil of thyme.....	2
Ether.....	100
Beta Naphthol.....	0.30

It forms a viscous liquid more easily applied than steresol, it evaporates quickly and forms a very thin skin over the parts.

ZINC SALICYLATE.—Is best prepared by mixing solution of sodium salicylate and zinc sulphate in in molecular proportions, and the resulting precipitate then crystallized by dissolving in water and setting aside till crystals separate.

PREPARATION OF FERRATIN.—100 gms. of egg albumen are added to a mixture of 70 c.c. of solution of caustic soda (10 per cent.) and 30 c.c. of water; 20 gms. of tartrate of iron are dissolved in water and, if acid, neutralized with sodium carbonate. The two solutions are mixed, and after standing five or six hours are heated upon a water bath until the black coloration, due to formation

of sulphide of iron, disappears. After cooling, tartaric acid is added to faint acidity and the precipitate formed redissolved by ammonia, any excess of which is driven off by heat. Finally the ferratin is precipitated by the careful addition of tartaric acid. The precipitate is drained and washed with water, alcohol and ether in succession, then dried.—*Ann. Jour.*

TEST FOR MERCURIC IN MERCUROUS CHLORIDE. Two or three grains of calomel are mixed with a drop of 10 per cent soap solution, a drop of fresh tincture of guiac and about $\frac{1}{2}$ dr. of ether added, on evaporating the ether solution, mercuric chloride is indicated by the presence of a green coloration.—*Phar. Jour.*

A NEW METHOD OF PREPARATION AND USE OF BORAX CARMINE.—To obviate the many disadvantages of this reagent, M. Radais of the *Ecole Supérieure de Pharmacie de Paris*, that the use of the following formula yields a satisfactory product.

Carmine, powdered.....	2 gm.
Borax.....	8 gm.
Alcohol 70 p.c.	200 gm.

The mixture is placed in a flask with efflux condenser and boiled in a water bath for twenty minutes, the liquid is then allowed to cool and afterwards filtered.

The sections to be colored should first be treated with alcohol 70 per cent. for some minutes. The nuclei and especially the cellulose membranes take up the color very rapidly, the coloration being more rapid as they are richer in pectic compounds, and on the contrary, lignified or subernized tissues are not acted upon by it. In very favorable cases, ten minutes at least are required to obtain good results, but the sections may remain a long time in the solution without fear of over-coloring. The sections after taken from the color should be well washed in 70 p.c. alcohol and afterwards dehydrated as usual.

According to the author, with this solution sections may be colored without previous treatment with hypochlorite, etc. For double stained with iodine green, or methylene blue, the sections are first stained with the aniline color, the excess washed out with 70 per cent alcohol, and then placed in the borax carmine till the desired tint is obtained.

THE ALKALOIDS OF CALABAR BEANS.—From these beans three alkaloids have hitherto been extracted—eserine or physostigmine, eseridine, calabarine. According to Ehrenberg, the last-named does not exist already formed in the plant, but a new alkaloid was extracted which he terms eseramine. This body crystallises in colourless needles, melting at 238° . It is almost inactive physiologically. Its formula appears to be $C_{16}H_{25}N_4O_3$. It is known that eserine, under the influence of alkalies, gives a colouring matter, rubreserine,

which rapidly turns blue. If, however, alkalis be allowed to act on eserine, in the absence of air and in the cold, a new base is formed, which can be obtained in crystals by means of dry ether. Ehrenberg proposes to term this base eseroline. It has the formula $C_{11}H_{18}N_2O$; exposed to air it rapidly oxidises to rubreserine. This body is not obtained from eseridine.—*Brit. & Col. Drug.*

PHARMACISTS in the Italian Army, according to the *Bollettino Chimico Farmaceutico* there are 41 pharmacists of the ranks of sub-lieutenant, 30 of lieutenant, 27 of captain, 7 of major and two with the ranks of lieutenant colonels, in the Italian army, graded as follows:

Pharmaceutical inspector	....	Lieut.-colonel
Pharmaceutical director	....	Major
Chief pharmacist, 1st class	....	Major
Chief Pharmacist, 2nd class	....	Captain
Pharmacist, 1st class	....	Captain
Pharmacist, 2nd class	....	Lieutenant
Pharmacist, 3rd class	....	Sub-Lieut.

NATIONAL WHOLESALE DRUGGISTS' ASSOCIATION.

The annual meeting was held in Denver, September 5th to 10th. A large number of wholesalers being in attendance. The principal business transacted was the adoption of the new rebate plan, which we give below.

The officers for the coming year are: president, J. C. Eliel, Minneapolis; vice-presidents, W. A. Hover, Denver; H. P. Gilpin, Baltimore; J. R. Owen, Chicago; F. W. Braun, Los Angeles; M. A. Fall, Atlanta, Ga.; secretary, A. B. Merriam, Minneapolis; treasurer, E. L. Strong, Cleveland; chairman Board of Control, C. F. Weller; Board, F. L. Carter, Boston; F. A. Faxon, Kansas City; D. Myers, Cleveland; D. D. Phillips Nashville. Philadelphia was chosen as the place of next meeting.

REPORT OF COMMITTEE ON REBATES.

A committee of fifteen, to be known as the proprietary goods committee, consisting of one representative of the jobbing trade from each of the thirteen "sections" of the United States, to be appointed annually; each "section" naming its own representative annually not later than thirty days after the adjournment of the regular annual convention of the N. W. D. A.; failing to make this appointment within this time, the chairman of the committee shall make the appointment from among the wholesale druggists of that section; the committee to include, further, a representative selected annually by the proprietors adopting this plan, if they so elect. The chairman of this committee to be elected

at large by the members of the N. W. D. A. at each annual convention.

DUTY OF THE PROPRIETARY GOODS COMMITTEE.

1. The committee shall issue a list of all parties who are and shall hereafter be classed as wholesale distributors of proprietary medicines. This list shall be submitted to each proprietor desirous of working under this plan, who shall then suggest to the committee for their decision the names of any others he may desire to add to the list, stating his reasons with the name proposed. All those included in this completed list to be as eligible sub-agents in the manner hereinafter prescribed, it being the intention to provide a sufficient number of sub-agents to insure, by reason of the commission paid to them, a thorough distribution of the proprietor's products in all sections of the United States, and maintenance of his terms and prices.

2. They shall select a capable man, whose name shall be presented to the several proprietors adopting this plan, with the request that they each appoint him as his general sales agent, and the said agent shall give bond, to be approved by the committee for the faithful discharge of his duties.

3. They shall serve as an arbitration committee on all questions arising between the proprietors, the general agent and the sub-agents, a majority decision to be final, on the rights of all aforesaid concerned.

4. They shall elect a reliable banking institution as the depository of all commissions to be paid to the general sales agent by the proprietors adopting this plan.

Each proprietor who adopts this plan shall announce that his prices hereafter to all dealers will be his long prices only, freight upon quantity orders from the parties who shall be designated by the general agent as his sub-agents to be prepaid or deducted from the bill. He shall further agree, on receipt of remittances from authorized sub-agents during the continuance of the sub-agency, and no longer, to pay the general sales agent—per cent commission, in consideration of said agent furthering the sale at wholesale of his preparations at the prices designated by him.

DUTIES OF THE GENERAL SALES AGENT.

1. He shall offer to each of the parties designated by the committee as wholesale distributors, a sub-agency for the distribution of the various proprietary articles represented by him. The conditions of this sub-agency shall be a strict compliance with the terms of sale as prescribed by each proprietor for his own products.

2. He shall pay quarterly to each sub-agent during his continuance as such, a commission on all goods represented by the general sales agent and purchased by the sub-agent during the quarter, the commission to be the same as that allowed by the proprietor to the general agent upon these purchases.

Manner of paying sub-agent—At the expiration of every three months the general sales agent shall fill out an order upon the banking institution selected by the committee as above provided, in favor of each sub-agent for the amount of commission allowed him for sales under the plan to date, mailing same at once to the respective sub-agents.

The sub-agents shall sign a contract with the general sales agent, setting for the condition under which each proprietor acting under this plan desires his preparations to be sold. The form and specifications of these several contracts to be decided by agreement between the proprietor and the proprietary goods committee. If the proprietor or the general sales shall be of the opinion that any sub-agent has violated the terms of any of these contracts, the general agent shall revoke said sub-agency and the appointment of said sub-agents shall thereupon cease and determine. Upon an appeal by the sub-agent to the proprietary goods committee from the decision of the general agent, it shall be the duty of the committee to pass immediately upon the matter, and if the committee reverse the action of the general agent the sub-agent shall proceed as though his sub-agency had not been revoked, and all commissions shall be paid to him as provided until some new reason shall occur.

Upon a majority of the wholesale dealers in good standing in the section in which any discharged agent is located in favor of said dealer's restoration to a sub-agency, and upon the presentation of his name for reinstatement to the proprietary goods committee by the representative of that committee from that section, and if approved by a majority vote of the said committee the general sales agent shall agree to again allow a commission for service rendered by him as a distributor of ————products, upon receipt of another sub-agency contract, properly signed, rebates to begin from the date of said new contract.

Each sub-agent shall agree to pay an assessment to cover the expenses of the agency, which is to be fixed by and under the control of the proprietary goods committee for the United States.

Intermediate quantities are considered desirable if sold by proprietors to sub-agents only; rebates to be paid by the general sales agent. Quantities and terms to be agreed upon between proprietors and the committee,

and to be included in agreement between the general sales agent and the sub-agent.

THE ASSOCIATION OF PROPRIETORS AND MANUFACTURERS met in annual session concurrently with the N. W. D. A. The following significant resolution was adopted:

1. To perpetuate and strengthen the rebate plan by confining the direct sales of manufacturers with rebate to the wholesale dealers by means of a list of approved names to be prepared and issued by the committee.

1. To perpetuate and strengthen the rebate plan by confining the direct sales of manufacturers with rebate to the wholesale dealers by means of a list of approved names to be prepared and issued by the committee.

2 To place all retailers on an equal footing and thus discourage the disposition to cut prices in department stores and in other large retail establishments which buy at best discounts from some proprietors.

3 To relieve manufacturers from the annoyance and uncertainty which now exist in regard to accepting or declining orders, the wholesale druggists, through their national organization and its authorized committee, assumes the responsibility of designating such of their number as are entitled to purchase direct under rebate contract from manufacturers and of settling all difficulties and disputes.

4. We do not understand that it is intended that the new method of settling rebate accounts shall demand of manufacturers any change in their prices, or discounts, or even their forms of contract, except to offer the rebate through the agent selected by the committee.

5. The whole druggists will devise means of assessment, or otherwise to provide for it.

On the important question of advertising the president in his address said:

We think that, however desirable it might be to have all advertising of the members of the association placed through one agency, that it would be impossible to obtain the consent of the largest advertisers. In our opinion a bureau of information should be established at the earliest date possible under the general supervision of a committee of the largest advertisers to properly classify and rate all periodical publications and to furnish reports to subscribers from time to time of changes affecting their interests. A list of advertising book mediums issued in book form showing the proper classification and value of each would soon become the standard with general advertisers and advertising could be conducted on a scientific business now unknown.

The following officers were elected:

President, R. E. Queen, San Francisco; first vice-president, Edward J. G. Wells, New York;

second vice-president, Thomas Doliber, Boston; third vice-president, C. C. Voorhis, Woodbury, N. J.; fourth vice-president, A. Cressy Morrison, Milwaukee; secretary, Joseph Leming, New York; treasurer, H. E. Harding, New York; executive committee—R. V. Pierce, Buffalo; Brent Good, New York; George A. Kelley, Pittsburg; Thomas Leming, New York; H. M. Sharp, Philadelphia; Chas. F. Fletcher, New York; E. T. Hazeltine, Warren, Pa.

TRADE NOTES.

A GOOD THING.

Among the innumerable new articles with which druggists are continually besieged there is occasionally one that is really "a good thing." Such an article is "The Best" Nurser. It does all that is claimed for it. It has the emphatic approval of eminent physicians on both sides of the water—and the enthusiastic endorsement of thousands of mothers.

Below we print a few of the many testimonials, and mail orders that The Gotham Company has received for "The Best" Nurser. We can vouch for the genuineness of every one of these testimonials and mail orders. And they are but a drop in the bucket as compared to the whole number received.

We have investigated this Nurser and can say emphatically that it is by far "the best" in fact as well as in name. Druggists cannot go wrong in ordering a dozen and putting them on their cases where they can be seen. "The Best" Nurser is being very extensively advertised and the demand is sure to grow.

Chattanooga, Tenn. "The 3 "The Best" Nurers on my second order are received. I have tried every kind of Nurser advertised or that I ever heard of—smooth-bore, choke-bore, rifled; nipples ribbed, non-ribbed, collapsible and non-collapsible, and if any one of them save "The Best," is worth an old-fashioned tinker's dam I am falled to find it. Inclosed 50c for 1 dozen more "Clingfast" Nipples."

E. M. Johnson, of Johnson & Johnson, New York, says: "I am prepared to say I think 'The Best' Nurser is perfection. I predict great success for it."

J. A. Cranston, Supt. Public Schools, Elk River, Minn, says: "One of 'The Best' Nurers is worth a car-load of any or all other kinds."

New York Infant Asylum says: "'The Best' Nurser has been tried at the asylum and is recommended most warmly, especially for the facility with which it can be kept perfectly clean."

New York Lying-in Asylum says: "We have used 'The Best' Nurser and find it superior to any we have seen as having combined all essential qualities. We therefore heartily recommend it."

New York Medical College and Hospital for Women say: "Are pleased with 'The Best' Nurser; it does all you claim for it."

Western New York Society, the Children's Home, Randolph, N. Y., say: "After giving 'The Best' Nurser a thorough trial are greatly pleased with it and have discarded all other bottles. 'The Best' Nurser has been a wonderful aid in the healthfulness of our babies."

Mr. F. B. Gillette, 195 Calyer street, Brooklyn, N. Y. writes: "Mrs. Gillette has had many kinds of bottles—one from Boston—but yours, 'The Best' fills the bill."

E Stahl, Naugatuck, Conn., writes: "After trying your Nurser, 'The Best,' I think it deserves the name. Had I known of it earlier, would have been saved considerable worry myself and discomfort for child."

Mrs. F. Deordorff, Prairie City, Ore., says: "I like 'The Best' Nurser very much. My baby is better ever since I began using it."

Mrs. M. Shuman, Brooklyn, N. Y., says: "'The Best' Nurser has been a blessing to our baby. Since using it he has not been troubled with wind-colic. It is really worth its weight in gold."

From a French Medical Paper: "'The Best' Nurser was exhibited at the Academy of Medicine, June 21st, by the eminent accoucheur, Prof. Budin, who had no trouble in making his colleagues of the learned assembly comprehend the incomparable advantages of this precious nursing bottle."

COMMERCIAL SECTION A. PH. A.

George J. Seabury, chairman of Commercial Section, A. Ph. A., 59 Maiden Lane, New York city, has issued the following:

To Organized Pharmacists—In order to facilitate national organization as promptly as possible, I respectfully ask the president or secretary of all existing societies and organizations, including local, county and state, to favor me with, at their earliest convenience, the names of the following officers: The president, secretary and the chairman of trade interests committee, if such committee exists.

The section on commercial interests in the American Pharmaceutical Association, during this and next year, will have communications that will be appreciated by them on trades interest organization and other important matters connected with their present and prospective welfare. A prompt reply to above will be appreciatee.

PRICES CURRENT.
SEPTEMBER, 1895.

Acetum cantharides	lb	\$0 60	
" colchici cornu	lb	50	
" ipecac	lb	40	
" opii	lb	1 20	
" scilla	lb	12	
Acetanilid	lb	90	oz. 15
Acid. acetic glac.	lb	45	demi 16 00 ea.
" " fort P.B.	lb	15	carboy 11
" benzoic German	oz	15	lb 1.40
" " ozs. Hwds	25		Bulk 20
" boracic	lb	12	25 lb 11
" " pulv.	lb	14	25 lb 12
" butyric conc.	oz	30	lb 3.75
" camphoris	oz	50	
" carbolic cryst 1 lb bot	lb	30	10 lbs 25
" " " 10 " tins	lb	22	
" " Calvert's No.1	lb	2 25	
" " " " 2 lb	lb	1 40	
" " " " 5 gal	gal	1 50	
" " Crude " 5 gal	gal	80	
" chromic	oz	10	lb 1.00
" chrysophanic	oz	30	
" citric	lb	45	10 lb 42
" " pulv	lb	50	
" gallic	oz	10	lb 90
" hydro-bromic dil	lb	45	
" hydrochloric	lb	5	carboy 24
" " C.P.s.g.1.20	lb	25	Wins. 20
" " dil	lb	15	
" hydrocyanic P.B. doz.	doz.	90	in 1 oz. 10c per oz.
" " Scheele's doz.	doz.	1 00	do 10c do
" hypophosphor	lb	1 10	
" hydrofluoric (in patent			1/2 lb bottles .50 ea.
ceresine bottles)			1 lb " 1.25
" lactic dilutum	lb	1 00	
" " conc. pur	lb	1 75	
" nitric	lb	15	Wins. 12 carb 8 1/2
" " C.F.s.g.1.42	lb	30	Wins. 25
" " dil	lb	15	
" oleic pale frozen	lb	40	
" osmic	gm	1 25	
" oxalic	lb	12	50 lb 10
" perchloric	oz	35	
" phos. dilut	lb	17	Whr. qt. 14
" " conc S.G. 1.5	lb	45	
" " glac. pur stick	lb	1 00	
" " syr s.g. 1.750	lb	50	Whr. 45
" picric	lb	75	
" pyrogallic Schering's oz	oz	35	8 oz. 30
" " Merck's	oz	33	8 oz 28
" pyroligneous	lb	10	gall 50
" salicylic	lb	80	
" sulphuric	lb	5	carboy 2 1/2
" " babcock, s.g. 1.82	lb	5	carboy 3 1/2
" " C.P.s.g. 1.84	lb	25	Wins. 20
" " pur Eng	lb	20	Wins. 18
" " aromat	lb	65	
" sulphuros	lb	12	
" tannic	lb	70	5 lb 65
" tartaric pulv	lb	35	10 lbs 33 keg 30
" trichlor. acet. pure	oz	40	
" valerianic	oz	40	
Aconitina exot.	gr	4	60 gn. 3
Adeps benzoatus	lb	35	
" lanæ P. B. anhydrous	lb	1 00	
Ether S. G. 735	lb	40	Whr. qt. 85
" acetic	lb	55	do 50
" butyric	oz	15	lb 1.50
" chloric	lb	65	Whr. qt. 60
" Anæsthetic tin 500 gms	gms	1 50	each. }
" " 250 "	"	80	" Squibbs
" " 100 "	"	40	"

DR. CHASE'S

THE ORIGINAL KIDNEY PILL



KIDNEY=LIVER

THE ONLY KIDNEY-LIVER PILLS



PILLS

T. DEWSON, 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.

TO BE HAD FROM WHOLESALE DRUGGISTS.



DR. WEBER'S ALPINE HERB TEA

Made in Germany.

TRADE MARK. An old fashioned honest German Household Remedy for Colds, Dyspepsia, Constipation, Indigestion, Piles, Female Disorders. An Active Blood Purifier.

DRUGGISTS, RETAIL AT 30 & 25 Cts.

DREXEL MEDICAL CO., Canadian Agents, 112 St. FRANCOIS-XAVIER ST., MONTREAL.



PETERMAN'S 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.

Æther Anes. L. S. & Co		$\left\{ \begin{array}{l} 1 \text{ lb tins } 1.00 \text{ each} \\ \frac{1}{2} \text{ lb tins } 0.68 \text{ " } \\ \frac{1}{4} \text{ lb tins } 0.30 \end{array} \right.$	
Alcohol brl.....	cash	4 25	10 gall 4.55 5 gall 4.60 1 gall 4.65
" absolut.....	lb	1 00	Wr. 90
" methylated.....	gal	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 13
" pulv.....	lb	25	do 23
" Socotrina.....	lb	60	do 53
" pulv.....	lb	70	do 65
Aloin.....	oz	25	
Alumen lump.....	lb	3	brl 1 $\frac{1}{2}$
" pulv.....	lb	4	brl 2 $\frac{1}{2}$
" chrom.....	lb	15	
" exsiccata.....	lb	20	
Alumol.....	25 gm	50	each
Ammonol.....	oz	1 35	
Ammonii acet. pure cryst.....	oz	15	
" benzoas, ex gum.....	oz	25	lb 3 00
" bichromate pure cryst.....	lb	1 00	
" bromid.....	lb	65	
" carb.....	lb	15	7 lb tins 16
" kegs.....	lb	11	
" pulv.....	lb	20	
" resub.....	lb	50	c. b.
" chlorid.....	lb	12	100 lb 10 $\frac{1}{2}$
" gran.....	lb	12	100 lb 11
" pulv.....	lb	13	
" 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
" cryst.....	lb	35	25 lb 30
" pure cryst.....	lb	50	
" oxalas pur.....	lb	75	
" phosph.....	lb	1 25	
" salicylat.....	oz	40	lb 4.75
" sulphas com.....	lb	9	pur 25
" sulphocyanid.....	lb	75	
" valerian.....	oz	40	
Amygdala amara.....	lb	35	
Amyl nitras.....	oz	15	
" nitrite.....	oz	15	
" valerian.....	oz	35	
Amylum pulv.....	lb	9	
Annatto Hispan opt.....	lb	40	
" Fullwood $\frac{1}{2}$ oz & 1 oz lb	lb	1 00	
Antim crocus pulv.....	lb	20	
" nigrum pulv.....	lb	10	
" oxid.....	lb	65	
" sulphurat precip.....	lb	50	
" tartarat pulv.....	lb	35	
Antikamnia.....	oz	1 30	
Antipyrin Knorr's.....	oz	1 10	5oz 1.05, 10 oz 1.00
" Swiss.....	oz	85	10 ozs. .80
"	lb	12 50	
Antitoxine, 7 c. c.....		1.50	nett.
" 25 c. c.....		3.00	"
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
" floridæ.....	gl	5 00	
" lauro-cerasi.....	lb	25	Whr qt 20

Bird Bread

THE WONDER OF THE AGE.

PATENTED 1881.

SAY! Do you know that in every roc. packet of Cottam's choice imported, re-cleaned and well-mixed Bird Seed, a sc. 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 sc. Cake of Bird Bread can be got for roc., or Bird Bread without Seed at sc. 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 50 cents in stamps and we will send you post-paid six cakes of Patent Bird Bread.

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

PRICE LIST

OF

Pharmaceutical * Products.

We have just issued a new Pharmaceutical Price List (Catalogue No. 95), a copy of which we would be pleased to mail to all established retail druggists who may write for it. We believe it to be most comprehensive in its scope, as it includes within its pages the prices on fully 4,000 pharmaceutical products, which are conveniently arranged in groups. The notes of reference given in the appendix should be of interest and assistance to the careful buyer. In order to comply with the request of the wholesale drug trade that all lists conform to a general standard as far as could be done consistently, we have adopted in Catalogue No. 95 a system of long prices with discounts, which are liberal. Our terms of three months credit, no charge for containers, cartage and boxing, are certainly worthy of consideration.

FREDERICK STEARNS & CO.,
Manufacturing Pharmacists,
WINDSOR, ONT.

Aqua menthae pip.....lb	10	
" rosea trip.....lb	25	Whr qt 20
" sambuci flor.....lb	25	
Argenti chloridum.....oz	1 50	
" iodide.....oz	2 50	
" nitras cryst.L.B.&Co.oz	85	9.00 lb cash
" " fus (4 to oz)oz	90	
" oxidum.....oz	2 40	
" sulphate.....oz	1 50	
Aristol.....oz cartons	1 85	
Arsenicum alb. pulv.....lb	10	
" rub ".....lb	15	
Arsenici bromid.....oz	40	
" iodid.....oz	60	
" tersulph pulv.....lb	25	
Asphaltum Egyptian.....lb	18	
Atropina pure.....oz	60	each oz. 4 00
Atropinae sulphas.....oz	80	" oz. 4.00
" salicylas.....oz	80	"
" hydrobromate.....gr	5	
Auri chloridum (15 gr).....doz	4.00,	3 doz 3.75, 6 doz 3.50
" " L. B. & Co.doz	4.25	
Bacca aurantii.....lb	25	
" capsici.....lb	25	pulv. 30
" cassiae.....lb	35	pulv. 40
" cubebae.....lb	35	
" " pulv.....lb	40	
" juniper.....lb	8	10 lb 7
" " pulv.....lb	12	10 lb 11
" pimentae.....lb	10	
" " pulv.....lb	12	25 lb boxes 11
" xanthoxylon.....lb	40	
Balsam canad.....lb	40	Winch. 35
" copibaee.....lb	60	Whr. qt. 55
" peruvian.....oz	25	lb 3.00
" tolut.....lb	55	
Barii carb pur.....lb	39	
" chlorid pur.....lb	25	
" hypophos.....oz	25	
" nitras exsic.....lb	20	
" nitrate C. P.....lb	35	
" perox anhyd.....lb	60	
" sulphate pur.....lb	50	
" sulphide ".....oz	10	
Bath Pipe.....lb	40	
Bay rum St. D.....gal	3 75	sec. 2.75
Beberinae hydroch.....dr	50	
" sulphas.....oz	90	
Benzine refined.....gal	40	
Benzoyl Guaiacol.....oz	2 00	
Bismuthi Benzoas.....oz	40	
" Beta naphthol.....oz	1 00	incl.
" carb.....lb	1 90	
" citras.....oz	20	
" et ammon-cit.....oz	30	lb 4.25
" oxide.....oz	20	
" salicylas.....oz	25	lb 3.50
" subgallas.....oz	20	lb. 3.00
" subiodid.....oz	45	
" subnitras.....lb	1 65	
" valerian.....oz	50	
Bismuthum (metal).....lb	2 25	
Bole armen.....lb	6	
Borax.....lb	9	keg 7
" pulv.....lb	10	do 8
" calcined.....lb	60	
Bromine.....oz	20	
Bromoform.....oz	30	inc. bot.
Cadmium.....oz	15	lb 1.75
Cadmii bromid.....oz	20	lb 2.25
" iodid.....oz	50	
" nitrate.....oz	20	
" sulphas.....oz	20	
Caffeina pur.....oz	75	

Caffeina citras.....oz	65	
Calamina preparata.....lb	7	
Calcii bromid.....oz	15	lb 2.00
" carb. praecip.....lb		V. Crata precip.
" chlorid. cryst.....lb	25	
" " fusum pure..lb	30	
" chlorid fused crude..lb	15	
" hypophosphis.....lb	1 40	
" iodid.....oz	50	
" lactophosph.....oz	15	lb 2.00
" nitras.....lb	75	
" phosphas praecip.....lb	20	
" sulphas.....lb	3	
" sulpho-carbolas.....lb	2 50	
" sulphid.....lb	50	
" sulphis.....lb	18	pulv. 20
Calx chlorinata.....lb	5	keg 3 1/2 brl. 2 1/2
" " in packets 1 lb 7, 1/2 8, 1/4 9		
Camphora Ang. Hd's.....lb	70	
" " " ozs.....lb	75	
" " " flowers..lb	75	
" Dutch.....lb	65	
" " ozs.....lb	70	
Camphor monobromid.....oz	20	
Cantharides Russian.....lb	1 40	pulv. 1 50
" Chinese.....lb	—	pulv. 65
Cantharidine.....grain	8	
Cap papav. alb.....lb	1 00	
Carbo animalis pur. pulv.....lb	12	
" ligni.....lb	6	
" ligni pulv.....lb	10	brls 5.50 each
Carbon bisulphidum.....lb	16	Whr qt 13
" " C. P.....lb	50	
Carmine.....oz	40	lb 5.25
Caryophyllum, Zanzibar.....lb	15	16 Pulv.
" Amboyna.....lb	25	
" Penang.....lb	50	
Cassia fistula.....lb	30	
Castoreum.....oz	1 40	
Celloidina Schering's, chips.oz	1 20	
Cera alba.....lb	65	sec 40
" " paraffin.....lb	18	50 lb 15
" flav opt.....lb	40	secs 35
" " lithographers.....lb	50	
Cerii nitras.....oz	25	
" oxalas.....oz	10	lb 1.10
Cetaceum.....lb	55	10 lb 50
Cetraria Iceland.....lb	16	
Chirata Incis.....lb	30	
Chloralamid.....oz.	35	
Chloralose.....oz.	2 50	1/2 or 1 oz. vials
Chlorodyne Lyman's.....lb	2 00	
Chloral Hydrate recryst.....lb	1 20	
Chlorof pure Smiths 1 lb g.s. bs. lb	90	10 lb 80 Whr. qt 6
" D. F. & Co's pur.....lb	2 00	
" " meth.....lb	90	5 lb 85
" " blue label..lb	90	
" Merck 1 s.....lb	65	5 lb bottle 60
" " 56-lb tins..lb	50	28 lb tins 55
Chromium metal.....gm	60	
" oxid anhydric.....oz	10	
" sesquichloride.....oz	1 00	
" sulphate.....oz	20	
Cinchonidin sulph.....oz	15	Hds. 20
Cinchoninae murias Hds.....oz	18	
" sulphas ".....oz	18	
Civet.....dr	1 50	
Cobalt chlor.....oz	25	
" nitras.....oz	25	
Cocaine hydrochlor crys.....oz	6 00	1/2 oz 90 each
" phenate 5 grain tubes	07	grain.
Cocculus Indicus.....lb	10	pulv 20
Coccus cacti S. G.....lb	40	pulv 45
Codeina pure.....oz.	80	ea. oz. 6.00
" phosphate.....oz.	90	ea.
" sulph.....oz.	60	ea. oz 4.50

IN CONVENIENT PACKAGES...
FOR FAMILY USE

... LIST ON APPLICATION



ALWAYS READY
WITHOUT HEATING.

Chase's Mucilage.

MANLEY'S CELERY NERVE COMPOUND

With Beef, Iron and Wine.

Contains no INJURIOUS DRUGS. Is based on GLYCERINE instead of ALCOHOL. For CONSTIPATION, DYSPEPSIA, NERVOUSNESS, DEBILITY, ALL WEAKNESSES, BLOOD and SKIN DISEASES it is a GUARANTEED CURE.

Sold by All Wholesale and Retail Druggists.

The Lion Medicine Co., Manuf'rs., Toronto.



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 who 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 everywhere known as an old and reliable article. Sold only in boxes. Retail price, 25 cents, 50 cents and \$1.00 JOHN I. BROWN & SONS, Proprietors, 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., Ld., 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.

Brown's Camphorated Saponaceous Dentifrice.

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

CIBIL'S FLUID BEEF.

Has Taken Eighteen
First Medals : : :

It is a concentrated strength broth and only two tea-spoonfuls need be used to a cup of water.
A small bottle will make ten platefuls.
Invaluable for kitchen, sickroom and travellers.

GENERAL DEPOT:

W.M. F. SCHMOGLE & CO.
ANTWERP, - - Belgium.

THE CANADIAN CAPSULE CO
TORONTO

For General Excellence

SIZES & QUANTITIES

12	100	6 GRs DRY POWDER	12	100	6 GRs DRY POWDER
24	200	12 GRs DRY POWDER	24	200	12 GRs DRY POWDER
36	300	18 GRs DRY POWDER	36	300	18 GRs DRY POWDER
48	400	24 GRs DRY POWDER	48	400	24 GRs DRY POWDER
60	500	30 GRs DRY POWDER	60	500	30 GRs DRY POWDER
72	600	36 GRs DRY POWDER	72	600	36 GRs DRY POWDER
84	700	42 GRs DRY POWDER	84	700	42 GRs DRY POWDER
96	800	48 GRs DRY POWDER	96	800	48 GRs DRY POWDER
108	900	54 GRs DRY POWDER	108	900	54 GRs DRY POWDER
120	1000	60 GRs DRY POWDER	120	1000	60 GRs DRY POWDER

OUR CAPSULES ARE TRANSPARENT ELEGANT IN APPEARANCE AND UNRIVALLED IN MANUFACTURE OF THE FINEST & BEST MATERIALS SAMPLES FREE

MADE BY THE CANADIAN CAPSULE CO TORONTO

Colchici corm.....lb	30	
Collodium	65	
“ vesicans, P. B...lb	2 25	
“ flexile.....	65	
Colocynthis Turc select.....lb	60	pulv 85
Confectio rosæ Gallic.....lb	50	
“ sennæ.....lb	40	
Cortex aurantii Ang.....lb	70	
“ “ coml.....lb	15	
“ “ opt. ½s.....lb	20	
“ canellæ.....lb	20	pulv 25
“ cascara sagrada.....lb	25	
“ cascariilæ.....lb	20	
“ cassiæ.....lb	15	pulv 18, 25 lb box 18
“ cinchon flav.....lb	90	pulv. 1.00
“ “ coml. .lb	30	pulv. 35
“ “ rub quill.....	50	pulv. 60
“ granat fruct.....	20	
“ radicia.....	40	
“ limonis ang opt.....	55	
“ “ com.....	16	
“ mezerei.....	25	
“ myricæ (bayberry)..lb	20	
“ pruni virginianæ ..	15	20 lbs 12
“ quillaie.....	15	grd, 20 pulv. 25
“ sassafra.....	15	pulv. 22
“ ulmi.....	16	pulv. 16 grd 14
Creolin, Pearson's.....	70	litre bot. 1 25 each
Creosot. Ang (Morson's).....oz	20	lb 2.00
“ (Beechwood) Merck's..lb	1 50	Whr. 1 35
“ (Beechwood) French lb	2 75	
“ white, from coal tar..lb	75	
“ Carb.....oz	80	lb 12 00
Creta gallic.....lb	18	
“ “ pulv.....lb	5	bgs 3½.
“ præcip.....lb	10	keg 8
“ præparata.....lb	6	25 lbs 5
Crocus stigmat amer.....lb	65	
“ Valent.....oz.	75	Aliouante 60c oz.
Croton chloral-hydrate.....oz	45	
Cudbear.....lb	20	
Cupri ammonio-sulphas	1 00	
“ chloridum pur.....lb	60	
“ nitras pur.....lb	60	
“ oxidum nigr. pur.....lb	1 75	
“ “ coml.....lb	50	
“ sulph.....lb	7	keg 5 brl 4½
“ C. P.....lb	20	
Cuprum scales.....lb	40	
Curare.....grain	4	
Currie powder.....lb	35	
Cusso “.....oz.	10	
Damiana.....lb	40	
Daturine, pure xtls.....gr	10	
“ sulph .1 grm. tube	1 15	each
Dextrine, white.....lb	10	50 lb 8
“ yellow.....lb	8	“ 7
Diapente.....lb	30	
Diastase.....oz	1 00	
Digitaline.....½ oz	93	each
Diuretin “Knoll”.....oz	1 75	
Dolichos pruriens pubes....oz	60	
Duboisin, pure Amp 5 gr. tube	60	each
“ sulphate.....gr	10	
Eikouegen.....25 gm. tins	40	each
Elaterine. xtls P.B. 15 gr vials	1 25	each
Elaterium.....dr	35	
Ergota.....lb	50	pulv. 60
Ergotinum Bonjean.....oz	75	
Ergotine Bonjean Gen..30 gm	2 00	each
Eserine sulph 5 or 10gr. tube.gr	9	
“ salycilate, 5 gr. tube gr	10	each

3 GOOD SELLERS



VELROSE SHAVING CREAM SHAVING STICK BARBERS' BAR.



Pay you well.

Please your Customers.

Attractive Counter Articles.

Order Sample 1/2 dozen from your Wholesale House to come with next order.

Samples for free distribution given with first orders.

THOS. LEEWING & CO.,
MONTREAL.

DUNCAN, FLOCKHART & CO'S ©

Blaud's Pill Capsules.

Are Soft and Flexible
Never Become Hard

Never Become Oxidized
Never Vary in Strength

THESE CAPSULES are put up in 1, 2, and 3-pill sizes, with or without Arsenic, and can be supplied in boxes of 2 dozen or 100 (each). They are prepared by a unique and original process, which entirely overcomes the tendency to **hardening** which is so common in the Blaud Pills.

For Sale By Druggists.

R. L. GIBSON,
General Agent
30 Wellington St., East, TORONTO.

Messrs. D. F. & Co. guarantee their 1, 2, and 3 pill capsules to be equal respectively in Ferrous Carbonate to 1, 2 and 3 freshly prepared Blaud Pills. They have also this distinct advantage over pills, viz., that

THEY NEITHER OXIDISE NOR HARDEN.

Argoline Petroleum Jelly



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

A CONDENSED PETROLEUM FOR
PHARMACEUTICAL, MEDICAL
AND TOILET PURPOSES.

We also Manufacture:

	Argoline Cold Cream
	“ Pomade
ORDER . . .	“ Carbolated
FROM YOUR JOBBER.	“ Camphorated

SHEPARD MANUFACTURING CO. 

HOMESTEAD, PA.

Ethyl, Benzoate.....oz	40		Extract. stramonii pulv....oz	25	lb 3.00
" Bromide.....oz	25		" taraxaci.....lb	50	
" Butyric.....oz	15		" valerian.....oz	15	lb 2.00
" Chloride.....tubes	35	each	" veratri viride.....oz	45	
" Iodid.....oz	60		Faba ignatia amara.....lb	1	00
" Cnanthylate.....oz	5	00	" physostigmatis.....lb	1	25
" Succinate.....oz	60		" tonca para.....lb	75	
" Valerian.....oz	50		" " surinam.....lb	1	25
Eucalyptol.....oz	30	lb 3.20	" " angostura.....lb	2	25
Fugenol pure.....oz	35		" vanillæ short.....lb	3	00
Europhen.....oz	2	00	" " medium.....lb	6	00
Exalgine.....oz	1	25	" " 7½ in.....lb	7	50
Extract. acon. (rad alco.)..oz	35	lb 4.80	Fehling's solution.....lb	1	00
" aloes barb.....lb	75		Fel bovinum purificat.....oz	20	2.00 lb
" " pulv.....oz	10	lb 1.25	Ferratine.....oz	1	25
" " socot.....oz	15	lb 1.75	Ferri acetat.....oz	15	
" anthemides.....oz	20	lb 2.50	" albumen.....oz	25	
" " alcoh.....oz	25	lb 3.00	" ammon chlorid.....lb	60	
" belladon P. B.....oz	25	lb 3.00	" " persulph(iron alum) lb	40	
" " pulv.....oz	30	lb 3.50	" " protosulph.....lb	30	
" " aqueos.....oz	15	lb 1.50	" " tartras.....lb	75	
" calumb.....oz	25	lb 3.25	" arsenias.....oz	15	lb 1.6'
" cannabis indicæ.....oz	25	lb 3.00	" bromidum.....oz	20	lb 2.00
" cascara sagrada.....oz	25	lb 3.00	" carb. precip.....lb	15	
" cinchonæ flav.....oz	25	lb 3.50	" carbonas sacch.....lb	30	
" colchici.....oz	20	lb 2.50	" chloride.....lb	50	
" " acet.....oz	15	lb 2.00	" citras soluble.....lb	65	
" colocynth co.....oz	25	lb 3.00	" et ammonii citras.....lb	65	
" colocynth co. pulv.....oz	20	lb 2.50	" et quin. cit., 4%.....oz	15	
" conii P.B.....oz	20	lb 2.00	" " 4 p.c.....lb	1	75
" " pulv.....oz	25	lb 3.50	" " 10%.....oz	17	
" copaiabæ resin.....oz	15	lb 1.50	" " ".....lb	2	40
" damiana.....oz	40		" " P. B.....oz	20	
" digitalis.....oz	20	lb 2.50	" " ".....lb	2	75
" " pulv.....oz	30	lb 3.50	" " Hd's.....oz	25	
" ergotæ pulv.....oz	60		" " anorph.....oz	15	
" gentianæ.....lb	45		" " ".....lb	1	75
" filicis maris ether.....oz	25		" " et strychn. cit., oz	35	
" hamamelis dest.....gr	1	25	" " Hd's, oz.....oz	40	
" glycyrrh mol.....lb	0	75	" et strychn. citas 1%.....oz	15	10 oz 13 lb 1.75
" " pulv.....lb	0	75	" hypophosphis.....oz	20	lb 2.50
" hellebor nig.....oz	25		" iodide.....oz	40	
" hæmatoxylin.....lb	80		" lactas.....lb	75	
" hyoscyamine.....oz	20	lb 2.5. 0	" perchlorid.....lb	35	
" hyoscyam aquos.....oz	15	lb 1.25	" phosphas.....lb	85	
" " pulv.....oz	25		" pyrophosph.....lb	80	
" " aug.....oz	25	lb 3.50	" succinate.....oz	35	
" ignatia amara.....oz	60		" sulphas commercl.....lb	2	brl 90 gross
" ipecac acetic.....oz	1	50	" " exsic.....lb	6	
" jaborandi.....oz	60		" " pur.....lb	7	10 lb 6
" jalapæ.....oz	25	lb 3.50	" sulphid.....lb	15	
" " pulv.....oz	35		" valerian.....oz	25	
" krameria.....oz	25	lb 3.50	Ferrum dialyzatum.....oz	40	
" lactucæ.....oz	20	lb 2.20	" redactum.....lb	75	
" logwood.....lb	11	(15 & 30 lb boxe.	" tartaratum.....lb	70	
" " 1 lb pkts.....lb	14	(30 lb boxes)	Flor. anthem. opt, French.....lb	35	
" " ½ lb pkts.....lb	15	"	" " Roman.....lb	30	
" " ¼ lb pkts.....lb	17	"	" " German.....lb	30	
" " asst. pkts.....lb	16	"	" arnica.....lb	25	
" lupuli.....oz	25	lb 3.00	" lavand.....lb	15	pulv. 25
" mezerei æther.....oz	60		" rosæ gall rub.....lb	75	
" nucis vomic.....oz	40	lb 5.40	" " white.....lb	40	
" " pulv.....oz	40		Folia aconiti.....lb	25	pulv. 35
" opii.....oz	90	lb 13.50	" belladon.....lb	25	pulv. 35
" " pulv.....oz	1	10	" buchu.....lb	20	
" " liquid.....lb	1	00	" cocæ green.....lb	50	
" papaveris.....oz	16	lb 2.25	" conii.....lb	20	pulv. 35
" physostigmatis.....oz	2	00	" digitalis.....lb	20	pulv. 35
" podophylli.....oz	25	lb 3.00	" eucalypti glob.....lb	18	
" quassia.....oz	20	lb 2.40	" hyoscy. exot.....lb	20	powd. 40
" rhamni franç.....oz	50	lb 5.00	" jaborandi.....lb	65	
" rhamni pulv.....oz	40		" maticoæ.....lb	40	
" rhei E. I.....oz	2	lb 3.50	" pulegii.....lb	20	
" sarsæ jam.....oz	30	lb 4.00	" sennæ alex.....lb	60	
" sarsæ co.....oz	20	lb 2.75	" " tenny.....lb	20	15, bale 16
" stramonii fol.....oz	20	lb 2.50			

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.

CELEBRATED BRAND

COGNAC BRANDY

Faustin Freres

as shipped in all the markets of the world . . .

. . . The best value in Brandy supplied for the price.



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

D. DENSMORE & CO.,

271 QUEEN ST., EAST,

TORONTO, Ont

Folia sennæ tenuy pulv.....lb	25	
“ uogæ ursi.....lb	12	
Formaline.....lb	1 50	incl.
Fruct. anethi.....lb	30	
“ anisi Germ.....lb	15	
“ “ pulv.....lb	20	
“ “ Star.....lb	45	
“ capsici.....lb	18	25 lbs 16
“ “ pulv.....lb	20	“ 18
“ carni.....lb	12	
“ “ canad.....lb	10	
“ “ pulv.....lb	18	
“ conii.....lb	30	
“ coriandri.....lb	16	
“ “ pulv.....lb	18	
“ fœniculi.....lb	15	pulv 20
Fuller's earth.....lb	4	100 lb 3
“ “ pulv.....lb	6	100 lb 5
Gaduol.....oz	40	
Gallæ corallæ.....lb	28	bag 25
“ “ pulv.....lb	30	grd 28
Gallanol.....oz	1 00	
Gallabromal.....oz	1 00	
Gasoline, 76°.....gal	60	
Gelatine, black label.....lb	85	10 lb 30
“ bronze label.....lb	40	“ 35
“ silver “.....lb	45	“ 40
“ gold “.....lb	60	“ 55
“ pink gold label.....lb	75	
Glue, black.....lb	12	
“ amber.....lb	15	
“ white.....lb	20	
“ cooper's.....lb	39	
Glycerine (double dist)1260 deg.lb.	20	56 lb tin 17 case 16
“ Price's.....lb	70	W. qt. 65
Grana paradisi.....lb	20	
“ “ pulv.....lb	30	
Guaiacol absolute.....oz	60	lb 7.00
“ benzoate.....oz	1 50	
“ carb.....oz	1 60	
Guarana pulv.....lb	2 00	oz 20
Gum acacia, No. 1.....lb	40	
“ “ “ 2.....lb	35	
“ “ “ 3.....lb	30	
“ “ “ 4.....lb	25	
“ “ “ 5.....lb	65	
“ “ pulv.....lb	40	
“ ammon guttæ.....lb	45	
“ asafoetid. opt.....lb	50	
“ “ pulv.....lb	75	
“ benzoin opt.....lb	12	20 lb 11 pulv 25
“ catechu nig.....lb	16	10 lb 15
“ catechu pallid cubes.....lb	35	
“ copal.....lb	30	
“ damar.....lb	30	
“ elemi.....lb	1 25	
“ euphorb. pulv.....lb	1 00	pulv 1 15
“ galban opt.....lb	65	Sec. 40 pulv 50
“ gambogiæ.....lb	35	
“ guaiaci.....lb	2 50	pulv 2 60
“ juniper.....lb	90	
“ kino.....lb	70	
“ mastiche select.....lb	45	pulv 65
“ myrrh. turc opt.....lb	25	
“ “ “ sorts.....lb	50	reed 1 00
“ olibani.....lb	75	
“ sang. draconis.....lb	6 50	
“ “ pulv.....lb	3 50	
“ scammon. aleppo } lb	35	
“ opt. (pulv) }	45	10 lb 40
“ scammon resin.....lb	40	
“ seedlac.....lb	30	10 lb 25
“ shellac, orange.....lb		
“ “ bleached.....lb		
“ spruce.....lb		



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 OFFERS.

New Line of Concentrated Extracts,
1 oz. Glass Stopped Bottles.

New Line of LAUTIER FILS, Grasse.

In the Following Odors:

CLOVER BLOSSOMS.	PEAU D'ESPAGNE.
WILD HONEY SUCKLE.	JOCKEY CLUB.
VIOLETTES DE NICE.	WHITE ROSE.
CHYPRE.	MAY FLOWERS.
IRIS AMBRE.	ŒILLET BLANC.

MAIGLOCKCHEN.

ARGOLINE, In Bottles,
1, 5 and 10 lb. tins.
25 and 50 lb. tubs.

LUCELLIN, In Bottles,
1, 5 and 10 lb. tins.
25 and 50 lb. tubs.

The BEST Feeder.

IVORY SOAP.	COPCO SOAP.
CIBILS' FLUID BEEF.	AMMONOL.
ARNOLDINE SPECIALTIES.	

Manufactured by Dr. ARNOLD, London, England.

LYMAN, SONS & CO.

ESTABLISHED 1800.

MONTREAL.

Gum storax liquid	50			Kamala	lb	80	
" " dry	50			Kousso	oz	10	
" thus	15			Kava Kava	lb	90	
" tragacanth Ribbons ..	90						
" " Aleppo opt lb	65						
" " " No.2.lb	50			Lactopeptin ozs.....	doz	8	50
" " pulv. opt. lb	90			" " ½ lbs.....	lb	10	50
Can cotton.....	70	1 oz box		Lactophenine	oz	1	10
				Lactucarium ang.....	oz	70	
Hæmogallol, 10 gm. vials....	50	each		Lanolin	lb	85	
Hæmol " " " "	35	" 25 gm. vials 80 ea		Lapis calam. præsp.....	lb	7	
Homatropine, pure.....	45	gr		" pumicis select.....	lb	8	ordinary 6
" hydrobrom ..gr	35			" " pulv.....	lb	7	100 lb 5
" hydrochloric ..gr	35			Leptandrin	oz	45	Keiths 50
Humulus lupulus, case 15 ..	18	assorted packages		Lichen Hibern opt.....	lb	18	Sac 12
Hydrarg. ammon chlor ..	1	20		Licorice Corig.....	lb	35	
" bisulphate.....	90			" Solazzi	lb	50	
" c. creta.....	60			" Zuvia	lb	30	
" cyanid.....	30			" Windsor, 4,8 or 161-5 lb	35	25 lbs 30	
" iodid rub	35	lb 4.50		" Y. & S. stick.....	lb	35	
" " virid	25	lb 3.50		" Pellets Y. & S.....	lb	40	
" nitrate pure	15	lb 1.50		" " M. & R.....	lb	40	
" oleas 5%.....	55			Lignum guaiaci rass.....	lb	7	
" " 10%.....	65			" quassia incis.....	lb	10	50 lb 9
" " 20%.....	80			" sant flav. grd.....	lb	65	Rub 10
" " 28.3%.....	1	50		Liniment aconiti.....	lb	90	Whr. qt. 85
" oxide flav. ....oz	15	lb 1.50		" belladon.....	lb	95	" 90
" " nig	25			" camph	lb	55	
" " rub.....	1	10		" camph comp.....	lb	60	Whr. qt. 55
" " liv.....	1	20		" crotonis.....	lb	1	25
" perchlor.....	90			" iodi.....	lb	1	50
" " pulv	95			" opi	lb	90	
" pill mass.....	70			" saponis co.....	lb	45	
" salicylate.....	45			" " c pot iod. lb	90		
" subchlor.....	1	00		" sinapis co	lb	1	50
" " a la vapeur lb	1	50		" terebinth.....	lb	30	
" sulph.....	15	lb 1.50		Liquor ammon. acet conc...lb	35		
" " c. sulph	1	00		" " fort s. g. 88vlt	12	case 10	
" tannas.....	35			" antim. chlor.....	lb	20	W. qt. 18
Hydrargyrum.....	75	10 lb 70		" arsenicallis.....	lb	10	pt., Whr. qt. 8
Hydrastine alkaloid C.P.....	1	00		" arsenii et hyd. iod. lb	25	W. qt. 20 (Donovans)	
" hydrochlor C.P.dr	90	oz. 6.00		" atropia sulph	oz	25	
Hydrastinine mur. Merck's				" bismuth et am. cit. lb	45	Wich. 40	
15 grain tubes	90	oz. 22.00		" ferri Acet	lb	35	
Hydrochinone.....	30	1 oz cartons		" " Ft	lb	60	
Hydrogen peroxid, Penchot's.1 lb		doz. 8.00		" " perchlor fort.....	lb	12	Whr. qt. 11
" " " ½ lb		" 6.00		" " pernit.....	lb	15	
" " " ¼ lb		" 4.50		" " persulph.....	lb	15	
" " Coml.....	35			" plumbi subacet.....	lb	12	Whr. qt. 10
Hyosine, hydrobrom, 5 gr. tub.1	75	each		" potassa.....	lb	7	
Hyoscyamine " ..gr	25	sulph gr 35		" santii flav comp. .lb	1	50	
Hypnal	25	gms		" sodii chlor.....	lb	16	
Hypnon, pure.....	1	50		" strychnine.....	lb	50	Whr. qt. 45
				Lithii bromid.....	oz	25	
Iatrol	oz	1	50	" carbonas.....	oz	25	lb 3.00
Isinglass Brazil.....	lb	2	90	" citras.....	oz	20	lb 2.75
" Gridley's os	doz	1	80	" hippurate.....	oz	1	50
" Russian	lb	4	75	" iodid.....	oz	50	
				" salicylat.....	oz	25	
				Litmus.....	lb	60	
				Losephan	oz	2	25
Ichthyol, Merck's	oz	45	½ lb 5.75 lb	Lucillino	1 lb tins	20	each
			¼ lb 5.60 lb	"	5 lb "	90	"
			1 lb 5.50 lb	"	10 lb "	1	60 "
Indigo Madras opt.....	lb	75		"	25 lb tubs	13	lb.
" " pulv.....	lb	90		"	50 lb tubs	12	"
" Paste.....	lb	20		Lupulinum.....	lb	60	
Insect powder Dalmatian ..	lb	35	25 lb 26 56 lb 25	Lycetol Bayer, ½ ozs	oz	4	00
" " Persian.....	lb	30	25 lb 21 56 lb 20	Lycopodium.....	lb	75	
Iodoformum.....	oz	40	lb 5.90	Lysol.....	½ kilo bottles	1	00 each
" præcip.....	oz	40	lb 5.90				
Iodol.....	oz	1	40	Macis.....	lb	1	10 pulv 1 20
Iodum crude	oz	30	lb 4.50	Madder compound.....	lb	10	carbony 9
" resub.....	oz	40	lb 5.25	" Dutch	lb	12	brl 10
Jalapin ang.....	oz	1	00 lb 13.50	Magnes citr. gran. Bishop..	lb	75	7 lb 65

**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 Liver-Pills, and this he was doing.

The Court granted a perpetual injunction—with costs.

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

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

SUBSTITUTION IS UNLAWFUL.

Do not be guilty of it.

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

Yours very respectfully,

CARTER MEDICINE CO.
Murray Street,
NEW YORK.

SMALL PILL.	CARTER'S LITTLE LIVER PILLS.
--0--	
SMALL DOSE.	
--0--	
SMALL PRICE.	
A POSITIVE CURE FOR SICK HEADACHE.	

"THE BEST" NURSER.



Easy Suction.
Easily Cleaned.
Nipple cannot Col-
lapse.
Prevents Wind-Colic
and Bowel Trouble.
The "Air-Inlet"
admits air
back of the

food not in front.

The "Clingfast" nipple free with each bottle.

The nurser is in high favor with the medical profession.



THE GOTHAM CO.,
82 Warren St. - NEW YORK.

NUTROLACTIS

The ———
Galactagogue

When the milk of a nursing mother is scanty, although the breasts be almost dry, this remedy will in a few days so increase the quantity that there will be enough to fully nourish any infant.

NUTROLACTIS acts chiefly by strengthening and building up the mother's system; it does not force mothers to yield good milk copiously, it enables them to do so.

MANUFACTURED BY

Nutrolactis Company,
UNION SQUARE,
NEW YORK.

Magnes citr. gran. Lyman. lb	35	
" calcined . . . 1 lb tins	50	bulk 40
" " . . . " bots	55	
" carb levis 1 oz pkt. lb	20	10 lb 18
" " " 2 " . lb	18	" 16
" " " powd. . lb	25	1 lb tins
" chloride lb	30	
" sulphas lb	3	Br. 1.50
" " hd's lb	5	" 4
Magnesium, wire or ribbon .oz	75	Powder 50
Maltopepsin 1/2 lb bots. lb	5	35
" " bots. doz	6	35
Maltose xtl's oz	1	50
Manganese chlorid. lb	50	
" hyphosphite oz	20	
Manganese oxyd. nigr lb	10	
" sulph. pur. lb	60	
Manna flak select. lb	1	40
Maranta Bermuda. lb	45	10 lb 42
" Jamaica lb	15	
Mol. canadensis lb	13	10 lb 12
Menthol oz	50	lb 7.00
Morphinæ acetas. oz	1	80 10 ozs. 1.70
" hydrochloras. oz	1	80 " 1.70
" sulphas. oz	1	90 " 1.80
Moschus, in grain, No 1 dr	6	00
" " No 2. dr	4	50
" " No 3. dr	3	50
Mollin, pure lb	1	00
Myrtol. oz	1	00
Naphtha mineral lb	50	
" vegetable lb	60	
Naphthaline resublimed. . . . lb	30	
Naphthol Beta. oz	10	lb 1 20
" " Benzoeate oz	35	
Nickel sulph. cryst. lb	50	
" ammon. sulph. lb	30	
Nux. areca select. lb	20	pulv 35
" kola. lb	50	
" myristicæ (limed) lb	35	pulv 1.00
" " opt. (unlimed) lb	90	
" vomica. lb	12	pulv 22
Olio Resin Capsici. oz	75	
" " Copaiba oz	25	
" " Cubeb oz	35	
" " Zingib. oz	90	
Ol. absinth. oz	40	
" amygd. dulc. lb	45	Whr. qt. 40
" " essent. sine acid pruss. oz	50	
" anethi Ang oz	30	lb 4.00
" anisi. lb	2	75
" anthem Ang. oz	1	20
" aurantii lb	2	00
" bergam super. lb	3	00
" buchu oz	1	60
" cadi. lb	30	Whr. qt. 25
" cajeputi oz	10	lb 1.00
" carui. lb	2	25
" caryoph lb	1	00
" cassia lb	1	75
" cedri opt lb	70	Whr. qt 65
" " coml lb	50	" 45
" chaulmoogra oz	25	
" cinnamomi ver. oz	1	70
" citronellæ lb	30	bot. 65 lb
" coccoanut. lb	15	
" cognac. oz	2	40
" cologne oz	60	
" conii. spruce lb	70	Whr. qt. 65
" copaibæ lb	1	25
" coriandri oz	1	50
" crotonis. oz	12	bot. 1.50 lb

TURKISH DYES.

Seventy-four Colors

. . . . Fast Shades

B RAYLEY, 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.

HARD

To Exaggerate

the importance of sterilizing the milk that is fed to little babies. Pure cow's milk is beyond all doubt the best bottle food for infants—competent nurses and leading physicians all agree on that. The only trouble about it is the difficulty of procuring pure milk. The utmost care of the cleanest dairy will not suffice. Put an

ARNOLD

Steam Sterilizer

between the dairy and the baby and the problem's solved. It isn't safe to use unsterilized milk because even if it came pure from the cow—which is not always certain—it has a dozen chances to become contaminated in its necessary handling. The Arnold Sterilizer is simple and convenient and its construction makes it absolutely effective for Pasteurizing (at 167°F) or Sterilizing (at 212°F.) It has the endorsements of leading colleges, hospitals and physicians.

Circulars and booklets sent on application to

Wilmot, Castle & Co., Rochester, N. Y.

Oi cubebæ.....oz	20	2.75 lb
" cymini.....oz	50	
" erigerontis.....lb	3 25	
" eucalypti.....lb	1 40	
" fœniculæ dulc.....lb	1 50	
" gaulther.....oz	20	lb 2.50
" " synthetic.....lb	2 00	
" geranii rose.....oz	50	
" " super.....oz	1 00	
" juniperi bacc.....oz	20	lb 2.75
" " lig.....lb	60	Whr. qt. 55
" lauri.....lb	40	
" lauri essent Bay.....oz	40	lb 4.50
" lavand ang.....oz	2 00	
" " French.....lb	3 50	see 2.60 1.50
" limonis super.....lb	1 50	copper 1.35
" lini, Raw.....gal	67	brl. 62
" " boiled.....gal	70	brl. 65
" macis.....oz	25	lb 3.50
" menth. pip. Amer.....lb	3 00	Whr. qt. 2.75
" " " English.....oz	1 00	lb 14.00
" " " Japan.....lb	4 00	
" " virid.....oz	25	lb 3.50
" morrhuzæ Norweg.....gl	2 75	brl. 2.50
" " Munn's Nfld. by } Norweg. process }	1 50	kegs 20 gals 1 25
" myrbaue.....lb	35	Whr. qt. 30
" myristicæ.....oz	25	
" neatsfoot, pale.....gl	1 00	
" neroli, opt.....oz	3 00	
" olive sublime salad 1 gal	original tins 2.25 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	85	brl. 75
" origani.....lb	85	
" " Sec.....lb	50	Winch 45
" palmæ select.....lb	15	
" patchouli opt.....oz	1 25	see 75
" petit. gran.....oz	50	
" pice.....lb	12	Whr. qt. 10
" pimentæ.....oz	25	lb 3.20
" pini silvestris.....lb	1 50	
" palegii hed.....lb	1 75	
" raphi.....lb	15	
" rhodii.....oz	80	
" ricini E. I.....lb	10	case 6 tins 6½
" " Gal water pale.....lb	10	brls 6½
" " Virgin.....lb	13	tins 11
" " Ital, 44 lb tins.....lb	15	10 lb tins 16
" rosmarini exot.....lb	90	W. qt. 65
" ruta.....oz	25	
" sabinæ.....lb	1 30	
" santali ang.....oz	50	lb 7.50
" " W. I.....oz	40	lb 4.00
" sassafras.....lb	65	Whr. qt. 60
" sesame.....gl.	1 35	
" 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
" terobinthinæ.....lb	45	
" " coml.....gl.	55	10 gals 50
" theobromatis.....lb	60	
" valerian.....oz	1 00	
" verbenæ.....oz	12	
" vini.....oz	25	lb 3.50
" ylang-ylang.....oz	7 50	
Opium Turc.....lb	4 50	
" " pulv.....oz	40	lb 5.50
Oss sepis.....lb	25	pulv 30
Otto rosæ coml.....oz	6 50	
" " virgin.....oz	9 00	opt 11.00
" " Turkish ounces.....dr	1 00	bottles of 9-11 drms



Scotch Whiskies.

J. & G. STEWART

EDINBURGH, Scotland.

Founded 1779.

Famous for More

than a Century.

Sold all over the World.

GOLD MEDAL,

Edinburgh 1886.

"PLAGNIOL" Olive Oil.

Absolutely Pure Olive Oil.

Grand Prix, Paris, 1889.

"VIOLETT."

Imperial Plums in bottles and boxes.

The finest Selected French Plums.

"YARRITU."

Spanish Castile Soap.

The perfection of Castile Soap and the

highest grade imported.

WM. G. MOEHRING & CO.,

Nos. 136 & 138 Cedar Street,

NEW YORK.

Sole Agents for Canada and United States.

A. McTAVISH WATT,

Room 429, BOARD OF TRADE,

MONTREAL.

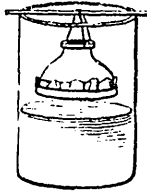
Selling Agent for Canada.

Pancreatine, Morson's..... oz	1 00	
" Merck's..... oz	50	
" absolute oz	75	
Papoid.....oz	3 25	
Paraffinum durum.....lb	15	50 lb 13
Paradehyde.....oz	20	lb 3.00
Paris Green.....100 lb irous	18	
" 25 lb "	19	
" 1 lb	20	
Pelleterine 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
" Jensen's scales " oz	1 25	
" Armour's.....oz	90	lb 12.00
Petrol Barbadiens.....lb	15	
Petroleum, see Lucilline		
Phenacatine Bayer.....oz	35	lb 4.50
" schering.....lb	4 00	
Phenetol pure.....oz	60	
Phenocoll.....gm	25	
" Hydroch.....25 gms	1 50	
Phenolphthalein.....oz	75	
Phenyl hydrazin hydroch.....oz	60	
Phloroglucin puriss..... dr	75	
Phosphorous... 11 lb tins..lb	85	1 lb bots 1.00
" amorphous.....oz	20	
Pil. hydrarg..... lb	70	
Pilocarpin hydrochlor...gr	35	5 or 10 gr. tubes
" nitras.....gr	35	5 or 10 gr. tubes
Pipe clay..... lb	5	100 lb 4
Piperinæ.....oz	1 00	
Piperazin Bayer, ½ oz bottle.oz	3 50	
" tablets... 10x16 gr	2 00	each
" Schering, 5 gm vials	75	each oz. 3.50
Piper alba.....lb	16	pulv 18
" cayenne.....lb	25	10 lb 20
" nigram.....lb	12	pulv 14, 25 lb 13
Pix Burgund bladders.....lb	10	20 lb 9
Platinum Bichlor.....oz	8 00	
" " 10% solut oz	1 25	
" Foil.....grm	60	
" Wire.....grm	45	
Plumbi acetas brown.....lb	10	50 lb 9
" " Xtls.....lb	12	50 lb 10
" " C. P.....lb	25	
" iodid.....oz	35	lb 4.50
" nitras coml.....lb	16	
" oleas.....lb	1 00	
" oxyd pulv.....lb.	9	keg 7½ (litharge)
" " rub.....lb	8	keg 6 (red lead)
Podophyllin resin.....oz	35	
Potassa caustica sticks.....lb	50	
" sulphurata.....lb	35	
Potassii acetas.....lb	45	gran 50 bot. inc.
" licarbonas.....lb	14	
" " pulv.....lb	15	
" bichromas.... lb	15	keg 12½
" binoxafas.....lb	23	10 lb 22
" " pulv.....lb	25	10 lb 23
" bitart.....lb	30	keg 23 brl 22
" bromid.....lb	65	
" carbonas.....lb	14	10 lb 12
" carbonas pearl ashes lb	10	100 lb 9
" chloras.....lb	17	keg 15
" " pulv.....lb	18	keg 16
" chlorid. pur.....lb	30	
" chromas.....lb	45	
" citras neutral.....lb	65	
" cyanid. C. P.....lb	1 00	

Potassii cyanid fused 30 p.c.lb	40	
" " fused 60 p.c.lb	55	go d p'aters
" hypophosph.....lb	1 50	
" iodid.....lb	4 00	5 l's \$3 75
" nitras.....lb	10	112 lb, keg 6½
" " gran.....lb	10	" " 6½
" " C.P. Mercks.. lb	30	
" nitrite pure stick..lb	1 20	
" oxa'as, neutral....lb	25	
" permangan pur.....lb	30	
" pruss. flav.....lb	35	
" " rubr.... lb	65	
" silicas.....lb	30	
" " Liq.....lb	20	
" sulphas.....lb	12	pulv 13
" sulpho-cyanid.....oz	15	
" sulphocarb.....lb	1 60	
" sulphuret.....lb	35	
Potassi tartras..... lb	80	
Potassium.....oz	2 00	dr. 40
Propylamine.....oz	50	
Pulv aloes c. canella..... lb	40	
" amygdalæ co.....lb	1 35	
" antimonialis P. L.....lb	60	
" catechu comp.....lb	70	
" cinnam comp.....lb	75	
" cretæ aromat P.B.....lb	1 20	
" " " c. opid P B lb	1 50	
" " comp Ph. Ed.....lb	50	
" " " c. opid..lb	75	
" " " c. camph.....lb	20	10 lb 18
" glycyrrh comp.....lb	30	
" ipecac comp.....lb	1 10	
" jalap comp.....lb	75	
" kino comp..... lb	2 25	
" rhei comp.....lb	75	
" sapo cast.....lb	25	
" " alb.....lb	30	
" scammon comp.....oz	30	
" seidlitz Howards.....lb	22	7 & 14 lb.
Pyoktannin.....25gms	1 25	
Pyridin Puriss.....oz	25	
Quassine, ¼ oz vials.....oz	4 00	
Quinine bisulph.....oz	65	
" bromid.....oz	90	
" citras.....oz	80	
" hydrobrom.....oz	90	
" hydrochlor.....oz	75	
" hypophos.....oz	1 25	
" iodid.....oz	90	
" phosphas.....oz	85	
" salicylas.....oz	75	
" sulph German.....oz	40	100oz tin 30 25 oz 32
" " Howards.....oz	45	
" " " 4 oz	40	
" sulphocarbo'as.....oz	1 50	
" tan'ate.....oz	50	
" valerian.....oz	85	
Rad acontiti.....lb	20	
" " contus.....lb	25	pulv 30
" anchusæ.....lb	20	
" angelicæ.....lb	30	pulv 35
" arctii (burdock).....lb	15	
" belladon.....lb	18	pulv 30
" calam. aromat.....lb	20	
" calumb.....lb	15	pulv. 20
" cureumæ Madras.....lb	10	" 12
" enula.....lb	20	
" galangal.....lb	12	
" " pulv.....lb	20	
" gentian, select.....lb	10	
" " ground.....lb	11	
" " pulv.....lb	15	
" ginseng.....lb	4 50	

= Chemical Apparatus =

Bohemian Glassware,
OF ALL KINDS AND OF BEST QUALITY.



Berlin Porcelain Crucibles,
Evaporating Dishes, &c.

AGENTS FOR THE DOMINION FOR THE MANUFACTURES OF

The Morgan Crucible Co.

OF BATTERSEA, LONDON.

Analytical Balances, Scales and Weights, Blow-Pipes, Blow Pipe Sets and
Chemical Cabinets, and all other requisites for Experimental
and Analytical Work, and Assaying.

CHEMICALLY PURE REAGENTS AND VOLUMETRIC SOLUTIONS.

An Illustrated Priced Catalogue on Application.

LYMAN, SONS & CO., St. Paul Street, MONTREAL



NO MORE ROUND SHOULDERS.
THE IMPROVED

**Knickerbocker
Shoulder
Braces.**

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, 34, 36, 38, 40 in., etc.
Youths' " for boys and girls:
24, 26, 28 and 30 inches.

Knickerbocker
Brace Co.,

EASTON, Penna.



Rad. glycyrrh decort....	lb	25	
“ “ incis	lb	15	
“ “ dec't pulv....	lb	15	
“ “ 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	20
“ iris Florentine	lb	40	
“ “ pulv	lb	50	
“ “ verona	lb	25	pulv. 30
“ jalapa	lb	50	
“ “ pulv	lb	60	
“ 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
“ sarsa Hond	lb	40	incis 50
“ “ Jam	lb	60	“ 70
“ “ Mexican	lb	18	20 lb 16
“ scilla sicc	lb	12	
“ “ pulv	lb	30	
“ senega	lb	60	
“ spigelia	lb	45	pulv 60
“ sumbul	lb	70	
“ taraxac sicc	lb	18	10 lb 15
“ tormentilla	lb	35	
“ “ pulv	lb	45	
“ singib. Afric. u. b	lb	16	25 lb 15
“ “ pulv	lb	18	25 lb 17
“ “ Jam. u. b	lb	22	10 lbs 20
“ “ bleached	lb	28	10 lb 27
“ “ pulv opt	lb	30	10 lb 28
“ “ sec	lb	25	
Resin flav	lb	4	
“ “ pulv	lb	5	50 lb 4
Resorcin xtls	oz	20	lb 2.75
“ resublim	oz	50	
Rhizoma arnicæ	lo	30	contus 40
“ cimicifugæ	lb	15	
“ podophylli	lb	14	
“ serpentariæ	lb	60	pulv. 85
“ valerianæ	lb	15	pulv. 22
Rouge—Jewellers	lb	65	
Rubidium chloride	gm	40	
Saccharin, 300°	oz	1	00
Sacch. lactis pulv	lb	25	
Sago perlat. parv	lb	5	
Sai prunellæ glob.	lb	20	
Salicinum	oz	25	lb 3.50
Salipyrine	50 gms	2	50 each
Salot	oz	30	lb 3 25
Salophen Bayer	oz	1	50
Santoninum	oz	20	lb 2.75
Sapo Castile Alb Contis	lb	16	box 15
“ “ Shell	lb	12	“ 10
“ “ Virgin	lb	12	“ 10
“ “ “ cakes box,	lb	5	00
“ “ Mottled opt	lb	12	box 11
“ “ com	lb	10	“ 9
“ “ cakes gross	lb	4	75
“ mollis ang	lb	10	20 lb 8
“ German Green	lb	35	
“ Green opt	lb	55	
Scammonia resin pulv	lb	3	75



ADAMS'

Tutti-Frutti.

New Glassware Packages
Jars

Sugar-Bowls and Spoon-
Holders

ASK YOUR JOBBER FOR THEM.

Send for Beautiful Advertising Hangers to
Decorate Your Store.

ADAMS & SONS CO.,
11 & 13 Jarvis Street, Toronto, Ont.

WAMPOLE'S

BEEF, WINE AND IRON,

In Pint Bottles, . . . \$5.00 per doz.
Winchester [$\frac{1}{2}$ Imp. Gal.] 2.00 each.
Imp. Gal. in 5 gal. lots, and over 3.50 per gal.

With handsome lithograph labels. Buyers name pro-
minently printed on same, at following prices :

$\frac{1}{4}$ gross lots, and over, - \$60.00 per gros
Packed in $\frac{1}{4}$ Gross Cases.

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

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

Your early orders and enquiries solicited through Whole
sale Jobbers or direct to us.

Very truly yours

HENRY K. WAMPOLE & CO.

MANUFACTURING PHARMACISTS
CANADIAN BRANCH: PHILADELPHIA, PA.
36 & 38 LOMBARD STREET,
TORONTO, ONT.

Scoparii cacumin	lb	25
Secale Cornut	lb	75
Seidlitz Mixture hds	lb	22
Sem. canary	lb	5 bag 4½
" cardam	lb	1 25 1.00 & 75
" " decort.	lb	1 00
" " pulv.	lb	1 20
" colery	lb	25
" chenopodii	lb	20
" colchici	lb	30 pulv. 40
" 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	30
" jambul	oz	10
" lini sifted	lb	4 brl. 3½
" " crushed	lb	5 brl. 4
" " " No. 2.	lb	4½ brl 3½
" " " No. 3	lb	4 brl. 3½
" lobeliæ inflæ.	lb	35 pulv 40
" maw	lb	15 10 lb 14
" millet	lb	5 bag 4
" pumpkin	lb	25
" rapii	lb	6
" sabadilla	lb	40
" sinapis alb.	lb	9
" staphisagriæ	lb	45
" stramonii	lb	25
Soda caustic, 25 & 50 lb, drums lb		4
" " 100 lb.	lb	3½
" " 750 lb.	lb	2½
" " C. P.	lb	90
" " stick	lb	50
" " cake	lb	40
" crystals	lb	2 brl 1.25 per 100 lbs
" tartarata	lb	25
Sodii acetat pura	lb	25
" arsenias	oz	15 lb 1.20
" benzoas	oz	15 lb 1.50
" bicarb. pulv Morson's lb		10
" " " Hd's.	lb	16 14 lb 15
" " " coml.	lb	4 keg 2 75
" bisulphis	lb	25
" bisulphus pure	lb	30
" bromid	lb	75
" carb. recryst	lb	15
" carbo/as pur	lb	3 50
" chlorate xtls	lb	50
" chloride C. P. xtls	lb	25
" citras	lb	90
" hypophosphis	lb	1 40
" hyposulphis	lb	5 keg 3
" iodid	oz	40 lb 5.25
" nitras pur	lb	25 coml. 8
" oxalas	lb	50
" phosph pur	lb	12
" " pulv.	lb	20
" " C.P. xtls	lb	26
" potass tart pulv.	lb	25
" salicylas	lb	90
" silicas xtls	lb	15
" " solut conc.	lb	10
" sozoiodol	oz	1 25
" sulphas	lb	3 brl. 1¼ Hds 5 [brl.
" " exsicc. pulv.	lb	15
" " par recryst.	lb	30
" sulphid	lb	50 ¼ & ½ lb 60
" sulphis	lb	7 pulv. 8
" sulphite C. P.	lb	30 1 lb bottles.
" sulpho carbo/as	lb	1 10
" tungstas	lb	40
" valerian	oz	50
Sodium	oz	30
" molybdate	oz	40
" succinate	oz	35

DAMSCHINSKY'S Liquid Hair Dye

IS GUARANTEED HARMLESS, and does NOT CONTAIN ANY TRACE OF SILVER or LEAD. ONE APPLICATION from ONE BOTTLE will dye GREY, RED, FADED HAIR or BEARD in a FEW MINUTES by MERELY COMbing IT. Made in three colors: BLONDE, BROWN, BLACK.

\$8.00 PER DOZEN - RETAILS \$1.00

PILOCRESIN Damschinsky's Great Hair-Producer

Contains the active principles of Pilocarpus PINNATUS, CINCHONA RUBRA, SEMINA SABADILLA, etc., mixed in proper proportion to INSURE EFFECT in CASE OF BALDNESS, for GROWING A BEARD, and to PREVENT THE HAIR FROM FALLING OUT.

\$8.00 PER DOZEN - RETAILS \$1.00

A very attractive Window Sign 15 x 20 inch, glassed and framed, showing the results of these goods, will be given to new customers on application.

HE G NUIN 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 exhibition 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.

Sol. acid osmic 1%.....oz	1 50	
" cocain 4%.....oz	60	
" nitro glycerin 1%.....lb	1 75	
Somatose—Bayer, 2 oz. tins. oz	70	
Somnal.....25 gm vials	75 each	
Sparteïn sulph..... $\frac{1}{2}$ oz	30 ea. 1 oz. 2 00	
Spice pickling.....lb	35	
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	
" menthæ pip.....lb	1 00	
" myristicæ.....lb	90	
" rectificatus 65 o/p. gl 4	65 5 gl. 4 60 in a/c. 4.55 10 gl	
" " " Brl	4 25 cash. 1 p.c. 10 days	
" vini gall.....gl	4 75 opt. 6.50	
Spongia usta.....lb	2 50	
Stanni chlorid. crist.....lb	40	
" oxid (putty-powder).....lb	45	
Stannum gran.....lb	50	
Stearin.....lb	15	
Strontii bromid, merck's.....oz	20 lb 2 40	
" carb. pure.....lb	50	
" chlorid.....lb	30	
" iodid, merck's.....oz	60	
" lactas, merck's.....oz	25	
" nitras exsic.....lb	18	
" salicylate, merck's. oz	25	
" sulphate precip.....oz	35	
†trophanthin pure.....gr	10	
Strychnina cryst.....oz	1 00 10 oz 85	
" sulph.....oz	1 00 in $\frac{1}{2}$ oz bots }	
Styrax liquid.....lb	50 25 extra }	
Succus conii.....lb	75	
" limæ fruct W. I.....gl	90 brl. 80	
" rhamni.....lb	20	
" scoparii.....lb	70	
" taraxaci.....lb	65	
Sulphonal—Bayer.....oz	45 lb 6.00	
Sulphur Lac.....oz	12 10 lb 11	
" præcip (B. P.).....lb	20 10 lb 18	
" rotund.....lb	3 brl 1 $\frac{1}{2}$	
" sublim.....lb	4 bag 110 lbs 2	
" vivum.....lb	6 10 lbs 5	
Sulphuris iodid.....oz	40	
Svaquia, $\frac{1}{2}$ oz bottles.....oz	5 00	
Tamarindus, W. I.....lb	12	
Tapioca flake.....lb	6	
" pearl.....lb	6	
Terebene.....lb	60	
Terobinth canadensis.....lb	45	
" chian.....oz	30	
" Venet.....lb	15	
Terpine Hydrat.....oz	20	
Terpineol.....oz	50	
Terpinol.....oz	30	
Terra Japonica (Gambier).....lb	10	
Thallin Sulphate pure.....drm	40	
Trikresol, Schering's.....lb	1 20	
Theobromin.....oz	3 00	
Thiol liquid.....oz	60 100 gm. tins 1.25	
Thymol.....oz	35	
Toluol pure.....oz	60	
Trional—Bayer.....oz	1 20	
Tripoli.....doz.	90	
Triticum repens.....lb	20	
Troch. acid carbolie G's T. H. lb	75	
" " tannic " lb	1 25	
" aconite.....lb	90	
" bath pipe.....lb	45	

Troch. black currant, Gibsons lb	90	
" boracic acid . . T. H. lb	90	
" bronchial P D & Co.	5 lb can 1 75 each	
" cachou dyf bouquet. lb	50	
" " floral gems.....lb	50	
" camphor.....lb	75	
" capsici Gibsons.....lb	65 Domestic 35	
" catechu ".....lb	80	
" chlorodyne.....lb	65 Gibsons 90	
" coltsfoot.....lb	40	
" cubeb T. H.....lb	90	
" gelatine.....lb	50	
" glycerin [jujubes].....lb	75	
" guaiaci T. H.....lb	1 10	
" ipecac.....lb	75	
" kramaris T. H.....lb	1 25	
" lactusæ, . . . T. H.....lb	1 25	
" licorice (pipe).....lb	35	
" mentha pip C. S Gibsons lb	65 11b bottles 75	
" " [XXX].....lb	50	
" morphine.....lb	1 00	
" " et ipecac.....lb	1 00	
" mosch Gibsons.....lb	80	
" opii.....lb	75	
" paregoric.....lb	70	
" pontefract.....lb	30	
" potass. chlor.....lb	50 Tablets 60	
" pyrethri T. H.....lb	90	
" rosæ Gibsons.....lb	80	
" sedative T. H.....lb	90	
" tolu.....lb	70	
" tussi [cough].....bot	1 15 Gibsons's	
" " ".....lb	50 [Preston's]	
" " " Watsons. tin	1 15 each	
" vermifuge.....lb	50 worm	
" voice [jujubes].....lb	85	
Turpentine, see Ol. terebinthine compl.		
Uranii acetat.....oz	60	
" nitras.....oz	60	
Urethane.....oz	60	
Veratrina pure.....oz	2 00	
Verdigris.....lb	35 powd 40	
Vinum rubrum [port].....gl	3 00 qr. cask 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.....gl	1 50 5gals 1.25	
Whiting.....lb	1 brl 60c per 100 lb	
Xylol.....lb	60	
Zinci acetat P. B pure.....lb	45	
" bromid.....oz	25	
" carb.....lb	35	
" chlorid. sticks.....oz	15 lb 75, bt. free	
" " cake.....lb	65 bot. free	
" iodid.....oz	60	
" lactas.....oz	20	
" oleas.....lb	1 20	
" oxidum Howard's P B lb	70	
" " Coml.....lb	15 10 lb 12	
" permanganate.....oz	75	
" phosphas pur.....lb	1 25	
" phosphid.....oz	40	
" sozoiodol.....oz	1 50	
" sulphas com.....lb	6 10 lbs 5	
" " pur Merck's.....lb	10 10 lbs 9c.	
" sulphocarb.....oz	10 lb 1.00	
" valerian.....oz	30 b 4.00	
Zincum granulatum.....lb	30	

BISHOP'S

**ORIGINAL
GRANULAR
EFFERVESCENT
PREPARATIONS.**

Highest Awards Paris Exhibition 1889, Chicago Exhibition 1893.

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

ANTIPYRIN.

5 and 10 grs. in each drachm.

ANTIPYRIN with.....	2½ grs.	} in 1 dr.
SODA SALICYLATE.....	2½ grs.	
ANTIPYRIN with.....	5 grs.	} in 1 dr.
CAFFEINE CITRATE.....	1 gr.	
ANTIFEBRIN.....	5 and 10 grs.	} in 1 dr.
CAFFEINE CITRATE.....	1, 3 & 5 grs.	
"HYDROBROMATE".....	1, 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.	

PIPERAZIN.

5 grs. in each drachm.

LITHIA SALICYLATE.....	5 grs.	} in 1 dr.
NUX VOM. CA.....	1-12 grs.	
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).		

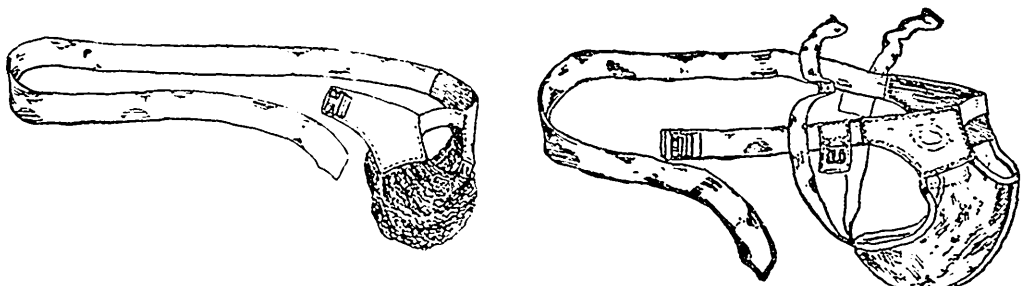
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May be obtained of all Chemists and Importers.
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CADMEN, NEW JERSEY, U.S.A.

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Dominica Lime Fruit Juice.

Pure
Refreshing.
Just the
Drink
for Warm
Weather.



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Cooling
Absolutely
Free from
Alcohol.

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BEST POLISH IN THE WORLD.



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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.

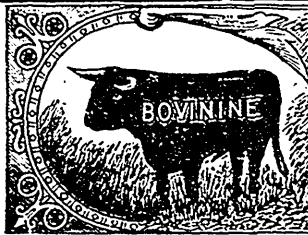
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"SUN PASTE STOVE POLISH"



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Manufactured by MORSE BROS., Canton, Mass.,
Proprietors of "RISING SUN STOVE POLISH."

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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 aboring men.

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

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

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

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

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

NEW YORK CHICAGO BOSTON.
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THE NATURAL MINERAL WATERS OF

CONTREXEVILLE PAVILLON *Spring's* PAVILLON

TONIC
DIURETIC
DIGESTIBLE

The only one under the protection of the French Government

Medical authorities are unanimous in asserting the efficacy of the natural mineral water of Contrexeville (*Pavillon Spring*) and have indicated it as the only one whose use is supreme in **GOUT, GRAVEL, DIABETES and URINARY DISEASES.**



To quote but a few names : Professors FOULON, CHARCOT, TROUSSEAU, BOUCHARDAT, CIVIALE, SIR D. D..., BARTHOLOMEW'S Hospital London; DOCTORS DURAND-FARDEL, LEGRAND DU SAULLE, CAUDMONT, MILLET (TOURS), F. R. C..., Ex-President of the Royal Collège of Physicians of Ireland; all these have drawn the attention of the profession to the great importance of the results which might be obtained through its use with regard to the public health.



ARTHRITISM, so common an affection, which is but a precursor of the diseases above enumerated, entirely disappears under the influence of the regular administration of Contrexeville water (*Pavillon Spring*).

Whether taken on an empty stomach or during meals, alone or mixed with other beverages (in which it produces no change), or at night when retiring to rest, it invariably corrects all faults of assimilation and brings back health.

So perfectly digestible is this water that Dr Pâtissier, member of Paris Academy of Medecine, has called it the « *stomach's friend* ».

It is noteworthy that in his report to the Paris Academy of Medecine Doctor Peschier says : « *The Pavillon Spring, solely on account of the multiplicity and persistence of the cures its waters have disseminated all over the world, has reached such a point of public notoriety that its name is as much identified with gravel and gout as that of sulphate of quinine with intermittent fever. Such recognition of its properties is wide, universal and incontestable.* »

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