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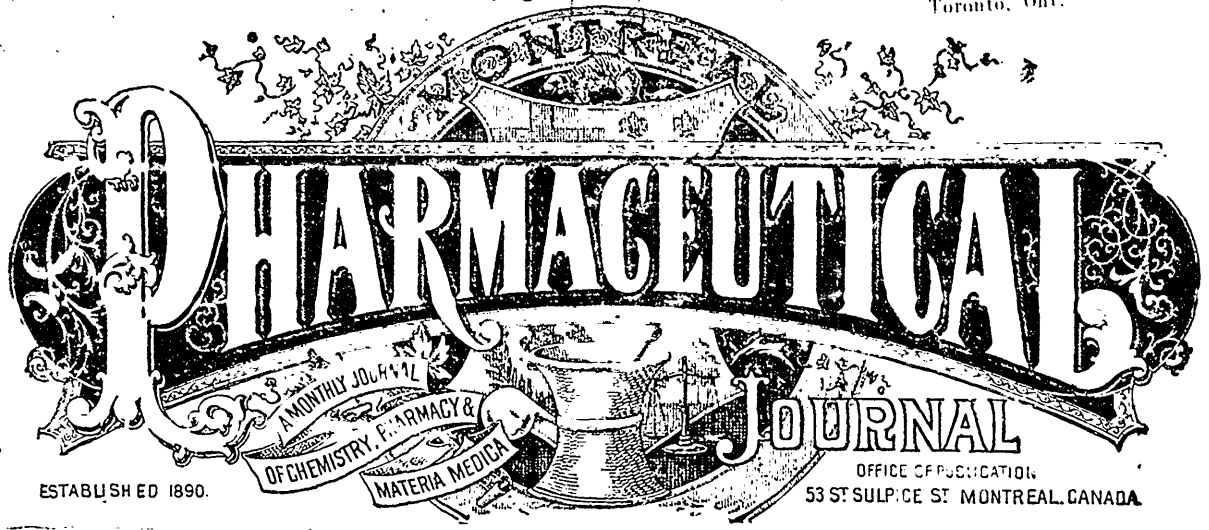
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VIII No. 8.

AUGUST, 1897.

Terms: \$1.00 per annum

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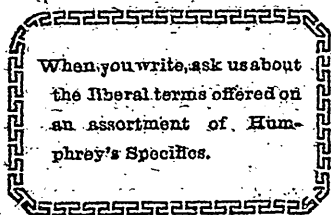
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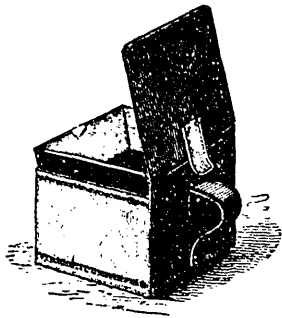
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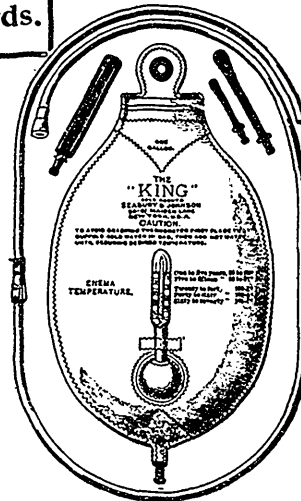
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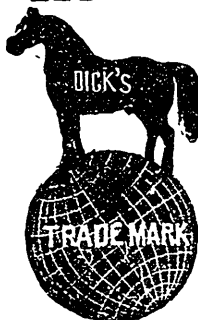
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*The STANDARD preparation of Mysore Sandalwood in five-minim Capsules.*

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to internal reme-  
dies, the sup-  
pressed, irregular  
or painful men-  
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promptly re-  
lieved.



**THE GREAT REMEDY FOR PAIN.**  
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 Toothache,  
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PERPETUAL INJUNCTION WITH COSTS.

The Proprietors of the above call attention to the following **IMPORTANT DECISION** of the Court of Chancery establishing their rights in the above, and **GIVE PUBLIC NOTICE** that their Solicitor has instructions to take proceedings against all infringers thereof:—

**PERPETUAL INJUNCTION (With Costs).**

In the High Court of Justice,

1896. C. No. 347.

Chancery Division,

Mr. Justice Stirling,

Between **THE CARTER MEDICINE COM-  
 PANY, Plaintiffs,**

and

**JOHN CARTER, Defendant**

A **PERPETUAL INJUNCTION** was granted by his Lordship the Honorable Mr. Justice Stirling, on the 31st January last, against **JOHN CARTER**, Chemist, of Woolwich, restraining him, his servants and agents from selling or offering for sale pills not being goods of the Plaintiffs' as or for the goods of the Plaintiffs by the use the term “Little Liver Pills,” or by getting up his pills for sale in a manner calculated to deceive the public into the belief that the Defendant's pills are the Plaintiffs'; also from supplying persons asking for “Carter's Little Liver Pills” or “Little Liver Pills” with pills not being the goods of the Plaintiffs: the Defendant undertaking to deliver up to the Plaintiffs, for destruction, all pill boxes, wrappers, and labels in his possession bearing the words “Little Liver Pills.” The Defendant was also ordered to pay to the Plaintiffs their cost of the action.

Information upon the subject of Infringements (which will be treated as strictly confidential) should be given to

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A QUARTER !!**

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**Pure Confectionery**

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1 lb. Packages of "Ye old  
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Easily handled, Always in demand, Always  
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**Frederick Stearns & Co.,**

Manufacturing Pharmacists,  
WINDSOR, ONT.

DETROIT, MICH. LONDON, ENG. NEW YORK CITY.





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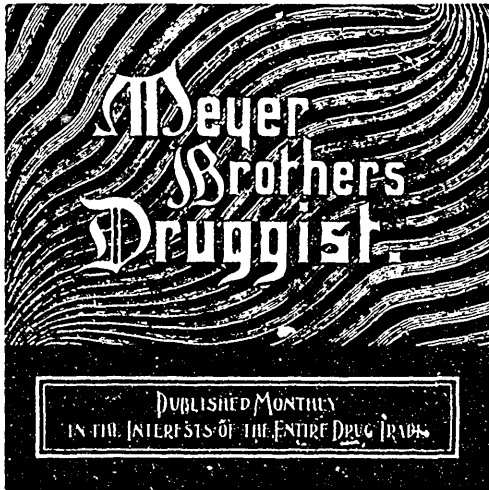
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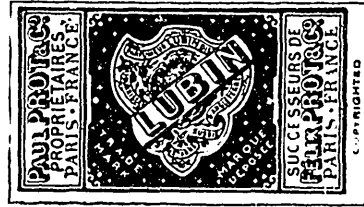
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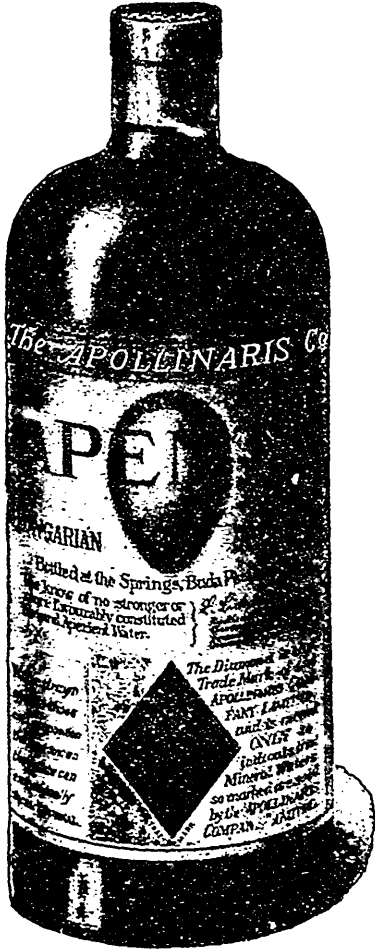
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UNDER EMINENT SCIENTIFIC CONTROL.

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VOL. VIII—No. 8.

AUGUST, 1897.

\$1.00 per annum.

The Montreal Pharmaceutical Journal.

53 St. Sulpice Street, Montreal, Canada.

HENRY MILLS, J. P. Managing Editor and Publisher.  
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MONTREAL PHARMACEUTICAL JOURNAL.  
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## Contents.

Attar Rose, 263.

Benzole Acid from Benzoin, 263; British Medical Association Program, 281; Bleaching Fat, 267.

Cinnamic Acid from Benzoin: 263; Correspondence, 269.

Dangerous Flowers, 273.

Editorial, 263.

Is the Pharmacist to be a shop-keeper, or a skilled professional: 265.

Land of Perfumes, 267; Laxative, A pleasant. 277; Lyman, Mr. Hy., 264; London Letter, 272.

Memo. N. W. D. A., 257; Montreal Notes, 256; Mustard flour for Deodorizing the hands, 257; McGill, Mr. Anthony, 257.

Odd orders. 288.

Petroleum, Pharmaceutical uses of, 278; Phar. Assoc. Prov. Que., 264; Phar. Assoc. Prov. Que. Exams, 264; Pharmacist and Microscope, 239; Photography without Light, 265; Pre-scriber vs. Dispenser. 274; Prize Competition, 257; Problem, 288; Report on Pharmacy, N. Y. S. P. A., 270.

Soda Water Hints, 274.

Tariff, The, 263; Thermometers, Freezing point on, 263; Trade Notes, 259; Transferring Pictures, Liquid for, 257; Troubles of the Drug Clerk—Poetry, 277.

Uric Acid, Estimation, 268.



## THE TARIFF.

It is quite remarkable to note the difference in the working of the new Tariff—The Government has succeeded in making matters so clear for the major part that the most dense collector of customs in the Dominion has a fair chance of enforcing the Law as Parliament designed and intended. We do not hear from one end of the country to the other the plaint of lack of uniformity—the bane of Canadian importers in the past. When differences do arise as to classification or interpretation, importers find the Departmental officers ready and willing to go into details and consider arguments offered, in a business like way. Business methods appear to have been adopted and much greater satisfaction is current. The importers of Canada, as a class, were abominably treated by the last administration. There existed no real recourse for those who suffered rude injustice at the hands of the department and its head. It is pleasing to take an early opportunity of acknowledging the fact of a gratifying and to commerce, a beneficial change, as is already observable. We congratulate the energetic Ministers of Finance, Trade and Commerce and Customs upon what they have already accomplished and at the same time would urge them to further endeavor in the direction of improved organization. The Board of Customs should be differently constituted and a competent druggist should be permanently attached to the department at head quarters.



HENRY LYMAN,  
Born, Derby, Vermont, 1813; Died, Montreal, 1897.

A great and good man has gone to his long last rest. Mr. Henry Lyman was one of the "fathers" of the drug business in Canada and at the time of his death (in his 84th year) was still in active business relation, being the senior and head of the firm of Lyman Sons & Co., Montreal, and, as well the President of the Lyman Brothers & Company, Toronto. Two of the great business establishments of the Dominion. The former undoubtedly the oldest established house in the country, dating back to 1800. The hurried collection of his life's record that we are to-day able to give to our readers will not be needed to speak of his greatness in commercial life to those of his time or to those in touch with the commerce of Canada generating from Toronto or Montreal as centers for the past sixty years. To record the late gentleman's demise however without the details of his long career, even as we know them, would seem

inappreciation itself of a life devoted to the service of his fellow-man, abounding in acts of charity and goodness and as well full of sacrifice and effort for the commercial prosperity and future of the country. Pharmacy in Canada in its earliest days, and continuously since, had a staunch friend and an able supporter in Mr. Henry Lyman. From a commercial point of view much more indeed might be said, but the simple record of his numerous positions, with commercial and public bodies—for special mercantile interest—as well as devoted to his fellow-citizen—in the interest of the country—and all, in addition to his connection with the two important drug firms—serves to replace and make unnecessary individualizing comment. We give below some extracts from the funeral address of the Rev. Mr. Warriner—better indeed than our own comment, coming as these words do from within the heart of the church that for upwards

of sixty years can speak of his identification with Christian work, charity, and of his truth and goodness.

To the bereaved family we extend our sympathy and regrets. In the words of their Pastor they will find comfort and strength to endure this bereavement and from Him to whom the Rev. Minister points as so truly the Master of the life that has just closed, they will receive consolation in this trial of sadness and loss.

Mr. Henry Lyman was born in Derby, Vt., in 1813 and came to Montreal with his father in 1816. He was educated at Workman's School in Montreal and at Amherst Academy, Massachusetts, and finally settled in Montreal in 1829, in which year he commenced his commercial career being employed by the firm of Hedge & Lyman.

He was one of the founders of the "Property Protecting Fire Company," formed to protect portable property and prevent pilfering at fires. He was one of the founders of the Sunday School Union in 1836, and for some time one of its secretaries. In 1837 he joined the "Montreal Rifles" and saw active service during the rebellion.

Henry Lyman assisted his brother Benjamin in forming a Volunteer Fire Engine Company called the "Union," and which ultimately led to great improvement in the then existing civic fire department. Mr. Lyman took an active part in the establishment of the "American Free School," and was also a Director and afterwards President of the "Montreal Building Society," the first of its kind in Montreal.

In 1851 he was a member of the Local Commission for the London Exhibition and received a diploma and medal "for services." In 1853 he was elected alderman for the West Ward of the City of Montreal, and rendered great services to the city, especially in the establishment of the water works and in the introduction of the Fire Alarm Telegraph. In 1856 he was Honorary Treasurer for the celebration of the opening of the Grand Trunk Railway.

At the time of the Trent affair in 1863, he took an active part in raising the 5th Battalion Royal Light Infantry, taking command of No. 8 Company and went to the front with his regiment at the time of the Fenian invasion in 1866. Shortly afterwards he retired with the rank of Major.

In 1867 he was again elected to the City Council of Montreal as representing the Centre Ward, and retired in 1870, receiving a vote of thanks, from the Council and Civic Fire Committee. He was elected a Director of the Citizens Insurance Company in 1866, later becoming Vice-President, and succeeded the late Sir Hugh Allan in the Presidency upon the latter's death in 1881. He held the office until 1889.

In 1879, Mr. Henry Lyman became the head of the Lyman house.

Mr. Lyman was a director of the Canada Shipping Company from its organization. He has also

been a member of the Board of Trade for many years and has filled most prominent offices in that most important body, having been Vice-President in 1863 and President in 1881-82. He also represented the Board of Trade on the Harbor Commission for a period. He was for many years a Deacon of Zion Church, and since the foundation of Emmanuel Church he has filled the same office in it, and also served as Chairman in the Building Committee.

He was Chairman of the Provisional Committee for the organization of the Imperial Federation League in Canada.

Mr. Lyman was a Governor of the General Hospital and of the Protestant House of Industry and Refuge, a Governor of, and Vice-President of, the Protestant Hospital for the Insane, and a life member of the Mechanics' Institute and of the Natural History Society.

The funeral took place from his late residence, Thornhill, McTavish street, to Emmanuel Congregational Church on Thursday July 22nd. and was very largely attended, many leading business and professional men being present to pay a last tribute of respect to one who had for so many years occupied a prominent position. There were no pall-bearers. The chief mourners were Messrs. A. Clarence Lyman and Walter E. Lyman, sons of the deceased; Master Sidney Lyman, grandson; Charles Lyman, nephew; Arthur Lyman and Lyman Beard, grand nephews; George Lyman, P. Lyman, Harold Redpath, Clifford Redpath, Dr. Fisher, Roswell Fisher, A. B. Chaffee, A. H. Plimsoll, Charles McClatchie and J. E. M. Whitney. Major H. H. Lyman and Mr. F. S. Lyman, sons of the deceased, are absent in Europe, and although cabled for they were unable to reach Montreal in time for the funeral.

The staff of Lyman, Sons & Co., in this city, attended in a body, and Lyman Bros. & Co., Limited, Toronto, were also represented.

The following members of the Veteran Firemen's Association were present:—Wm. Cunningham, president; David Bickerstaff, vice-president; Capt. A. McNaughton, T. Jones (secretary), T. Richardson, Thos. Allen, J. Milloy, J. Robinson, Capt. W. Mann, J. T. Barlow, J. Knox and A. C. Lauzon. The late Mr. Lyman was the father of the firemen and the organizer of the present paid brigade.

The floral tributes from relatives and friends were numerous and beautiful. The staff of Lyman, Sons & Co., sent a large cross and crown in white flowers, and the staff of Lyman Bros. & Co., Toronto, sent a large pillow with the words 'Our President,' in purple flowers.

#### THE SERVICE AT THE CHURCH.

In the absence of the pastor, the Rev. Dr. Evans, the Rev. W. H. Warriner of Zion Church officiated at the service in Emmanuel Church, and was assisted by the Rev. John McKillican, an old friend of the family. Mr. Warriner met the body

at the door and recited passages of Scripture as the procession moved up the aisle. After the hymn, 'Now the laborer's task is over,' had been sung, the Rev. Mr. McKillican read the Scripture lesson.

The Rev. Mr. Warriner, in his address, said in part:—

'Christian friends, this is no common life that has passed away from us. Whichever way you may measure it, whether in length of days, in vigor of intellectual power, in cleanness and uprightness of character, or in prolonged and richly varied usefulness and honor—this is a life that has stood conspicuously fair in the history of this city in which for the lengthened period of fourscore years it grew and growingly adorned.

'It would therefore not seem altogether right or wise, and I am sure it would not be satisfactory to our feelings, if we were to let this hour pass without any expression however brief, of the thoughts and feelings that crowd upon us to-day, not to glorify him who is gone but to honor his Saviour and inspire our hearts with devotion and faith.

'As we call to mind the form and face the silver white hair of him who has been taken from us. we cannot but think how true in his case were the words of sacred writ, "The hoary head is a crown of glory if it be found in the way of righteousness."

How early his conscious religious life began I do not know, but I believe it was as early as the thirties that he united with Zion Congregational Church, and for upwards of sixty years his life has been identified with Congregationalism in this city.

He was one of that band of able men which at one time, and for a long period, made Zion Church such a mighty power for good in this city, ever prominent in her councils and active in her labors.

When this church was organized in 1875 he was one of its charter members and chief founders. Elected a deacon at its formation, he continued in office to the day of his death, only one other occupying the same position with him. He was the most aged member of the church.

Many are the testimonies that are given of his great usefulness. One calls to mind that forty years ago he was his Sunday-school teacher; another speaks with pleasure of twenty years of service with him on the music committee of the church, while another calls to mind that he was an influential member of the building committee of the first Zion Church on Beaver Hall Hill.

Nor were his sympathies limited to his own church. His mind was cast in that broader mould that looks out on the needs of the city and the nation at large. His interest in both secular and religious education has already been referred to in the public press; it need only be added that for many years he was a most valuable director of the Congregational College in this city.

How fully and in how many ways he entered

into the life of this city, commercially and otherwise you know, as well as how he was influenced in every sphere of his activity by the high purposes of a Christian gentleman.

'And now that he has gone from us we may, without irreverence, apply to him the words spoken originally of Israel's great King. "After he had served his own generation by the will of God he fell in sleep."

'If these cold lips could speak to us to-day, they would confess to much of human imperfection in both life and service, and bid us trust alone in God's redeeming grace, while they would surely testify of that love which fills all our life with gladness, purifies and makes strong our youth, and even to gray hairs carries us with infinite tenderness—a love which conquers death itself, and though parting for a while with all that is dearest on earth, anticipating that blessed reunion, when

Death, with his healing hand,  
Shall once more knit the band,  
Which needs but that one link  
Which none may sever.  
Then through the only good,  
Heard, felt and understood,  
Hearts that are one,  
Are one forever.

"Mr. Warriner concluded:—'And the city, where so long he lived and which he loved so well, looks to the young men and calls on them to take their places in the ranks where their father stood, that so from generation to generation we shall not want for men of God to do God's work in the world.'"

After prayer, the hymn 'O God, our help in ages past,' was sung, and the funeral cortege reformed and proceeded to Mount Royal Cemetery, where the Rev. Mr. Warriner concluded the service at the grave.

The late Mr. Lyman leaves a widow and four sons.

The eldest Mr. F. S. Lyman a prominent lawyer and for some years Queen's Counsel

Major Henry H. Lyman the managing spirit of the firm of Lyman, Sons & Co., Montreal and vice-president of the Lyman Bros. & Co., Toronto. This gentleman is a graduate of McGill University, was an enthusiastic Militia officer for many years and is prominent in society circles.

Mr. A. Clarence Lyman is a Notary Public and Mr. Walter Lyman the youngest of the family is engaged in the Insurance business.

#### MONTREAL NOTES.

Dr. O. J. Lachapelle of the Sobmer Park Pharmacy has removed to more commodious premises at the corner of Ontario and Amherst st.

The Doctor has shown much enterprise in opening out in a large way and thus marking the Jubilee year, by new goods in new quarters, we wish him much success.

Mr. Jno. Lewis, of St. Catherine street is back to business, looking quite himself again. He has been absent about two months, most of which time was spent in Los Angeles Cal. His restoration to health is noted with much pleasure by his numerous friends.

Mr. D. R. Gagnon chemist of Quebec has made an assignment on the demand of Dr. E. Morin.

**Executive Committee on Entertainment of the National Wholesale Druggists' Association.**

RICHMOND, VA. July 28, 1897

Dear Sirs :

The 23d annual meeting of the National Wholesale Druggists' Association will be held at Richmond, Va., 11th, 12th, 13th and 14th Oct. The Committee on Arrangements have obtained rates at the Jefferson, one of the handsomest hotels in the country. American plan at 4.00 per day, or rooms with baths at \$5.00 and \$6.00, European plan from \$1.50 to \$5.00 per day. Members wishing to secure rooms in advance, will please correspond with Mr. P. M. Fry, Manager of the Jefferson, or if they prefer, the Committee will secure rooms for them if advised in advance.

The railway lines have granted the usual concession, making a one and a third rate for the round trip. As it has heretofore been found necessary on several occasions to extend the proceedings beyond the 6 days usually allowed, Mr. J. M. Peters, as Chairman of the Committee on Rates, has made application for rates to cover a meeting from October 11th to 22nd, and tickets will therefore be good going three days prior to the first date and returning three days after the 22d.

The committee have provided a pleasant programme for the members and their ladies which will include a trip down the historic James to Old Point, passing many places of interest. It will aid the Committee very much if members expecting to attend will notify the Chairman.

Yours very truly,  
R. W. Powers

Chairman Entertainment Committee

**Mustard Flour for Deodorizing and Sterilizing the Hands.**

A writer in *Scapel* recommends as a successful method of purifying the hands, the putting of a mixture of flour and mustard into the bath when washing, the rubbing may be discontinued as soon as the smarting of the skin is felt. This very efficacious method of sterilization of the hands, also radically deodorizes them. Iodoform even is quite removed by the soaping in combination with flour of mustard.



ANTHONY MCGILL, B. Sc.

Anthony McGill, B. Sc., was born in Rothesay, Scotland, in 1847, his father was Rev. A. McGill of Edinburgh, assistant to Dr. Lindsay Alexander, of Argyle Square Chapel; came to Canada in 1860, was educated at Hamilton Collegiate Institute and Normal School, and University College, Toronto, was graduated B. A., Toronto University, and B. Sc., Victoria University. After graduation was assistant to Prof. Pike for some years, later was appointed Science Master at Collegiate Institute, Ottawa. In 1887 joined the Inland Revenue Department as Assistant Analyst. Mr. McGill has been a frequent contributor to Scientific Journals, the Canadian Institute, the Royal Society of Canada, &c. Since 1887 his scientific contributions have been limited almost entirely to the Bulletins of the Department of Inland Revenue.

**LIQUID FOR TRANSFERRING PICTURES**  
to paper or other absorbent surfaces :—

- Spt. vini rect..... $\frac{3}{4}$ l.
- Glycerini..... $\frac{3}{4}$ l.
- Aque..... $\frac{3}{4}$ l.

M. Add a little perfume.

Directions for Use : Place the picture right side up on smooth wood or glass, placing one layer of waste paper underneath. Damp the picture with the fluid by means of a camel-hair brush, then place unglazed paper upon the picture, and rub briskly and firmly from you with a paper-cutter or any other smooth hard surface.



## EDITORIAL CORRESPONDENCE.

It was thought wise as well as desirable, that the JOURNAL should be represented at the Annual Pharmaceutical Convention of the Empire State, I had the opportunity and pleasure of being present at the nineteenth annual meeting of the N. Y. S. P. A. which was held at Manhattan Beach Hotel, Coney Island, July 13-16. I had with me credentials from the Pharmaceutical Association Province Quebec and the Montreal College of Pharmacy, and on presentation of these was most warmly welcomed, and hospitably entertained. The president R. K. Smither, officially announced to me, as a "foreign delegate to the United States" a cordial reception, and all the privileges.

The first personal welcome was from my friend Mr. Mayo of the *American Druggist*, I was soon in the congenial company of C. W. Parsons, *Era*, Messrs. Mays, and Bataille, *Drug. Circ.* Mr. T. J. Keenan, *A. Drg.* and Dr. Eccles, *Amer. M. S. Bulletin* and was quite at home.

The lively parts in the discussions in the meetings, centered around the Greater New York legislation. The State had four Boards and four Schools, and the first draft of the new law wiped out one of the Schools, that of Brooklyn. By vigorous efforts of the friends of the latter institution, modifications were worked in at the last moment at Albany, and the registration fees divided between the N. Y. College and the Brooklyn College. Much lobbying had been done at Albany, one member acting in the dual capacity of member of the Legislative Committee of the State Association, charged with the preparation of a law consolidating the Boards, and at the same time working for a law in the interests of Kings' County Society, Brooklyn. "The temporary success of the Brooklynites consolidated the New York College of Pharmacy and the Kings County Pharmaceutical Society in opposition to any law which would shut off that source of income to the Colleges, and made it a fight of Greater New York against the state—of the Professors of Pharmacy against the practitioners of pharmacy." (C.W.P.)

In the end it seemed the one State Board principle was advanced somewhat, this being in accordance with the result of a state *plebiscite*, which indicated that 94 per cent of the pharmacists in the state had favored it. A number of interesting papers were read, some of which are reproduced in this number. The entertainment items of the programme were admirably arranged, and permitted of the business of the Convention being conducted smoothly and expeditiously, without the interruptions, which picnic features generally introduce. The lavish entertainment supplied by the Maltine Company of Brooklyn, as their contribution to the Convention, was really splendid. Two special trains were furnished to transfer the members and ladies to the magnificent establishment of the Company 8th avenue, Brooklyn. Luncheon was served in the main hall of the works, the menu being of a most attractive character, the toothsome delicacies were highly appreciated. Champagne flowed freely for those who desired to use it, and imported *Nicotiana* in cylinders, was in abundance for those who had a weakness for the weed. The various ingenious and labor saving contrivances for preparing the materials and bottling the products were inspected. Finally there were flowers for the ladies, and a souvenir for the men. All went away duly impressed with the magnitude and prosperity of the Company. The weather was capricious, and instead of being hurt with the heat, Montreal had given more to suffer. The terminating item on Friday, a day on the water, with a visit to Glen Island was most enjoyable. The day was fine, the scenery of the sound was viewed with delight, members of the entertainment committee were on hand to point out places of interest on Blackwell's Wards and Harts' Island, Hell Gate, etc. At Glen Island, a beautiful island park, after visiting the menageries, etc., a regular Rhode Island clam-bake was enjoyed, and voted by all a perfect success.

The menu contained clams hard, clams soft, clams large, clams small, clam fritters, clam shower, and clams ad in-

finium. On the return in the "Valley Girl" dancing was indulged in with much heartiness, the old fashioned Virginia Reel caused much amusement both to onlookers and dancers.

An item not on the regular program that interested me much, was a visit to the unique establishment of Merck, University Place, New York. Mr. W. C. Alpers well-known to many of the JOURNAL readers, by his able contributions to journal literature, is the Manager, he took over from the Beach a small party of the members, one evening when the euchre party was in full swing, and showed them through the various departments. This immense and beautiful establishment is a permanent object lesson, showing what an ideal professional Pharmacy would look like when managed scientifically, and with ample means. The various processes of extraction, percolation, distillation, are carried on with the most modern and specially prepared apparatus. An ingenious automatic water distilling machine was noticed, this takes water from the tap, and for refrigeration, the two supplies, going on harmoniously, the gas is lighted, and no further attention is needed. Analysis, chemical and microscopical, both for pharmaceutical purposes, and for the medical profession is managed by experts. In the pharmacy proper on the ground floor, a bright young woman was observed, at one of the dispensing counters. Mr. Alpers informed me that his experience so far, with "Woman in Pharmacy" had been most satisfactory.

Some of the methods in dispensing at this model establishment may be mentioned, the prescription on being handed in is first stamped with the day and minute, by means of a clock stamp, it is then pasted on a card, and passed on to the dispensing counter. As each ingredient is weighed, the bottle remains in view, with the weight used, lying beside it.

As many grain, or dram etc., weights are used as there are repetitions of the quantity in the prescription. The checker thus can compare the quantities, with the weights used, and there is a certainty of the right quantity having gone into the mixture. It was a treat in these days of commercialism and degeneration, to visit a vast and handsome establishment, devoted to pure pharmacy. No side-lines, of any kind, only medicines, medical supplies, appliances, and sick comforts. After an inspection of some of the flats, which proved most interesting, time did not permit of doing the whole building, the visitors accepted the invitation of Dr. Weiker and Mr. Alpers to the Hotel Martin, where a very recherche dinner awaited them. Needless to say, most complimentary allusions were made in reference to the famed Merck Pharmacy. We advise any one interested in Pharmacy, visiting New York to call at University Place, and inspect the laboratories and dispensing departments. The managers are glad to receive visitors and show them around.

Before returning I made some visits in Brooklyn and New York, among the number to a former student of mine Mr. Gallagher, (M. C. P. 1882). Mr. Gallagher is now a leading Pharmacist of Brooklyn. He is carrying on a live business, and still finds time to push the early-closing movement, whose inception was largely due to him. In New York I was the guest of my long time friend and former fellow clerk Dr. W. Nelson, now a prominent physician, and Insurance expert, in the great metropolis.

Opportunity was afforded of visiting the new building of the New York College of Pharmacy 58th street and I gladly availed myself of it. The building is handsome, the class rooms commodious, and well arranged. As a teacher, I could appreciate the attractions of this splendid and well-equipped College, my only regret was that the Professors I would like to have met were out of town.

Mr. Thos. F. Main is the successor, as secretary, of the lamented Mr. A. H. Mason. To Mr. Main I am greatly indebted for kindly attention and hospitality. Wannamaker's great department store Broadway was found as busy as a fair, Mr. Wannamaker deserves well of the Pharmaceutical Profession as he has always refused to touch medicines, regular or patent. There are 6000 registered Pharmacists in the State of New York.—T.D. R.

## TRADE NOTES.

## A Red-Hot Money Maker.

This is the time of year when retail druggists everywhere are over-whelmed with questions from customers like these. What have you to kill rats or mice? Our kitchen is over-run with cook-roaches. Can they be removed? etc., etc. Nothing is so revolting to the eye of a good housekeeper as vermin of any kind. She is always willing to buy an article that will rid her home of the pests. Stearns' Electric Rat and Roach Paste is an exterminator of exceptional merit. *It kills* rats, mice, cock-roaches, water bugs, etc., where hundreds of similar preparations fail. The goods never soil, are put up in attractive cartons for display and are in demand twelve months in the year. You can recommend the goods to your customer to do the work and make money by buying and pushing Stearns' Electric Rat and Roach Paste. For prices, etc., see advertisement on page vii.

## Foolish, isn' it?

Look at the foolishness of it.

'Tis an exceeding difficult thing to come into competition with a well-known and a well-liked article.

Consider the cost of making a new thing known; the argument; the persuasion and the hundred and one things necessary to publicly.

The trouble is over in the first case. It just begins with the new arrival.

The race is an uneven one.

What's the use then?

The profit of the transaction is soon eaten up.

The genuine HIRES ROOTBEER had a hard fight for it.

Even now The Charles E. Hire Co., is obliged to advertise in twelve thousand magazines and papers.

Thir' of that—when tempted to reap where you h not sown.

## To Druggists at Summer Resorts.

As Humphreys' specifics are largely sold in cities to the wealthy, or well-to-do,—the persons who have the means to spend the summer at the sea-shore, or mountains,—we ask that you keep your stock of Humphreys' Specifics in good condition and let us know if we can send you a sign, or printed matter to draw attention to the fact, that you keep the specifics for sale. If you do not

keep them, it will be interesting to you to know of our liberal terms and inducements: address the Humphreys' Company, New York.

## A Big Risk.

One resentful customer can do great damage—he can make his grievances contagious.

A dealer cannot be too careful about giving the customer precisely what he asks for.

The profit in recommending an unknown substitute soon ceases. For if it does not in every way measure to the standard established by the original article, there will be trouble.

HIRES ROOTBEER is established in the minds of the customers.

They want HIRES ROOTBEER and nothing else.

It pays to sell what is demanded and offends to suggest anything else.

It requires too much argument and persuasion to work up a counterfeit.

All this trouble is over with HIRES ROOTBEER.

## The Pharmacist and the Microscope.

HENRY KRAEMER, PH.G., PH.D.

Philadelphia College of Pharmacy.

The topic of "The Microscope in Pharmacy" is by no means a new one. In this country, for at least the past twenty years, it has been a theme upon which comparatively many have written. Upon looking over some of these papers one is struck with the loyalty of the authors to the microscope in describing its construction, uses and even possibilities. Nevertheless, one cannot but feel that the situation has been viewed in most cases from some other standpoint than the practice of the profession of pharmacy. The idea that seems to pervade the atmosphere is all that is necessary for the pharmacist is to procure the necessary apparatus (microscope, reagents, etc.) and books, and to follow the directions given. One further-more receives the impression that because vegetable drugs possess characteristic structures, that therefore the pharmacist ought to use his microscope in determining all of the drugs that he buys. The result of this kind of writing has to some extent hindered our progress in practical pharmacognosy in this country.

## ONE MUST BE TAUGHT.

To possess a microscope and not know how to use it, or to think one knows how to use it

and spend one's time by one's self in endeavoring to interpret what is revealed there, is both money and time wasted. In order to obtain results that are reliable, in using a microscope for any purposes one must know how to use the instrument and understand the structures in the department (say botany) where it is to be used. This knowledge can come only by being instructed properly. Of all the instruments devised in the prosecution of scientific research, there is none that requires that its user shall be better taught in the foundation and guiding principles of the science in which he engages than that of the microscope. It is extremely unprofitable for anyone to have the idea that he can teach himself the use of the microscope in the science in which he proposes to apply it. It looks very inviting to see a good illustration and to read of sectioning, mounting and examining a drug with the microscope. It is another thing to do the work and see the points. Experience teaches us that a beginner finds no help in the illustrations of books. What the beginner needs in doing microscopical work are not illustrations or facts, but ability to use his hands, eye and brain rightly. One must be taught, i. e., guided to knowledge. Time must first be consumed under a competent teacher in mastering the construction of the instrument and in becoming familiar with the methods of doing microscopical work and in learning the foundation and guiding principles of morphology, both outer and inner, of the plant kingdom. After this is accomplished the student will find books helpful. Now he can use his hands properly, see with his eye correctly and interpret with his brain rationally. The more knowledge that is gained by personal observation the stronger and more self-reliant will the student become.

A broad botanical or even biological university training is the best foundation and is necessary to accomplish the best work with the microscope. It cannot be said, however, that this is absolutely necessary in the prosecution of microscopical work by the pharmacist. It is necessary for him, however, to have mastered the foundation principles of physics, botany and chemistry in order to get the results that are of practical value to him. Some of our schools and colleges of pharmacy are now prepared to give their students a good start in this direction. The student must not be discouraged, but on the contrary expect "to make haste slowly" at first. He must exercise patience in learning to section drugs, and work persistently under a competent instructor until he understands the principles of his subject. Nature does not unfold herself unless one works patiently and incessantly at her. When one problem is worked out, the next

is easier. So that by the time the student is master of his subject, results come comparatively easy.

#### TIME AND PLACE FOR USE OF THE MICROSCOPE.

Having shown that instruction is necessary in order to secure reliable results from the use of the microscope in pharmacy, the illusion that the microscope is necessary on all occasions must be dispelled. While it is sometimes an indispensable instrument, it does not follow that it must be used always any more than because an axe is used to chop down a large tree therefore an axe is necessary to break up every piece of wood. The microscope has its time and place for use by every one who is accustomed to using it in his special line of work. It is as superfluous for the educated pharmacist to use his microscope in the examination of each lot of *nux vomica* or *columba* that he buys as it would be for the field botanist to make a microscopical examination before he could determine say *Castanea dentata* or *Quercus alba*. In fact it bespeaks lack of knowledge in the botanist. It likewise reflects on the professional pharmacist who wishes to make sections of those drugs which are so characteristic in a crude condition, and which by experience he ought to distinguish at once.

#### APPLICATIONS OF THE MICROSCOPE IN PHARMACY.

Upon completion of the proper laboratory course and being well grounded in the various sciences necessary for the use of the microscope in pharmacy, we must also recognize that in the use of the microscope there is a training of the eye (a sharpening of it, so to speak) so that the trained eye with the other senses (educated, too) are all to be employed where necessary in the discrimination of drugs. Now there are times when the use of the microscope is essential—whereas at other times it is rather a convenience than a necessity in the practise of pharmacy. Some of the applications of the microscope in pharmacy are the following:

1. *Examination of some crude drugs:* While appearance, odor, taste, etc., are generally sufficient aids in determining most of the commercial drugs one from another, still there are instances when a microscope examination is desirable and necessary. This is especially so when certain drugs occur in relatively small pieces or whenever drugs that possess similiar characteristics are supposed to be intermixed or incorrectly labeled. The microscopic structure will generally enable one to quietly dispose of such doubtful cases. The following crude drugs of the U. S. P require

not infrequently a microscopical examination for their accurate determination. Especially is this necessary when they do not appear in the forms usually seen in commerce:

Mexican Sarsaparilla from Honduras Sarsaparilla.  
Belladonnae Radix (the horny kind) from India.  
Belladonnae Folia from Stramonii Folia.  
Serpentaria\* from Spigella.  
Granatum from Xanthoxylum.

There are a few cases in the examination of crude drugs when microscopical examinations have been advocated, and while sometimes necessary, the quality and nature of adulterant may frequently be told by the eye alone, as with crocus, etc.

2. *Examination of Powdered Drugs*: In recent years powdered drugs have been introduced to such an extent that in many retail pharmacies few crude drugs are to be found. Drugs in the powdered condition may be obtained pure, but adulteration is more easily affected here than in the whole drugs. This is owing to the inability of the average pharmacist to detect it. We notice that some State Boards in their examinations give the candidates few, if any, crude drugs for determination. In time there can be no doubt but that the examiners for the State Boards in their examinations will give the candidates few, if any, crude drugs for determination. In time there can be no doubt but that the candidates for the State Board examinations will be required to determine powdered drugs and pronounce on their quality. This is desirable for the sake of the profession of pharmacy and is in accord with the spirit of the State Boards in giving the candidates as practical examinations as may be possible. The microscope must be used in this province, as only by means of it can one determine most of the powdered drugs and pronounce on the quality of all. By means of the microscope drugs of different origin may readily be determined, as the various sarsaparillas, sennas, ipecacs, etc.

3. *As a Preliminary Step in the Study of Plant Constituents*: The microscope is of undoubted service in the preliminary steps of the chemical examination of drugs. With it the nature of inorganic substances, as  $\text{CaCO}_3$ ,  $\text{CaC}_2\text{O}_4$ ,  $\text{SiO}_2$ , etc., may readily be detected. The nature of some carbon compounds, as starch and sugar, and active principles, as oils, resins, tannins or other substances, may be detected qualitatively.

4. *In Determining the Relative Value of Drugs*: It not infrequently happens that two drugs of different origin or habitat are used in medicine and that the cheaper contains the larger percentage of active principles. A chemical assay may be resorted to, but when purchasing a small quantity of a drug this might not pay. By means of the microscope, however, an approximate comparison may be instituted. This applies not only to the

\*The microscope is not necessary here, as will be shown in an article to be published later.

powdered, but also to crude, drugs. The following instances may be cited:

- (a) *Gingers*: The African ginger is cheaper than the Jamaica ginger, but the former contains more secretion cells, which are about the same size in both; hence the African, although the cheapest, assays a higher percentage of oleoresin.
- (b) *Buchus*: The "short buchu" is cheaper than the "long buchu" but nevertheless the former contains much larger and more numerous secretion reservoirs than the latter; hence the "short buchu" assays more oil than the other.

5. *In Determining Loss of Active Principles*: It is possible in some cases without resorting to a chemical assay to determine if the active principles have been removed. This is notably so in drugs that contain alkaloids, secretion reservoirs or secreting hairs, as in cinchona, ginger, cloves or any of the labiatae.

6. *In Determining Identity and Quality of Spices and Foods*: Since the introduction of spices in a powdered form into the household there has been the most flagrant kind of adulteration practiced. In many cases the microscope is the only satisfactory means for determining the purity of the drug or the nature of the adulterant. A few illustrations may be given:

- (a) Pepper is admixed with mustard hulls, wheat flour, etc.
- (b) Bermuda arrowroot is adulterated with and substituted by other arrowroots and starches.
- (c) Tea contains leaves *Salix alba*, *Sambucus nigra*, etc.

7. *In Determining Unknown Drugs*: It often occurs that a pharmacist receives for identification samples of drugs that are unknown to him. It may be that they are common indeed, and indigenous to this country. The microscopical examination at once gives him a start. The compound microscope is indeed playing a very important part throughout systematic botany. Certain groups or families or genera are found to possess a certain characteristic inner morphology, and this is the key of the solution. It may be that the arrangement of the fibro-vascular bundle is peculiar, or that the shape of the element, root, stem, etc., is characteristic, or the identification may be based on the nature of secretion cells or on the nature of hairs, etc. In the leaves the habitat may sometimes be determined by reason of the structure.

8. *In Biological and Sanitary Analysis*: The advancing pharmacist is taking upon himself the study of those branches which are more or less directly related to medicine and for which there is evidently a growing demand. He is making the biological as well as the chemical analysis of water and reporting on the condition of the sputum, urine, etc., of the patients of the physician. In all this kind of work the microscope is necessary.

9 *For other Practical Purposes*. Recently

some one wanted to examine the number of meshes in some sieves, The compound microscope was recommended for the purpose, the principle of the method followed being the same as that used in measuring the lengths of cells, etc.

The microscope may be used in detecting forgery; in determining the writing on soiled labels; also in ascertaining the kind of writing paper, labels, etc., that are purchased, etc.

#### THE INFLUENCE OF THE USE OF THE MICROSCOPE.

From what has preceded it is seen that the microscope has a very important bearing on the practical work of the pharmacist. It would not be proper in an essay of this kind to fail to record the influence of the microscope in the training of the pharmacist. The use of the microscope does for him as it does for all—an infinite amount of good that must not be over looked. It makes better observers of all. The early workers with the microscope often remarked that it enabled the workers to see afterwards with the naked eye structures that were invisible to them before they used the instrument. By means of the simple lens one is enabled frequently to make out those characteristics of a drug that have been seen with the compound microscope. Finally with the naked eye alone, one can by experience obtain results in determining the quality of drugs that are based on structure, and not on ephemeral external characters.

#### RESULTS OF THE USE OF THE MICROSCOPE.

We must not be discouraged by reason of the sceptic and his oft-repeated question. "What is the use?" The sceptic is as useful in treating this subject as he is in other problems. In the applied sciences this question is ever before the student. The pure scientist in his pure science will pay no attention to the query. But the business and professional man feels it necessary to devote his energies to those things only that will bring forth useful fruits. There is, however, an insurmountable difficulty in following the applied sciences.

One cannot predict what scientific fact will be the basis or part of a principle in the construction of some useful invention. Hence we find it necessary to take in more than we can use practically and are sometimes silenced for the time by the question, "What is the use?" Nevertheless we are safe in recording some of the results that occur to the educated pharmacist from his use of the microscope. The benefits are two-fold, viz., to the pharmacist and to the public.

1. To the Pharmacist: The pharmacist is able to dispense drugs, foods and spices, the purity of which he can guarantee. This means to him and for him.

(a) The most efficient of co-operative work with the physician.

(b) The building up of a good pharmacy, the one of which shall endure.

(c) The establishment of confidence in him by the best physicians and the public. (To have good custom one must sell good drugs.)

(d) The pharmacist receives the value of his money for his purchases. He does not pay a high price for an inferior drug, as a Honduras price for a Mexican or other sarsaparilla.

(e) The conscience of the pharmacist is clear and he knows what he is selling.

(1) It is also an advertisement to the pharmacist, and he may judiciously utilize it in the building up of his estate here.

2. To the Public: The public in return receive fine drugs, foods and spices. This means to them,

(a) Confidence in the pharmacist, which sometimes may prolong and even save life, and

(b) Satisfaction in the goods for the money paid.

#### ARGUMENTS AGAINST THE USE OF THE MICROSCOPE

1. It requires an educated person to use the microscope to any advantage. A mere merchant could not use it with profit. It requires that one shall have spent time and money in acquiring a proper education. Hence they who have never been instructed by a competent teacher cannot practically avail themselves of the benefits of the use of the microscope.\*

2. The cost of the outfit, being at least \$25, makes some persons, who might use it profitably, think too long about purchasing a microscope.

3. Time must be given to the use of the microscope. Many pharmacists feel that if there is any time to spare it ought to be given to "resting up" or waiting for the next rush of business.

4. It takes "nerve" or backbone for one to go to college, to buy a microscope, to give the time necessary for securing results and to believe that all will pay in the end.

5. The merchant who wishes to purchase his goods at the lowest price, regardless of quality, does not care to be able to know whether the guarantee for purity of the seller is correct. He would rather sell impure and adulterated goods with the clear conscience of willful ignorance.

#### CONCLUSION.

A good education is necessary for a professional pharmacist, and he alone who is taught properly can use the microscope advantageously. The microscope may be utilized in so many practical ways by the educated pharmacist that the receipts far outweigh the cost and time. The light in the sky is already appearing, the clouds are rising higher and higher on the mountain side and the practical pharmacists are ascending one by one to higher flights than where they rested yesterday, and they follow those who it sometimes may seem are working in the clouds, yet who, nevertheless, when the light shines, are seen to be laboring for their benefit and the future of pharmacy.

\*This statement we consider much too strong.—Ed.

# Seasonable Preparations in Popular Demand . . .



## LIQUID ACID PHOSPHATES :

A nerve and brain food ; very popular for use at the soda fountain. Each teaspoonful contains 10 grains pure phosphoric acid ( $H_3PO_4$ ) partly free and partly in combination with calcium, magnesium, iron, sodium, and potassium.

In 8-fluidounce bottles.....	per doz..	\$1 80
In 16-fluidounce bottles.....	per doz..	3 20
In 30-fluidounce bottles.....	per doz..	1 20

Bulk prices on application.

## CHLOR-ANODYNE :

An almost magical remedy in the bowel affections so prevalent during the heated term—diarrhoea, dysentery, cholera morbus, colic, etc.

In fluidounce bottles.....	per doz..	\$3 00
In 16-fluidounce bottles.....	per bot..	3 45

Also in four and eight fluidounce bottles.

## ELIXIR LACTATED PEPSIN :

Containing the properties of Lactated Pepsin, appropriately combined with aromatics. Each fluidounce now represents 80 grains Lactated Pepsin.

In 16-fluidounce bottles.....	per doz.	\$12 00
In 30 fluidounce bottles.....	per bot.	4 40

Less the usual discounts.

## ELIXIR SAW PALMETTO AND SANTAL COMPOUND :

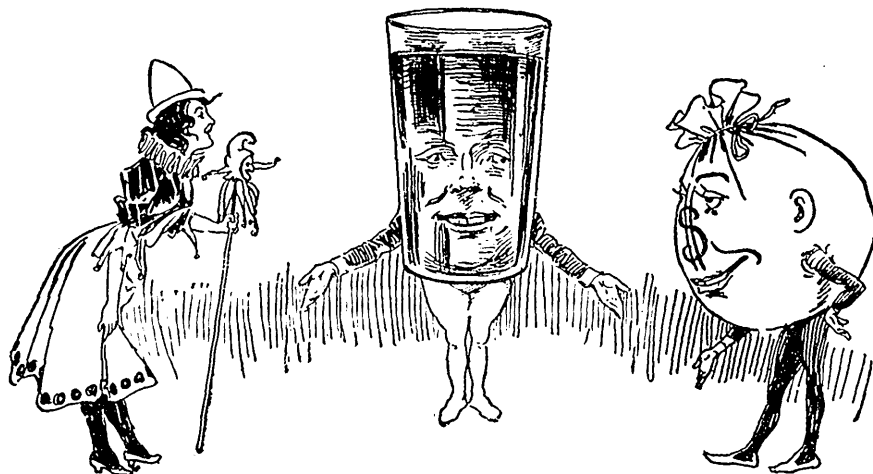
Admirable for the relief of congested and irritable conditions of the genito-urinary tract. The formula appears on each label and the ingredients are of the choicest quality.

In 16-fluidounce bottles.....	per doz.	\$12 00
In 30-fluidounce bottles.....	per bot.	4 40

Less the usual discounts.

---

Parke, Davis & Company, Manufacturing Chemists,  
WALKERVILLE, ONTARIO.



## Pleasure and Profit

Pleasure to the Customers  
 Profit to the Dealers  
 That's the pleasing combination  
 we offer you in . . .

# HIRES Rootbeer

But mind you—only in HIRES ROOTBEER, not in the worthless substitutes which are so often dispensed in its name.

This substitute is neither fair to the customer or to us, to say nothing of the suspicion to which the dealer submits himself when it is discovered.

**HIRES Rootbeer** is genuinely good. It has a splendid reputation. We advertise it in every conspicuous and sensible way. No trouble to you at all—except to sell the goods.

We'll bring the customers.

Moreover, the universal verdict of the druggists who sell the HIRES ROOTBEER at the soda fountain is that it is a good business bringer.

People drop in for a glass of this wholesome drink and if the druggists stock is well displayed they buy something else.

Any leading well known article carries others with it.

A concentrated solution of HIRES ROOTBEER ready for immediate fountain use is put up in one pound packages.

What do you say to a little reciprocity?

We sell the genuine HIRES ROOTBEER and we will do anything possible in generous and extensive advertising to make your investment profitable.

## The Charles E. Hires Co.

 PHILADELPHIA, PA.

### Freezing Point on Thermometers.

In a paper recently read before the Royal Society on the determination of the freezing point on mercurial thermometers Dr. Harker stated that the method adopted is to cool distilled water in a suitable vessel to a temperature below 0 degree, to insert the thermometer and then bring about the freezing of the water by dropping in a crystal of ice. The mercury then rises, and finally attains a steady position differing only very slightly from the true zero. The apparatus employed consists of two portions, the thermostat and the cooler. The former is a copper vessel, filled with either refined petroleum or a strong solution of common salt. The vessel communicates with the cooler, through which the liquid can be pumped by a rotary stirrer, and by this means it can be cooled and maintained for some time at about -2 degrees. The distilled water to be frozen is contained in a glass tube of about 300 c. c. capacity. This is first placed directly into the circulating liquid, and cooled quickly to -0.5 degree or -0.7 degree. It is then transferred to a cylinder lined with polished metal, placed in the center of the thermostat. The thermometer whose zero is to be taken is then quickly fixed in position, the bulb and a considerable length of the stem above zero being immersed in the water. A crystal of ice is dropped in and the temperature quickly rises to the freezing point.

### Cinnamic Acid from StyraX and Benzoic Acid from Benzoin.

StyraX is boiled for some time with an excess of a sodium carbonate solution in a copper or other suitable vessel and to the mixture when cold and without having been filtered, commercial hydrochloric acid is added in such a quantity as to show finally a faint but distinct alkaline reaction. The contents of the vessel are then heated again to the boiling point, filtered, when cold and the residue on the filter washed with water. To the filtrate, concentrated by evaporation, if necessary, is now added a sufficient amount of hydrochloric acid, the precipitate collected on a filter and washed with a small quantity of cold water, after which operations it is dried and extracted with hot rectified benzoin. This solution has, after cooling deposited a considerable amount of cinnamic acid. The benzoin is now poured off the crude acid and the work of extracting repeated as long as it yields acid. In the benzoin separated from the last crystallization there is yet left some acid, wherefore it may be shaken repeatedly with a diluted sodium carbonate solution. Hydrochloric acid precipitates from the latter the acid, which is then brought on a filter washed with cold water and dried. The cinnamic acid obtained at first is very white, later on, the same, particularly that separated from the last sodium carbonate solution, may often be found to be yellowish, in which case it should be treated with benzoin as above.

It is evident that the same process can be used to extract cinnamic acid from certain kinds of benzoin resin and benzoic acid from the common commercial benzoin as also the mixed acids from balsam of tolu.—*Edo Claassen Phar. Review.*

### Attar rose.

A correspondent of the Boston Advertiser after visiting the rose gardens about Paris gives the following interesting facts gathered on the trip:

Gathering the rose crop in southeastern Europe is now in progress. It is estimated that from the middle of May until the middle of July over 750,000 people mostly women and girls, are employed in gathering the roses, and the fact that this flower generally esteemed solely for its beauty, should, by means of its petals, furnish employment and bread to so many people is one of the most singular phenomena of our complicated civilization.

As a commercial product the rose is grown in many parts of the world. Not only in the neighborhood of Paris, but more extensively in the south of France, roses are cultivated for the purpose of manufacturing the attar, and over 30,000,000 pounds of rose leaves are annually collected.

In Algiers and Tunis the rose was formerly grown much more than at present, for the competition of other places has become so severe that the Algerians and Tunisians are now turning their attention to the geranium, which in that mild climate, producing its flower nearly all year, is a more profitable crop.

The Valley of Damascus yields a fine quality of attar, and the vale of Cashmere has for ages been famous not only for its roses, but also for the quality of its product.

In northern and central India rose water and attar are manufactured. At Ghazipur, near Benares, there are miles upon miles of rose gardens, really fields, in which the rose is cultivated for the flowers. In Italy and Sicily rose culture is practiced for the sake of the product, and during the last twenty-five or thirty years the attar, or essence of the rose, has become one of the most important commercial resources of Bulgaria.

There is a district in Roumania over 120 miles long by 40 in width, which, by climate and soil, is singularly well adapted to the production of the rose, and almost the whole of this region is given up to the rose fields.

The rose is known to botanists as the *rosa moschata*, a red rose, and are propagated by layering the shoots, the layers being placed in rows about six feet apart. In three years the plants are in full bearing, and continue at their best for five years longer; when the quality as well as the quantity of the product begins to deteriorate, the plants are rooted up and others set in their stead.

No more charming spectacle is presented in the world than a Roumelian rose field during the picking season. The time of the harvest is known



for 400 or 500 miles in every direction, and whole families migrate from Bosnia, Servia, Northern Bulgaria, Albania and even from Greece, Roumania and Asia Minor to take part in gathering the roses.

The harvest lasts about eight weeks, and during this time any one who can pick roses can find a job in the Southern Balkans.

Every picker is equipped with a basket holding about two bushels, for rose leaves are light, and there is a considerable difference in weight between two bushels of rose leaves and two bushels of potatoes.

When the baskets are full they are emptied into sacks, and as soon as possible these are transported to the houses and there converted into essence. Picking begins at early dawn, when the dew is on the leaves, and is continued until 10 to 11 a. m. or, during cloudy weather, all day long.

When the sun is shining brightly labor is discontinued toward noon, and recommenced at 4 or 5, and then work is carried on as long as the pickers can see. Labor is paid for by the pound.

The factories where the attar of rose is made are primitive, but quite sufficient for all practical purposes. They are mere sheds, sometimes the walls are of brick, more frequently of stone, occasionally of plank.

On one side stand the retorts in rows, copper alembics about three feet in height, with a brick furnace underneath. Each alembic has a capacity of 110 liters, a liter being about a standard quart, but for a charge only 75 liters of water are used and 10 kilos of roses, a kilogram being 2.2 pounds or about 75 quarts of water to 22 pounds of rose leaves.

The process of distillation is carried on for an hour, when the flask which is used to receive the distilled product contains 10 liters of oil and condensed water; it is removed, the alembic is recharged, and the process begun anew, while the flask with the product is set aside; the attar of rose or oil which floats upon the surface is subsequently taken off by cooling and condensation.

Some kinds of roses produce the attar in much greater abundance than others. The product also varying in different countries, and it has been found by experience that the season has much to do with the quantity of attar; a humid spring, with intervals of warm sunshine, causing the petals to yield more liberally than in the case in a dry hot season.

In Bulgaria 3000 kilos of rose leaves produce one kilogram of the attar, and this is the yield of about one hectare, or two and one half acres.

A kilogram of attar is worth from 800 to 1200 francs, say an average of 1000, and thus the Bulgarian realizes about \$100 an acre for his crop, a very fair return for the amount invested and the outlay.

In France the production is about the same, or 3000 lbs. of rose leaves to a pound of attar, and it

is computed that the leaves of 400,000 roses are necessary to produce one ounce of the oil.

In Algeria the roses are much less productive, but in Cashmere and at Ghazipur it is estimated that from 1,500 to 2000 lbs of petals produce one pound of essence. Only the red rose is used for manufacturing the essence; the white or yellow varieties, while fragrant to the nostrils, appearing to lack the essential oil which forms so valuable a product.

The value of the annual yield of the Balkan rose district alone is about \$400,000 worth of attar

### Pharmaceutical Association of Province of Quebec, Election of Officers.

At the first meeting of the council of the Pharmaceutical Association of the Province of Quebec, held July 8, in Montreal, the following officers were duly appointed, R. W. Williams, Three Rivers president, (re-elected) S. Lachance, Montreal 1st vice-president (re-elected,) J. Emile Roy Quebec, 2nd. vice-president, C. J. Covernton, Montreal treasurer (re-elected).

Board of Examiners for major and minor candidates. W. H. Chapman, A. J. Laurence, J. R. Parkin Montreal, R. W. Williams, Three Rivers, A. E. Duberger, Waterloo, J. Emile Roy, Quebec. Preliminary Board of Examiners: Prof Isaac Gammell of the High School Montreal and the Rev. L'Abbé Verreau, Principal of Jacques Cartier Normal School Montreal, with Mr. J. E. Dubé of Quebec as supervisor of examinations for Quebec City and District.

### Pharmaceutical Examinations.

The Preliminary Board of Examiners of the Pharmaceutical Association of the Province of Quebec, held their quarterly Examination in the Montreal College of Pharmacy on Friday July 2nd 1897, when thirty one candidates presented themselves and of these the following were successful and are named in order of merit namely:—T. A. Swift, Miss N. Cutler, L. E. Vadeboncoeur, Samuel Kenedey, F. J. McKenna, F. C. B. Wilson, Howard Frazer, and J. N. Boileau, these are entitled to be registered as certified apprentices. The following candidates passed on all subjects but Geography, for which subject they will be required to present themselves at the October Examination namely: D. Tessier and W. Dubois, the remainder of the applicants were referred back for further study.

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

The Examiners were the Rev. L'Abbe Verreau, Principal of Jacques Cartier Normal School and Prof. Isaac Gammell of the High School Montreal.

The next examination will be held on October 7th.

## PHOTOGRAPHY WITHOUT LIGHT.

### Curious Experiments and Discoveries.

In a recent paper read by Dr. Russell before the Royal Society, he described the results of a series of experiments which to photographers almost rival the discovery of the X-rays. From time to time various experimenters have claimed to obtain photographs by the long exposure of bodies to sensitive photographic surfaces without the action of light. As far as we are aware, however, with the exception of Becquerel's and Colson's, experiments, the precautions taken for the exclusion of extraneous light have not been such as to place these experiments above suspicion. There now seems little doubt that many of the common substances with which we are surrounded have the property of emitting invisible active radiations, which can pass through many bodies that we have been in the habit of regarding as opaque. Becquerel some time ago showed that different compounds of uranium, if allowed to remain on a sensitive photographic plate for some days in the dark, had considerable action on the film, and if the plate was developed in the usual way a photograph of the body was obtained.

Dr. Russell, in repeating Becquerel's has discovered that this particular action is by no means confined to uranium salts, but that many of the metals and other bodies, such as wood, charcoal, copal, straw, etc., possess it in a marked degree.

The radiations from these bodies, however, differ in one very important particular from those given out by the uranium compounds. While the latter readily pass through glass the former are completely stopped by it. Colson, in January last, described the action of Zinc, cadmium, and magnesium on photographic films in the dark. At the time of making his experiments Dr. Russell was not aware of this, and consequently his results are independently confirmed.

Starting with the metals, mercury, zinc, magnesium, cadmium, nickel, aluminium, pewter, fusible metal, lead, bismuth, tin, cobalt, and antimony, he found that all these, after a week's exposure near a sensitive plate in the dark, produced a distinct effect upon the plate, while gold, iron and platinum were without any action, and copper only showed a very slight effect. The action is not in any way due to "contact phenomena," as a polished surface of zinc with a design scratched on it gave a distinct image of the markings when not touching the plate, and even when thin screens of guttapercha or celluloid were interposed between the sensitive plate and the zinc surface. Some metals were then coated with copal varnish to see if this would interfere with the effect. It was found that the image was more rather than less distinct.

In another set of experiments cardboard pill-boxes were used for inclosing certain substances before allowing them to act upon the photographic plate. It was discovered that an empty box

emitted active radiations, giving a most distinct image. This suggested experiments with different cardboards, when it was found that the better qualities were inactive, while the common varieties known as strawboard had considerable action on the plates. Among the other bodies experimented with were green and dry woods, both of which were active. A section from a young larch tree gave an excellent image, showing rings and layer of bark. Charcoal was also found to be active, but lost its activity if heated for several hours in a closed crucible. The results obtained with printer's ink were very interesting. In many cases they produced no action at all, and in other cases they were remarkably active. The ink used by the 'Westminster Gazette' the 'Standard' and 'Daily Graphic,' gave excellent pictures of the printing. The 'Times' showed not quite such good results, while ink of the 'Morning Post' and 'Echo' had no action at all.

What is this mysterious force? Its nature has still to be discovered. Two points seem to have been established. The first is that an increase of the temperature of the body greatly increases its activity; the second, that aqueous vapor in no way assists the action. Bodies which at 0° C. had no action whatever, at 70° C. gave distinct images. It has further been suggested that the chemical action is caused by a finely attenuated vapor given off by the different metals and other bodies. It is far more likely to be due to some hidden form of energy more or less akin to what has been paradoxically but suggestively called—dark light.

### Is the Pharmacist of the future to be a mere storekeeper, or a skilled member of a Profession?

ALFRED B. HUESTED, M. D.

This is a question many thoughtful pharmacists have asked themselves, and some have even queried if the pharmacist of to-day is more than a mere storekeeper.

We are living in an age of change. New truths, inventions, discoveries and methods, make to day as different from yesterday as light from darkness. These changes are more sudden now than in any previous period of the world's history. In everything change tends to disorder and confusion, and a view on the surface gives the impression that disintegration and destruction, rather than growth or development is taking place. There is no better way to understand the present and predict what the future has in store than by a survey of the past. If we compare every profession or business of to-day with what obtained twenty years ago there are very few who cannot see that great changes have taken place in all of them. The doctor, the lawyer, the teacher, the clergy, the merchant, the manufacturer, and even the agriculturist—are they to-day what they have been in the past? Do they practice, do they teach, do they believe, do they

carry on business, do they work to-day as they have it the past? Look at the most common mercantile business, that of supplying food to man, the grocer. Is his place of business, and his method of conducting it, what it was a few years ago? I fancy the merchant of twenty years ago would be almost as much surprised by the store of to-day as was Rip Van Winkle when he awoke from his long sleep.

And as we old timers in the drug business look back at what was, at the quiet, noiseless, inexpensive methods of the past, at the leisure for thought and research, and the certain prospect of success, were we but diligent and honest and compare it with the excitement, hurry and expense and noisy shouting of to-day and the query of this essay arises.

I have said that by looking at the past we can better understand the present and see into the future. In the early history of man, the individual and the nation, was to the fullest extent self-reliant. He held within himself the knowledge and the art by which to satisfy all his necessities. As time passed necessities grew and the means to satisfy them also grew, hence a certain division of knowledge grew; self-reliance decreased and dependence or community of interests increased. Men began to separate into classes, first the teacher and worker only; then the merchant or trader class was formed, and these are the three great classes of to-day, to one of which, or a sub-division, every individual should belong. These three classes of men are equally honorable and mutually dependent. One class cannot be abolished without injury to the remaining. At first one individual represented the class; combination was the order, in teaching, in working and in trading. The teacher has the ruler giving laws; the clergy dictated religion; the doctor the pharmacist advising and supplying medicine for the sick; the laborer could work in any department and the merchant dealt in all kinds of commodities. As time passed sub-divisions of these classes came. The revolution of the minister, the lawyer, the doctor, the pharmacist took place. As the sciences were revolved students and teachers of these became separate and distinct, some pursuing one branch, some another. Labor also became sub-divided. The education of man developed new wants, and the evolution of mechanics and arts furnished a vast variety of employment for the laboring classes. Merchants or traders followed the same course as the other two great classes of men, the educators and the workers, and sub-divided into dealers of single articles, or related lines of merchandise. This sub-division in the teaching or educational class of men has developed to a great, some think to its fullest extent. The regions of the world are numerous, the sects of each more numerous, and the sub-division of the teachers of these sects into evangelical, pastoral, missionary, theological, &c., obtained. The lawyer of to-day instead of practicing in all the departments of law

as a rule confines himself to one—international, constitutional, municipal, civic, criminal, &c. The doctor for a while preaching as well as practicing in time confined himself entirely to the cure of the sick and wounded. The surgeon then separated from the physician, each in turn following many diverging avenues of thought and work, and the specialist is the result.

In the second class into which men are divided, the working or laboring class, this sub-division or evolution has been carried to as great an extent as in the educational. Some countries bring forth one kind of product, some another as experience proves best. Some men develop one new mechanical device, some another, and localities even become renowned for the manufacture of one article or varieties of it.

With the third class of men, the merchant or trader, sub-division has been the rule in the past and is to some extent to-day. No one will deny that a change is in progress and has advanced so far that it is the exception to find the merchant of one product or manufacture; the majority dealing in many and not a few in almost everything needed by civilized man.

We cannot deny that this subdivision in educational pursuits has produced better systems of religion and more devoted and consecrated ministers; better laws for controlling the intercourse of man with man, and more profound expounders of the same, better knowledge of organic life, of the laws governing health and disease, and better doctors to advise and give relief. The agricultural and mechanical world by this same sub-division of work progressed to an almost miraculous extent. The tempting fruits, and beautiful flowers, the wonderful inventions and discoveries, all point to this as the age of progress above and beyond all preceding.

The merchant of today with his avenues of trade extending around the whole earth, his transactions involving vast and almost inconceivable sums, is so far beyond the merchant of the past that the latter is not thought of in the same connection. The educated and artisan classes seemed to have reached their present development by a division of thought and work, but individual thought and work in one direction and unvarying line. No one can deny that this pursuit of one line of thought and research in the educational world and one line of effort in the world, has been the cause above all others for present attainments. The trader or merchant, however, appears to work on the principal that the laws which govern dealing in one article can be applied to others, and the greater the number the more successful and accomplished as a merchant he becomes.

You may ask now, what has all this to do with the query, and I answer it just this. The pharmacist has always been a worker in the three great classes; an educator or teacher in the line of medicinal and chemical research; a manufacturer

in the sale of these products to those in want. The educational and manufacturing sides have in the past been more prominent, while the mercantile followed as matter of course and was in a certain sense of minor importance. The average pharmacist today in this country is more of a merchant and less of a searcher after knowledge and manufacturer than he was. Instead of dealing in medicinal agents only he has included many other lines of goods and is yet reaching out for more. The life of the merchant is not conducive to quiet and undisturbed thought and research. This condition has not arisen because of direct effort, or from lack of efforts on the part of the retail pharmacist, except in so far as he has gone out of his legitimate field and introduced into his stock articles foreign to pharmacy. It may be that in this commerce of articles foreign to the profession can be found the reason for the decline of the professional and increase of the mercantile side of pharmacy. I will not say that the pharmacist is entirely at fault for this condition, but he is to some extent I think no one can deny.

The conclusions to be drawn from the preceding considerations seem to be that educational matters, the professions, the sciences, the arts, agriculture, mechanics, all the work of the first and second classes into which we have separated men are advanced by a division of labor, that is, by individual effort in one line, and that the third or mechanical class has reached its present standing by combination, that is by dealing in numbers of articles, and apparently the greater the number the greater the success.

The student, discoverer, and inventor cannot thrive in the busy haunts of trade. The true pharmacist has to a great extent been driven from the care of pharmacies in public places, to the laboratories of large manufactories, hospitals and schools. The retail pharmacist of today receives from these manufactories the great bulk of his stock in trade, and the prescriptions of physicians call directly in great part for this or that manufacture of goods, or this or that product made only by A. B. or C.

The pharmacist of the future will be what the pharmacist of to day makes of him; (a) merchant or trader, in proportion as he enlarges the variety of commodities in which he deals, or a professional or educated man—in the proportion in which he reduces this variety and endeavors to confine his work to the preparation, care and sales of such agents and work in such lines as are used in the cure of disease, relief of the wounded, and which promote a knowledge of the laws of health.

For bleaching and hardening crude fats of any kind, whether comestible or for candle-making or leather dressing, a new composition has been invented. It consists of a bath made up of 100 pounds of hypochlorite of calcium and 20 pounds of sulphate of magnesium in 1000 pounds of water.

### The Land of Perfumes.

King Carnival asserts his noisy sway to-day all along the Riviera, but I wanted a quiet Sunday. "Go to Grasse," advised a friend of Cannes, "and in forty minutes you will be far from the madding crowd." And if you have nothing to do this Saturday afternoon, come with me and visit one of the perfume factories there."

An hour later, as the little train jogged its way leisurely up the steep twelve miles that separate the two towns, my companion pointed out the favored position of the town, which is the principal centre of the raw perfumery trade of Europe. The mountains in the north protect from the cold winds the sloping land that stretches seaward, and the southern aspect and Mediterranean sunshine make this spot particularly suitable for flower cultivation. We could see numerous plots of jasmine laid out in rows divided by trenches, but now withered; and occasionally violets were visible clustering under the olive groves—they cannot stand the full glare of the sun. But, as a rule, the floral world is conspicuous principally by the absence of its chief ornaments. "Every flower is picked and sold," I was told; "the very wild flowers form projectiles for the 'Battle of Flowers.'"

The town itself is quaint and picturesque, with steep and narrow streets that were evidently planned in medieval days. "We Cannes folk say that the Grasse people export their perfumes, but keep all their evil smells for home consumption," remarked G, as we passed a heap of perfumery factory refuse. Several of these factories in the older part of the town, I noticed, are installed in ancient convents and hospitals; one of the buildings had evidently been a chapel. Around the works clustered a legion of tinsmiths' and coopers' shops, where one heard the busy adze and hammer shaping receptacles for the various goods; while the coppersmiths constructed and repaired large alembics and similar apparatus.

The factory we visited, if not immense, was complete and interesting; our guide was, I understood, the manager of the establishment. It was the violet season now, he told us, and there was a very fair crop this year. The flowers are brought daily to the manufactory by the peasants who have made contracts to supply the firm. Twenty years ago there was little but mule-paths and the blossoms were carried in paniers on donkeys, but excellent roads now exist for wheeled traffic.

The Parma violet is the one used in perfumery, giving as it does the highest percentage of perfume. The flowers, after being carefully picked from the stems, are thrown into a vessel containing pig's lard and a little suet. About four pounds of violet go to one pound of fat. For jonquils, marguerites and cassie the proportion is about the same; but in the case of orange flowers twelve pounds are necessary. After standing an hour or so, the receptacle is placed in a water bath heated

by steam to 60°. The mixture is stirred for about twenty minutes, and then strained through a sieve. The flowers are then wrapped in packets and placed under an hydraulic press; the liquid which is then pressed out runs into the vat, into which a new supply of flowers is thrown, and this process continues till the whole mass is thoroughly impregnated with the odour.

To prepare the "extracts," the pomade produced as above described is mixed with an equal quantity of cold alcohol at 95°, and turned by steam machinery for about three days. The liquid is then drawn off, and the fat sold to soapmakers. To avoid oleine, the alcohol is artificially refrigerated by a freezing machine.

"If you want to see us busy, and also to see the beauty of the flower district, you ought to come in May or June," added the manager. "The whole valley is then one mass of roses. Yes, we grow no dwarf bushes, so as to obtain the maximum of flowers. The yield averages nearly half a pound of roses to the square foot. We use the pink flower known as the 'Rose de Mai' for perfumery. The stalks are cut off and the pistils carefully extracted; we use the petals and the stamens; these latter are especially rich in odor."

And he pointed out the huge copper alembics devoted to the distillation of otto of roses, to produce one pound of which some eight ton of roses are required. This product sells for about £40 or £62 5s. per pound.

"No, I don't think the Bulgarians can touch our quality," he added. "Their otto sells, if I remember rightly, for about half the price of ours."

Neroli is produced in the same way, from orange flowers; it takes about half a ton of these bridal blossoms to produce a kilo of the essence, which is worth about £20. These are the flowers of the Bigarrade orange, largely cultivated in the Riviera. The skin of the same fruit is much used for making "bitters."

Next door was the apparatus for the "cold" process employed for jonquils and jasmine. These flowers are simply spread on sheets of glass thinly coated with grease, and the sheets subsequently placed in wooden frames which, piled one upon another, practically form an air-tight case. The flowers are replaced daily till the fat is thoroughly impregnated. Jasmine and tuberose are sometimes changed ninety times, twenty to twenty-five renewals sufficing for jonquils.

But Grasse does not confine its industry to home products. Patchouli and sandalwood are imported from India. "These bales arrived late, having come from Bombay; they were refused at Marseilles because of the plague, and made the journey to Liverpool and back here," I was told. The plague scare has probably done much harm to French commerce.

There was orris-root, too, which comes from

Florence, but will probably be successfully cultivated in the Vosges or Dijon districts soon, my guide informed me.

The "concentrated extracts" prepared for countries like Russia, where the customs duties are heavy, were then shown to us—they were almost solid. "Ten grammes of this jasmine," said the manager, "will make a litre of 'Triple extract.'"

This terminated our visit, but a few additional facts and figures may be interesting. Besides the factories of Bruno-Court and Chiris (both of which Queen Victoria visited during her season at Grasse in 1891), Roure-Bertrand, Pilar Freres, Sozia, and Andrioli, Muraour, Faye, Belandon, and twenty or thirty other firms whose names I forget, have establishments of more or less importance. The annual value of perfumery exported is calculated at nearly one million pounds. The town also contains large factories for crystallised fruit and olive oil, and soap is made to a certain extent.

"Quite a hive of industry," I said. "But are these people really French, or Italians, like the Nicolas?"

"Grasse was French two hundred years ago," I was informed; "but probably 50 per cent, of the workers are Piedmontese."

"What do they earn?"

"Not much. The tinsmiths, etc., may make 75 cts a day; but in the factories 50 cts per diem for the men and 25 cts or so for the women is about the average. They make overtime in busy season."

"And how do they live?"

"Frugally and carefully; half of them put a trifle in the savings bank annually. A family lives in a single room at 25 cts a week rent; meat is a luxury for Sundays."

"This low pay," I remarked, "enables Grasse to hold her own."

"Yes," said G—. "I may add they are hard workers and keen business men. Historians pretend there is Phœnician, Greek, and Jew in their veins. The town is prosperous, and the wealthy manufacturers want no tourists to spoil their people; building land is scarce and attractions few. Catharine de Medici sent a Florentine to open a perfume laboratory at Grasse centuries ago, and it is quite possible the trade may stay for centuries yet."—"Ph. Era."

### The Rapid Estimation of Uric Acid in Urine.

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The estimation of uric acid presents well recognized difficulties, and the results obtained by any of the known methods are always

open to criticism on the side of accuracy. While we admit this fact, it must also be admitted that the object for which the estimation of uric acid in urine is usually undertaken, does not require extreme accuracy. For diagnostic purposes, slight errors may usually be disregarded. Another factor often regarded by both the person afflicted and the physician, as of great importance, is the time and trouble and hence the expense to be incurred in making a correct diagnosis. The methods now in vogue for the estimation of uric acid, are so time-consuming that only the chemist with a well appointed laboratory can undertake them. This fact has prevented the mass of physicians from having such estimations made, and has deprived many an unfortunate sick one of the benefits to be derived from a scientific diagnosis of his ailments.

One of the oldest methods depends upon the fact that the acid is almost insoluble in water acidulated with hydrochloric acid. The acid is set free by hydrochloric acid and after 48 hours it is collected on a filter, dried at 100°C., and weighed. This method has been shown to be very unreliable, as a very considerable amount of uric acid may remain in solution. The usual processes are, as a rule, complicated and the results are not in all cases reliable.

I have devised a process of direct titration, which I believe corrects most of the errors of previous processes. The method is based upon the complete precipitation of uric acid from the urine by silver nitrate, in the presence of an excess of magnesia mixture and ammonia, and the detection of the end reaction by potassium, sodium, or ammonium sulphhydrate. The titration is performed in a hot solution, to prevent the precipitation of the xanthin bases by silver nitrate.

The process is conducted as follows:—To 50 C.C. of the clear urine, add 5 C.C. of the magnesium mixture, and about 10 C.C. of ammonium hydroxide (Sp. Gr. 0.960) enough to give a decided excess. Warm the solution on a water bath, and add from a burette a one fiftieth normal solution of silver nitrate. From time to time a drop is removed from the solution by means of a dropper pipette, with a bit of absorbent cotton wound tightly over the end, so as to make an efficient filter, and after removing the cotton filter, bring it in contact with a drop of the weak sodium Hydrogen sulphide solution on a white surface. Experiments with pure water, showed that it required 5 C.C. of the silver solution in 50 C.C., or 1 C.C. in 100 C.C., to give a marked reaction. This amount must therefore be deducted from the reading. The titration is continued until a dark ring or cloud is seen at line of contact

of the two drops, showing the presence of silver in the solution. Each C.C. of silver solution corresponds to 0.00336 grams of uric acid, and the number of C.C. used (less 0.5 for each 50 C.C. of urine) multiplied by this factor, gives the number of milligrams of uric acid in the urine taken. From this we may calculate the amount excreted in 24 hours, the only figure of clinical value.

As soon as the process is complete, the precipitate rapidly settles, and it is best to draw off a drop or two from this clear supernatant liquid, and test it carefully again. We may also check our work by running in another drop of silver solution, to see if it produces a cloud, or to see if the precipitation be complete. As there is no excess of silver in the hot liquid, at any time, there can be no reduction of silver.

If, after the titration is complete, the solution be cooled, it will usually be found that it will require from 1 to 3 C.C. of the silver solution to again produce the end reaction, because of the precipitation of the xanthin bases by the silver, in a cold solution.

This amount is usually greater in concentrated and fever urines, than in normal urines. I have found that the xanthin bases are but slightly, if at all, precipitated by silver nitrate from hot urine.

Baginski found normal urine to contain about 2.7 to 3 mgrms. of xanthin bodies in 100 CC. of urine,

I found, by a series of trials, that the titration of a hot urine gave the same result, as the same urine after the removal of the precipitate produced by hydrochloric and phosphotungstic acids, and filtered while hot. In the cold solution a part of the uric acid is also thrown down, but this is soluble in hot water, as I have also proved, by trials with solutions of pure uric acid.

I have found that the difference between the hot and cold titration in normal urines, to be usually about 1 C.C. in 50 C.C., but in abnormal urines it has been as high as 3 C.C. If we accept the formula of the silver-xanthin precipitate, as  $\text{Ag}_2\text{O}, \text{C}, \text{H}, \text{N}, \text{O}_2$ , the factor for the one fiftieth normal silver nitrate will be 0.0015 gram. This would give for 100 C.C.,  $2 \times 0.0015 = 0.003$  grams, for the average amount of xanthin bodies, calculated as xanthin. This agrees with the results found by Baginski. In febrile urines, and in concentrated urines the amount of these bodies is greater.

On one occasion, a specimen of morning urine passed by a healthy man, after an unusually hearty meal accompanied by some champagne, and followed by a night without sleep and with hard work, that the difference between the hot and cold titration was 3 C.C.

in 50 C. C. of urine, instead of 1 C. C. as on the preceding day. We have here, then, a method that gives important information outside of the quantity of uric acid. I have not had time to investigate how completely we can separate uric acid from the xanthin bases, by this process, but the results seem to point to it as a valuable clinical method, for their quantitative estimation.

It has the advantage over all other methods with which I am acquainted, in that it avoids the necessity of any filtrations, and is a direct titration instead of an indirect one. It is simple and gives good results when applied to solutions of pure uric acid. A solution of pure dry uric acid was made, with the assistance of sodium phosphate and just enough sodium hydroxide to make the solution clear, and containing one gram to the liter. 50 C. C. of this solution, containing 0.050 gram, uric acid required 15 to 15.5 as the result of a number of titrations. As it took 0.5 C. C. of the silver solution to give the reaction in 50 C. C. of water, we have, after deducting this amount, 14.5 and 15 as the limits of test. This gives 0.04872 to 0.0504 as the variations in the results obtained. These results were repeated on three separate solutions. The process was then tried as follows: 50 C. C. of urine was measured out and titrated, cold, to the appearance of the end reaction. 50 C. C. of the above solution of uric acid was then added, and titration continued. It required 16 C. C. of the silver solution. Deducting 1 C. C. from the result, we have 15 C. C. as the corrected reading, which agrees with the reading with the pure uric acid solution. It seems, therefore, that it is possible to estimate by this method with reasonable accuracy, uric acid in watery solutions, and to obtain good results in estimating the acid in urine to which it has been added.

The relation of uric acid to urea is generally regarded as an important guide in the determination of a normal or abnormal excretion of uric acid, and is believed by many to be more important than a statement of the actual amount of uric acid eliminated.

This ratio is variously stated as from 1 to 33 to 1 to 60. The ratio varies with the method used for the estimation of uric acid.

In the above three urines, the ratio was as follows.

No. 1.....	1 to 34.4
No. 2.....	1 to 34.8
No. 3.....	1 to 48.5

The tests so far made indicate that it is a valuable clinical method.

It is also valuable as a rapid and approximately accurate method of estimating the unoxidised xanthin bases, which have an import-

ant clinical bearing, when present in the urine in excess.

In conclusion I would call attention to the fact that the results by this process are more apt to be higher than the truth, than lower, on account of the difficulty of seeing the first appearance of the dark cloud in the test. It will therefore, be best in individual cases, for the observer to make a test of the process with a solution containing a known amount of uric acid, as a guide to the appearance of the reaction. With a little practice, the end reaction can be determined with accuracy.

### Report of the Committee on Pharmacy and Queries of the New York State Pharmaceutical Association, Manhattan Beach Meeting, July 13, 14, 15 and 16, 1897.

*To the President and Members:*

A retrospect of the pharmacy of the year, taken with a view of bringing out prominently the more notable achievements of workers in the fields of pharmacy, chemistry, materia medica and allied sciences brings out one striking feature and that is the debt which medicine owes to the researches of the biological chemist. The advancement of our knowledge of the bacteria of disease made possible by the investigations of such renowned chemists as Pasteur, Behring, Kitasato, Koch and others of the French and German schools, has almost revolutionized the system of medical therapeutics, and a complete change of ideas in regard to the treatment of diseases caused by the development of germ life and their chemical poisons in the individual has ensued. The use of Antitoxin has continued to find favor with physicians in all parts of the world, and as what may be termed the starting point for the serum treatment of disease, marks an epoch in the history of medicine. The untimely announcement by the German scientists of a specific for the cure of tuberculosis proved a temporary setback for the theory, but a more recent study of the leading idea has served to convince many of the most active opponents of serum therapy that there is a probability of the eventual alleviation of tuberculosis, a disease which is credited with one seventh of the total mortality of the race. Gaining wisdom from the criticism which followed the untimely announcement of the discovery of an antituberculous serum by a new mechanical process has resulted in the discovery of a new serum, called like the previous fluid tuberculin, which gives promise of considerable value in the treatment of tuberculosis, lupus and diseases of a similar character which owe their development to bacterial life.

Other serums discovered during the year, which have been used with success in the treatment of the diseases for which they were produced are Marmoreck's Anti-streptococcus serum which is now being used to some extent and with success against the poisons of septicaemia and erysipelas. The treatment of lockjaw which has hitherto proved one of the most difficult problems confronting the physician has been rendered easy by the discovery by Prof. Behring of a new tetanus antitoxine which has already yielded splendid results in the lowering of the mortality from this disease. Many other serums have been announced but clinical results have not been in all instances obtainable.

In thus recording their new and constantly increasing uses of animal serums your Committee wishes simply to indicate the modern trend of medicine and no more.

The use of an extract of the thyroid gland in the treatment of certain intractable diseases has led to research looking to the chemical composition of the thyroid gland and a principle has been isolated to which the name thyrodoin has been given. The substance is obtained by prolonged boiling of the gland with about four times its weight of dilute sulphuric acid (1:10) then allowing the resulting liquid to stand, collecting the flocculent precipitate thus deposited and extracting the active principal from the latter by alcohol.

A thyreo antitoxin has also been isolated from the thyroid gland which is believed to be the active principle and of definite chemical composition.

The use of extracts of the actual substance of other glands of the body has been noticed to some extent but not with the same degree of success as has marked the use of the thyroid and this branch of pharmacology, if such it may be called, is now destined to play a very important role in the future.

The recent action of the New York State Board of Regents by which Colleges of Pharmacy are to be prohibited from matriculating students except those having definite and high grade preliminary education and by which no degrees may be conferred except after a three years course in pharmacy with actual attendance upon the college exercises, marks a decisive and sweeping effort to advance the standard of pharmacy to a high grade in this State. The Board of Regents have decreed that after the year 1901 no degree whatsoever shall be conferred upon any one except after a four years course of study, and it prohibits absolutely the conferring of honorary degrees. The probable effect of these regulations will be to lessen the attendance upon colleges and to force students before a board of pharmacy instead of inducing them to take up a college

course. That this will work great hardship upon pharmacists and seriously handicap pharmaceutical progress if enforced must be manifest to every careful observer. It is hoped that the Board of Regents will see their way clear to reconsider this matter and be guided more in their deliberations by the experience of the members of this Association.

A subject which caused some discussion at the recent meeting of the American Medical Association, Philadelphia to whose committee on materia medica and therapeutics it was referred by a similar committee of the American Pharmaceutical Association was the proposition to expunge from the U. S. pharmacopoeia fermented and distilled liquors such as whiskey brandy and wines. Doctor N. S. Davis of Chicago advocates their deletion because of their wide variations in strength and quality that exist in wine, whiskey and brandy according to when and where they are bought. He argues that the Pharmacopoeia can only fix the vaguest kind of a standard for the strength and quality of these liquors because they are not made by pharmacists connected with pharmacy who would likely be guided by pharmacopoeial considerations. No two samples of wine are ever alike, no two samples of whiskey agree in strength and no two samples of brandy contain the same amount of alcohol. He insists therefore that it is better to order alcohol direct and be aware of the strength of the article used; that the scientific prescription is a dilution of the article used; that the omission of the palatable aroma would be less likely to create the liquor habit. In argument for the use of the substance which produces the definite effect required, he says if the effects of morphine pure and simple are required it is not customary to prescribe opium, nor is nuxvomica ordered when the peculiar and recorded effects of strychnine are required. Hence why should it be necessary to associate with alcohol fusel oil or any of the compound ethers, etc., that give the characteristic flavor to alcoholic beverages in order to secure the medicinal effects known to follow the administration of pure alcohol. Economy and scientific accuracy truly favor the reform as has been said and sentiment and habit are about all there is to claim for the retention of these articles of the Pharmacopoeia.

The committee on pharmacy and queries of the New York State Pharmaceutical Association desires to record its approval of the reform advocated by Dr. Davis and would like to see the support of the Association pledged to the movement.

Another question which has attracted attention and aroused discussion is the proposition to introduce into the Pharmacopoeia proprietary articles whose process of manufacture



is patented. Although this proposition has met with considerable opposition it is possible that some coal tar and similar products which are of known composition the process of manufacture of which is patented might be advantageously introduced.

The question of some sort of insurance by the association, of its members is worthy of consideration and would be an additional inducement to membership and constant evidence of the practical benefit of membership in the Association.

The literature of pharmacy has been enriched during the year by several notable contributions. Dr. Albert Schnieder who has succeeded to the chair of botany and pharmacognosy in the Northwestern University School of Pharmacy made vacant by the elevation of Prof Kraemer to the post in the Philadelphia College of Pharmacy formerly held by Maisch and Bastin, is the author of a valuable series of papers on the micrography of certain vegetable drugs, notably senna, eucalyptus and ipecac; and a very instructive series of articles on the use of the microscope in the detection of the adulterants of vegetable drugs has recently been concluded in the columns of the *American Druggist and Pharmaceutical Record*.

Prof. J. H. Beal's work looking to a codification of the existing pharmacy laws with a view of framing one general law for the entire country has been embodied in a series of papers presented to the committee on legislation of the American Pharmaceutical Association. The labor involved in the collection of statistics and other material for its work must have been enormous and the results as so far announced display a remarkable amount of research. We desire to commend the work of Professor Beal as something most deserving of praise, not less for the disinterested manner in which it has been undertaken as for the practical benefits which are sure to ensue to pharmacy when his ideas can be carried into effect.

#### ENGLISH PHARMACEUTICAL NOTES.

(By our London Correspondent.)

Since its inception the Salt Union of Cheshire cannot be described as a great success. It has no doubt prevented undue competition by reason of all the principal manufacturers having been absorbed into the Union. But for some unexplained reason, although the price of salt has not been materially advanced, yet its consumption has decreased. So the Union has been on the look out for a development that would utilise its surplus labor and stagnant works. And they have hit upon the fortune-producing soap, as the article that is to restore the Union and bring grist to the mill. At first sight the relation of salt to soap appears

only alliterative, but it must be remembered that the Salt Union is a big customer to the Alkali Union and that either they will make their own alkali—an important item in soap-boiling operations—or will be able to make good arrangements for its successful purchase. The rest is pretty easy as the demand for cheap grades of soap is apparently inexhaustible. At one time highly colored and grossly sophisticated specimens of soap came largely from Germany, but the British maker can now more than hold his own although he is conservative to a degree and frequently does not appreciate the value of picturesque packing or elegant wrapping of toilet soaps, of course I, do not refer to the leading houses, such as Pears', Cleaver's, Vinolia, etc., but to soap-boilers who have pushed their trade as far as retail chemists. Their sole idea of perfume in soap is often based upon oil of mirbane, although the striking success of Pears' unscented soap and the delicacy of perfume in Vinolia soap should give them newer impressions. The new synthetic perfumes are admirably adapted for high class toilet soap when suitably blended. But soap makers are often not sufficiently enlightened to keep a chemist, so they purchase inferior oils because of their cheapness and fail to attract the public with a superior article. Surely if it pays a firm of jam makers in the city of London to keep a chemist—who is a pharmacist by the way—there would be plenty remunerative scope in the soap makers laboratory.

An interesting proof of the different laws that pertain to different parts of the United Kingdom is shown by the recent scheduling of carbolic acid as a poison in Ireland, although in England the Privy Council have frequently refused to sanction a proceeding recommended unanimously by the medical profession and any number of coroners' juries. It is another "injustice" to the green island that its inhabitants should be more carefully protected from the suicide's fate or sad accident by legislation, whereas the same protection is denied to Englishmen?

"My Lords" of the Privy Council have also shown their authority by suggesting amendments in the new by-laws of the Pharmaceutical Society, making the date for the proposed alteration in the first examination an increase in fees September, 1900, instead of January. Those who have been carping at the council of the society for demanding a higher fee have only a nine months delay to congratulate themselves upon, whereas the principle of the suggested alteration is evidently accepted by the Privy Council. For this small mercy we are inclined to be devoutly thankful. One does not quite see that the suggested alteration is of much importance, but it really means that three years notice is thus given to everybody connected with the trade. The early examinations in 1900 will be tremendously crowded, one may safely prophecy, if only to escape the additional fees.

It has occurred to me that some description of country pharmacies may not prove uninteresting. The London West End dispensing houses and leading pharmacists are always getting noticed and Canadian readers may think that the provincial chemists are happy, like the country that has no history, in not attracting the attention of the journalist. After seeing the Naval Review I crossed over to the Isle of Wight recently to spend a few days at one of the quiet sea-side towns that the island is proud of. It is a curious fact that whilst the ever cheapening rates for tourists have opened up Continental countries to the wandering Britishers, the Isle of Wight effectively keeps many away by its exorbitant railways. They have a simple practice of charging only second-class fares and at the rate of about 50 cents a mile. It is not surprising therefore to find the pharmacies present a most rural appearance and that "cutting" is almost unknown. In one little town, the chemists shop is also a post-office and has therefore earned the *soubriquet* of *pill-ar* box. Dispensing is not a big function except at Ventnor, where a large number of invalids congregate especially in the winter to enjoy its solubrious climate, has had enterprise enough to manufacture mineral water, and the soda fountain is unknown and even lemon-squash not regarded with favor. A good show is made of preparations like glycerine and cucumber cream for the complexion, soaps figure largely in the stock, but the main business is evidently in retailing of those simple medicines, such as rhubarb pill, effervescent saline, etc., with which the British public and even holiday visitors consider it necessary to dose themselves.

Photographic sundries and chemicals have been taken boldly in hand, as the island is noted for its beautiful scenery and splendid atmosphere, so that amateur photographers abound. None of the heavy trade that is customary in many provincial pharmacies is found here; paints, oils, etc., are left severely alone. The medical men do not write prescriptions, except in the larger towns like Newport, Cowes and Ventnor, but dispense their own medicines. There is very little counter-prescribing and generally speaking pharmacy jogs along quietly making no show or fuss, but providing a modest competency without much exertion or real hard work for those who have established connections. To a large extent one must feel cut-off from his fellows in the island whilst the train facilities are so poor and expensive; but compensating advantage, so the natives say, is that undesirable trappers are kept out and only the better class of visitors arrive. And they come year after year to the same spot from all parts of England and even Scotland. In spite of the island's beauty and the generally satisfactory state of trade, I am unable to recommend it as a suitable spot for the enterprising Canadian pharmacist, who should desire to practise in England, when reciprocity becomes established.

The markets are getting firmer after the dullness produced by the "Diamond Jubilee. There was distinctly a better tone at the last auctions. Quinine is recovering and opium is firmer. Camphor has been reduced, Santonine is also cheaper Orris Root easier. The acids are generally dearer and essential oils are appreciating slightly.

### Dangerous Flowers.

Modern science is above all things pessimistic. Last week I had to record the fact that a scientific correspondent of a popular paper had discovered pestilence and sudden death in the harmless necessary tablet of soap, the week before I had to draw attention to Dr. Murrel's wholesale condemnation of toilet powder, while if I recollect aright, the preceding week I pointed out that the ladies' newspapers had started a crusade against smelling bottles. During the current week the very stronghold sanctum of the chemists' art is invaded, and in two columns of a leading evening oracle a correspondent declares that half the ills of poor humanity in this decadent era are attributable to the use of perfumes and the scent of flowers. It is true that he directs his attention more especially to the flower, rather than its distilled essence, but he takes care to point out that even the "sweet meadow fragrance cased in walls of glass" is deadly, or at least, pernicious. Buttercups, he declares are powerful, irritant poisons. The classic celandine, Wordsworth's favorite flower, would appear to be above suspicion, yet says the ruthless alarmist, "it is poisonous." The wood anemone, the ideal flower of fairy beauty and innocence, is as deadly as the monkshood. Who would think the nodding daffodils sung by Shakespeare, Herrick, and Wordsworth should ever inspire fear, and be dubbed with the dreader title of "poisoners." Yet so it is. "There is poison in the daffodils," says the apostle of poison; "even their odor in a small room produces intense headache." Children have been seriously affected by taking a single daffodil blossom into the mouth for an instant, while even adults have succumbed after absent-mindedly chewing a few petals "of those nodding lovelinesses of green and gold which wreath the blustering brow of March with promise of the coming spring." Not even the lily is harmless, for we are told that notwithstanding its odour and aspect, each of equal purity, it must, regretfully, be pronounced poisonous, which makes it fortunate for *Punch's* æsthete in the "Patience" days that he only intended to lunch on a lily metaphorically.

But we have even a more remarkable instance of peril lurking under the aspect of innocence in the snowdrop. Even the fair herald of Spring is poisonous. So also are the jonquil, the hyacinth and the narcissus and many others which I have not space to refer to.

What a terrible indictment. All the friends of our youth—the buttercup, celandine, anemone,

daffodil, narcissus, jonquil, lily, snowdrop and hyacinth stand arraigned at the bar of the Supreme Court of Medical Science charged with the hated title "Poisoner." Can anyone accept a brief in their defence or must we hereafter read our Shakespeare in sickly scientific paraphrase and believe that there is

"Sickness in stones, bacteria in the running brooks ;  
Poisons in flowers, and death in everything" ?  
ATRAPERNA, in B. & C. D.

### Soda Water Hints.

Use thin glass.  
Good advertising pays.  
Shaved ice makes soda taste flat.  
Have soda straws always at hand.  
It's quality that counts, not quantity.  
Wash syrup cans thoroughly before refilling.  
Neat service is as important as good soda.  
Ladies and children like plenty of syrup and cream.  
Fresh flowers on the counter every day are very attractive.  
Introduce new syrups frequently. It stimulates interest.  
To be successful you must please both the eye and the palate.  
Your soda counter is an advertisement for your drug business.  
Use only the best supplies ; cheap ones don't pay at any price.  
Don't mix fresh cream with that left over from the day before.  
Wash egg, milk or cream tumblers in salt water first, then rinse.  
Be sure that the soda is well mixed with the syrup in the glass.  
Wash out interior of apparatus thoroughly at least once a week.  
Always scald the cream bottle and ice-cream freezer before refilling.  
The public believe that good soda means good drugs and vice versa.  
Throw away the first three glasses drawn every morning. They don't taste good.  
Make the customer cool at the soda counter and she will come again. That is where a mechanical fan pays.

### Prescriber vs. Dispenser.

JOHN F. HOWARD.

Medicine and pharmacy are so dependent upon each other that they should go hand in hand, and should not allow minor differences to alienate them from each other.

Let us consider, then, in the first place, who should prescribe medicine? Upon this point

there can be no two opinions. The physician, by his knowledge of anatomy, physiology, pathology and other branches of medical science in which he has been educated, is the only competent person to diagnose disease and to prescribe treatment. But is he the only one who does prescribe? By no means. Many people prescribe for themselves, and if they are told the same truth concerning medicines that has become proverbial as applied to law, namely, that he who is his own doctor has a fool for his patient, they are apt to become indignant and reply that they know what they are about. There is another large class of persons who take pleasure in prescribing for their friends, and these persons again cannot be made to believe that, so far as the case in hand is concerned, they do not know more than all the doctors. The evils of such prescribing as this cannot be reached by codes of ethics or by any measure of reform instituted by physicians and pharmacists.

But there is a certain amount of prescribing done in drug stores by men who lay no claim to medical instruction, and whose practise in this regard cannot be defended. Reputable pharmacists, as well as physicians, are anxious to see this irregular practise abated, as it is an infringement upon the province of physicians, and therefore unfair, and also has the effect of lowering pharmacy in the esteem of the public as well as of physicians. In what way can this counter-prescribing be lessened? I suggest, in the first place, that it cannot be checked by abuse or by retaliation, but rather by cultivating more cordial relations between the two professions, and by a certain degree of concession of both sides. It is to be borne in mind that any retaliatory measures adopted by physicians in this matter will effect the reputable pharmacists who are not doing the counter-prescribing, while those who are transgressing will not be affected thereby.

It is not to be forgotten in a discussion of this question that some physicians are inordinately sensitive on this subject, so they would prohibit the dispensing of almost all drugs and medicines that are not ordered by physicians. Whatever our views of this case may be, whether we like it or dislike it, the fact cannot be denied that the American people will not submit to such stringent regulations. You cannot compel an American citizen to employ an architect when he wants to build a dog kennel. In regard to the use of drugs and medicines, they feel themselves free to consult a physician or not, according to their own judgment, and cannot be driven into it by the combined efforts of all the doctors and druggists in the country. Again, those who have had much experience behind

the counter in a drug store will bear me witness that even when there is the most conscientious and scrupulous regard for the rights of physicians and the most painstaking adherence to medical ethics, it is still impossible to answer many of the questions that are daily put to the druggist in regard to the nature, property and doses of medicines without appearing to suggest the use of certain ones in specified cases. Not only is the druggist consulted in regard to disinfectants, anti-epileptics and many other hygienic and remedial agencies, but his opinion is frequently asked in regard to the nature, use and doses of drugs, the best method and time of administration, etc. A refusal on his part to give the desired information would be attributed by the majority to ignorance and by the remainder to boorishness. As a business man, he cannot afford to allow his patrons to leave his store with any such misapprehension concerning himself or his establishment. Furthermore, there are a few slight ailments which the public absolutely expect a druggist to prescribe for, which do not partake of the nature of medical treatment, since the patient diagnoses his own case, such, for instance, as a morning headache, slight bruises or trifling injuries; in fact, any such ailments as people are in the habit of prescribing for themselves. The druggist, when requested, is expected as a matter of course to suggest a remedy, and there is no more thought of medical treatment than when a barkeeper mixes a "pick-me-up" or a shoe dealer selects for you a shoe that will not hurt your corns. When physicians interpret ethical relations so rigidly as to prohibit druggists from performing these trifling courtesies for their customers they widen the breach between the two professions, having no experimental knowledge of the injury the pharmacist does himself if he declines to render his service.

If we now ask the question, "Who shall dispense medicines?" the answer is no less positive than that given to our first query. The pharmacist is the proper dispenser of medicaments. This statement will bear no more qualifications than my previous assertion that the physician is the proper person to prescribe. And yet there are circumstances in which physicians may dispense medicine with advantage to themselves and their patients. Common sense again puts in a plea and prevents a too rigid application of the general custom of separating prescribing from dispensing. It is necessary for the doctor in some cases to secure immediate relief for the sufferer, and so the pocketcase and hypodermic syringes are his constant companions, more frequently used than the surgical instrument.

The greatest stickler for the keeping apart of medicine and pharmacy cannot raise any valid objection to a physician having in his office or in his residence a few remedies for emergencies. Other cases will suggest themselves to the mind of those present where physicians may advantageously dispense remedies for temporary use. But these exceptions to the general rule do not constitute an argument for the abrogation of the rule itself.

The drift of the times in all professions and businesses is towards specialism. Particularly is this the case in the practice of medicine, in which we have almost every organ of the body a subject of special study, and every class of disease treated by specialists. If the study of medicine is so large, so vast, so difficult so comprehensive, that no man can accomplish it at all, why should the physician seek to add to his already over-burdened curriculum a knowledge of pharmacy.

The sciences upon which pharmacy is dependent are advancing with strides no less marked than those of medicine. Pharmaceutic manipulations and processes are continually being improved, and these improvements are largely dependent on a better knowledge of organic chemistry and of the constitution of drugs. Busy pharmacists ever find it difficult to keep pace with the times both in these branches of knowledge and in the improved methods of administration; how, then, shall a physician, already overburdened with his practice, keep himself up in these studies?

Strictly speaking, then, physicians are the only ones who should prescribe. Any deviation from this rule, such as I have hinted at, would only apply to trivial, common, everyday experiences, and the pharmacist should always use his influence as far as he can, not only to avoid prescribing himself, but to dissuade his customers from doing the same. He should seek to check the pernicious habit many persons have of repeating their own prescriptions ad infinitum, and particularly of allowing these same prescriptions to be repeated for the benefit of other people, "friends of the family," and so on. A great injury is often done to physicians by this practice, and it must be admitted that where the medicine is not of a dangerous character, such as preparations of cocaine, morphine, chloral, etc., druggists are not as careful to prevent repetition as they ought to be in justice to the doctors. Only by a more friendly relation between them can this habit be checked.

But while holding that physicians should do the prescribing and pharmacists the dispensing, I would call your attention to the fact that much of the prescription-making and compounding is done by a class of persons who are enemies of both physicians and pharma-

cists. I refer to the large army, which is daily increasing, of proprietors of pharmaceutical specialties. This class of persons are not owners of corner drug stores or physicians in legitimate practice, but wealthy corporations and private individuals who trade upon the weakness of humanity. Able to command unlimited capital, they hire physicians to bring other doctors within range. Their immense wealth and patronage enables them to subsidize medical journals, if indeed they do not own them outright, and by the power of money and plausible presentations and representations enlist a large portion of the medical fraternity in their service. Praying upon the ignorance of some, the indolence or recklessness of others, they have succeeded in bringing the practice of medicine to such a pass that the modern druggist's prescription file is a curiosity, owing to the large percentage of orders for special preparations, many of them of unknown composition, most of them made by unknown processes. If these preparations were any better than those made by the intelligent pharmacist, surpassing the latter either in purity or elegance, there would be some reason why physicians should so commonly prescribe them; but as a class the articles I refer to are in no way superior to similar preparations made by reputable pharmacists. There is some slight excuse for their prescribing by name certain polypharmic remedies, because the trouble of writing out a long formula is of some consequence to a busy man, but the days of polypharmacy are passing away and many of the prescriptions for special preparations call for one article only. A lazy prescriber is a good subject for the medical drummer, but the latter has a better friend in the ignorant one, who is content to let the manufacturer of pharmaceutical specialties do his prescribing for him. This class of men, with one stroke of the pen, write a prescription, copying the directions from the printed circulars with which they are so abundantly supplied. Medical men generally are fully aware that this class of prescribing is injurious to the druggist, whose profit on such prescriptions is so larger than the dry goods men's profit on dress goods, notwithstanding the responsibility the druggist has to bear, arising from the powerful nature of some of these medicines.

I do not wish to be understood as objecting to a physician's specifying the name of the maker of a few articles that are of superior quality to those usually made by good pharmacists, nor to such as by their greater attractiveness in appearance, taste, etc., make them more acceptable to the patient. It is the province of the pharmacist to aid the physician to overcome the repugnance many persons have

to nauseous doses and nasty local applications by preparing medicaments so as to be as agreeable as possible, without sacrifice of effectiveness. I am objecting to secret or semi-secret preparations with copyrighted names, and to the thousand and one ready-made elixirs, syrups, solutions, etc., most of which are no better than those made by any good pharmacist. Physicians are not generally aware of the injury they do themselves by sending out such prescriptions. Any druggist who will be candid enough to admit the whole truth will bear me witness that a large portion of more intelligent customers soon find out that their prescriptions in such cases call for a ready-made compound, the name of which they find some means of ascertaining. Should the medicine prove beneficial, they not only take it themselves on future occasions when similarly affected, but recommend it to their friends. Soon these specialties, which are practically patent medicines, secure a large sale, chiefly through the influence of physicians who were the first to introduce them favorably to the public. When this has been accomplished, the proprietors usually cease catering for the patronage of physicians exclusively, and advertise their wares indiscriminately like any other quack medicines. Thus, in one way or another, such preparations as Scott's Emulsion, Fellows' Syrup, Bromo-caffeine, Listerine, Bromidia and many other compounds, some of them harmless and some dangerous, have passed out of the hands of physicians and are bought by persons who use them without medical advice. These are not poor people, but mostly of the well-to-do class, who are able to pay the doctor's bill, and who, when sick, do not think of asking a druggist for advice.

Now, where is the necessity for a physician prescribing such compounds? Does he not know enough of *materia medica* and therapeutics, of the properties and doses of medicines to select his own remedies? Of what avail is all his instruction in these branches of medical education if, when he engages in practice, he lets the patent medicine manufacturer or the manufacturing pharmacist do his prescribing for him? And of what use to the pharmacist is his education in *materia medica*, chemistry and pharmacy if he has nothing to do when putting up a prescription but to count out a few ready-made pills or hand out a bottle of ready-made elixir.

The professions of medicine and pharmacy are both suffering from the inroads that are being made upon them. The young practitioner is shut out from practising among the poor, by dispensaries and clinics that are now doctoring millions of patients every year, who have no right to claim service of this kind. He cannot get practice among the rich because

he is unknown; the wealthy preferring to employ eminent physicians, for whose service they are well able to pay. So the young medical graduate waits and waits, often eking out a precarious existence "living as a gentleman on forty pounds a year." The pharmacist's legitimate occupation is already invaded by the substitution of ready made pharmaceuticals of every kind, by the free dispensaries and clinics, as well as by the fraternal societies which furnish medical attendance for a song and medicines at cost. Let physicians be careful about prescribing pharmaceutical specialties; let them frown upon the unprofessional puffing which these preparations receive in the medical journals. Let us see that dispensaries and clinics are not abused, to the despair of the young practitioner and the grievous injury of the drug trade. On the other hand, let pharmacists be more cautious to avoid exercising the functions of physicians by declining to give advice when asked for it, except for most trivial matters.

**A PLEASANT LAXATIVE.**

Oil of cinnamon.....	2 minims.
Oil of coriander.....	2 minims.
Oil of caraway.....	2 minims.
Oil of fennel.....	2 minims.
Oil of orange.....	10 minims.
Oil of anise.....	10 minims.
Tincture of ginger.....	½ fluidounce.
Tincture of podophyllum...	½ fluidounce.
Water.....	2½ fluidounce.
Fluid extract of senna.....	12 fluidounce.
Tartaric acid.....	1 ounce.

Dissolve the oils in the tincture of ginger, add tincture of podophyllum, then the fluid extract of senna, and shake well. Finally add the tartaric acid dissolved in the water. Shake frequently for three or four days, allow to stand for one week, and filter. The filtrate should measure one pint; to this add sufficient simple syrup to make four pints. *Klie.*

Rhubarb.....	1 ounce.
Alexandria senna.....	1 ounce.
Pumpkin seed.....	½ ounce.
Anise seed.....	½ ounce.
Wormseed.....	½ ounce.
Coriander seed.....	½ ounce.
Hydrastis.....	½ ounce.
Potassium bicarbonate.....	1 ounce.
Sugar.....	32 ounces.
Oil of peppermint.....	10 minims.

Glycerin, alcohol, water, and treacle, of each a sufficient quantity.

Reduce the drugs to a No. 40 powder; mois-

ten with a menstruum of glycerin one part, alcohol two parts, and water three parts; macerate forty-eight hours; pack firmly in percolator and add menstruum until two pints of tincture are obtained. Dissolve in this the potassium bicarbonate, potassium and sodium tartrate, sugar, and oil of peppermint; lastly add enough treacle to make 4½ pints.

Dose: One to two teaspoonfuls for children.

This mixture is mild and pleasant to take. The total cost of four and one-half pints is about one dollar, and can be sold in bulk at five cents per fluid ounce.—*Hasselbrock.*

**Troubles of the Drug Clerk.**

There are cases and stipulations  
To the various occupations,  
But for woes and tribulations,  
You must try the drug clerk's lot.  
He is under obligations.  
To refrain from objurgations  
Tho' the limit of his patience  
Be exhausted on the spot.

He is noted for urbanity  
But seldom for profanity,  
Altho' his equanimity  
Is often sorely tried.  
All questions whose inanity  
Would drive you to insanity  
He answers without vanity  
Tho' possibly with pride.

Tho' not much in society  
He's the acme of propriety,  
And in spite of all anxiety,  
He manages to woo.  
In life he likes variety,  
He's noted for sobriety,  
And sometimes for his piety,  
A fact that is not new.

Oh, the drug clerks of all nations!  
Listen to their lamentations,  
And hear them out of patience  
Ere they go.  
If you're sick upon a Sunday,  
Please wait until next Monday,  
And give, Oh, give them one day  
To recuperate and grow.

Shorter, hours he's agitating,  
And he's eloquent in stating,  
That there's no use in debating,  
For shorter hours must come.  
He just won't work till 'leven,  
Though he lost all chance to heaven,  
After ten his warning's given,  
"You must go elsewhere for gum."

*Cubeb in N. Engr. Drg.*

## THE PHARMACEUTICAL USES OF PETROLEUM.

The earliest history of petroleum, and the solid "bitumen" produced by its spontaneous evaporation and oxidation as it oozes from the strata containing it, refers almost entirely to the medicinal uses to which it was put. The value of petroleum as an illuminant and heating agent was more or less known, but it appears to have been entirely over-spread by its curative powers as an ointment for wounds and skin diseases and, to a slight extent, as medicine for internal use.

Writing at the close of the thirteenth century, Marco Polo stated that the oil of Baku was "used to anoint camels that have the mange," and "that people came vast distances to fetch it," and Jonas Hanway, in his "Historical account of British Trade over the Caspian Sea," stated that the Russians drank the thinner petroleum as a cordial and medicine. The solid bitumen found floating on the Red Sea was early esteemed for medicinal use. Diodorus a contemporary of Julius Cæsar, stated that it was employed in Egypt for embalming purposes, and in the "Complete Dispensatory" of Dr. John Schroder we are told that the "Jewish is best that comes from Mare Mortuum.

Among the liquid varieties of petroleum employed before the present century the almost colourless variety obtained in Persia was most esteemed, and Boerhaave states that the "oleum terræ" of India was in his time so scarce as to be "kept by the Princesses of Asia for their own use."

In Bavaria the petroleum from the Tegern Sea was used as early as 1463 as an ointment under the name of "St. Quirinus' oil," while in Italy the oil of Modena was simply employed in the seventeenth century. In Pennsylvania and New York petroleum was formerly used by the Indians as "Seneca oil," and about the year 1849 "American oil," obtained by roughly distilling petroleum, was sold by S. M. Kier, of Tarentum, on a large scale for external application. It is stated that Mr. Kier's operations were to a great extent the earliest attempts at the drilling of Artesian wells for petroleum.

In England petroleum, under such various names as petroleum, naphtha, bitumen, oleum terræ, earth-balsam, pisselacum, pissasphaltum, numia, etc., was used quite as extensively as in other countries, but the price of the colourless and light coloured oil was so great that the bulk of that used is stated in James' "Medical Dictionary" (1745), and in Neumann's "Chemistry" (1759) to have been fictitious. Among the most approved varieties used were the light oil obtained from the East, mainly from Persia, the bitumen of the Dead Sea, and the "tar" (or asphalt) of Barbadoes, but an oil obtained by distilling a sandstone saturated with petroleum, which occurred at Pitch-

ford, in Shropshire, was largely sold as "Betton's" British Oil."

The purification of petroleum by distillation was carried on by the early pharmacists, but the product appears to have been usually regarded as little better than an artificial petroleum, and was only saleable as untreated crude petroleum.

Crude petroleum varies from an almost colourless, highly mobile liquid to a green, brown, or almost black oil, as viscous as treacle. Its composition varies according to the strata from which it is obtained, but it is mainly composed of hydrocarbons together with small quantities of bodies containing oxygen, nitrogen, sulphur, and in some cases traces of arsenic, phosphorus, etc. The American oil consists mainly of the saturated hydrocarbons belonging to the methane or paraffin group, but that of Russia, which is obtained from geologically newer strata, is principally composed of members of the naphthene group which, while isomeric with the olefines and very similar in properties to the paraffins, belong to the benzene group, and are therefore entirely different in chemical composition.

The various products now obtained from crude petroleum are said to amount to as many as two hundred, but these are mainly varieties of the mixtures of hydrocarbons which are known in commerce as naphtha, benzoline, kerosene, lubricating oils, paraffin, and vaseline. In order to obtain these in a state of purity, they are first separated from the crude oil by fractional distillation, followed by a system of chemical purification by which all colouring matters and ill-smelling substances are separated.

Petroleum naphtha and the still lighter distillate known as gasoline are used as solvents as a means for purifying various pharmaceutical and other products, and, like benzoline, of cleaning fabrics.

Considerable quantities of colourless and odourless oil, intermediate between kerosene and lubricating oil, are now prepared in Russia under the names "perfumery oil" and "mixing oil." For this purpose the higher-boiling fraction from what is known as "Solar oil," is freed from water by blowing a current of air through it at a temperature of 70 deg. C., until perfectly bright and clear, and is then treated with ordinary strong sulphuric acid, and finally with Nordhausen acid with constant agitation. After the evolution of sulphurous acid, produced by the decomposition of the impurities in the oil, has ceased, the acid is allowed to settle and is drawn off, and the oil is washed with a solution of caustic soda and finally with warm water.

As described by Rossmassler, "perfumery oil" has a specific gravity of 0.800 to 0.885, and does not become yellow or deposit any impurity after exposure to light. It is employed in the preparation of perfumes, and is known in the German Pharmacopoeia as "paraffinum liquidum."

# Perpetual Injunction.

## COPY.

IN THE HIGH COURT OF JUSTICE

Before COLIN G. SNIDER, Esq.,  
Local Judge of this Court at Hamilton. }  
}

THURSDAY, the 20th day of MAY,  
A. D. 1897.

BETWEEN

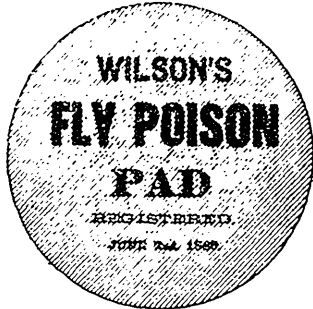
ARCHDALE WILSON & CO.,

*Plaintiffs.*

—AND—

FRANK W. MERRILL,

*Defendant.*



Upon the application of the Plaintiffs for an Order to continue the Interim Injunction granted herein by Colin G. Snider Esq., Local Judge in Chambers on Monday, the 17th day of May, A.D. 1897, upon reading the Notice of Motion to continue the said Injunction and upon hearing what was alleged by Consul for the Plaintiffs, and Defendant and Consul agreeing that the said Motion should be turned into a Motion for Judgment.

THIS COURT DOETH ORDER and adjudge that the Defendant be forever restrained from manufacturing, selling or dealing in fly poison prepared in felt, pulp or paper in the shape of a square, circular, pad, octagon, mat, welt or shield, or any form whatever where the felt, pulp or paper is smaller than twelve inches square and weighs more than an eighth of a pound to the square yard, and from using boxes, labels or envelopes such as those heretofore and now used by the said Defendant, or similar in any manner to those used by the Plaintiffs.

And this Court doth further order and adjudge that the Defendant do pay to the Plaintiffs the costs of and incidental to this action forthwith after taxation thereof.

Upon Motion of Mr. Thomas Hobson of Counsel for the Plaintiffs.

By the Court, S. H. GIENT, Deputy Clerk.



Before buying see the new lines **CROWN PERFUMERY.** New Crown Series, all sizes. And Louis xv. Extracts. Purse Salts. Lavender and other Odors, etc.

**LYMAN, KNOX & CO.,** - - - MONTREAL and TORONTO.

## ANTITOXINES. Diphtheria-Antitoxines.

Diphtheria Antitoxine. Price reduced.

Vial, 5 c.c. (500 units) immunizing dose.	1 Bot. .50, 12 Bot. 4.50
" 10 " (1000, " curative dose.	1 " .50, 12 " 8.40
" 25 " (2500 " ) for well developed case.	1 " 2.00, 12 " 21.60

### Double Antitoxine.

From the Horse Immunized against Diphtheria and Streptococcus.

1 Vial, 25 c.c.	\$5.00
Tuberculosis, Immunized Serum from the Mule. One dose,	\$1.50
Streptococcus, " Horse.	5.00

For use in cases of Erysipelas, Pyæmia, Spticæmia, Etc.  
Tetanus, Antitoxic Serum (1 to 1,000,000.)

Immunizing dose, to be applied in case of suspicious wound	\$1.50
Vial containing 25 cc., for treatment, (veterinary)	3.00
" " " " " " (Human being)	5.00

Correspondence Solicited.

### Erysipelas and Prodigiosus Toxines.

25 cc.	\$3.00
Special Syringe, 3 cc.	2.50

### The New York Biological and Vaccinal Institute,

PASTEUR INSTITUTE BUILDING, NEW YORK.

Canadian Depot: Leaming, Miles & Co., 63 St. Sulpice St., Montreal.



THE WORLD'S BEST NATURAL APERIENT WATER

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THE ONLY ONE *having received over 1000 testimonials from Medical Authorities.*

25 years' Success in Canada.

„Most valuable. Invariably good and prompt success.“

(Opinion of VIRCHOW.)

CAUTION. *None genuine without the signature of the firm „Andreas Saxlehner“ on the label.*

## Colchi-Sal

(Registered.)

COLCHICINE SALICYLATE

NEVER FAILS IN

Gout, Rheumatic Gout, and all Rheumatoid Affections.

Safe  
Prompt  
Effective

Colchi-Sal is dispensed in small capsules each of which contains  $\frac{1}{4}$  of a milligramme of Colchicine dissolved in 20 centigrammes of natural Methyl Salicylate which is equivalent to 5 grains of Salicylate of Soda. Each bottle contains 50 capsules. Price, \$9.00 doz. nett.

Agents: LEEMING MILES & CO.,  
MONTREAL.

Special to Retail Druggists.



COMMON SENSE EXTERMINATOR.

Roaches and Bed Bugs.

Only Infallible Remedy known. Expressly for the destruction of these, the greatest pests in the world. Once used always recommended—Never fails. Price: 25c, \$1.75, 50c, \$3.50, \$1.00, \$5.00 doz.

Common Sense Exterminator for Bats and Mice.

Free from Poison, not dangerous to man or Beast. DEAD RATS make no smell as this preparation eats up flesh and Bone before decay sets in.

4 Sizes:— Price, 15c, \$1.00, 25c, \$1.75, 50c, \$3.50, \$1.00, \$5.00 doz.

Above Goods advertise themselves.

Sold by Wholesale Druggists generally.

Manufactured by

Common Sense Mfg. Co.,  
523 King St. West, Toronto, Ont.

WORLD WIDE POPULARITY.

THE DELICIOUS . PERFUME

CRAB-APPLE BLOSSOMS,

The Delights of the old World



LONDON,  
PARIS,  
BERLIN,  
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INDIA.



AND THE

CROWN LAVENDER SALTS.

and the New.

NEW YORK,  
BOSTON,  
MONTREAL,  
TORONTO,  
HAVANA,  
RIO.



The Crown Perfumery Company, 177 New Bond Street, London, Eng  
Offices: 112 & 113 Fore St.

Mixing oil, which is largely used as an adulterant of other oils, is usually of a yellow colour, and has a specific gravity of not less than 0.860 and not more than 0.855.

The principal pharmaceutical uses of petroleum products are, however, confined to the varieties of paraffin wax, ozokerite, and vaseline. Paraffin wax is obtained mainly from the higher-boiling fractions obtained during the distillation of American petroleum and Scotch shale-oil, and, to a less extent of Indian petroleum. Russian petroleum yields practically no paraffin, and although large quantities are obtained in Galicia, the product from that country is usually known as ozokerite.

For use in the manufacture of pomades, etc. the softer paraffin wax is preferred, the purer form which is obtained by pressing the soft wax at low temperatures being too hard for this purpose, although largely employed for the manufacture of the better class of candles, for the adulteration of beeswax, etc., as a preservative coating for eggs, and for a large number of other purposes. A common paraffin wax obtained as a bye-product in the manufacture of lubricating oils in America, is used in the preparation of "chewing gum," while a yellow wax obtained from Galician ozokerite, known as "yellow ozokerine," is used on the Continent as soft paraffin wax is used in this country and in America, in the compounding of ointments and pomades. Like vaseline, paraffin and ozokerite (which is chemically identical with, and physically but little different from paraffin wax) are found to possess far greater permanency than lard, and their absolute freedom from any tendency to become rancid is rapidly leading to their universal use as a medium for the preparation of ointments.

The "yellow ozokerine," mentioned above, is largely purified by means of Nordhausen sulphuric acid, and the colorless product obtained is employed by French perfumers in the process of "enfleurage," *i. e.*, in the extraction of scents from flowers, etc. Vaseline is obtained mainly from American oil, but is also produced from Galician, Russian and German oils. That from the three latter countries, though practically the same as from America, is frequently known as "ceresin," or "cerasin". Although vaseline was first obtained in America, it is to the Germans that we owe the greater part of our knowledge as to its composition, Engler and Bohm having devoted particular attention to the subject.

The method of preparation employed in America is to a great extent a secret one, but is said to consist in the distillation of selected crude petroleum in vacuum stills, and in the filtration of the residual pasty mass through animal charcoal. In the Old World the treatment is very similar, but considerable quantities of an "artificial" vaseline are also prepared by admixture of solid paraffin with highly viscous paraffin oil. This material is said to be sometimes preferred, especially when fluidity

at a moderate temperature is required, and is included in the German Pharmacopoeia, but it is not perfectly homogeneous, and shows a granular structure and a tendency to separate into solid paraffin and oil.

Vaseline consists of a mixture of solid and liquid hydrocarbons, the former of which are entirely without crystalline structure, a feature of which the valuable properties of vaseline are largely due. Like paraffin wax, it consists almost entirely of saturated hydrocarbons, the small quantity of oxygen-containing compounds being almost negligible. Vaseline absorbs a small quantity of oxygen from the air, but its value for pharmaceutical purposes does not appear to be reduced thereby. The so-called "solidified petroleum," which is employed to a slight extent as fuel and for laundry use, and as a lubricant, is usually prepared by incorporating liquid petroleum with soaps, or by saponifying fats in admixture with petroleum. It is however, of little importance to the pharmacist.

Dr. Squire has recently described an interesting process in which petroleum is employed for the purification of crude alcohol. This process, which not only removes the fusel oil, but also the ill-smelling products contained in the common spirit obtained from molasses, etc., appears to be due to Parsons of New York, who, in 1896, patented the use of paraffin wax for the purpose. The wax was dissolved in the hot alcohol, which was then diluted to 50 per cent. strength, whereby the paraffin was precipitated with the fusel oil, etc. The method now in use is that of Ruffin and Bang, and consists in replacing the wax by liquid petroleum having a boiling point of about 140° C. *Pharmaceutical Journal.*

#### Sulphate and Carbonate of Lime in White Paints.

In a previous paper on the analysis of white paints, says G. W. Thompson, I overlooked a very peculiar reaction between carbonate of lime and sulphate of lead. It is well known that sulphate of lead when treated with the carbonates of the alkalis, as carbonate of ammonia, carbonate of soda, &c., is decomposed with the formation of carbonate of lead and sulphate decomposed with the formation of carbonate of lead and sulphate of the alkali; but as sulphate of lead is practically insoluble, and the same is the case with carbonate of lime, it was not supposed that on treatment with water any reaction between these two insoluble substances would take place, at least with any degree of rapidity or completeness. Our astonishment was great, therefore, on finding that sulphate of lead is completely decomposed by carbonate of lime in the presence of water, and by complete washing all the sulphuric acid can be washed out as sulphate of lime, if the carbonate of lime is in slight excess. Sulphate of lime, therefore, cannot be determined in a paint containing

sulphate of lead and carbonate of lime by washing with water.

#### THE PROBLEM WE SET OURSELVES TO SOLVE

Was how to determine carbonate of lime and sulphate of lime in the presence of lead compounds. This we finally succeeded in doing with perfect satisfaction by dissolving out the carbonate of lime in the cold by a mixture of 65 per cent. of alcohol and nitric acid, 1.40 sq. gr., mixed in the proportion of nine to one. We treat 1 grm. of the finely powdered sample four times by decantation with this mixture, allowing to stand twenty minutes between each treatment, filtering, and washing the paper with the same mixture. We evaporate the filtrate to dryness to expel the alcohol, and, as oxalic appears to be formed by the oxidation of the alcohol, sulphuric acid is added in excess, with the addition of more nitric acid if necessary, and the heating continued until fumes of sulphuric acid appear. After cooling take up with water, make alkaline with ammonia and acid with acetic acid, heat until complete solution is obtained, pass sulphuretted hydrogen boiling, to precipitate lead and zinc if present, filter and determine lime in filtrate, after precipitation as oxalate. We determine the total lime in the usual manner, deducting from it the lime found as carbonate, that is, the lime soluble in the solution given, the remainder being the lime as sulphate. Illustrating the.

#### REACTION BETWEEN SULPHATE OF LEAD AND CARBONATE OF LIME,

Mr. F. P. Ingalls took three and three-hundredths (3.03) grms. of sulphate of lead and 1 grm. of carbonate of lime, both prepared by him and chemically pure, and placed them in a flask with 650 C. c. of water, which was calculated as being more than sufficient to dissolve all the sulphate of lime formed; the flask was corked, and agitated occasionally for four days. The solution was then filtered and the residue collected and weighed. It was found to weigh 2.815 grms. If all the lime and sulphuric acid had been converted to sulphate of lead and dissolved in the water the loss in weight would have been 1.36 grms., the actual loss in weight being 1.215 grms. An analysis of the residue showed it to contain no lime soluble in the alcohol and nitric acid mixture. The lime and sulphuric acid found were equivalent to each other, so that we got the residue to contain:—

	Per cent.
Sulphate of lime, anhydrous ...	5.70
Lead, equivalent to lead carbonate	93.21
	99.21

This residue, in other words, contained no sulphate of lead, that substance having been completely converted to sulphate of lime and carbonate of lead. To clear our conclusion on this point

we would say that, in accordance with the method outlined above, we found no lime as carbonate; all the lime present, therefore, is present as sulphate, and, as the sulphuric acid was just sufficient to satisfy this lime as sulphate, there was none left to be in combination with the lead as sulphate.



MR. FRANK THOMAS SHUTT.

Mr. Frank Thomas Shutt, M.A. (Toronto) chief chemist of the Dominion Experimental Farms is an Englishman by parentage and birth. Coming early in his youth to Toronto, he entered the laboratory of Dr. W. H. Ellis, Professor of applied chemistry, Toronto University, and Public Analyst, where he continued as pupil and assistant for six years. He then entered the Honour Science Course of Toronto University, studying more particularly under Dr. Pike and Professors Ramsay Wright and Chapman. Mr. Shutt after winning the McMurrick and Silver medals in Biology and Chemistry, graduated with first class honours in Chemistry, Mineralogy, Geology and Biology in 1885, receiving later the appointment of Fellow in Chemistry of his Alma mater. This honourable post he continued to hold for two years, when he was appointed to his present position in Ottawa. During the ten years that have since elapsed Mr. Shutt has carried on many original investigations in agricultural chemistry, and notably in the examination of the Virgin soils, the cereals and native fodder crops

and waters of Canada. The naturally occurring fertilizers of the Dominion, such as swamp muck, marsh mud, peat and marl. By his annual reports in the Chemical Division much valuable assistance has been rendered to the Dairying and Fruit industries of Canada from time to time.

In 1893, upon the nomination of Sir Henry Grueman Wood, Secretary to the Royal Commission of Great Britain, Mr Shutt was appointed a juror on cereals at the World's Columbian Exposition. While in Chicago, he was engaged in the analysis of the cereals competing for award. He was the only foreign chemist appointed to the Board of jurors.

Mr Shutt is a Fellow of the Institute of Great Britain, and is also a Fellow of the Chemical Societies of England and the United States.

Mr. Shutt is an interesting and popular lecturer, having frequently addressed audiences in Montreal and elsewhere.

### BRITISH MEDICAL ASSOCIATION.

#### SIXTY-FIFTH ANNUAL MEETING, 1897.

The adjourned annual meeting of the British Medical Association will be held at Montreal on Tuesday, Wednesday, Thursday and Friday, August 31st, September 1st, 2nd and 3rd, 1897.

*President.*—HENRY BARNES, M.D., F.R.S.E., Senior Physician to the Cumberland Infirmary, Carlisle.

*President Elect.*—T. G. RODDICK, M.D., M.P. Professor of Surgery in McGill University, Montreal.

*President of the Council.*—ROBERT SAUNDBY, M.D., F.R.C.P. Physician to the General Hospital, Birmingham.

*Treasurer.* CHARLES PARSONS, M.D., Dover.

An address in Medicine will be delivered by W. OSLER, M.D., F.R.C.P., Professor of Medicine in the Johns Hopkins University, Baltimore U. S. A.

An Address in Surgery will be delivered by WILLIAM MITCHELL BANKS, F.R.C.S., Surgeon to the Liverpool Royal Infirmary.

An Address in Public Medicine will be delivered by HERMAN M. BIGGS, M.D., Director of the Bacteriological Laboratory of the Health Department, New York City.

The Scientific Business of the meeting will be conducted in Eleven Sections, as follows, namely :

#### A., MEDICINE.

*Macdonald Chemical Building.*

President: Stephen Mackenzie, M.D., London. Vice-Presidents: J. E. Graham, M.D., Toronto; W. Bayard, M.D., St. John, N.B.;

J. P. Rottot, M.D., Montreal; F. W. Campbell M. D. Montreal; James Stewart M.D., Montreal; H. P. Wright, M.D., Ottawa, Hon. Secretaries: H. A. Lafleur, M.D., Montreal; W. F. Hamilton, M.D., Montreal; William Pasteur, M.D., 4 Chandos Street, Cavendish Square, London W.

The following discussions will take place :

1. The Diabetic Treatment of Diabetes, to be opened by Dr. Robert Saundby, Birmingham.

2. Arthritis Deformans, Rheumatoid Arthritis, more especially its Relation to Rheumatism, Nervous Disease, and Tuberculosis, to be opened by Dr. James Stewart, Montreal.

3. Cholelithiasis; its Causation, Symptomatology, Diagnosis, and Treatment, to be opened by Dr. William Hunter, London, and Dr. Graham, Toronto.

The following, among others, are expected to take part in the discussions in this Section: Dr. Reginald Fitz, Boston; Dr. Jacobi, New York; Dr. Musser, Philadelphia; Dr. Pepper, Philadelphia; Dr. F. C. Shattuck, Boston; Dr. E. L. Trudeau, Saranac Lake, N. Y.; Dr. Jas. Tyson, Philadelphia; Dr. Wyman, Marine Hospital Service, Washington; Dr. R. L. Bowles, London, Mr. William Armstrong, Buxton; Dr. Sydney Coupland, London; Professor Osler, Baltimore; Dr. S. Monckton Copeman, London; Dr. H. Handford, Nottingham; Dr. Myrtle Harrogate; Dr. Graham, Toronto.

The following papers have been promised : Armstrong, William, M. R. C. S. The Exciting Cause of Rheumatoid Arthritis.

Bowles, Dr. R. L.—London. Further Experiences of dangers connected with Respiration and their avoidance, with special reference to Anæsthesia, Hæmoptysis, Drowning, Apoplexy, and all Paralysed and Unconscious Conditions.

Fussell, Dr. M. H.—Philadelphia. Two cases of Hæmophilia.

Graham, Dr. J. E.—Toronto. A Case of Crossed Hemiplegia the Result of Injury to the Pons Varolii.

Hamilton, Surgeon-Major-General — P.M.O. Plymouth. The Enteric Fever of Armies contrasting the Disease in Tropical, Sub-tropical, and Temperate Climates.

Osler, Dr. Wm. Exophthalmic Goitre (a) Development of Maniacal Symptoms in, (b) Scleroderma with (c) Myxœdema following.

Pepper, Dr. Wm. and Stengel, Dr. Alfred—Philadelphia. A Contribution to the Clinical Study of Venesection.

Starr, Dr. M. Allen—New York. A Contribution to the Subject of Brain Tumours and their Surgical Treatment.

Stockton, Dr. Charles G.—Buffalo. A Type of Diarrhœa associated with Gastric Acidity.

Tyson, Dr. James — Philadelphia. Note on

the Proper Use of Terms to denote Myocardial Changes.

Whittaker, Dr James T.—Cincinnati. Generalisations from Seven Years' Use of Tuberculin.

B SURGREY.

*Large Lecture Room, McGill Medical College.*

President: Christopher Heath, F.R.C.S., London. Vice-Presidents: Hon Sir William Hingston, M.D. Montreal; Hon. M. Sullivan, M.D., Kingston, Ontario; Hon. E. Farrell, M.D., Halifax, Nova Scotia; I. H. Cameron, M.D., Toronto; F. leM. Grasett, M.D., Toronto; James Bell, M.D., Montreal; George E. Armstrong, M.D., Montreal; Hon. Secretaries: Robert C. Kirkpatrick, M.D., Montreal; Thomas Walker, M.D., St John, N.B.; Jordan Lloyd, F.R.C.S., Broad Street, Birmingham.

The President will give a short introductory address.

A discussion will take place upon the Surgical Treatment of Appendicitis, which will be opened by Dr. G. E. Armstrong, Montreal. Dr. J. Ward Cousins, Professor C. B. Ball, Dublin, Mr. Jordan Lloyd, Birmingham, will take part in the discussion.

A discussion will also take place upon the Treatment of Cancer of the Rectum by Kraske's Operations, to be opened by Dr. James Bell.

Among those who, it is anticipated, will take part in the discussions in this Section are: Dr. W. W. Keen, Philadelphia; Dr. Collins Warren, Boston; Dr. John Ashhurst, Philadelphia; Dr. Cheever, Boston; Dr. Dennis, New York; Dr. Murphy, Chicago; Dr. McGraw, Detroit; Dr. J. C. White, Boston; Dr. Chas. T. Bull, New York; Professor C. B. Ball, Dublin; Mr. Jordan Lloyd, Birmingham.

The following gentlemen have given notice of their intention to read papers in this section:

Ball, Professor C. B.—Dublin. On Trans-sacral Resection of the Rectum.

Cousins, J Ward, M.D., F.R.C.S. Southsea—Operative Treatment of Organic Stricture of the Urethra

Ferguson, Dr. W. W.—Kingston, N.B. Varicosity of the Lingual and Buccal Veins.

Garrow, Dr. A. E.—Montreal. Ventral and Umbilical Hernia in the same Patient.

Lloyd, Jordan, F.R.C.S. Stone in the Ureter and its Treatment.

Marcy, H. O., M.D.—Boston. On the Suturing of Wounds.

McGraw, Theo., M.D.—Detroit. Invagination of the Cæcum and Vermiform Appendix.

Newman, David, M.D.—Glasgow. (1) Cases illustrating some Interesting Points in the Pathology and Surgical Treatment of Renal and Vesical Hæmaturia. (2) Transitory Hydronephrosis and Albuminuria in cases of Movable Kidney treated by Operation.

Ross, James F. W., M.D.—Toronto. Some Rare Conditions of the Kidney.

Roth, Bernard, F.R.C.S.—London. Analysis of One Thousand Consecutive Cases of Lateral Curvature of the Spine treated by Posture and Exercise exclusively, without mechanical supports.

Shepherd, F. J., M.D.—Montreal. A case of Abdominal Tumour, in which nearly eight feet of the small intestine were resected.

Smith, Dr. A. Laphorn—Montreal. Seven cases of Appendicitis with Pus Tubes.

Spanton, W. D., F.R.C.S.—Hanley. Two cases of Meningocele successfully operated on.

Thomson, A'lexis, M.D., F.R.C.S.—Edinburgh. Stricture of Intestine as Sequel of Strangulated Hernia.

### C. PUBLIC MEDICINE.

*Large Lecture Room of the Redpath Museum.*

President: E. P. Lachapelle, M.D., Montreal. Vice-Presidents: F. Montzambert, M.D., Quebec; Robert Craik, M.D., Montreal; P. H. Bryce, M.D., Toronto; Sir James Grant, Ottawa; R. H. Powell, M.D., Ottawa. Honorary Secretaries: Wyatt Johnston, M.D., Montreal; E. Pelletier, M.D., Montreal; Harvey Littlejohn, M.B., C.M., Surgeons Hall, Edinburgh.

The business of the Section will be carried out as follows:

The President will give an address on Sanitation in Canada; its progress Up-to-date.

Lachapelle, Dr. E. P.—President of the Board of Health of the Province of Quebec, Montreal—Sanitation in Canada; its progress up to date.

Newsholme, A., M. D.—M. O. H. Brighton. A plea for the International Study of Diphtheria, illustrated by Facts and Figures.

Kaye, J. R.—M. O. H. to the council of the West Riding of the county of Yorkshire. The Relationship of the Health Officer to the Registration and Certification of Deaths.

Dr. F. Montzambert of the Canadian Quarantine Service Grosse Isle, Quebec; and Dr. W. Wyman, Superintendent of the Quarantine and Marine Hospital Service, Washington; will open a discussion on the Utility of Quarantines as now Conducted, Inspection, Disinfection, and Isolation Stations in Certain Countries at Least.

Dr. P. H. Bryce, Secretary of the Provincial Board of Health, Ontario; and Dr. H. Handford, M. O. H. to the County of Nottingham; and Dr. C. B. Probst, Secretary, State Board of Health, Ohio; will open a discussion on How far should Mandatory Measures go in Dealing with (a) Measles, (b) Whooping Cough (c) Tuberculosis, (d) Leprosy

Johnston, Wyatt M. D.—Bacteriologist Board of Health, of the Province of Quebec. Experiments with Disinfectant Gases.

Janin, G., C. E.—Montreal, On the Different Processes recommended for the Treatment of Sewage; Mechanical, Chemical and Epuration by the Arable Soil.

- Motter, Dr. D. Murray Galt—Washington. Underground Zoology and Legal Medicine: a Study of Fifty Disinfectants, with Additional Experimental Observations.
- Kinyoun, Dr. Jos. J.—United States Marine Hospital Service Washington. Methods of Disinfection.
- Neech, Dr. James T—M. O. H. for Atherton. The period of Infection of Scarlet Fever.
- Copeman, Dr. Monckton—Medical Inspector to the Local Government Board of England. Some Alleged Dangers of Vaccination and their Prevention
- Dr. R. F. Ruttan, Chemist to the Board of Health of the Province of Quebec will open a discussion on The Respective Value of the Chemical and Bacteriological Methods of Water Analysis.

## D. OBSTETRICS AND GYNÆCOLOGY.

*Large Lecture Room, McDonald Physics Building.*

President: William Japp Sinclair, M.D., Manchester. Vice-Presidents: William Gardner, M.D., Montreal; James Perrigo, M.D., Montreal; J. A. Temple, M.D., Toronto; J. C. Cameron, M.D., Montreal; T. Johnston Alloway, M.D., Montreal; James Ross, M.D., Toronto. Honorary Secretaries: D. J. Evans, M.D., Montreal; W. Burnett, M.D., Montreal; Arthur E. Giles, M.D. 58 Harley Street, Cavendish Square, London, W.

The following discussions will, it is proposed, be held in this section on the days indicated:

September 1st.—The Causation and Treatment of Hyperemesis Gravidarum.

September 2nd.—The Vaginal *versus* the Abdominal Route in dealing with Inflammatory Conditions and Tumours in the Pelvis. To be opened by Mr. Lawson Tait.

September 3rd.—The Palliative and Radical Treatment of Uterine Flexions and Displacements. To be opened by Dr. Barton Cooke Hirst, Philadelphia.

The following papers are promised:  
Alloway, T. J., M.D.—Montreal. Title not announced.

Anderson, Professor Winslow, M.D.—San Francisco. Uterine Fibroids, their etiology, pathology, symptoms diagnosis, and treatment.

Barnes, Robert, M.D.—London. Notes and a drawing to illustrate "Barnes' Boundary Line" in Placenta Prævia.

Campbell, John, M.D., F.R.G.S.Eng.—Belfast. Labour Complicated by Abnormalities of the Cervix Uteri and Vagina.

Eden, T. W., M.D.—London. Title not announced.

Garrigues, H. J., M.D.—New York. The Treatment of Abortion.

Hart, D. Berry, M.D.—Edinburgh. The Pathology and Treatment of Chronic Non-suppurative Condition of the Uterus and Appendages.

Lucas, T. P., M.R.C.S.—Brisbane, Australia. Menstruation, its Purpose and Design.

Macdonald, A. A., M.D.—Toronto. Title not announced.

Macleay, Ewen J., M.D.—London. The after-history of some Gynæcological Operations.

Madden, T. More, M.D., F.R.C.S.I.—Dublin. 1. On some points in Modern Treatment of Tedious Labor with description of a new Traction Forceps; 2 On the Conservative Treatment of Fallopian Tube Disease.

Mundé, Paul F., M.D.—New York. Pelvic Abscess.

Parsons, J. Inglis, M.D.—London. A New Method of Treatment for Prolapse of the Uterus.

Robson, A. W. Mayo, F.R.C.S.—Leeds, to be read by Dr. Collier, Ripon. Porro's Operation for Tumour of the Pelvis complicating Pregnancy.

Smith, A.L. Dr.—Montreal. Diagnosis and Treatment of Retroversion of the Uterus, with Fixation.

Temple, G. Algernon, M.D.—Toronto. Title not announced.

It is expected that Dr. Howard Kelly, of Baltimore, will give a demonstration on Genital Endoscopy.

Among those who are expected to take part in the work of this Section are Professor A. W. Mayo Robson, Leeds; Mr. Lawson Tait, Birmingham; Dr. T. W. Eden, London; Dr. Inglis Parson, London; W. H. A. Kelly, Baltimore; Dr. P. F. Mundé, New York; W. R. Goffe, New York; and Dr. John Campbell, Belfast.

## E. PHARMACOLOGY AND THERAPEUTICS.

*Lecture Hall of the Wesleyan College.*

President: D. J. Leech, M. D., Manchester, Vice-Presidents: A. D. Blackader, M. D., Montreal; James Thorburn, M. D., Toronto; C. R. Church, M. D., Ottawa; J. B. McConnell, M. D. Montreal; F. J. Austin, M. D., Sherbrooke; Walter George Smith, M. D., Dublin. Honorary Secretaries: F. X. L. de Martigny, M. D., Montreal; J. R. Spier, M. D., Montreal; C. R. Marshall, M. B., Pharmacological Laboratory, Downing College, Cambridge.

The President will deliver a Short Introductory Address.

Discussions on the Treatment of Insomina, the Treatment of Syphilis, and Diuretics will be held on September 1st, 2nd, and 3rd respectively.

1. The Treatment of Insomnia will be opened by Dr. C. K. Clarke, Physician to the Rockwood Hospital, Kingston, on General Treatment; by Dr. R. W. Wilcox, Professor of Medicine and Therapeutics in the New Ycrk Post-Graduate School on the Value of Individual Drugs, with special reference to the newer Hypnotics; by Dr. A. McPhedran on the Ill Effects and Contraindications to the Use of Drugs; and by Dr. R. Ferguson, Lecturer on Therapeutics in the Western University, on the Mode of Action of Hypnotics.

2. The treatment of Syphilis will be opened by Dr. Whitla, Belfast. The introducer will deal with questions under the following heads: (a) How mercury and iodides are supposed to act in syphilis; (b) when should mercurial treatment be started, especially should it be given in the primary stage; (c) the various methods for its routine administration, dosage, etc., and the length of time necessary for mercurial treatment; (d) the treatment of tertiary and congenital syphilis.

Hypodermic and intravenous medication will be dealt with by a dermatologist.

The question of Diuretics will be opened from the clinical side by Dr. Barr, Liverpool, and from the experimental by Mr. Marshall, Cambridge.

Among those who have promised to take part in the discussions are: Professor Richet, Paris; Dr. A. R. Cushing, University of Michigan, Ann Arbor; Dr. H. A. Hare, Philadelphia; Dr. A. D. Blackader, Montreal; Dr. H. Barnes, Carlisle, Dr. Saundby, Birmingham; Dr. Donald MacAlister, Cambridge; Dr. Whitla, Belfast; Dr. J. A. Campbell, Carlisle; Dr. Brookhouse, Nottingham; Mr. Jordan Lloyd, Birmingham; Dr. J. Ward Cousins, Southsea; Dr. D. Berry Hart, Edinburgh; Dr. R. C. Stewart, Leicester, Dr. H. A. McCauley, Western University; Dr. J. J. Cassidy Toronto; Dr. James Watson, Southsea; and others.

Those who have promised papers are:

Hare, W. A.—The importance of Studying the Absorption and Elimination of Drugs  
Blackader, A. D. On Apocynum Cannabinum.  
Cushing, A. R. A Contribution to the Pharmacology of the Mammalian Heart.  
Leech, D. J. On Quillaia Bark.  
Phillips, C. D. F., and Pembrey, M. S. On the Physiological and Therapeutic Actions of Hydrastis Canadensis.  
Halliday, A.—Nova Scotia. The effect of Certain Drugs on Gastric Secretion.  
Fotheringham, J. T.—Toronto. On the prescribing of Proprietary instead of Pharmacopæial Preparations.  
Hutchison, K. On the Pharmacology of the Thyroid Gland.  
Marshall, C. R. On the treatment of the Heart Failure of Arteriosclerosis.  
Marshall, C. R., and Taylor, J. J. On the Absorption of Mercury.  
Chisholm, M.—Halifax. The Opposite Effects of Drugs in Large and Small Doses.  
Bazin, Dr. On Diphtheria Antitoxin.  
Marshall, C. R. Further Experiments on Indian Hemp.

#### F. PATHOLOGY AND BACTERIOLOGY.

*Lecture Room II, McGill Medical College.*

President: Watson Cheyne, F. R. C. S., F. R. S., London. Vice-Presidents: J. G. Adami,

M. D., Montreal; J. Caven, M. D., Toronto, J. Stewart, M. D., Halifax; J. C. Davie, M. D., Victoria, B. C.; L. C. Prevost, M. D., Ottawa; M. T. Brennan, M. D., Montreal. Honorary Secretaries: W. T. Connell, M. D., Kingston-Ontario; C. F. Martin, M. D., Montreal; Rupert W. Boyce, M. B., University College, Liverpool; William Hunter, M. D., 54 Harley Street, Cavendish Square, W.

The following will be the subjects for discussion:

1. Serum Diagnosis and the Agglutinating Action of Serums, to be introduced by Professor Wyatt Johnston, Montreal.

2. Immunisation.

3. The Bubonic Plague.

Among those who will take part in the discussions will be Professor Welch, Johns Hopkins; Professor Crookshank, London; Dr. W. Hunter, London; Dr. A. S. Grunbaum, Liverpool; Dr. A. C. Abbott, Philadelphia, Dr. T. M. Cheesman, New York; Dr. R. Fitz, Boston; Dr. E. Hodenpyl, New York; Dr. Trudeau, Saranac; and Dr. F. F. Westbrook, Minneapolis.

It is urged that British pathologists unable to be present should send to Dr. Rupert Boyce lantern slides and other material for demonstration bearing upon the subjects selected for discussion.

The following papers are promised:

Adami, J. G., M. D., and Staples, E. M. D.—Montreal. On the Appendices Epiploicæ.  
Barker, Lewellys F., M. D.—Baltimore. On the Changes in the Nerve Cells in Epidemic Cerebro-spinal Meningitis, with special reference to lesions in the lower motor neurons.  
Boyce, R. The occurrence of the B. Tuberculosis in Milk.  
Caren, Professor J., M. D.—Toronto. Title of Paper not received.  
Connell, W.—Kingston, Ont. Title on paper not received.  
Copeman, S. Monckton, M. D.—London. On Vaccinia.  
Flexner, Simpson M., D. Johns Hopkins University. Pseudo-tuberculosis Hominis Streptothricia.  
Goldman, Professor—Freiburg. On early infections of Blood Vessels in Carcinoma and Sarcoma, lantern slides.  
Grunbaum, A. S., M. D. The Smegma Bacillus.  
Herter, C. A., M. D.—New York. Experimental Observations on the Relation between Bacterial Activity in the Intestine and the Indican in the Urine.  
Hodenpyl, Eugene, M. D.—New York. On the Occurrence of Typhoid Fever without Lesions of the Small Intestine.  
Manson, Patrick, M. D. On Filaria Sanguinis Hominis, with the demonstration of a new Species from Central and South America.  
Stiles, H. J. On the Evolution of Cancer Bodies, (lantern slides).

Thomson, Alexis H. Epithelioma of Penis.  
 Van Gieson, Ira, M.D.—New York. On  
 Hæmato-myelopore and its Relations [to  
 Syringomyelia.  
 Washbourn, J. W., M.D. Demonstration] of  
 Specimens of an Infective Neoplasm from  
 the Dog.  
 Welch, Professor—Baltimore. The Distribu-  
 tion and Pathogenic Effects of the *B. Aero-*  
*genes Capsulatus*.  
 Wright, Hamilton K., M.D.—Montreal. On  
 the Topography of the Posterior Columns.

## G. PSYCHOLOGY.

*Morris Hall, Presbyterian College.*

President: R. M. Bucke, M. D., London,  
 Ontario. Vice-Presidents: D. Clarke, M. D.,  
 Toronto; T. J. Burgess, M. D., Verdun Que-  
 bec; A. Vallee, M. D., Quebec; G. Wilkins,  
 M. D., Montreal. Honorary Secretaries: J.  
 V. Anglin, M. D., Montreal; George Villen-  
 euve, M. D., Montreal; J. G. Blandford, M. R.  
 C. S., D. P. H., London County Asylum, Ban-  
 stead, Sutton, Surrey.

The officers of this Section, believing that  
 many of the papers already offered will be pro-  
 vocative of considerable debate, have deter-  
 mined to announce no special subjects for discus-  
 sion. Among those who have offered to con-  
 tribute papers are:

Bucke, K. M., M. D.—London Ontario Asylum.  
 On Mental Evolution.  
 Clark, W., M. D.—Toronto Asylum. The  
 Reflexes in Psychiatry.  
 Hobbs,—M. D.—London Ontario, Asylum.  
 Surgical Gynæcology in Insanity.  
 Russell, J., M. D.—Hamilton Ontario Asylum.  
 Insanity in its Relation to the State.  
 Villeneuve, George, M. D.—Longue Pointe.  
 Crime and Insanity.

Among those who intend to take part in the  
 business of the Section are Dr. N. H. Beecher,  
 Mimico Asylum Ontario; Dr. G. Alder Blumer,  
 Utica, New York; Dr. C. K. Clark, Rock-  
 wood Hospital, Kingston, Ontario; Dr. Ed-  
 ward Cowles, Waverly, Mass.; Dr. T. D. Croth-  
 ers, Hartford Conn.; Dr. G. Stanley Hall,  
 Worcester, Mass.; Dr. Hazlitt, Sunbury; Dr.  
 Henry Hurd, Baltimore; Dr. Rogers, Asylum  
 for the Feeble Minded, Faribault, Minn.; Dr.  
 George H. Rohe, Maryland Hospital for the  
 Insane, Catonsville; Dr. Rothesay Stewart,  
 Leicester; and Dr. A. R. Urquhart Perth

## H. OPHTHALMOLOGY.

*Lecture Room I, McDonald Engineering Building.*

President: Edward Nettleship, F.R.C.S.,  
 London. Vice-President: F. Buller, M. D.,  
 Montreal; R. A. Reeve, M. D., Toronto; Ed.  
 Desjardins, M. D., Montreal; A. A. Foucher,  
 M. D. Montreal. Honorary Secretaries: W. H.  
 Smith, M. D., Winnipeg; J. Jehin-Prume, M. D.

Montreal. Thomas Herbert Bickerton, M. R.  
 C. S., 88, Rodney Street, Liverpool.

It is intended that a discussion should take  
 place on the Prevention of Accidents to the  
 eyes of Persons engaged in Industriæ  
 Employments. The following gentlemen have  
 expressed their intention of contributing  
 papers to the Section:

Bickerton, T. H.—Liverpool. (1) The Ques-  
 tion of Colour Vision in the Public Services;  
 (2) on Mule's Operation.

Buller, Dr. F.—Montreal. Abnormalities in  
 the Functions of the Extrinsic Ocular  
 Muscles.

Foucher, Dr. A. A.—Montreal. Auto-Infec-  
 tion in Pustulous Keratitis.

Fulton, Dr. John F.—St. Paul, Minn., U.S.A.  
 Amblyopia of Strabismus.

Jehin-Prume, Dr. Jules—Montreal. A Con-  
 tribution to the Treatment of the Syphilitic  
 Affections of the Eye.

Lee, Charles G.—Liverpool. On an Unusual  
 Case of Orbital Tumour.

Wurdemann, Dr. H. V.—Milwaukee, Wis.  
 U.S.A.—Relation of Skiascopy to other  
 Objective and Subjective Methods for the  
 Estimation of the Ocular Refraction, with  
 Exhibition of Hand Skiascope.

Specimens—Specimens will be shown by  
 Mr. Treacher Collins, Mr. Priestley Smith, and  
 Dr. C. H. Usher.

## I. LARYNGOLOGY AND OTOTOLOGY.

*Lecture Room II, McDonald Engineering Building.*

President: Greville Macdonald, M.D.—  
 London. Vice-Presidents: W. Tobin, M.D.,  
 Halifax; G. A. S. Ryerson, M.D., Toronto;  
 H. S. Birkett, M.D., Montreal; G. R.  
 McDonagh, M.D., Toronto. Honorary Sec-  
 retaries: A. Chretien, M.D., Montreal; H. D.  
 Hamilton, M.D., Montreal; W. Permewan,  
 M.D., 7 Rodney Street, Liverpool

The following papers are announced in this  
 Section:

Bryan, J. H.—Washington. A Contribution to the  
 Anatomy of the Fronto-Ethmoidal and Frontal  
 Maxillary Regions.

Delavan, Dr. D. B.—New York. Surgical Treat-  
 ment of Malignant Disease of the Larynx.

Farlow, Dr. Jno. W.—Boston, Mass., U. S. Pre-  
 sentation of Instruments, with remarks.

Hobbs, Arthur G., M. D.—Atlanta, Ga. When  
 not to Inflate the Middle Ear.

Horne, Jobson, M. D., and Yearsley, Macleod, F.  
 R.C.S.—(1) On Eucaïne as a Local Anæsthetic  
 in the Surgery of the Throat, Nose, and Ear. (2)  
 On Turbinectomy.

Ingals, E. Fletcher, M.D.—Chicago. On the re-  
 lation of Nasal Diseases to Pulmonary Tubercu-  
 losis.

Jones, T. W. Carmalt, F.R.C.S. Ed. Some After  
 Effects of Turbinotomy.

Knigh, Chas. H., M. D.—New York. Upon a



- Foreign Body (Metallic Button Hook) removed from the Larynx by Laryngo-Fissure.
- Mackenzie, Dr. John N.—Baltimore, Md., U. S. The Physiological and Pathological Relations between the Nose and the Sexual Apparatus.
- O'Dwyer, J., M.D.—New York. Acute Syphilitic Stenosis of the Larynx in the Adult treated by Intubation.
- Roe, John O., M.D.—Rochester, New York. The Correction of Nasal Deformities by Subcutaneous Operations.
- Spicer, Scanes, M.D.—London. (1) On Reduction of the Inferior Turbinate Bone in Certain Cases of Nasal Obstruction. (2) On the Significance and Treatment of Recurrent Retention of Secretion in the Lacunæ of the Tonsils. (3) A case of Multiple Papillomata of Larynx in a Man aged 73.
- Würdemann, Dr H V —Milwaukee, U.S.A Phosphoric Necrosis of Temporal Bone
- Among those who intend to take part in the business of the Section are also Dr. J. Solis-Cohen, Philadelphia; Dr. Birkett, Montreal; Dr. Chretien, Montreal; Dr. G. R. McDonagh, Toronto; Dr. D. B. Delavan, New York; Dr. Charles Warden, Birmingham, and Dr. J. W. Mackenzie, Baltimore

#### J. ANATOMY AND PHYSIOLOGY.

*Lecture Room I, McGill Medical College.*

President: Augustus D. Waller, M.D., F. R. S., London. Vice-Presidents: F. J. Shepherd, M.D., Montreal; A. B. Macallum, M.D., Toronto; T. Wesley Mills, M.D., Montreal; A. Primrose, M.D., Toronto; J. B. A. Lamarche, M.D., Montreal; D. B. Fraser, M.D., Stratford, Ontario. Hon. Secretaries: J. M. Elder, M.D., Montreal, W. S. Morrow, M.D., Montreal; Robert Hutchison, M.D., Physiological Laboratory, London Hospital Medical College, Turner Street, Mile End, E.

The following have been selected as subjects for the discussions:

September 1st. Anæsthetics, to be introduced by the President of the Section (Dr. A. Waller). Among those who are expected to take part in this discussion are Dr. Shore, Cambridge; Dr. Kemp, F.R.S., Baltimore; Professor W. D. Halliburton, F.R.S., London; Dr. A. B. Macallum, Toronto; Dr. H. A. Hare, Philadelphia; Dr. G. T. Kemp, Baltimore; Dr. G. Gordon Campbell, Montreal; Dr. Kenneth Cameron, Montreal.

September 2nd. The best methods of Teaching Anatomy, to be introduced by Professor Alex. Macalister, Cambridge, and Dr. F. J. Shepherd, Montreal.

September 3rd. The causation of the Heart Beat and its Modifications, introduced by Dr. Gaskell, F.R.S., Cambridge, and Professor T. Wesley Mills, Montreal; Dr. Porter, Boston; Dr. Howell, Baltimore, and Dr. Bowditch, Boston; Dr. W. Townsend Porter, Boston; Dr. A. B. Macallum, Toronto; Dr. T. Wesley Mills, Montreal; Dr. G. Carl Huber, Ann Arbor, Mich.; Dr. A. P.

Knight, Kingston, are expected to take part in the discussion.

The following papers have been promised:

- Huber, G. Carl, M.D., Assistant Professor of Histology and Embryology, University of Michigan, Ann Arbor. A brief account of some observations on the sympathetic Ganglia of Vertebrates.
- Kemp, G. T., M.D., Ph.D., Baltimore. Nitrous Oxide Anæsthesia.
- Knight, A. P., M.A., M.D., Professor of Physiology, Queen's University, Kingston, Ontario. Action of certain Chemical Salts on the Heart Beat of Fish Embryos
- Lombard, Warren, P., M.D., Professor of Physiology, University of Michigan, Ann Arbor. Anatomy of the Knee-joint of the Frog, with special reference to the action of Flexor and Extensor Muscles.
- Macalister, Professor Alex., Cambridge. The Influence of Head Shape on Cranio-cerebral Topography.
- Macallum, A. B., M.B., P.H.D., Professor of Physiology, Toronto University. Some observations on the Micro Chemistry of Cells and Tissues.
- Meltzer, S. J., M.D., New York. On the effect of Anæsthesia upon the Reflexes of Deglutition and of the Closure of the Glottis.
- Mills, T. Wesley, M.D., L.R.C.P., Professor of Physiology McGill University. Title of paper not yet received.

Paton, Dr. Noel, Edinburgh. The phosphorus Compounds and the Exchange of Phosphorus in the Salmon.

Pembrey, Dr. M. S. Title not received.

Stewart, Dr. G. N. The relation of Electrolytes to the other Constituents of Animal Cells and Liquids, with especial reference to the Blood Corpuscles and Blood Plasma.

Thompson, Professor W. H., Belfast. Degenerations resulting from Lesions of the Sensory Area of the Cortex Cerebri.

Dr. Gustav Mann will send for exhibition specimens illustrating the Minute Histology of the Liver in Active and Resting Conditions. Dr. D. A. Welsh, Edinburgh, will exhibit specimens illustrating the Histology of the Parathyroid Glands. Dr. Geo. Oliver will exhibit his new Hæmoglobino-meter and Hæmocytometer.

Dr. Shore and Professor Sherrington will take part in the proceedings.

#### K. DERMATOLOGY

*Lecture Room III, McDonald Engineering Building.*

President: Malcolm Morris, F.R.C.S. Ed., London. Vice-President: J. E. Graham, M.D., Toronto; F. J. Shepherd, M.D., Montreal; J. A. S. Brunelle, Montreal; G. L. Milne, M.D., Victoria, B. C. Hon. Secretaries: Gordon Campbell, M.D., Montreal; J. M. Jack, M.D., Montreal; James Galloway, M.D., 24 Harley Street, Cavendish Square, W.

A subject selected for discussion in this Section is the Clinical and Pathological Characteristics of Vesicular Skin Diseases, especially the Dermatitis Herpetiformis Group.

It is intended that a joint meeting should be held with the Section of Pharmacology and Therapeutics for the discussion of the subject of the Treatment of Syphilis (see p 180).

The following papers are announced :

Fox, T. Calcott. Demonstration of the Biology of the Trichophyte.

Galloway, James—London. On Melanotic Conditions of the Skin preceding Malignant Disease of the skin.

Among those who are expected to take part in the discussions of this Section are Dr. E. B. Bronson, New York ; Dr. L. D. Bulkley, New York ; Dr. J. A. Fordyce, New York ; Dr. J. N. Hyde, Chicago ; Dr. G. T. Jackson, New York ; Dr. Stephen Mackenzie, London ; Dr. A. Eddowes, London, and Dr. White, Boston.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 31st, 1897.

- 11 A. M.—Cathedral Service.
- 2.30 P. M.—Openings Ceremonies. Welcome by His Excellency the Governor-General, Lord Aberdeen, the Mayor of Montreal and others. Address by the President-elect, Dr. T. G. Roddick, M. P.
- 4 P. M.—Garden Party at the Royal Victoria Hospital (Mr. R. B. Angus, President of Royal Victoria Hospital), etc.
- 9 P. M.—Conversazione at Laval University. Address by Professor Richet, Delegate from the French Government, etc.

WEDNESDAY, SEPTEMBER 1st, 1897.

- 10 A. M.—McGill University : Opening of Sections.
- 2.30 P. M.—Windsor Hall : Address in Medicine by Dr. W. Osler.
- 4 P. M.—Excursion down the St. Lawrence : Garden Parties, etc.
- 9 P. M.—Reception by the Hon. Sir Donald A. Smith, High Commissioner of Canada.

THURSDAY, SEPTEMBER, 2nd, 1897.

- 9.30 A. M.—McGill University : Sectional Meetings.
- 2.30 P. M.—Windsor Hall : Address in Surgery by Mr. W. Mitchell Banks.
- 4 P. M.—Excursion across the Island, International Golf Match, etc.
- 7.45 P. M.—Annual Dinner of the Association.

FRIDAY, SEPTEMBER 3rd, 1897.

- 9.30 A. M.—McGill University : Sectional Meetings.

- 1 P. M.—Lunch on the Mountain, given by the Mayor.
  - 2.30 P. M.—Windsor Hall : Address in Public Medicine by Dr Herman Biggs ; Concluding Speeches, etc.
  - 4 P. M.—Excursion down the Lachine Rapids ; Garden Parties, etc.
  - 9 P. M.—Conversazione at McGill University.
- SATURDAY, SEPTEMBER 4th, 1897.
- Excursions to Lake Memphremagog, Saranac, Ottawa, Quebec, etc.

Correspondence.

J. B. C.—requests formulas for 1. mucilage for prescription labels. 2. Indelible ink for Laundry use. 3. Harness oil.

1. Mucilage for labels is made with gum arabic, or dextrin. If the paper is of good quality the gum will not show through. If it does, flour paste may be used. For large quantities dextrin has the advantage of less cost. Card-box makers use dextrin for economy. The Government uses it on stamps.

Dextrin Mucilage.—Dextrin 8 pts. acetic acid 2, alcohol 2, water 10. Mix dextrin, water, and acetic acid, to smooth paste, and add alcohol. This makes a thin paste, which is well suited for bottles and wood boxes, but not for tin.

Indelible Ink.—Linen goods manufacturers use a stamp paste which is doubtless composed of silver nitrate. The laundry men use the ordinary liquid marking ink, such as Payson's. The one liquid marking inks are composed of a strong solution of ammonio-nitrate of silver, thickened with gum, and tinted with carmine if desired red, at first.

Harness Oil.—The oil most esteemed for harness is purified Neat's foot oil. If a "dressing" is required, the following, recently registered in N. Y. might suit : Belgian Black is incorporated with a mixture of Neats foot oil, tallow, and petrolatum. This produces a permanent black, when applied to harness or other leather.

TWENTY DOLLARS IN PRIZES.

An Offer to the Retail Druggists (and Druggists' Clerks) of Canada.

The following prizes will be awarded for the best suggestions for a drug store window display advertising Nestlé's Food. Communications in connection with this offer should be received not later than September 1st.

For the best suggestions for a Window display of Nestlé's Food :

1st prize .....	\$10.00
2nd .....	5.00
3rd .....	3.00
4th .....	2.00

Suggestions must have merit to be awarded a prize.

In sending suggestions for Nestlé's Food Window Display Contest, give name and address. Send if possible a rough diagram, showing arrangement of advertising matter and cans of Nestlé's Food, with what other suggestions, such as show-cards, attractive placards, etc., would be used in the display. It is to be remembered that the Window Display is to meet the eye of mothers, and

especially of mothers of young children. A sample line of advertising matter, which will furnish information as to Nestlé's Food, will be sent on request to anyone wishing to compete. In the event of more than one suggestion being alike—the date of mailing will govern.

The names of the winners will be published in the October issue of the Montreal Pharmaceutical Journal. Address all communications to

LEEMING, MILES & CO., Montreal.  
Agents for Nestlé's Food.

**PROBLEM.**

No. 61—A Druggist put up three packages of medicine, weighing in all 22 lbs. Three times the square of the number of pounds in the first package, minus 11 = the square of the number of pounds in the second package, and the number of pounds in the second package multiplied by the number of pounds in the third package, plus the number of pounds in the third package = the square of the number of pounds in the third package. How many pounds were in each package? A solution required—E. P. F.

Ans. No. 60—7.2 + tons. 130 Tw. Sp. Gr. 1.65 calculated thus  $(130 \times 0.05) + 1.000$ . 43% of the Pyr. is available.  $\frac{13}{10} \times \frac{7}{10} \times \frac{10}{10} \times 4$  7.2.

E. P. F.—The answer to No. 59 is 55 gallons. You have misread the conditions of the problem. Eleven gallons are removed the first time, and  $\frac{1}{5}$  of eleven the second time, that is  $8\frac{1}{5}$  gals, and altogether 19 $\frac{1}{5}$ , now find a quantity of which 19 $\frac{1}{5}$  is  $\frac{9}{25}$ , and you get the answer 55.

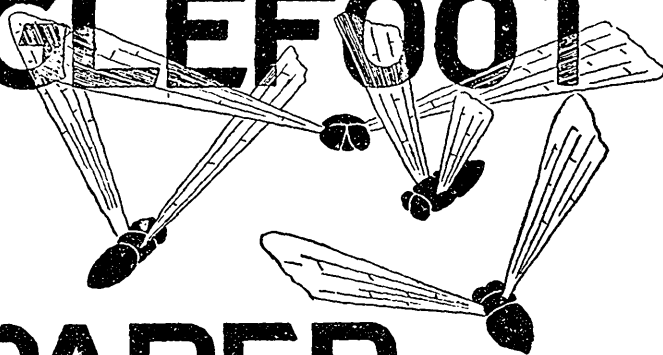
The puzzle-picturelast no. has evidently interested and amused quite a number of our readers, as we have received numerous communications on the subject. The answers are:—(1) Antimony, (2) Squills, (3) Iodine (4) Castor oil, (5) Quinine, (6) Potas. Bicarbonate, (7) Aloes, also Otto Rose (O two rows), (8) Eucalyptus Kaye's (KK's), (9) Soda Tartrate, (10) Benzoin, (11) Manna, (12) Camphor, (13) Borax, (14) Absinthe (absent), (15) Aconite also Strych. Nit. (stricken Knight), (16) Cocaine, (17) Cinchona.

Answers received, in part correct from R. M. J., G. A. M., F., A. J. W., J. F. J., N. C. H., W. S., C. H. A., J. C., L. R. M., D. S. H.

We submit an order, which we would like our readers to interpret.

*files under new book  
of cement to R.M.J.  
number a book of  
marty feet*

# TANGLEFOOT SEALED STICKY FLY PAPER



**STILL FURTHER IMPROVED.**

BORDER	-	Stronger and More Pliable
STICKY	-	Stickier and More Endurable
DESIGN	- - -	New and Prettier
PRICE	- - -	Lower
PROFIT	- - -	Higher

Your Jobber Sells It.

Prices for 1897.

<b>Regular</b>	45 Cents a Box.	(10 Boxes in a Case.)
	\$3.80 per Case.	
<b>"Little"</b>	18 Cents a Box.	(15 Boxes in a Case.)
	\$2.10 a Case.	

**HOLDERS: \$1.00 per Box of 50.**

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The Best and Cheapest Transparent Soap in the Market.

## Jubenia Soap.

Marvellous Effect!! Preserves and Rejuvenates the Complexion.

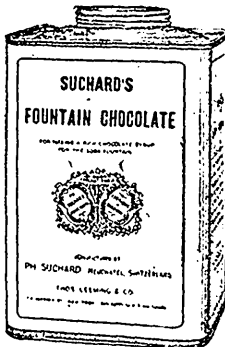
## Glycerine and Cucumber Soap.

Most Cooling and Refreshing to the Skin.

## Cold Cream and Oatmeal Soap.

Embodies the Soothing and Softening Properties of Cold Cream and Oatmeal.

## SUCHARD'S Fountain Chocolate



Is a pure preparation of the Cocoa Bean from which the Cocoa Butter has been removed. It is completely soluble and leaves no trace of grease upon the glass. It yields a rich Syrup with delicious chocolate flavor, and it contains nothing but the pure product of the cocoa bean, proves the most economical of all chocolates for the fountain.

In Square Tins of  
One Pound, 50 cents lb.

In Square Tins of  
Five Pounds, 45 cents lb.

Full Information with each tin.

Leeming, Miles & Co.,

53 St. Sulpice Street, - MONTREAL.

## WAMPOLE'S BEEF, WINE AND IRON,

In Pint Bot'tles, - - \$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 prominently 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 Wholesale Jobbers or direct to us.

Very truly yours

HENRY K. WAMPOLE & CO.

MANUFACTURING PHARMACISTS  
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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 Bland Pills.

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General Agent

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**THEY NEITHER OXIDISE NOR HARDEN.**



## SWAYNE'S OINTMENT

Gives better satisfaction, has the largest sale of any Ointment in the United States.

It is warranted to cure the worst case of PILES or the most obstinate SKIN DISEASE.

Its merits are being steadily brought before the public by liberal and persistent advertising, and under no circumstances will its proprietors allow legitimate competition to capture its well merited laurels.

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WHOLESALE AGENTS FOR CANADA,

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Lactophenin, *Syn.*: Lactyi-para-phenetidin :  $C_6H_4 \left\langle \begin{array}{l} OC_2H_5 \\ NH.CO.CH(OH)CH_3 \end{array} \right.$

Lactophenin is a definite chemical compound of phenetidin, differing from phenacetin only in the replacing of lactic acid for the acetic acid fixed to the ammonia. By this change the therapeutic properties are enhanced, and the shortcomings eliminated. LACTOPHENIN has been clinically tested during the past two years and endorsed on its record by the highest medical authorities in Europe and America.

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Supplied in one ounce packages, Powdered, and in 4 and 8 grain Tablets, by Druggists everywhere

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*Dose for Adults*: Eight grains (powder or tablets) three times daily.

Always prescribe  $\bar{3}$  i Ferratin, powder or tablets; this quantity is necessary to obtain results, and the cost is less to patient than in divided doses.

Reprints of instructive reports will be mailed to physicians free on application.

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SPECIAL NEW LINE  
IN  
**GIBSON'S**  
**Celebrated - Sweets.**

ONE POUND, HALF-POUND, AND QUARTER-POUND TINS.

Bouquet Tablets.

Cream Coffee.

Lemon Drops.

Barley Sugar.

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Mint Rock.

Lime Fruit.

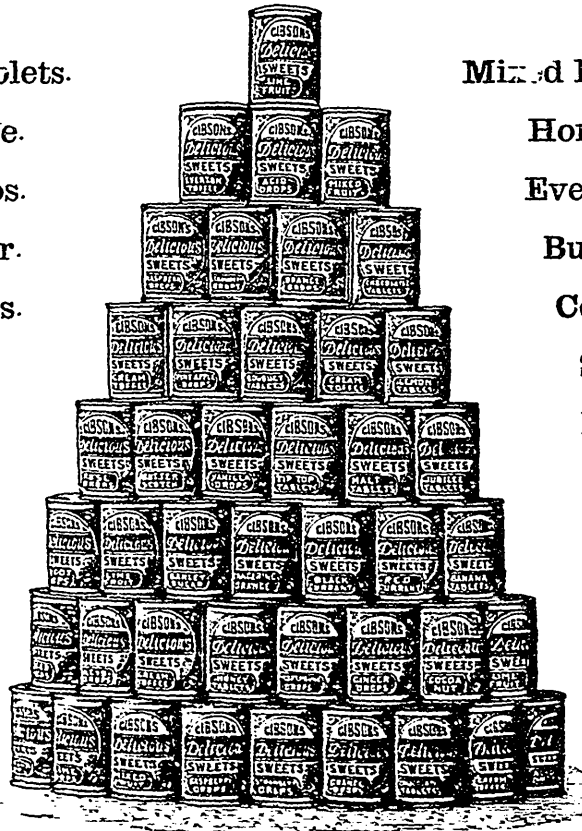
Pine Apple.

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VIRGIN BRAND  $\left\{ \begin{array}{l} 1 \text{ Gall. (Imperial) can.} \\ 5 \text{ " " " cans.} \end{array} \right.$

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Perfumers and Druggists.

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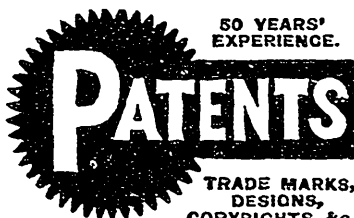
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Strongest and best Lye made.  
Far Superior to any Solid Lye.

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BELL BRAND.

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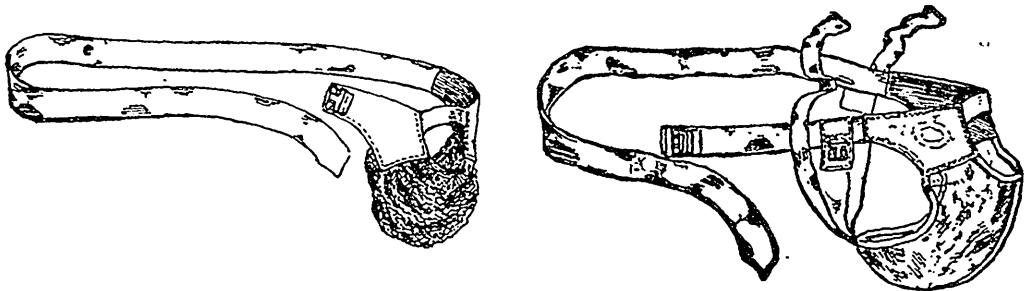
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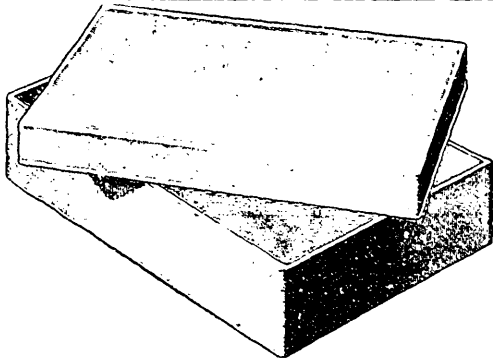


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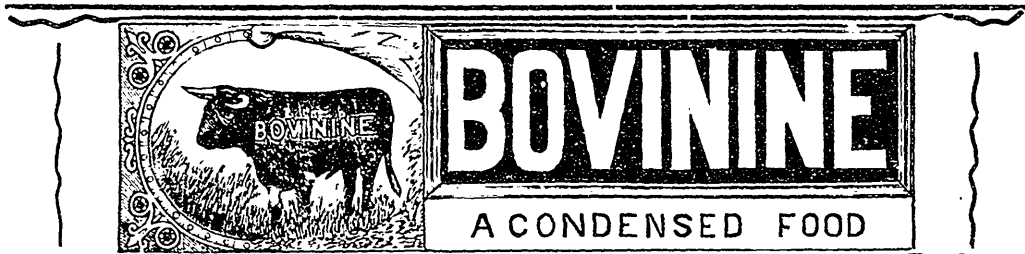
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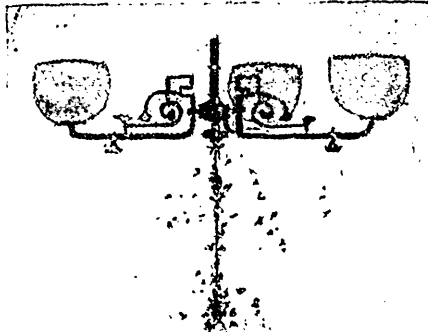
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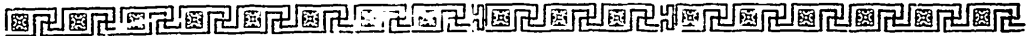
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