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Illegal Sale of Poison.

At the Police Court, on Friday, November 25th, twenty-five druggists were charged by George Albert Mason with having, on the 17th instant, sold poison contrary to law.

Mr. J. H. Patterson appeared for the prosecution and Dr. McMichael for the defence.

Dr. McMichael proposed that as the information was the same in all the cases, one of them be tried as a test.

Mr. Patterson wished, however, to take each case separately.

The first case on the calendar, that of J. O. Wood, was therefore called, when

Dr. McMichael said that the information contained no specific charge; it was not stated therein that the defendant had sold laudanum and at any rate it was a question whether laudanum came under the statute, for that drug was not a deadly poison.

Mr. Patterson said that they did not claim that laudanum was a deadly poison; and with regard to Dr. McMichael's first objection, he held that the declaration on the information that poison had been sold "contrary to law" was sufficient to warrant the case being tried.

John Gill, sworn— I live in Toronto; know the defendant; he keeps a drug store on Queen street.

Mr. Patterson— Did you purchase anything in his place lately?

Witness— Yes; I bought some laudanum.

Dr. McMichael— Stop, witness; are you a professional man?

Witness— No.

Dr. McMichael— Well, show the article you purchased.

Witness— I bought the laudanum on the 17th; the defendant told me that he was liable to a fine of \$50 for selling it; when I asked him for it, he hesitated a little and then gave it to me, (the laudanum purchased by the witness, was produced); I paid 10 cents for it; when I got out of the store I marked the defendant's name and the number of his store on the wrapper of the bottle, and at night I put on the time I bought it; I bought the laudanum without a certificate from a medical man, priest or minister; the defendant did not ask me for any.

Cross-examined— It was about ten o'clock; the defendant gave me the laudanum; I can't say whether there was any person else in the shop or not; I gave as a reason for wanting the laudanum that my rest had been broken for the last two or three nights; my rest had been broken; I bought some more laudanum on the same night; I cannot say from my personal knowledge what is in the bottle; I think the contents are the same now as when I bought the bottle, but I cannot swear that they are.

To Mr. Patterson— I delivered the bottle to Mason on the same night I purchased it. G. A. Mason was next called, when

Dr. McMichael objected to his evidence being taken, as under the statute an informer was not competent to give evidence, and besides this, complainant had been disqualified as a witness in being convicted of perjury.

Mr. Patterson held that the statute under which they were proceeding showed that an informer was a competent witness, and he

read sec. 2 cap. 13 of 33 Vic, Stat. of Ontario, which was to the effect that no person should be disqualified by reason of crime or interest from giving evidence.

The magistrate inquired if either of the learned council had looked at the Perjury Act in connection with this case.

Both of the learned gentlemen said they had not, and Dr. McMichael said that he would now have to ask for an adjournment, as he had business in other courts.

Mr. Patterson said that he also desired an adjournment until he should have the contents of the various bottles that had been purchased analyzed.

The case was therefore adjourned until Tuesday, when it was again resumed, and George A. Mason was called as the first witness, and—

Dr. McMichael again objected to the reception of his evidence, on the ground of infamy.

Mr. Patterson answered this objection by reading a clause from chapter 99, Con. Stat. of Canada, which was to the effect that in cases of summary jurisdiction, conviction should be made on the oath of one or more credible witnesses other than the informer.

Dr. McMichael held that the phrase "other than" excluded the informer. He also objected to the reception of Mason's evidence on the ground that the latter was a prosecutor, having a pecuniary interest in the result of the case, and was therefore, incompetent as a witness under Cap 31 of 32 and 33 Vic. sec. 45.

The Magistrate noted the objections and admitted Mason's evidence.

The witness stated— I know the defendant; I was opposite Mr. Woods' store when Gill purchased the laudanum; I saw Mr. Wood serving it; Gill came out and gave me the bottle in a wrapper; the bottle was one he had just purchased in the store; the bottle produced in court on the last hearing of this case is the same; from the time I got the bottle on King street until it was produced here I had it in my possession; the cork was not taken out of the bottle during that time.

Cross-examined— I saw the defendant through the glass in the door.

Mr. Shapter was called as the next witness, and at first objected to be sworn on the same Bible that Mason had had been sworn on.

He finally did so however, and stated: I am a druggist of some years experience; I should judge from the appearance of the fluid in the bottle produced that it is laudanum; but I do not know that it is; it smells like laudanum; it smells also like alcohol; laudanum is a tincture of opium; in a fluid ounce of the laudanum of commerce there would be about three grains of opium; opium is considered to be a poison, but not a deadly one; strychnia, nux vomica, arsenic and corrosive sublimate are deadly poisons.

Mr. Patterson— What is the difference between a deadly poison and one that is not deadly?

Witness— Well, about the best test would be for Mason to take a dose of strychnine and myself a dose of laudanum; (laughter); for deadly poison there is no remedy; it is more immediate in its action than poison which is not deadly, i.e., two grains of the former will kill quicker than two grains of the other; I have not always found an ounce of laudanum a fatal dose for an adult; I do not remember any case in which an ounce of laudanum proved fatal; I do not speak, in giving my classification, either from ex-

perience or from books; I give my own estimate of them; three grains of arsenic might produce fatal results. I cannot tell in what time it would produce a fatal effect. I am not aware that two grains of opium would produce a fatal effect. I keep laudanum in my store, and dispense it. I do not sell it ordinarily as I do hair oil. When a man of ordinary intelligence asks for laudanum, I ask him what he is going to use it for, and if he knows its nature; if he gives satisfactory answer I let him have the laudanum; I would not give it in any quantity; I would determine by the purpose for which the customer wanted the laudanum the quantity to give him; I would use this caution because of its necessity, not because laudanum is a dangerous poison; but if it is incautiously used it may produce death, but not immediately prussic acid will cause instantaneous death; I am speaking of my experience on cats. I have had no experience of the deadly effects of prussic acid on a human being; I do not of my own experience know any poison that will produce instantaneous death, laudanum is a vegetable poison.

Cross-examined— I would not class laudanum with arsenic, corrosive sublimate and strychnine; I would not call laudanum one of the poisons commonly known as deadly poisons; laudanum is not a poison that can be administered secretly, or that would be likely to be taken incautiously; I will not swear that the liquid in the vial produced is laudanum; from what I have heard of Mason's reputation for veracity, I would not believe him on oath.

Re-examined— I would not classify laudanum with the other poisons, because it is not so specific in its action; Mason has had me fined for selling liquor; I have no spite against him; I cannot tell whom I have heard speaking about his veracity, or where I have heard it spoken of; I have heard it spoken of repeatedly.

Dr. Lizars sworn— I am a qualified physician in the Province of Ontario; I have been practising since 1853; from the taste and smell of the contents of the bottle produced, I believe them to be laudanum—the common laudanum of commerce sold in drug stores and kept in most houses; laudanum is a preparation of opium; I cannot say what is the strength of common laudanum; it is commonly known as a poison and labelled as such; laudanum may be a deadly poison, and so may be arsenic, corrosive sublimate and strychnine; I never saw laudanum produce immediate death; there is no poison that I know of which will produce immediate death; arsenic, corrosive sublimate and strychnine will not do so; I would take Taylor's or Beck's Medical Jurisprudence as authority on poison; I think that arsenic might be looked upon as a deadly poison; I have known a number of persons take laudanum to kill themselves; I have known a man kill himself by taking it; there is a little over half an ounce or three quarters of laudanum in the vial produced; there is over two drachms in it; laudanum is a poison that, if used incautiously may produce death.

Cross-examined— I would not include laudanum in the same class of poisons as strychnine, arsenic and corrosive sublimate; secretly or incautiously administered it would not cause immediate death; there is not the same danger of laudanum being incautiously taken in dangerous quantities as strychnine, arsenic and corrosive sublimate; laudanum

can be secretly administered in dangerous quantities, but not with the facility of arsenic strychnine and corrosive sublimate; laudanum requires to be administered in such large quantities that it is likely to be detected at the time of taking it; I would not call laudanum a deadly poison in the same sense in which I would call arsenic and strychnine poisons; I would not include laudanum in the description of poisons mentioned in the statute; none of the poisons mentioned in the statute will cause immediate death; there is danger of laudanum being incautiously used; it can be administered in liquor so that the party taking it cannot detect it; it may be secretly administered; I do not think that laudanum is commonly taken as a deadly poison.

At this stage the case was again adjourned until next day, when the following additional evidence was taken:

Professor Croft sworn.—I am Professor of chemistry in the Toronto University; the fluid in the bottle produced is some preparation of opium; I cannot say without further examination whether it is laudanum or a sedative solution of opium; if taken in considerable quantities, opium is poisonous; the preparation in the bottle if taken in certain quantities would be fatal; some persons could take a pint of it in a day without being killed by it, and half a teaspoonful of it might kill a child; I think the laudanum of commerce contains about one of grain of opium in 20 drops; all poisons are deadly; it would be hard to administer laudanum secretly, on account of its disagreeable taste, but it might be administered secretly in porter in sufficient quantities to cause death, thought not immediately.

Cross-examined—Prussic acid will produce death in about five seconds, strychnine in about twenty minutes; laudanum would not produce death so soon; it is kept in almost every house as a medicine; I do not think it is a poison in the meaning of the statute.

Henry Burden, sworn.—I have been a chemist and druggist for about 20 years; when I sell any poison I require to know the party to whom I sell it and an order by a physician verbally or in writing; I do not use this precaution in selling laudanum; but I require to know something of the purchaser; if I knew my customer I would sell him a gallon if he asked for it; it is a poison; I cannot say that the liquid in the bottle produced is laudanum, but I think it is.

Cross-examined—I sell alcohol; it is a poison; from what I have heard of Mason's reputation for veracity I would not believe him on oath; laudanum is used in almost every family.

Dr. Riddell sworn.—The bottle produced contains laudanum; laudanum is a poison; I have known it to kill people; it does not come under our statute; it is not a deadly poison.

This concluded the evidence.

Dr. McMichael objected that there was no evidence of the sale of poison, and that the bottle produced had not been proved to be the identical bottle purchased from the defendant; assuming, however, that the liquid produced was laudanum, every professional witness had said that it was not deadly poison, and, therefore, it was not within the purview of the statute.

The Magistrate deferred judgment until Saturday.

ONTARIO COLLEGE OF PHARMACY

PRESIDENT, - - - Wm. ELLIOT, Esq.

The regular meetings of the College take place on the FIRST FRIDAY evening of each month, at the Mechanics' Institute, when, after the transaction of business, there is a paper read, or discussion engaged in, upon subjects of interest and value to the members.

The College admits as members, Chemists and Druggists of good standing, and their assistants and apprentices, as associates, on payment of the following fees:

Principals, - - - - \$4 00 per Annum
Assistants & Apprentices, 2 00 "

The JOURNAL is furnished FREE to all members.

Parties wishing to join the College may send their names for proposal to any of the members of the College. A copy of the Constitution and By-laws of the College will be furnished on application.

HENRY J. ROSE, Secretary.

THE CANADIAN Pharmaceutical Journal.

E. B. SHUTTLEWORTH, EDITOR.

TORONTO, ONT., DECEMBER, 1870.

Correspondence and general communications, of a character suited to the objects of this JOURNAL, are invited, and will always be welcome. The writer's name should accompany his communication, but not necessarily for publication.

Subscriptions will not be acknowledged by letter, as our sending the paper may be taken as sufficient evidence of the receipt of the money.

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"EDITOR CANADIAN PHARMACEUTICAL JOURNAL
TORONTO."

THE SALE OF POISONS.

Many of our readers will, by this time, have learned of the recent prosecution of a number of our city druggists for alleged infraction of the law regarding the sale of poisons. The case is one of considerable interest to all classes of the community, and, to druggists, especially so. Nor is this interest of a purely local nature, inasmuch as the statute relates to all parts of the Province, and should the decision which is now pending, be rendered in favor of the prosecution, it is probable that druggists, in other cities and towns, would soon have to suffer a like humiliation with their Toronto brethren, by becoming a prey to the treachery of that most despicable of creatures—a common informer.

The details of the case, together with the evidence taken, will be found, in full, in another part of the Journal, and to this we refer our readers for particulars; we give, however, a brief statement of the facts:—

Sometime during the middle of last month, the notorious informer, Mason, accompanied

by one of his satellites, made a circuit of the drug stores of the city, and from twenty-five of these establishments succeeded in obtaining, by virtue of various artful misrepresentations, quantities of laudanum varying from forty minims to an ounce. Information was at once lodged with the police magistrate, and the offenders were, in due course, brought before that functionary. As the information was in all cases the same, it was proposed to try one as a test, which was accordingly done. From the evidence of the informer, it appears that the laudanum was procured with considerable difficulty, and it was not until the purchaser gave full particulars as to the purpose for which he wanted it, urging, as a reason, that his rest had, for several nights been broken—that the druggist consented to let him have the quantity required—a little over half an ounce. The question arose as to whether laudanum came within the meaning of the statute in being "a deadly poison." A number of witnesses, including Professor Croft and Dr. Lizars, were examined, but all agreed in their testimony that laudanum could not be so regarded, and could not, with propriety, be classed in the same category with arsenic, corrosive sublimate, and strychnia. The case was remanded, from day to day, but nothing contradictory to this was elicited. The magistrate declined giving judgment when the evidence was concluded, and although nearly three weeks have elapsed, the decision has not yet been rendered.

It is not for us to say what the end of the case may be, but from the evidence taken, we certainly think that the point upon which the case appears to turn is clearly made out, and that laudanum cannot be considered a deadly poison, in the same light with poisons such as strychnia and arsenic. That the intent of the law is to include poisons such as these, and these only, will be apparent from a consideration of the following quotation from the Act in question:—

"No apothecary, chemist, druggist, vendor
"of medicine or other person shall sell or
"deliver any arsenic, corrosive sublimate,
"strychnine, or other poison, mineral or
"vegetable, simple or composite, commonly
"known as a deadly poison, (or which being
"incautiously or secretly administered may
"cause immediate death) to any person who
"does not then produce and deliver a certifi-
"cate or note from some person duly licensed
"to practice as a physician or surgeon, or
"some priest or minister of religion, resident
"in the locality, addressed to such druggist,
&c., and mentioning the name, calling, or
"profession of the person requiring such
"poison; and stating the purpose for which
"it is required, and that it ought to be sold
"to the persons requiring the same; and
"such certificate or note shall be kept by

"the person selling or delivering such poison as his justification for so doing."

What is a deadly poison? This is a question somewhat difficult to answer. It is true we might give a general definition of the term, which might convey its commonly understood acceptance, but this definition might be widely incorrect. Happily, in this difficulty, the framers of the statute have plainly indicated what they, at least, understood by the term;—that is—a poison "which being incautiously or secretly administered may cause immediate death." Certainly laudanum cannot come under this designation, for we know that "immediate death" has never been known to result from its use, even in the most enormous quantities, and in all cases a sufficient time elapses for the exhibition of the proper remedies. Some persons have endeavoured to assign a wider and more general meaning to the term as used in the Act. Thus, an erudite correspondent of the *Globe* informs the readers of that paper that a deadly poison is one "that will kill;" "or produce death in man." A moment's reflection shows this to be erroneous, but, assuming it to be correct, we might find hundreds of articles in a druggist's stock which might be classed under the term. The mere enumeration of these would be sufficient to show their character, but let us go to fields less promising and find what the grocer does in the "deadly poison" line. Take one of the commoner articles—saltpetre—we find that in doses of one ounce it will prove fatal, and instances of such a termination have been recorded; (*Wood & Bache*)—cream of tartar, four or five teaspoonfuls have been found a fatal dose for an adult (*Taylor's Medical Jurisprudence*)—essence of ratifia, a teaspoonful is a fatal dose, a case of poisoning by this quantity is reported in the *Lancet* in 1841—cayenne pepper, one ounce of which would cause death as certainly as a like quantity of laudanum. We might enumerate a number of similar instances, or might allude to alcoholic liquors which are, as a rule, comparatively slow in their action, but nevertheless remarkably sure; but think we have adduced sufficient to show that if a deadly poison is one which will produce death in man, and that such is the meaning of the term as used in the Act, that informer Mason need not in future confine his attention, exclusively, to druggists.

We do not, at present, intend to pursue this subject further, but shall postpone our remarks until a legal decision has been given. In the meantime, we do not wish it to be understood that we treat the matter of the sale of poisons, with undue laxity; we hold to quite the contrary, and think that every legal obligation compatible with the lawful use of dangerous substances, should be laid

down and enforced with the utmost rigor, but we believe that the present law is altogether insufficient for the purpose for which it was intended, as demonstrated by the fact that for over ten years it has remained a dead letter on our statute books, and when it is ultimately revived, it is only for the purpose of extorting money from one of the most respectable classes of the community, and placing it in the hands of one whose very avocation is a by-word and a disgrace.

The most impracticable and pernicious feature of the present law is that of requiring a physician or minister's certificate as authority for the sale of poison, (let the rendering of the word be what it may). On this subject one of the *Globe's* correspondents very sensibly remarks. "Is a doctor or a minister any better qualified than a druggist to determine the uses to which a person may apply poison after having purchased it? Or, do they keep any record of the name, occupation, residence, &c., of those to whom they grant these certificates? I believe the answer—No! will apply to both these questions. And I also believe that there is no druggist in the Dominion who would knowingly and willingly contravene the law as it now exists, if he could avoid it. But the thing is impossible! There is scarcely any article in the whole pharmacopœia which can strictly be termed 'innocuous,' and one-half of the stock usually found on the shelves of a drug store might easily be termed 'poisons.' So that keeping to the precise letter of the law, a druggist would be compelled to give up his business and say with the Moor 'Othello's occupations gone,' or by infringing it, as in the instance now on trial, place himself at the mercy of any one who through spite or impecuniosity may see fit to visit him with the terrors of the law."

The druggist is the party with whom the responsibility of the sale of poisons should rest. The nature of his calling presupposes an intimate knowledge of their properties and uses; of these matters he is certainly a better judge than the priest or minister. His standing in the community is, as far as morality is concerned, as high as any. Care and watchfulness form an essential part of his education, and, in this respect, he is not a whit behind the physician. We are not unduly sounding the praises of the class we represent, for we find that others entertain an equally high estimate of the character of the profession. On this subject a city contemporary editorially remarks: "As a rule the educated druggist is one of the most careful of traders. A high sense of responsibility governs his proceedings, whether dispensing or retailing his goods. Not a few of them on point to occasions on which even

"the physician's prescription has been corrected, and a catastrophe arising from a slip of the M. D.'s pen, averted by the watchfulness and intelligence of the dispenser." Let the druggist be allowed to use his own discretion in regard to the sale of poisons, and in thus assuming the guardianship of the public safety, we are sure that the welfare of the community will not suffer.

In speaking to druggists it is needless for us to remark that the passing of the proposed Pharmacy Act, as amended at the last sitting of the Legislature, would prove an effectual remedy for the evils and inconveniences with which both druggist and people are now harassed. It would insure adequate qualification on the part of those engaged in selling poisons, and at the same time guarantee all that the law can ask in regard to their sale. We hope that druggists, as well as lovers of good order, will do all in their power to promote the passing of this measure, by representing to members of the House, with whom they may have influence, the true state of affairs and the great necessity for putting this vexed question of poisons on a just and solid basis.

OBITUARY.

We have again to note the loss, by death, of another member of the College—Mr. John A. Kane, of Amherstburg. From information received from Mr. Lowe, of that place, we learn that Mr. Kane was the pioneer of pharmacy in that region, having commenced business at an early stage of settlement. In 1851 he commenced a small business, which was so successful that, in a short time, he was enabled to erect the large brick store in which he conducted business until the time of his death. He had been suffering for a lengthened period, under a severe chronic bronchial affection, which ultimately resulted in his death—an event which took place on the 14th November. Mr. Kane was one of the first country members of the Pharmaceutical Society, and took a prominent part in the promotion of its interests in the section of country in which he resided. His manner is described as having been quiet and unostentatious, and as a neighbour and tradesman he bore a faultless character. He leaves behind him a wife and seven children, who have the deepest sympathy of all who knew him.

Our European exchanges contain announcements of the death of three distinguished chemists:

DR. WILLIAM ALLAN MILLER, LL.D., F.R.S., Professor of Chemistry in King's College, London, died at Liverpool, of apoplexy, on the 30th of September. He was born in 1817, and at an early period gave evidence

of his predilection for that branch of science in which he, subsequently, became so distinguished. In his younger days he was a pupil of Liebig, and afterwards of Prof. Daniell, who, ultimately, engaged his services as assistant lecturer in King's College. In 1845 he succeeded to the Professorship,—an appointment which he held until the time of his death. He also held the positions of Vice-President of the Chemical Society; Treasurer and Vice-President of the Royal Society, and assayer to the Mint, and Bank of England.

DR. AUGUSTUS MATTHEISON, F.R.S., F.C.S., Lecturer on Chemistry at St. Bartholomew's Hospital, died on the 6th of October, under circumstances of the most painful character. He was found seated at his laboratory table, and near him a bottle of prussic acid and another containing urate of ammonia, with which, it is said, he was experimenting. He appeared to be asleep, but examination revealed the fact that he must have been dead several hours. Dr. Mattheison was only about forty years of age, but is well-known through his researches on electricity, and in the department of organic chemistry. His researches on the opium bases are, doubtless, familiar to most of our readers, who will also remember his discovery of the new base apomorphin, which was announced quite recently.

DR. ALEXANDER P. BOLLEY, Professor of Chemistry, in the Polytechnic School of Zurich, died suddenly, of heart disease, while in the midst of his active duties. He gave his usual lecture, on the morning of the day of his death, and shortly after, feeling unwell, he started for a sharp walk, thinking exercise might be beneficial, but in a short time he fell prostrate on the street and was carried home a corpse. He was born at Heidelberg, in 1812, and was at one time assistant to Prof. Gmelin, but owing to political troubles, in which he took a prominent part, he was compelled to flee to Switzerland where he resided until his death. In the department of applied chemistry Professor Bolly was unequalled. His loss will be severely felt by the school with which he was connected, as well as by the scientific world at large.

Effect of Alcohol on Animal Temperature.

From a series of carefully conducted experiments on the effect of alcohol on animals and men, Dr. Cheever, (*Michigan University Journal*) comes to the following conclusions: 1st. That in the case of animals the body temperature is unaffected by non-narcotic (non-poisonous) doses. 2nd. That narcotic doses cause a marked decline in temperature. 3rd. That this decline is in direct proportion to the degree and duration of the narcotism.

4th. That the body temperature of man is but very slightly affected by non-poisonous doses of alcoholic liquors. 5th. That this effect is not uniform, but varies with different individuals, and liquors. 6th. That the influence of alcohol on the temperature of the human body is not sufficient to indicate or contra-indicate its use in any case.

A Cheap and Compact Battery.

In one of our exchanges we notice a description of a form of galvanic battery which is ascribed to Dr. Golding Bird, and which might interest some of our younger readers. The bowls of six ordinary clay tobacco pipes are detached from the stems, and the apertures at the bottom of the bowls stopped with sealing wax—these serve the purpose of porous cells. Six small toy tumblers—an inch or two in height—are fitted with small cylinders of amalgamated zinc—the pipe bowls are provided with strips of platinum (if this cannot be obtained copper may be employed) and inserted in the middle of the tumblers. The connections between the cells are made of fine platinum wire. Nitric acid is used for the exciting solution in the pipe bowls, and dilute sulphuric acid for the zinc. This little arrangement is said to be sufficient for the decomposition of water.

Colored Fires.

Druggists are occasionally required to furnish colored fires, and though we know that there is no lack of formulae for their preparation, we suppose that the source from which the following recipes are derived is some guarantee of their superiority. The formulae were presented to the Physical Society of Frankfurt by a member of the German Artillery corps.—

1. White light: 8 parts saltpeter, 2 parts sulphur, 2 parts antimony.
2. Red light: 20 parts nitrate of strontia, 5 parts chlorate of potash, 6½ parts sulphur, 1 part charcoal.
3. Blue light: 9 parts chlorate of potash, 3 parts sulphur, 3 parts mountain blue (carbonate of copper).
4. Yellow light: 24 parts nitrate of soda, 8 parts antimony, 6 parts sulphur, 1 part charcoal.
5. Green light: 20 parts nitrate of baryta, 18 parts chlorate of potash, 10 parts sulphur.
6. Violet light: 4 parts nitrate of strontia, 9 parts chlorate of potash, 5 parts sulphur, 1 part carbonate of copper, 1 part calomel.

Detection of Arsenic.

The *Chemical News* contains a notice of a recent paper, by Dr. Bethendorf, which appeared in the September number of *Dingler's Journal*, and which contains an account of a new test for the detection of arsenic in sulphuric and hydrochloric acids, in subnitrate of bismuth and in tartar emetic. The test

is easily applied and might be turned to good advantage in pharmacy.

Take a thoroughly clean and dry test-tube, of not so narrow a bore; put into it as much pure protochloride of tin as can be placed on the point of a knife; next add from 4 to 6 c.c. of pure hydrochloric acid (containing 25 per cent of real acid, sp. gr. about 1.12); add, after this, gradually, from 2 to 3 c.c. of the sulphuric acid to be tested, taking care to move the test-tube very gently. If a white precipitate ensues, the addition of a few drops of the hydrochloric acid will be required to restore the liquid to perfect limpidity. If no arsenic is present, the liquid remains clear and colorless, even after standing for a time; but if even a trace of arsenic is present, the fluid becomes at first yellowish, next brownish-colored, and at last the metallic arsenic is deposited as a deep grayish brown flocculent substance. Even with only 1-500,000th part of arsenious acid a coloration ensues. It is essential that, when the sulphuric acid is added, the liquid should become hot; if, therefore, that acid is to dilute too cause heating, the test-tube and contents should be warmed over a spirit flame. The testing of hydrochloric acid only differs in this particular; that, instead of taking, as above stated, pure hydrochloric acid, the acid to be tested is tested is taken, and pure concentrated sulphuric acid is applied. The testing of the subnitrate of bismuth is carried out in the following manner. About ½ a gram. of the subnitrate is placed in a test-tube; a quantity of 1 c.c. of pure and concentrated sulphuric acid is next added, to expel the nitric acid. After this has been driven off, the tube being kept in a vertical position, from 4 to 5 c.c. of pure hydrochloric acid are added; when the liquid has become quite clear, about 1.5 to two grms. of pure protochloride of tin are added; after this salt has been dissolved about 3 c.c. of strong and pure sulphuric acid are added; and if the mixture does not then become very hot, it is heated just to the boiling-point. The coloration and precipitation of arsenic above described take place after a shorter or longer time according to the quantity of that substance which is present; but it ought, of course, to be absent. The testing of tartar is effected in the following manner:—As much as can be carried on the point of a large-sized knife, and twice as much protochloride of tin, are placed in a wide test-tube; 4 to 5 c.c. of the pure hydrochloric acid above alluded to are added; and, next, 2 to 3 c.c. of pure concentrated sulphuric acid. If required the mixture is heated. Neither the oxides of bismuth nor antimony are reduced to the metallic state by this reaction.

Local.

A RIDDLE—Who was Mason's informer in the recent prosecution for the illegal sale of poisons?

THE United States Patent Laws, with instructions how to obtain Patents, is the title of a work of 112 pages, sent to us by MUNN & Co., 37 Park Row, New York. It also contains the official rules, forms for patent deeds, hints on selling patents, 150 diagrams of mechanical movements, and a large variety of other useful information. It is a book

really worth having, and can be had free by all who will send their names to Messrs, MUNN & Co. as above.

The latest novelty in the way of advertising was brought out at Mlle. Nilsson's concert, in this city. The programmes, which were liberally distributed, exhaled a fragrance strongly suggestive of santal, not to say musk, and each was stated to have been "perfumed with a single drop of the celebrated Nilsson Bouquet." We are never too old to learn.

Students' Department.

QUESTIONS.

- I.—The weight of a piece of metal, when taken in the ordinary manner, is found to be equal to 500 grains; when immersed in water it is found to weigh 456 grains. What is its specific gravity?
- II.—Ascertain, by experiment, the specific gravity of the alloy of silver used in our Canadian currency.
- III.—How much commercial alcohol 65 o. p., will be required to make one imperial pint of *Sp. Tenuior B. P.*?
- IV.—Describe, by an equation, the changes which take place in the preparation of *Liq. Ferri Perchlor. Fort. B. P.*?
- V.—What amount of zinc will be required to make one pound, avoird., of the crystallized sulphate?
- VI.—What percentage of nitric acid (HNO_3) is present in a solution of which ten ounces require for neutralization, 4.4 ounces of caustic soda?
- VII.—How much metallic arsenic is contained in one fluid ounce of *Liq. Arsenicalis*?
- VIII.—What quantity of cyanide of potassium and acid sulph. B.P. will be required to produce ten parts pure hydrocyanic acid.
- IX.—An unlabelled parcel is known to contain either tartaric or citric acid, in powder. How would you determine which was present?
- X.—A solution is supposed to contain either iodide, bromide, or chloride of potassium. How would you determine its composition?

ANSWERS.

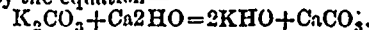
- I.—The specific gravity of *Æther, B.P.*, is .735; that of *Chloroform*, 1.49. These numbers furnish us with the relative weights of equal bulks of both liquids. The volume specified is that occupied by a pound of ether. The question may be simply expressed thus: A vessel capable of holding 735 pounds of ether will hold 1490 pounds of chloroform; what quantity of chloroform will a vessel which will hold 1 pound of ether contain? As 735 : 1 :: 1490 : 2.02 lbs., Ans.
- II.—The term 65 over proof, or o. p., as applied to alcohol, signifies that 100 parts of

that spirit contain, or are equivalent to, 165 part of proof spirit. *Spiritus rectificatus, B.P.*, is of specific gravity .838, and is equal to a strength of 55.45 o. p., as indicated by Sikes' hydrometer. From those data we may state the question thus: How much alcohol containing 165 per cent. of proof spirit will be equal to 10 gallons of a spirit containing 155.45 per cent.? As 165.00 : 155.45 :: 10 : 9.42 gals., Ans.

There is another method by which this question may be solved. Alcohol of 65 o. p. contains 89 per cent. by weight of absolute alcohol; that of specific gravity .838 contains 84 per cent. A simple calculation furnishes us with an answer corresponding to that given above.

III.—By reference to tables of the strength of hydrochloric acid, we find that that of sp. gr. 1.15 contains 30.5 per cent. of hydrochloric acid gas (HCl); then, if 100 parts of commercial acid are equal to 30.5 parts of HCl, what quantity will correspond to 10 parts HCl? As 30.5 : 10.0 :: 100 : 32.7 parts, Ans.

IV.—The changes which take place in the preparation of *Liq. Potassa* are expressed by the equation—



V.—To ascertain whether the reaction in the above process is complete, a few drops of the clear liquid may be added to an excess of dilute sulphuric, nitric or acetic acid; the presence of carbonic acid will be shown by effervescence. It is usual to reverse this method, and add acid to the liquid to be tested. In this case, minute traces of carbonic acid will escape observation, as the gas liberated will combine with a portion of the undecomposed carbonate of potash, forming bi-carbonate. As nearly all authorities recommend the addition of the acid to the liquid, we have made no deduction from the value of the answers, but all agree in being in error in this particular. One of our students gives a test for lime, but as the solubility of this substance is so small, there is no fear of much contamination. Another test which may be applied for the detection of carbonate, is that of aqua calcis, an equal bulk of which should be added to the filtered liquor; if carbonic acid be present, a precipitate of carbonate of lime will render the liquid milky.

VI.—By the equivalence or atomicity of an element, we mean the relative value or power of its atoms as compared with others, or when referred to a common standard. As hydrogen has been selected for the standard of the weight of atoms, so has it been adopted as the standard of their value. One atom of hydrogen is capable of combining with and fully satisfying one atom of Cl, as in the compound HCl. We can replace this atom of H by one of Na, forming NaCl; or we can in turn displace the atom of Na by one of Ag, forming AgCl. The atoms of these elements are then truly equivalent to one another, and to this class, which also embraces a few other elements, the names univalent, or monovalent, have been applied. Again, we have a class of elements whose single atoms are capable of combining with two atoms of hydrogen, or displacing a like number; thus, in the familiar instance of water H_2O , one atom of oxygen appears to fully saturate two atoms of hydrogen; or if, in the case of HCl, we act upon that

substance with zinc, we find that one atom of zinc is capable of displacing the hydrogen from two atoms HCl, combining with two atoms of chlorine, and forming the compound ZnCl_2 . Thus we see that one atom of oxygen or zinc is equivalent to two atoms of hydrogen or chlorine. These two elements, together with some twenty-three others, are known as dyads, or bivalent elements. In like manner we have triads, or trivalent elements, the single atoms of which are equivalent to three atoms of hydrogen—as nitrogen in the compound NH_3 . We have also a class of tetrads, or quadrivalent elements.

VII.—The following answer is given by Mr. Price Jackson, Toronto:—

(a) One of the most delicate tests for nitric acid is to add to the liquid to be tested an equal volume of strong sulphuric acid, well cooling the mixture, and then carefully pouring on its surface a solution of ferrous sulphate. If nitric acid be present, a black ring is produced where the two layers meet. Nitric acid stains the skin and nails of a permanent yellow color, destroys the color of indigo, and in combination, when heated with sulphuric acid, gives off red fumes of nitrous acid.

(b) Sulphuric acid, either alone or in combination, in the form of a soluble sulphate, produces immediately a dense white precipitate when added to a soluble barium salt. Sulphuric acid, when strongly heated, gives off dense white suffocating fumes.

(c) Hydrochloric acid is known by the dense curdy white precipitate produced when the acid or a soluble chloride is added to a solution of silver nitrate, the precipitate being easily soluble in ammonia, and insoluble in nitric acid. It is also known by its pungent odor, resembling that of chlorine.

VIII.—By the assay of any substance we do not mean its complete quantitative analysis, but the determination of its most valuable constituents. In the case of opium this term is generally applied to the estimation of morphia, only. Some of the answers we have received treat the matter too thoroughly, and give methods for the isolation of all the so-called opium products. Of this, however, we do not wish to complain, but think it shows a praiseworthy endeavour to do the subject every justice. There have been many methods devised for the assaying of opium, as those of Guillemond, Hager, Fordos, Schnieder, Mayer, and others, but in the present instance it might be better to adopt the official process of the B. P. To this we need not refer, as we suppose the work is accessible to all.

IX.—Mr. H. MacLagan, Lindsay, gives the subjoined answer to this question:

Ipomea Jalapa (Nuttall). *Exogonium Purga* (Bentham.) This plant is a native of Mexico, deriving its name from the city of Jalapa, in the neighborhood of which it grows. The drug is brought from the port of Vera Cruz, in bags usually containing 100 or 200 pounds. The tuber comes either whole or divided longitudinally into two parts, or in transverse circular slices. The entire tubers are irregularly roundish, or oval and pointed, or pear-shaped, usually much smaller than the first. The tuber is heavy, compact, hard, brittle, with a shining undulated fracture, exhibiting numerous resinous points, distinctly visible under

the microscope. Externally it is brown and wrinkled; internally, of a grayish color, diversified by darker concentric circles, in which the matter is denser and harder than in the intervening spaces. The odour of the root, when cut or broken, is heavy, sweetish, and rather nauseous. The taste is sweetish, somewhat acrid, and disagreeable.

Tampico Jalap is distinguished by the name of the port from which it comes, differing from the true jalap, which is brought exclusively from Vera Cruz. The botanical source is unknown, but, from its resemblance to the true jalap, it is evidently the product of a plant belonging to the same family of *Convolvutaceae*. The odour of Tampico jalap is said to resemble that of peat, and is very persistent, being perceptible even in the extract and resin. It is much inferior to the true jalap.

Mechoacan is a native of Mexico and the Southern States, and is sometimes found as an adulteration in true jalap. The plant producing it has been conjectured to be the *Ipomea Macrorrhiza* of Michaux, but the origin is quite uncertain, and Guibourt states that what is sold in Europe under the name of Mechoacan, is certainly the product of *Asclepias Contrayerva* of the Mexican flora. It is in circular slices or fragments of various shapes, white and farinaceous within, and as found in the European markets, generally destitute of bark, of which, however, portions of a yellowish color sometimes continue to adhere. The larger slices are sometimes marked with faint concentric striae, and upon the exterior surface are brown spots, and ligneous points, left by the radicles after removal. Though tasteless when first taken into the mouth, it becomes after a time slightly acrid. It is feebly purgative.

Male Jalap. Fusiform Jalap. Jalap Stalks.—A drug formerly known as spurious jalap, in our markets, sometimes comes mingled with the genuine, and has been imported unmixed, in mistake for that root. It has been named *Convolvulus origabensis*, from the city of Origaba, in the vicinity of which it grows. It is described as being in circular pieces, two or three inches in diameter, or longer or more slender sections. The shape of the pieces is often such as to indicate that the root was sliced transversely, and each circular piece divided vertically into quarters. The horizontal cut surface is dark brown, from exposure, unequal from the greater shrinking in dessication of some parts than others, and presents extremities of numerous fibres, which are often concentrically arranged, and run in the longitudinal direction of the root. Internally the color is grayish, and the texture, though much less compact than that of the genuine, is sometimes, almost ligneous. The taste is at first slight, but after a time becomes somewhat acrid and nauseous. It has cathartic powers somewhat similar to the true jalap, but much feebler.

Rose-scented Jalap; Overgrown Jalap.—A false jalap was some years since imported from Mexico into New York, and offered for sale under the name of overgrown jalap. It was in light, entire, or vertically sliced tubers, of different form and magnitude, spindle-shaped, ovate and kidney-form; some as much as six inches long and three thick, others much smaller, externally

somewhat wrinkled, with broad, flattish, light-brown ridges, and shallow, darker furrows; internally greyish-white, with distant dark concentric circles, sometimes uniformly amylaceous, of a dull rough fracture, a loose texture, a slight, peculiar and sweetish odor, and a feeble jalap-like taste. The root differs from Mechoacan by the absence of rootlets, and from male jalap by the want of fibrous structure. A similar root was described by Guibourt, by the name of rose-scented jalap. It was brought from Mexico to France mixed with the genuine jalap. It proved equally inefficacious as a purgative, and probably had the same origin.

Another variety of false jalap, is described as being a tuberous root, resembling in shape, color, and size, the butternut, or fruit of *juglans cinerea*, being black or nearly so, externally, dull over most of the surface, but glossy in spots, with deep longitudinal incisions. Internally yellowish or yellowish white, with a horny fracture, and upon the transversely cut surface marked with sparse dots, as if from delicate fibers. It contains no resin, and appears to be inert.

Three other tubers are described by Guibourt, which have been offered in the market for jalap; one named *false jalap of New Orleans*, because imported into France from that city; the second, *digitate jalap*, from the arrangement of its component tubers, and the *radiated false jalap*, from the stellate appearance of its cut surface.

X.—*Tinct. ferri perchloridi* is incompatible with the alkalies and alkaline earths and their carbonates; solutions containing weak acids, as sulphurous or hypophosphorous; tannic and gallic acids, and astringent vegetable infusions or tinctures; acetate of lead; nitrate of silver, and mucilage of gum arabic.

ORDER OF MERIT.

Number of Marks awarded for Answers.

QUESTIONS—	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	Total.
1. W. A. C., Orono.....	10	9	5	10	10	10	10	10	10	7	91
2. P. Jackes, Toronto.....	8	1	10	10	10	10	10	10	6	10	85
3. H. MacLagan, Lindsay.....	10	1	5	10	9	5	10	8	10	10	78
4. G. McIntyre, London.....	8	5	5	10	10	1	10	8	7	7	71
6. W. M. Rose, Toronto.....	10	5	5	10	9	1	10	7	6	8	71
5. C. E. Scarff, Woodstock.....	10	0	10	10	9	2	5	2	4	8	69
7. E. B. Borland, Fenelon Falls	1	1	2	10	1	1	10	10	7	8	51

Notes and Queries.

J. J. Hall, Woodstock.—You will find the Constitution and By-laws in the July number of the JOURNAL for the present year. They have not been issued in a separate form, or we should have sent you a copy.

STUDENT wants to know what is, in our opinion, the best way to make MAGENTA DYE and TINCT. FERRI MURIAS. The latter compound he has seen prepared with ferri subcarb. and acid. hydrochloric, and asks if this is the proper formula for the tincture used in Canada.

MAGENTA DYE.

Magenta crystals.....½ oz. (avoir.)
Alcohol.....1 pint (wine.)

Dissolve the magenta by agitation with the spirit, and add

Water.....1 pint (wine.)

TINCT. FERRI MUR.

This tincture is no longer known, in Canada, by the name by which you have designated it. Since the publication of the British Pharmacopoeia of 1864, its name, as well as the mode of its preparation, have been changed, although the composition of *Tinct. Ferri Perchloridi*, as it is now called, is identical with that of the older preparation. The method of preparation is described in the British Pharmacopoeia, which work you do not seem to have, but should, by all means, procure. In the meantime we transcribe the process for your benefit:—A preparatory step is the preparation of *Liquor ferri perchloridi fort.*, which is made by mixing 8 fluid ounces of hydrochloric acid, sp. gr. 1.16, with an equal bulk of water, and dissolving therein, by means of a gentle heat, two ounces of iron wire. Filter the solution, and add to it four fluid ounces of hydrochloric acid, and nine fluid drachms of nitric acid, heat the mixture briskly until on the sudden evolution of red fumes, the liquid becomes of an orange brown color; finally evaporate by the heat of a water bath until the bulk is reduced to ten fluid ounces. This is the official process, but we should advise you to bring the filtered liquid to which the additional hydrochloric acid is added, to a boiling temperature before adding the nitric acid, and to add the latter carefully, and by small portions at a time, until it no longer produces effervescence. This will have occurred when the liquid assumes a clear reddish color. A porcelain, or wedgewood vessel will be required, and it should be of at least double the capacity occupied by the liquid. This solution should not throw down a precipitate on being tested with red prussiate of potash.

For making the tincture, this solution should be diluted with three times its bulk of rectified spirit; this will form the tincture of muriate of iron in use in Canada, or at least that which should be used.

ONTARIO COLLEGE OF PHARMACY.

MONTHLY MEETING.

The regular monthly meeting assembled at the usual place, on Friday evening, 2nd inst., when the minutes of last meeting were read and adopted, and the following new members were elected:

- S. T. Chamberlain.....Strathroy.
- W. P. Conklin.....Tilsonburg.

ASSOCIATE.

C. Thompson.....Strathroy.

After informal conversation regarding the criminal prosecution of nearly all the Toronto druggists, for selling laudanum contrary to the Poisons Act, it was decided on motion of the Vice-President, to adjourn the meeting until Tuesday evening, pending the Police Magistrate's decision.

The adjourned meeting was held on Friday evening, 9th inst., with the President in the chair, who explained that as the Magistrate's decision had been twice postponed, it was thought best to call the meeting for to-night, as the Ontario Legislature had assembled, and it would be advisable to take action with regard to the bill.

After discussion of the criminal prosecutions, it was decided that as the Society was composed principally of members non-resident in Toronto, they could take no action in the matter, but must leave it for the druggists of Toronto to deal with as they thought best.

Mr. Shuttleworth brought before the notice of the Society a new feature introduced into the *Journal*, in the last two numbers, which consisted in the publication of a series of questions for students and others, which, in the absence of any lectures provided by the Society, he thought ought to be encouraged by the offer of prizes for the best answers, either monthly or quarterly. In reply to a question as to the greater opportunities some would possess for finding answers, Mr. S. said that the answers could all be found by any one who had the U. S. Dispensatory, or any similar work, at his command. After many remarks by those present as to the advantages of the project and the practical and useful nature of the questions already published, the matter was left over for future action.

Mr. R. W. Elliott said that as the Legislature was now in session, some action should be taken regarding the Bill, which was crowded out last session, partly owing to the press of railway business, but partly owing to the supineness of the gentleman who had taken charge of it, and it was for the meeting to say whether it would be advisable to endeavor to place it in other hands. A committee was appointed, consisting of the Vice President, Mr. R. W. Elliot and Mr. Hodgetts, with power to add to their numbers, to confer with the Hon. Attorney General, and take such action as they deem best for obtaining the desired legislation.

Meeting adjourned.

HENRY J. ROSE, Secretary.

Changes.

Mr. J. A. Garlick, of Mitchell, has entered into partnership with Mr. Colwell, of that place. The style of the firm is Colwell & Garlick.

Mr. J. McLean of St. Mary's, has removed to a better and more commodious store.

Mr. Dyas, of Lucan, has purchased the business of Mr. G. Orchard, Strathroy, Mr. Orchard retires.

Mr. D. Wilson, of Stayner, has disposed of his business to Dr. D. J. Beaton, of that place.

Communications.**TINCTURE OF CHLORIDE OF IRON.**

Editor Pharmaceutical Journal:

DEAR SIR,—Seeing that the topic of discussion at this month's meeting of the Ontario College of Pharmacy was Tinct. Ferri Perchlor., I thought it might not be amiss to give you a minute description of how we make it. There is nothing very wonderful about our plan; but still, in the course of some years' operations, we have had many little difficulties to overcome—difficulties so slight that the framers of the formula have not considered it necessary to notice them, and yet they gave us considerable annoyance and discouragement.

For the preparation of the tincture we use the United States formula, as we do, in fact, for nearly all other preparations in this section. We make four times the quantity demanded by the formula at once. Twelve troy ounces of No. 13 iron wire, purchased from the hardware merchant, are cut, by the aid of a pair of large shears, into pieces almost an inch in length. We cut through a small coil at once. This is put into a gallipot and the hydrochloric acid poured over it. We do not use a flask, because we find that crystals are apt to form and cement the whole into a solid mass, which it takes considerable force to break up, and in doing this we broke our flasks. The gallipot is now set aside, and will have to stand from four days to a week. Twice each day during this time the semi-crystallized mass must be well broken up. When the effervescence has ceased, we turn the whole into a three-gallon enamelled preserving kettle, heat it to the boiling point, and filter it through double filtering paper—well supported at the point—into a bottle containing the remainder of the hydrochloric acid. After carefully rinsing with hot water, there will be a residue of undissolved iron and carbon remaining in the filter, which should weigh, when dried, about two ounces although I am afraid ours sometimes, weighs even more than that. We then cleanse the preserving kettle with a little water, return the filtrate into it, and having brought the mixture quite to the boiling point throw in the nitric acid. There ought now to ensue a brisk effervescence, and the evolution of copious acid fumes, whilst the mixture turns from a pale green to a transparent brownish red, but instead of this we frequently find only a slight effervescence and a change to a dirty greenish black color. The remedy for this is a little more heat, and, if that will not do a little more nitric acid. The acid should be added sparingly at first, and generally a few drops makes all right, but we once added nearly half an ounce extra. Having added water sufficient to make the product measure four pints, we carry the process no further until the bottle from which we retail needs filling. We then mix half a pint of the Liq. Ferri. Perchlor. and a pint and a half of alcohol, and our Tincture of Iron is complete. When we added the alcohol at the time of making as directed by the Pharmacopoeia, we found that before the whole quantity was used we got a yellow precipitate, which had to be filtered out before filling up the shop bottle. Now we have no filtering to do. The tincture when first made, has not quite the deep color, nor the ethereal smell that characterize

a good article, but these come in the course of twenty-four hours after mixing. It is, of course, necessary to use those acids which are known as chemically pure; failure will be almost certain with the ordinary commercial acids. I cannot understand why the alcohol is needed in this tincture; I should think it would be far better to use water in place of it, and call it a liquor.

Yours, &c.

PHILO.

MUCILAGO ACOACIE.

Editor Canadian Pharmaceutical Journal.

DEAR SIR—I would recommend to PHILO and others, who have had any difficulty in keeping *Mucilago Acacie* sweet, to add 2 oz. Sp. Vini. Rect. to each pint of mucilage.

The amount of alcohol is so small that scarcely any objection can be found to its presence, whilst in my opinion it makes a clearer and more perfect solution.

A sample by me a year old, is as free from acid as when first made.

Respectfully yours,

"AIKEN."

Amherstburg, Ont., Nov. 29, 1870.

Trade Report.

The unsettled state of the weather, and the bad condition of the roads during the past month, have combined to render wholesale business very quiet.

The changes to note are but few, Ammon. Carb., Bals. Copaiba, Cochineal, Galls, Morphia. Oil Almonds, Oil Peppermint, being all in favor of the buyer.

The advance in price is confined to a very few articles, viz., Cantharides, Mercury and its preparations, Iodine and preparations. Quinine is also still advancing.

The demand for Spices for the Christmas season is large, and prices rule about the same, Cassia being lower, Mace and Nutmegs are very firm at high rates.

PERFUMERY.

HANDKERCHIEF Extracts, Jockey Club, Frangipanni, Patchouly, West End, Musk, Spring Flowers, Mignonette, New Mown Hay, Sweet Pea, and all the popular scents.

Extra Quality.—6 oz. Octagon Cut; 3 oz. Octagon Cut; 1½ oz. Plain, stoppered.

Best Quality.—1½ oz. Plain, stoppered.

No. 1 Quality.—1½ oz. Squat Cork'd; 1 oz. Stone Jug; 1 oz. Glass Jug; ½ oz. Panel; ½ oz. Squat; ½ oz. Squat; ½ oz. Oval; ½ oz. Squat.

Hair Oils, Pomades, Tooth Washes, Tooth Powders, Cologne, Lavanders, Sachets, Camphor Ice and Roll, Toilet Vinegar, Milk of Roses, etc., in all the popular styles.

Price Lists on application to

LYMAN BROS. & Co.,

1-y. 157 King Street East, Toronto.

WHOLESALE PRICES CURRENT—DECEMBER, 1870.

DRUGS, MEDICINES, &c.		DRUGS, MEDICINES, &c.		DRUGS, MEDICINES, &c.		DYE-STUFFS—Continued	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Acid, Acetic, fort	0 12 @ 0 14	Gum, Shellac, liver	0 30 @ 0 35	Potash, Bi-chrom	0 15 @ 0 20	Logwood, Camp	0 02 @ 0 04
" Benzoic, pure	0 25 0 35	" Storax	0 65 0 75	" Bi-tart	0 25 0 23	" Extract	0 10 0 14
" Citric	0 75 0 85	" Tragacanth, flake	0 80 0 93	" Carbonate	0 16 0 23	" " 1lb box	0 14 --
" Muritic	0 05 0 07	" " common	0 32 0 40	" Chlorate	0 38 0 49	" " 4lb "	0 15 --
" Nitric	0 11 0 15	Galls	0 27 0 32	" Nitrate	10 50 11 00	Madder, best Dutch	0 14 0 17
" Oxalic do	0 24 0 30	Gelatin, Cox's, 6d.	1 10 1 20	Potassium, Bromide	1 60 1 70	" 2nd quality	0 13 0 16
" Sulphuric	0 03 0 07	Glycerine, com.	0 26 0 30	" Cyanide	0 65 0 75	Quercitron	0 03 0 05
" Tartaric, pulv.	0 39 0 45	" Vienna	0 39 0 40	" Iodide	4 00 4 50	Sassa	0 06 0 08
Ammon., carb. casks	0 18 0 19	" Price's	0 65 0 75	" Sulphuret	0 25 0 35	Tin, Muriate	0 10 0 12
" " jars	0 18 0 20	Honey, Canada, best	0 17 0 20	Pepsin, Boudault's, oz.	1 25 1 50	Redwood	0 05 0 06
" " Liquor, 830	0 18 0 25	" Lower Canada	0 15 0 18	" Houghton's, doz	8 00 9 00		
" " Muriate	6 12 0 15	" " "	0 20 0 25	" Morson's, oz.	0 85 1 10		
" " Nitrate	0 45 0 50	Iron, Carb. Precip.	0 40 0 45	" Sulphuret	0 25 0 35		
Æther, Acetic	0 45 0 50	" Sacchar	0 40 0 45	" Pepsin, Boudault's, oz.	1 25 1 50		
" Nitrous	0 27 0 30	" Citrate Ammon.	0 90 1 00	" Houghton's, doz	8 00 9 00		
" Sulphuric	0 45 0 50	" " & Quinine oz.	0 43 0 48	" Morson's, oz.	0 85 1 10		
Antim. Crude, pulv.	0 15 0 15	" " & Strychnine "	0 17 0 23	" Sulphuret	0 25 0 35		
" Tart.	0 48 0 55	" Sulphate, pure	0 08 0 10	" Pepsin, Boudault's, oz.	1 25 1 50		
Alcohol, 95% Cash	1 07 1 72	Iodine, good	4 50 5 00	" Houghton's, doz	8 00 9 00		
Arrowroot, Jamaica	0 19 0 22	" Resublimed	5 60 6 00	" Morson's, oz.	0 85 1 10		
" " Bermuda	0 45 0 65	Jalapin	1 40 1 60	" Sulphuret	0 25 0 35		
Alum	0 02 0 03	Kreosote	1 60 1 70	" Podophyllin	0 50 0 60		
Balsam, Canada	0 24 0 35	Leaves, Buchu	0 25 0 30	" Quinine, Pelletier's	1 90 1 95		
" Copaiba	0 68 0 75	" Foxglove	0 25 0 30	" Howard's	1 90 1 95		
" Peru	3 80 4 00	" Henbane	0 35 0 40	" " 100oz. case	0 60 --		
" Tolu	1 00 1 20	" Senna, Alex.	0 30 0 60	" " 25 oz. tin	1 85 --		
Bark, Bayberry, pulv.	0 10 0 20	" " E. I.	0 12 0 20	Root, Colomba	0 14 0 20		
" Canella	0 17 0 20	" " Timneville	0 20 0 30	" Curcuma, gr'd.	0 12 0 17		
" Peruvian, yel. pulv.	0 45 0 40	" Uva Ursi	0 15 0 20	" Dandelion	0 25 0 25		
" Slippery Elm, g. b.	0 15 0 20	Lime, Carbolate, brl.	5 50	" Elecampane	0 14 0 17		
" " flour, pkt's	0 23 0 32	" Chloride	0 04 0 06	" Gentian	0 10 0 12		
" Sassafras	0 12 0 15	" Sulphate	0 08 0 12	" " pulv.	0 15 0 20		
Berries, Cubebs, ground.	0 25 0 35	Lint, Taylor's best	1 20 1 25	" Hellebore, pulv.	0 17 0 25		
" Juniper	0 06 0 10	Lead, Acetate	0 14 0 17	" Ipecac	1 75 2 20		
Beans, Tonquin	0 60 1 10	Leptandria	0 75	" Jalap, Vera Cruz	1 35 1 00		
" Vanilla	14 00 15 50	Liq. Bismuthi	0 50 0 75	" Tampico	0 90 1 --		
Bisauith, Alb.	4 89 5 00	" Opii, Battley's	6 60 8 00	" Liquorice, select.	0 11 0 13		
" Carb.	4 80 5 00	Lye, Concentrated	1 50 2 00	" " pow'd	0 15 0 20		
Camphor, Crude	0 35 0 45	Liquorice, Solazzi	0 42 0 45	" Mandrake	0 20 0 25		
" Refine'd	0 45 0 55	" Cassano	0 23 0 40	" " "	0 20 0 25		
Cantharides	1 70 1 80	" Other brands	0 14 0 25	" Rhuibar, Turkey	4 00 4 50		
" Powdered	1 89 1 90	Liquorice, Refined	0 35 @ 0 45	" " E. I., China	1 25 2 60		
Charcoal, Animal	0 01 0 06	" Hessin's doz	2 00	" " pulv.	1 40 2 50		
" Wood, pow'd.	0 12 0 15	" " 4 "	0 17 0 20	" " 2nd	1 30 1 50		
Chiretta	0 25 0 30	Magnesia, Carb 1 oz.	0 20 0 25	" French	0 75 --		
Chloroform	1 25 1 50	" " 4 "	0 17 0 20	" Sarsap, Hond.	0 45 0 50		
Cochineal, S. G.	0 80 0 90	" Calcined	0 65 0 75	" " Jam.	0 85 0 90		
" Black	1 00 1 20	" Citrate, gran.	0 37 0 50	" Squills	0 10 0 15		
Colocynth, Pulv.	0 59 0 69	Mercury	0 70 0 80	" Senega	0 97 1 00		
Collodion	0 67 0 70	" Bichlor	0 75 0 80	" Spigelia	0 85 0 90		
Elatarium	4 50 5 00	" Diniodid, oz.	0 25 0 35	Sal, Epsom	2 50 3 00		
Ergot	0 70 0 80	" Chloride	1 00 1 10	" Rochelle	0 23 0 25		
Extract, Belladonna	2 00 2 20	" C. Chalk	0 50 0 60	" Soda	0 01 0 03		
" Colocynth, Co.	1 25 1 75	" Nit. Oxyd	1 00 1 10	Seed, Anise	0 16 0 30		
" Gentian	0 50 0 60	Morphia, Acet	5 50 6 00	" Canary	0 05 0 06		
" Hemlock, Ang.	1 12 1 25	" Mur	5 50 6 00	" Cardamon	4 10 5 75		
" Henbane	3 75 4 00	" Sulph.	5 70 6 20	" Fenugreek, gr'd.	0 08 0 10		
" Jalap	5 00 5 50	Mask, Pure grain, oz.	21 00	" Hemp	0 06 0 06		
" Mandrake	1 75 2 00	" Canton	1 00 1 20	" Mustard, white	0 14 0 16		
" Nux Vomica, oz.	0 60 0 70	Oil, Almonds, sweet	0 40 0 45	" Spanish	3 00 3 50		
" Opium	Variable.	" bitter	14 00 15 00	Santonine	9 50 10 50		
" Rhuibar	7 50 --	" Anniseed	3 40 4 00	Sago	0 07 0 60		
" Sarsap. Hon. Co	1 00 1 20	" Bergamot, super.	5 00 6 00	Silver, Nitrate, cash	14 50 16 50		
" " Jam. Co	3 25 3 70	" Caraway	4 00 4 20	Soap, Castile, mottled.	0 11 0 14		
" Taraxicum, Ang	0 70 0 80	" Cassia	1 75 2 00	Soda Ash	0 03 0 04		
Flowers, Arnica	0 25 0 35	" Castor, E. I.	0 14 0 15	" Bicarb. Newcastle	3 75 4 00		
" Chamomile	0 30 0 40	" " Crystal	0 22 0 25	" " Howard's	0 14 0 16		
Gum, Aloes, Barb. extra	0 70 0 80	" " Italian	0 28 0 28	" Caustic	0 04 0 05		
" " good	0 42 0 50	" Citronella	1 40 1 60	" Sponges Ammon., iron	0 25 0 35		
" " Cape	0 15 0 20	" Cloves, Ang.	1 00 1 10	Strychnine, Crystals	2 30 2 75		
" " pow'd	0 25 0 30	" Cod Liver	1 35 1 50	" Sulphur, Precip.	0 10 0 12		
" " Sacot.	0 50 0 75	" Croton	1 70 2 00	" Sublimed	0 4 0 05		
" " pulv.	0 90 1 00	" Geranium, pure, oz.	2 00 2 20	" Roll	0 03 0 04		
" " Arabie, white	0 60 0 65	" Juniper Wood	0 80 1 00	Tamarinds	0 15 0 20		
" " sorts	0 31 0 37	" Berries	6 00 7 00	Tapioea	0 15 0 18		
" " com. Gedda	0 42 0 50	" Lavand, Ang.	19 20 2 00	Veratria	2 75 3 00		
" Assafetida	0 31 0 35	" " Exot.	1 40 1 60	Vinegar, Wine, pure	0 55 0 60		
" British or Dextrine	0 13 0 15	" Lemon, super.	3 30 3 60	Vendigris	0 55 0 60		
" Benzoin	0 48 0 55	" " ord.	2 60 2 60	" Pow'd.	0 45 0 50		
" Catechu	0 12 0 15	" Orange	2 70 3 00	Wax, White, pure	0 80 0 90		
" " pow'd	0 25 0 30	" Origanum	0 65 0 75	Zinc, Chloride	0 10 0 15		
" Euphorb, pulv.	0 32 0 40	" Peppermint, Ang.	15 00 17 00	" Sulphate, pure	0 10 0 15		
" Gamboge	1 40 1 60	" " Amer.	3 40 4 20	" com.	0 06 0 10		
" Guaiacum	0 38 0 50	" Rose, virgin	7 75 8 00	DYE-STUFFS.			
" Myrrh	0 48 0 60	" " good	4 40 5 50	Annatto	0 40 @ 0 60		
" Sang Dracon	0 60 0 70	" Sassafras	0 35 0 50	Avaline, Magenta, cryst	4 50 --		
" Scammony, pow'd	5 60 --	" Wintergreen	6 00 6 50	" liquid	2 00 --		
" " Virg.	14 50 --	" Wormwood, pure	5 80 5 90	Argols, ground	0 15 0 25		
" Shellac, Orange	36 0 38	Ointment, blue	0 65 0 70	Blue Vitriol, pure	0 08 0 10		
		" Opium, Turkey	8 50 9 00	Camwood, pure	0 06 0 09		
		" " pulv.	11 20 12 00	Copperas, green	0 01 0 02		
		Orange Peel, opt.	0 43 0 50	Cudbear	0 16 0 25		
		" " good	0 12 0 20	Fustic, Cuban	0 02 0 04		
		Pill, Blue, Mass	0 70 0 75	Indigo, Bengal	2 40 2 50		
				" Madras	1 0 1 10		
				" Extract	0 28 0 35		
				Japonica	0 05 0 06		
				" Ladye, pow'd.	0 33 0 38		
				Logwood	0 02 0 03		