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# CANADIAN DRUGGIST. 

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Sthatheor, Ontaho.
ENOI.ISH olerler,
16 Trulock Road, Tottenham, LONDON, N.

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## lllegality of Counter Prescribing.

The recent decision given by Judge Hose in the Common Pleas Division of the Divisional Court, 'Toronto, in refusing to quash a summary conviction by thic Police Mugistrate, in the ease of Mir. S. Howarth, and further, in his judgment, interpreting the law in the case, is of especial interest to druguists as showing where the line of conduct wust be drawn in order to be safe.

The alleged ofience in this case was indicnting a medicine for symptoms describ). ed by a customer and selling a bottle of it at the regular price. The defence, instead of being a deninl of the charge, was an attempted vindication of the practico by by contending that this was not practising within the meaning of the Act, amb, even if it was, it wirs not for gain, and even if it wis for gain, the defendant was entitled, as an apothecary, so to practise.

The Court held that there was esidenco of practising mediciuc on which a magis trate might well convict; that it was practising for hire or hope of reward, and that the defendant's registration under tho Wharmacy Aet did not qualify him to practise in the same way that one registered under the Medical Act as a physicinn and surgcon could practise. The judge held that a druggist, can properly tell a customer the name of a remedy for a disease, or even tell hins which of ser eml remedies he deems the best, but can. not legally enquire into the customer's symptoms to ascertain the nature of his andaent and then indicate the remedy.

From this reporting of the case, the de fendant's counsel has apparently rested his defence largely on his client's right to practise as as an apothecary.

Whether, under our Act, druggists are such, is a matter upon which no spocial legal interpretation has yet been given, although the judge has apparently had such in mind when he dechared that registration under the Pharmacy Act did not grant qualification to practise in the same niay that those registered under the Medical Act were entitled to practise.

In referring to the Chemists and Apothecaries' Act, as published by the Chemint and Druggist some years ago, considerable light is thrown on the privileges of each by Buglish interpretation of similar cases.

Referring to this Act, the Chemist ant Drutgyist srys, "The Apothecaries" Act, 181i, is the only statute which protects
any part of medical practice. The Medi cal det, 185 s , and its subsequent legisla. tive supplements, atringently prohibit the assumption of any titles or descriptions untruly implying qualification or registra tion, but do not interfere with the prac tice of medicine or surgery by ungualitied persons who make no misleading preten sions of fitness. luat it remains illegal to 'act as an apothecary;' and a number of cases against chemists and others have been prosecuted by the Apothecaries' Company. The delinition of an apothe cary's functions, which the courts havo ever since acted upon, was lad down by Mr. Justice Cresswill in the case of the Apothecaries' Company v. Totinga, 2 .l. and 1R., 195 (tried in. 1813), that 'an apothecary is a person who professes to judge of internal disease by its symptoms, and applies himself to cure that disease by medicine. . . . But a chemist is one who sells medicines which aro asked for.'"

In February; 18 F g, the Apothecaries' Company sued a London chemist and druggist, in the Court of Dxchequer, for a penity of $E^{2} \geq 0$ for practising as an apothecary without a certificate. Tho 2 Sth section of the Act wis pleaded, nad the defendant said that all serious cases wero attended by his partner, a duly gualitied practitioner, that he never visited, but, that ito minor cases, he had inquired the nature of the illness, and had given the most suitable nuadicine without consulting his partner. laron Bramwell told the jury that the Act was strict in its terms, and they were boumd by it. If a man asked a cleanist fur sumething to cure is bad healache, and the chemist gave hima draught, he would be infringing the terms of the Act ; but it woudd be unreasonable in such an case for the Apothecaries' Company to interfere. It was for the jury to say if the defendant had infringed the Act. The jury found for the plaintifls, and tho judge refused leave to move. The Apothecaries' Company subsequently prosecuted a chemist and druggist at Nottinglinm, and the defence was taken up in this and other cases by the Cheniists' Trade Association. The fine wis inflicted in the Nottingham County Court, and an appeal (Sir Henry James arguing for the appellants) the Court of Exchequer (Sir Fitaroy Viclly and Mr. Baron Chashy) ordered the case to be retired in that Court. The case was therefore heard before Mr. Haron Pollock on November T, 1857. It was proved that a witness cmployed to get up the ense had visited the
dofendant's shop, had complained of is soro thront, and tightness at the ehest and sheeplessuess. The defendant looked at his throat, gave him some medicine, and charged 1s. for it. For the defence, seetion 28 of the Apothecnries' Act was chiefly relied on. $A$ mumber of aged chomists were called to prove that to their knowledge such practices as that alleged by tho prosccution were customary on the part of chemists and druggists beforo 1815. Tho judge, however, in summing up, said tho business of a chemist and druggist was detined in tho $28 t h$ section, and if chemists went beyond their ris lits before 1815 , that did not justify them in doing so afterwards. 1 Ie left it for the jury to say whether in the particular case before them the defendant had gone boyond the limits allowed him. The jury found for the defendant; but in this verdict they were no doubt iniluenced by the unsatisfactory evidence submitted for the plaintifls. Other juciges, in other cases, interpreted the liw similatly. At the Birmingham County Court a proseculion of a chemist and druggist by the Apothecaries' Company was held over for two years pending the settlement of the last quoted case. I'he chemist had given certrin medicine to a young woman sulfering from weakuess, and hud charged her is shilling for it. Ito admitted having asked her certain questions, though there was some dispute respecting the whole of the alleged consultation. He was fined $\{20$.

If the above interpretation of the distinction between an apothecary and is pharmaceutical chemist can be brought to bear upoin our Act thore is but little hope that any relief can be afforded those who overstep the line Jnid down in Justice Rose's decision; as but few druggists, if any, registered purely as phamaceutical cliemists,are likely to claim that they are apothecaries in the sense of professing to juidge of internal disease by symptoms.
It is quite unnecessary for us to advise caution, as we are satistied that all who review these cases will act in accordance with the letter of the law, even though the spirit of it may be somewhat strained by so doing.

## Manitoba Pharmaceutical Association.

The annual mecting of the Manitobn Pharmaccuticul Association was held in Winnipig, Fel. 2lst.
Among those present were J. l. How ard, president, in the chair; E. Casselman, Emerson; G. W. McLaren, Morden; B. M. Canniff, Portage; N. H. Jackson, U. Flexon, Dr. Hutton, J. K. Hill, W. Caupubell, Howard Mitchell, W. Pulford, E. S. Lighterp, Geo. Saddler, MI. 11. Casselman, IE. E. Mletcher, and ${ }^{\text {r. K. Strac- }}$ han, registrar. The report of the council, dealing with the work of the association for the past ycar, tho treasurer's and registrar's reports were read ind adopted: The total nombership of the association is 79, clerky 14, apprentices 28. Four
members havo been removed from the register in consequence of removal from the province or other causes. The secretary was empowered to incur the neecssary expense to procure avidence against persons viohating the assucintion's net. E. E. Lightcap and 11. 1I. Cassclman, having been appointed scrutincers, the ballot papers sent in were counted and resulted in the following being elected as council for the ensuing two years, vi\%: J. C. Gordon, J. R. Howard, I. D. Martin, C. Tlexon, W. 1R. Bartlett, 13: M. Camill and G. W. MeTaren. During the counting of the ballots the president aldressed the meeting, reviewing the work of the association, and congratulated the members on its satisfactory condition.

Dr. Mutton moved, seconded by Mr. Camiff; "That the pharmaceutical Associntion of Manitoba oller for yearly competition, for general proficiency in the major examinations, a gold and silver medal, the gold medial to be given to the student obtaining the greatest number of marks, the percentige to be not lass than nincty; the silver medal to be given to the student obtaining the next highest mumber of marks, provided such student takes not less than eighty per cent. of the total marks, the competition to date from the apring examinations of 1895, and to br open to students who have taken their full course in Manitoba. In case of $n$ tic, the oxamining board to take into consideration the respective merits of tho tying candidates, with reference to the neatness of the papers put in and the work done."
In moving this resolution, Dr. Hutton, in an interesting speech, pointed out the strong incentive to good work, tho chance of winning the Association medals would be, and stated that ho would be willing to oller a silver medal for the student obtaining the highest number of marks in materia medica, and Mr. Camitt; in supporting and seconding the resolution, also said he would be willing to offer a medial for tho highest number of marks in any particular subject, probably chemistry. Mr. Mchatren and others, having spoken in fiver of the motion, it was put and carried.

The question of the :ssociation obtaining permanent suitable rooms, for the purpose of a laboratory, lecture - : © aniuation rooms, was discussed, and on motion of Mr. Camniff; seconded by Mr. MeLaren, the matter was referred to a committee, consisting of the president, Mr. Flexon and Dr. Mutton, to wait on the medical college authorities and ascerthin on what terms a room could be procured in the medical college building.

Cambe. Vaseanes.-Vaseline is first rendered aseptic by prolonged heating to $120^{\circ} \mathrm{C}$., and then mixed with enrbolic acid. The mixture is poured whilst hot into metal tubes, which are hermetically sealed whilst at in elevated temperature. It is put forward as a good antiseptic salve.-Apothaker Zcituraj.

Pharmacoutical Association of
the Provirice of Queboc.

## Notlog to Situlente.

The Semi-Ammal IXamination for Mijor and Minor Candidates will commence on l'uesding, $A$ pril 17th, at 9.00 a. m., and will bo hrid in the College of Pharmacy, 595 Latgatuchetierg Strect, Montreal. Candidates must file their application, duly certified, with the Registrar, on-or before the Tth of $A$ pril. Printed Regulations and Form of Application must be cbtained from the Registrat, and be duly signed by tho Applicant.

Candidates who have failed more than once in their Examinations will be required to pay the full Dixamination Tee,

The Council having instructed the Registrar to enforce the rule reguiring from candidates for examimation, ten days notice, prior to the date fixed for the examinations, no application will te accepted after the 7 th dity of $A$ pril.
J. Munt,

Secty.-Registrar.
595) Laganchetiere Sitreot.

Montreal, M:wch Sch, 1594.

## New Salts of Berberine.

Tt is well known that commercial erystallized sulplate of berberine dissolves with difliculty in cold water and alcohol, in fact is almost insoluble in both these liquids. Merck, by increasing the quantity of sulphnic acid used in its preparation, has introduced a sulphate which is easily soluble in cold water and in alcolool. It is z:0w on the market as "soluble crystalline sulphate of berberinc." It can bos taken in half-grain doses six times daily. According to Schmidt (See Arch. iler pharm., 1S90), frec berberine rapidly absorbs carbonic acid, and as met with in commerce usually contains much carbonate. Merck attempted to introduce a method for the preparation of the free alkaloid, which shall give a preparation as free as possible from $\mathrm{CO}_{2}$. Mo has concluded that the best method is by procipitation of the sulphate of berberine with barium hydrate in just sufficient quantity to precipitate the whole of the sulphuric acid, and afterwards evaporating the filtered solution, without the employment of heat, in glass vessels. Buteven prepared in this way, $\mathrm{CO}_{3}$ is absorbed. Hence Merck suggests that free berberine should be superseded by the carbonate, which is casily crystallized from water or alcohol, and is of quite defirite composition. If the pure alkaloid is required, it is easy to prepare it from this salt by heating it to $100^{\circ} \mathrm{C}$. in a current of hyarogen.Jourual de Pharm. d'Anrers.

An Euglish formula for at rubler substituta is 10 parts of parallin, 1 part bitumen, 2 parts India-rubber, and this in spite of the fact that rubber mannfacturers the work over are afraid paraffin.

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Each fluidounce of the Wine contains four gmins of PEPTONATE OE IRON, the most readily assinilated and most valuable of all forms of iron, it being partially predigested nud free frum styptic properties.

The fact that iron is prescribed in so many eases where Cod Liver Oil is repuired, verifies the ingenious, yet scientitic combination of this preparation, which now fills alon, felt watat a to how to administer in an agrecable maner the very agents much needed.

This preparation does not cause cruchations or namsea, as does the oil, but is pleasant to take and - thoroughly active. The dose may be increased somewhat with its use, if thought desirable.

The Wine notably increases the strength of the patient, as increased weight is evidence of returning health. It is valuable in nervous aftections of children, actmer especially on the werve ernters, thus not only aissisting but jreventing nervous disorders.

This Wine sustains the functiomat actaity of the organs of digestinn and msoimidation, nad is therefore

 ments that patients taking it have gained apid!y in weight and increased appetite

Stearbs Wine has a delicious taste, and is acceptably to the stumah of the must delicate inablid. It is rich, ruby red in color, and free from all odor and taste of the platin Oil.

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According to the reports of the Americin Public Health Association, one-fifth of all the deaths among infants may be trared to the milk supply.

What a boon it is, therefore, to have an infant fool that contains nothing but the solids of pure cows milk perfectly sterilized, which reynires nothing but the addition of water to prepare it for use.

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## Trade Notes.

The drug business of Dr. J. 11. Wel don, St. John, N.B., is closed.

John K. Sutherland has opened n new drug store in Vancouver, B. C.

The drug store of J. W. Levers, Kalso, 13. C., has been destroyed by fire.

The drug store of Di. Ovens, Barkhill, was destroyed by fire on March 19 th.

W: Thorntou, Calgary, N. W. T., hus sold his drug business to Owen H. Bott.
A. E. Munson, of Carberry, Man., has whd his drug business to Mr. Newton, of I'reharne.

Delblois d Prinirose, druggists, Bridgetown, N.S, are advertising their business for sa'e.
W. MeSween has purchased the drug business, formerly conducted by F . W. James, in Leamington, Ont.
B. Batchelor, Brantford, Ont., has sold his branch store in the North Ward to Pearson \& Co., formerly in Weston.
J. H. Sanderson, of Richmond Hill, Ont., who sells his goods from the waggon, has travelled about 9300 miles a year during the last eight years.

Geo. S. Hobart, druggist, Kingston, Ont., died Feb. 19th. Deceased was sixty years of age and had been in the drug business thirty five years.
C. H. Davis, druggist, of Firedricton, iv. B., has fled the country. He is accus. ed of forging the nanies of his two broth. ers-in law for large nmounts of money.
J. F. Jaeck, member of oues of the old cat drug firms in Victoria, 13. C., lins pur. chased the good will and business of John Reed, corner of Cordovn and Albert sts.

Jas. 12. Chambers, who for many years and until a short time ago was connected with the drug firm of C. 1). Daniel \& Co., King St. East; Toronto, Ont., died in New York after a sliort illness.

- Joseph Dilwortl, who, in addition to carrying on a drug business in Jing St. west, Toronto, has been conducting is sort of Patron supply store at 57 Colborne strect, has assigned to J. 13. Boustead.

The Victoria, B. C., Chemicnl Co., which began operations about a year ago have found their particular field so prolitable that they have changed into a limited liability concern, having a capital of $\$ 10,000.00$ with $n$ view of extending their operations in other directions. Messrs. F. Moore, J. A. Hall and J. W. Fisher, who have hitherto carricd on the works, enter the new company, and operations of manufacture will be, as heretofore, superintended by Messrs. Hall and Moore, both graduates of the famous Ower College, Mnachester, and who hawo been connected with large chemical works in England. The works of this company constitate a very complate plant for the manufacture of sulphuric, nitric and muriatic acids, sulphate of copper and heavy chemicals.

## Montreal Notes.

Dr. Wilfred Lecours hats nequired tho Arug business of 1). Prevost, corner of Craig and Bonsecours strects, opposite Vige: (inrden. Mr. Lecours served his upprenticeship with Dr. St. Jneques, of St. Hyacinthe, and was afterwards two years with Mr. M. K. Gray, of Montral, and las recently been managing the Ias. porto pharmacy, where his engagement. has not guite expired.
The action against Dr. Leomard, drug gist, of St. Cuncronie, n suburb of Montreal, came up biforo Judge Desnoyers in the police court on the 30 th ultimo. Soveral old established pharmacists gave evidence in the case, and it was clearly shown that Dr. Leonard had not been in fault and the Judge dismissed the case.

Anaction for danages brought by Dr. Douglas Decow against Mr. I. T. Tyons, chemist, Craig street. for having given an opinion as to the Doctor's professional standing, (which wis not flattering to the Doctor), after having been before the court some time, wasfinally decided against the phintilf: Mr. Lyons is much praised for having had the pluck to stand by his opinions and tight the case.
A singular case of accidental poisoning or rather of death being accelerated by taking Tartar E:netic in place of Bismuth, hass resulted in at rather singular verdict on the part of the Coroner's jury. It is stated that the papars reported the inguest anything but fully, and consequently a wrong impression as to tha whole case has got nibroad. It would be better if coroner's inquests could be reported verbatim or not at all.
It has been suggested that at the next nunaal meeting of the American Pharmaceutical Association this important body should be invited to hold its Convention of 1895 in Montreal. It would be as well if the Montreal pharmacists would think the matter over, especially those who are members of the Association. The question of expense would of course be important, and would have to be mut by subscription.
There has been some talk in the press about the est-ablishment of a large co operative store in Montreal, but it is probable the scheme will not materialize, the reminiscence of the last fuilure is still green in the memory of Montrealers who were tempted to iancost. The culaditiuns are very diflerent here for the success of co operative stores to what they are in England, notably high wages, high rent. als, and heavy taxes, both municipal and provincial. The drawbacks of importing, the length of time between ordering and recaiving goods, the impossibility of importing certain goods during the winter months, athd no cud of other difficulties from which co operative stores in Enghand are free. Any one behind the scenes knows full well what grocers' prolits are in Montreal, and unless tho co-operative people go into selling bogus liguors and cheap wines, they will, without the slight-
est doubt, share the fate of their predeces. sor.

Mr. S. Lachance's now pharmacy on St. Catherime St., enst, is much aduired, and Mr. Lachance desorves praise for his good taste. In Mr. Tachance's able hands the investment cannot but prove remun. erative.
'Iho dispensing business in Montreal is becoming more dillientt cvery day owing to the nenltiplicity of now pharmaceutical preparations being contimanly introduced by manufacturing pharmacists, and tho ease with which physicians are indaced to order them. Strande to say, physicians of the highest standing are the slowest at adopting these fads. It is refreshing to occasionally receive the simple preserip. tions written by leading Loudon physicians. A little more attention ought assuredly to be given in our medical colleges to the "art of preseribing."

## Manitoba Notes.

Geo. Braser has taken charge of Jos. Thylor's branch store in Portage la Praivic.
11. 1\%. Newton, formerly of Treherne, Man., has purchased the business of $A$. F. Munson, druggist, of Carberry.

The Pharmaceutical Examinations for the Province of Manitoba will take place on the 2nd, 3rd and the of April. There will be six students writing for the major and ten for the minor. The minor class has been somewhat reduced owing to tho death of Andrew McDomald and thos absence of Jno. Wrait, who was called away by tho illness of his parents.
A. Melonald, whose death is noted ahove was working for 3:. Knowlton, druggist, Mnin street, Winnipeg, up to the time of the commencement of the fall course of lectures, which he attended until near Christums, whin ho was taken ill with pleurisy. He died on Sunday the 2 2th of Tebruary.

Tho folluming genthemen ware clected on the Council of Pharmacentical Assocition for the current year: Messrs. J. I: Howard, E. D Martin, J C. (Gordon and C. Flexon, Wimipeg; (. W. McTaren, Morden and B M. Camin; Portage la Prairie.

John Rogers, of Pains, Sons \& Co., Muntreal, is nun duia; Wianipes, on his way back from the coast. Mir. Wright, of Lyman, Sons \& Co., is slso in the country.

Peter lloss, late of Banff, is now on the roal for Bule, Wyan d Co.

Dag trade, in common with every other fine, was slow during the month of leblruary; bat March is opening up better.
1). W. Bole, of Bole, Winn \& Co., has been elected president of the Jobbers' Inion, Winnipes.
E. D. Wartin recently relurned from an extended castern trip.

## Now Brunswick Notes.

Fredericton, N. B., is at the present monent minus one of its retail druggists, Geo. 1I. Davis. When last seen he was walking down the rillroad; track; Son Sunday afternoon duringe heavy rain storm. He leaves behind him a fow nugry brokers, the wreck of a small retail business, and liabilities to the amomet of $\$ 21,500$. About $\$ 14,000$ of this is repudiated puper upon which it is reported Mrr. Davis did not raise noore than $s, 1,000$. In miny cases he paid a shave of 65 per ecent. and even higher rates. Much of this paper is forged ind is now repudiated by the men whose signatures have been initated. The brokers who charged such rates as Gj̄ jper cent. aro not entitled to much sympathy. Mr. Davis was not a drinking man, but addicted to gambling, it is thought in stocks, which has led up to the above doplorable result.

In order that the drug clerks in St. John, N. B., may be better equipped for passiug the remistration exmmination of the Board of Pharmacy, two courses of lectures have been instituted on Flementary Chemistry and Materin Medica. The course will consist of twelve lectures on each subject. A. E Maclutyre takes Chemistry and W. IF. Mowatt, Materin Medicn. Chemistry on Monday evening and Materia Medica, Thursday afternoon. The tickets for the courses have been placed at a very slow figure, ' 83.50 per course. It is intended next winter that these lectures shall be succeeded by a more advaneed course on each subject.

In the exmmination held byjin.B. Board of Pharmacy, Jan. 30. There were ten candidates for the preliminary examination, all of whom prissed. Four for the fimal, of whom two passed, Messrs. Wur. Wilson, St. John West, and Geo. 0. Spencer, Moncton. Examiners present were Messrs, 12. E. Coupe, Dr. I. C. Allison, C. Wialter Clark, W. IT. Mowatt and M. V. Padilock.
"The Welcome of the Flowers" is the title of an article in the March number of IIarper's Mayazine on the cross fertilization of tlowers by W. Irunilton Gibson. The sulject is dealt with in a clear and graphie style and the high order of the illustrations both from is scientific and artistic standpoint render the article an extremely interesting one to the botanist. The subject, the cooperation of thowers and insects, is traced from its inception by Sprengel in 1787 , diagrams being given of the lloral problem which the carlier theorists were unable to master: down to the complete explanation of this by Darwin secenty years later ir. his "Origin of Species:" The fertilization of many faniliar wild 'species is illustrated and explained. One remarkable and perhaps not widely known fact relative to this subject is that of the tirst erop of American red clover raised in Australin. The crop was splendid in every respect, except that tho llowers never cans to waturity; there was no seed. The Amer-
ican bumble bee had been left out in tho transaction, and it was not until this gontleman and his family were maturnibed that the erop speded in the usual way. lhis seems to havo been at true instanco of the Hower wasting its fragrance on the desert air, although tho aphorism, in its general sense, seems now to be a falso one. If the iconochastic hamel of the mod. ern historian is proving many beantiful old hegends, which wo hive hicherto taken as facts. to be myths only, tha biologist and his coworker, the botimist, on the other hand, are constructing from the living pitge of mature a history more wonderfal in its many facts than the historic legends of old which are now dying out muder the remorsteless hand of scientitic investigation.

## British Columbia Notes.

Tho next meeting of the council of the 13. C. Pharmaceutien Association will be held in Vietoria, Mareh Sth. The principal featuro of importance coming up will bo the amendments to the Pharmacy Let now before the Provincial House.

The semi-smanal examinations for Jicentinte of Pharmacy will be held on Wednesday and Thursday, April 4 th and 5th. Ail applications must reach tho registrar at least two weeks previous, accompanied by the fee ( 320 .) All npplications for registration on diploma, should bo in at least 30 days before the Examining Board meets. Charles Nelson, registrat.

The business known ns lieed's lharmacy, Vancouver, was sold on Feb. $20 t h$ by the mortgagers (Lungley is Co., of Victoria) to J. F. Jaeck, also of $V$ Vetoria, who is continuing the husiness under the name of "The Owl Drug Store.

It is also rumored that MeDowell \& Co. have sold their Westminstex Avenue Eranch, Vancouver, to their late imanager, J. K. Sutherland.

I'. M. Menderson, of Jemgley \& Co., Victoria, has been taking in the MidWinter Mair at Sian Erameiseo, trying to recuperate his vitality; lost through it severe attack of grip.
T. Proctor, Namimn, has also been under the same complaint.
C. R. liing, of Victoria, B. C. asent ior the woll known Evans \& Sons, has Intely lost his son, Clarence, who died, nfter a lingering illuess, of consumption.

Jewis IIall, of Victoria, who was re. cently prosecuted by the Jharmaceutical Association for filling prescriptions with. out being registered as a licentinte, returned from Oregon with a diploras. from a college of that state and has consequently been registered by the 13 . C. Association.

The Coast pharmucists bave been pleased with visits fro:n Dr. Sibree Clark, the pioneer drugrist of Kimloops, B. C. Tho doctor wis on tho Coast in
connection with the Oddfellows' (Irand Ladge meeting and his high and honornble position of Grand Master of Masomry.

Tho drug tade generally is sulfering during the depression, as all other businesses are, the shudowy fortuncs doating awaty with cho wind.

Willians, druggist of Kaslo, is one of tho losers in the recent fire in that city. L.oss, : 2,000 .

Scien.

## Notes From England.

## ( Pr rm our own Correxpoulene)

 Losmos, March lst.The Pharmaceutical Society has entered upon a crusnde against the grocers ever sinco their success in che Chlorodyne case. The point which they have now raised will have to be settled by tho Court of Appeal, vir.: what gunntity of poison is necessary to bring a preparation within the meaning of the Act. In the latest case, that of selling Poreell's Balsam of Aniseed, the Society seek to make it penal for any but qualified chemists selling it, allhough on their own showing the quantity of morphine is but onc-tenth of $n$ grain in a huid ounce. There is, howover, considerable difliculty in the matter as it is obvious that thereare many drugs which would be considerably more dangerous, if 3 times the legitinate dose were taken, than with this particular preparation. On the other hand the principal for which tho Society is contending is a most important one, that the quantity of poison is immaterial to the case provided it is in sullicient quantity to injure anybody under any circumstances. As the counsel for the defence pointed out, such a defluition would reguire brandy and port wine to be scheduled as poisons, as in moderate quantities they would be projadicial and possibly fatal to infants.

A striking point in these recent prosecutions has been the repeated cvidence of the variation in tho composition of some of these proprietary articles. According to Dr. Paul the proportion of active iaaredient is sometimes 25 per cent. more in one sample than in another-it very serious increase that alone might lead to fatal resnlts. It has been suggested to me that in the case of opinm preparations this is due to the occasional inferiovity of the opium employed and which the munufacturers are not capable of assaying. It is evident, therefore, if this explanation be accepted that the amount of morphine might vary considerably.

Professor Attfield's paper upon the Irrperial British Pharmacoposia will be read by Canadian pharmacists with peculiar pleasure. According to Dr. Atttield he was in no way ilarmed at the recent production of the U.S. B., but the suggested Camadiar Phamacopecia gave him much more concern. If my information is correct, tho whole of the socalled Canadian demand for a pharmacopocia of their own, was manufactured by a drug journal of

# NOW IS THE TIME TO BUY <br> <br> Whitaker \& Grossmith's 

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## ENGLISH TOILET SOAPS.

These Soaps see sold only to the Drug Trade, and therefore pay retail Druggists a good profit , a large number of Canadian Druggists have now been handling them for years with satisfaction to themselves and customers.

## Whitaker \& Grossmith's

| Transparent Soap, unscented, boxes of 3 do\% |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $" ،$ | $" ،$ | 30 | $"$ | $"$ | $"$ |
| $"$ | $"$ | $30 \%$ | $"$ | $"$ | $1 / 4$ | Shaving Sticks, No. I, boxes of i dor.




Cent lear Soap, - boxes of $1 / 4$ doz.
White Glycerine,
Jockey Club,
Musk Brown Windsor, White Almond, Sandringham, Eucalyptus, White Carbolic, White Clover, Cucumber and Glycerine, Superfatted, Baby Soap, 'Thymol Tooth Soap, White Rose Soap,
All of above can be confidently recommended to consumers.

# Archdale Wilson \& Co. SOLE AGENTS FOR CANADA. 

## Wine of the Extract of Cod Liver.



 retain fatty substuces. Itsetfect, like that of Cod Liver Oil, iv imalual, in Scrofula, Rickets, Ancemia, Chlorosis, Bronchitis and all diseakes of the Chest.
Wine of the Extract of Cod Liver with Creosote.





Sold las all firwiclava


The beech-tree Creosote chacks the destactive wolk of Pulmonary Consumption, as it dinininhe expectoratim, sthengthens the uppetite, reluces the fever and suppresses perspiman. Its effect, combined with Cod Liver Oil, makes the Wine of the Extract of Cod Liver with Creosote an excellent remedy against pronomeed ar threatened Cousumption.

# ADAMS' ROOT BEER. 

Pays Well, Sells Well, and Gives Satisfaction.
Retail, 10 and 25 cts. ; Wholesale, 90 c. and $\$ 1.75$ per doz., $\$ 10.00$ and $\$ 20.00$ per gross.
Place it on your list and order from your next wholesale representative.
The Canada Specialty Company,
DOMINION AḠENTS.
TORONTO, ONTARIO.

## Free Advertising for Druggists.

## Dr. Slocum's Compound Pennyroyal Tea.

Put up in neat and attractive 25 cent Boxes, sells at sight, and is now being extensively advertised.

## _PUT IN A STOCK AT ONCE.

Sold by all leading Wholesale Houses at $\$ 2.00$ per dozen, less $5 \%$, or direct upon receipt of price.

## T: A. SLOCUM \& CO.,

Montreal．To most yeople it would cer－ tainly appear that $C_{\text {ianadians are abready }}$ atllicted with a plethora of pharmacopucias， to which a Canadian edition would only add another without replacing one of those aiveady in use．Professor Attlield is now awaiting suggestions for his new phatrma－ copuil．All suggestions should，as far ：es possible，be accompanied with formula already made out，in the manaer of the 1i．P．，so that they are practically ready for insertion if approved by the Gemeral Medical Council．

Angier＇s l＇etrolenm Ennulsion is the Intest，phamanceutical production for med－ ical favors．It is stated to he ath emul－ simn of 33 per cent．of a paritiod petro． hrum oil and a definitu propurtion of the hypophosphites of limes，sodia and pot：shls．At tirse sight it wonde hardy apmear to be an des：ant componan likely lo tempt the thertiser appoite on phathisical patients．fi：x from 1xamimation and perasal of medical report：it is quicomi dent that the jetrobrum is ：t hand unarritatiang vasedine like oil which has mast ied valter in phehisis atad pulambar atibe tions．FIn ulation to consump． tion it unay he intersting to mention that the ase of lace unathes simelaria is strongly te． comumended hy a leading spe－ cialist，who has receratly obtath－ ell the menciable motoriety of heing strack ofi the molical register in consenucrace of ati－ vertising．

Some time aso a atedhod was published of co：tines pills with salol so as to ensure sheir pass－ ing；through the stomach with－ out＇desintegration，whitst they wouht be dissolved in the dato． demam．This has bero found at a largre dispeasing estal，lish－ ment a very great inprovement on the olis Keratin methom which was very tedious and messy．The salot is warmed and when just melted the pills are turnca iato the licaid sidol and lifud out onto at shb to dry．When guite coll they have a frosted appearance which is mether attractivejtan otherwise and no unsight－ ly pia－pole．The salol coating does not cisily rub off，if the pills were previously free from powder．pills of aloin，tituro． cholate of solla，iridin and iron com－ pounds have been in most demand．

The subject of the preservation of iniu－ sions is constantly tackied by pharma． cists having more or less knowledge of the subject．The latest contribations are remarkable as being precisely antagonis－ tic in their inferences．In Iondon，Nr． E．White lins suggested boiling the iniu－ sions where almissible and preserving in sterilized bottles free from the ubiquitous microber．Where sterilization by beat is objectionable he recommends the addition of a small guantity yof chloroiorm is：in

dosindt mitait．
quired，however，is pharmacopuial per－ mission for cheir use by inserting the gro． per forms．Whether this be granted or not，medical men who dispense and phar－ macists，will eontima to use these coaven－ ient forms of concentrated galenicals． As their therapmatical properties are small and tha troubic of preparation great，whilst they are bound to vary and prone to change，it is unreasonable to alouse the concentrated articleand numiso to ignore them．

Todocafliene is obtainey hy dissolving in the colai a mixture of ：is parts of sodium iodide and bia parts of catcine iodide，in suficient water，treating this solution with hyilrogen sulphiah：＂and evaporating to dryness．

## Prominent Canadian Pharma－ cists． <br> ．10si：pll concint．

The suluject of the first of our skentelies of Camadians prominent in pharmaceutical matters was born in Montreal in＇s 5 ，pursu． ＇d at classical course at the Jesuits＇College in that city until 1805，when he brgan his carcer in the drag bosiness by being entered as an apprentice with licult，\＆Son．Nr． Contant has，perhaps，beenan exception to the majority of drug clerks inasmuch chat， from the first day of his appocoticesthip until the present time，he hats continumb in the same store lio ：attemled the loer tures on pharmacy at Me（fill Collowe first and afterwands at the Montreal Collace of Phammacy，from whinh ho eraduated．Tym the death of Dr．Picault，in Iscis，her pur． chased tare busiams and has carrical it on crer simere umiar the firm name of l＇satule $\alpha$ Conshat．Dhe．Contant has ion many yeus been a prominent figura in qhamaneorationl citciles mad indil the atire of I＇res dont of the Phamatereutical Asiokia－ tion of Quther fromblanc，小心か， to Jume，！s：！1，and was atan！ dected to the stme attier in
 ated at 11 İJ Sutre llabu sit． diontreal．

## 

Was horn in Queber the 19th April， $1: 17$ ，and aceciverl a part of his classieal colucation in the Sominatry of gucdece arad entered in M．İ．Inugal＇s Ihar． matey as an apprentice，July
 he opuatala drug store in lira． serville，Guebec，but affer tive years of masuccessilul eflorts， gave up business and went to Detroit，Dich，whete he re． mained one year as elerk in ： German drus store Ia $1 \times \pi .4$ mostalyiaz forced lim to come bact－to his mother country and he went to Montreal where a situation as clerk wis secural at M．I．Goulden＇s drug store，St．Cath－ erimest．In November，1sjG，he anain started for himself in partnership with his ohd patron 11．H．Dugal，of Quebec， under the commercial name of Dugal of Itehaner．On the lith licb．，IsG： afiter a mutual consent of dissolution of partnership he decided to ofen alone at 1：83N St．Catherine－st，where her remain－ ed nearly fiftern years，aud where a de－ cided success was the rewiard of persuver． ance．

Mr．Jachance bas been prexident of tha Iharmacentical Association of the l＇ro－ vince oi Quelec，and for several years member of the hoard，also menber oi zhe boand of the Montral College of Mhar． macy for many years and one of the ex－ aminess for the last six years．He is also
a member of the American Pharmaceatical Association and has always taken a decp interest in pharmaceutical progress, principally in the study of pharmacy.

Fior some time Mr. Fachance had been looking about him for more convenient and larger premises on account of the extension of his business, and last summer at new store was secured on the corner of St. Catharine and St. 'Christophe strects, which outrivals, we believe, anything of its kind in Montreal. This store, a cut of which is given on this page, occupies the ground tloor of a hamb. some three story brick and stone buidding occupying : m area of 25 fect by 01 fect in dimensions, the whole building being used by Mr. Iar. chance in his business. The store is oblong in shape, has handsome . counters, adorned with rich plate glass show ceses, rumning up each sidr, and being joised at ther rad by a semi-circular screen, surmounted by a coronct of 96 peudant incambescent. lights, endorsed in acorn shaped globes of beautiful watered giliss. The whole of the inurior of the store itself, with, ther exception of the flow which is of rich Italian marhle is cabinetted in stained cotton wood, the ceiling lwing very artistically relieved in pancls and bosses in various shades. From the ceilins hang three very handsome crystal chamdeliers cach supporting numerous electric lights, whilst thirty pendant incandescent lights in acorn olobes, give a brilliant appearance to the store. The walls are lined with handsomic fittings in ash and walnut, whilst elogisnt glass show cases, filled with at choice sedection of druggist's sundries, occupy the centre of the establishment. The windows, three in number, are of immense sheets of polisherd plate glass, and are illumined iy forty-cight incandescent liohits, set in bevelled :and riodinted plate glass mirrors. Here: Mr. Jachance: and five qualified assistants are kept constantly engnged in attend. ing to the wants of his numcrous customers. The first floor is occupied by MIr. Tanchance as a IMarmaccutical Iaboratory and stock warchouse, the upper that being fitted as a laboratory, wherc Mr. Lachance prepares his proprictary medicines, with the as. sistance of ten emplojecs.

Pilocarpine is scommended fordeafness.

s. Lacanave:

known also that weak doses of mineral nedds and of chloride of sodium possess some inllucnee, but the action is not dependable, and appears to be duo to antiseptic power rather than to direct interference. From the researches of M. Effront, it uppears that aluminium salts, phosphates and asparagine faver the action of the ferment. Whatever the temperature of conversion be, this inlluence is always noticeable. lint the action stops as soon as the degrec of hydration has become very geat. It apperse, therefore, that the same substances which fitwor the development of organised ferments also faror the action of soluble: fermonts. Whatever the mature of this action is, it is possible that the mechamism is the same in loth cases. Mineral salts, and, perhaths, cert:ain nitrogenous substances can enter into combination in some special way with carbohydrates and aibumen, so that the unstable compounds formed, casily undergo hydration, oxidation or further decompo. sition. The role which certiin inorganic salts play inorganic synthesis, as discovered by Fricdel and liraft, may, perhaps, he similar to that in these peculiar ferment actions. Chrmivt ani bruegin.
(ilass Lincis. - Dxperiments with sliss building bricks were begun in 1891 by M1. Ealconier, an architect of Lyons. These hricks are hollow, being blown like bottles, and are given forms-such as cubes, hexasons, etc.,-that permit of ready laying. it bituminous cement, with $\Omega$ basis of asphalt, is used with them. The bricks serve as double windows, giving protection against both cold and heat: ; they are good insulators of humidity and noise; and they bend themselves readily to the decoration of buildings either by their form or their color. Many applica. tions are foreseen. The bricks are neater than marble in meat markets, and are especially adapted for hath halls, hot-houses, hospitals, wfrigerating establishonents, and buildings in which absence of windows would be an advantage. A hothouse of glass bricks recently appeared in the Comples ISomfus. It is well known that certain substances hinder the action of diastise, but very few investigations have been undertaken with the object of aseertaining which substances favor this action. It is
is of about ordinary cost, saves fucl, and resists hail.

In the calcium spectiom some new lines bave been discovered in the region of the ultraviolent rays.

## JOHNSON'S BELLADONNA PLASTER.

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ALL PASCALTIS SPECIATILES<br>MAT Bf: ODTANE:D FHOM<br>ANT VUFIOIESSAIE EIOUSE.

J. PASCALL, LONDON, S. E.


FOR THE DESTRUCIIOH OF TICKS, LICE, MANGE, AND ALL INSECTS UPON SHEEP, HORSES, CATTLE, PICS, DOCS, ETC.
Superior to Carbolic Acid for Ulcers, Wounds, Sores, \&e.
Removes Scurf, Roughness and Irritation of tho Skin, making the coat soft, glossy and healthy.

Removes the unpleasant smell from Dogs and othor animals.
" Littles Sheep Dip and (attle Wanh" an und at the Dominion Espurimental Farms, at Ottana atal litanlen, at the Ontario Industrial Farm, (inclph. and by all the pianipal lireolete bin the brominion and

 " Bitule's Sheep and (attle Wash" in all port- oi the worh.
 lirecoler in the bomimion.
ROBERT WICHTMAN, DRUGGIST, OWEN SOUND, ONT. Sole Agent for the Dominion.
To le had from all Wholesale brugists in Toronto, Itamiton id Jomden.


## CHEAP, HARMLESS AND EFFECTIVE.

A Highly Concentrated Fluid for Checking and Preventing Contagion from Infectious Diseases.

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 Gewernanent, "Iatale's Soluble Whengle" was proved to te the leat Dit.

 cent. proved worthites.



 Ilighest Fanitary An:horities of the diay.

The lhenyle has been awavied Cioh Merbals and Diphomas in all parts of the worlit.

 by every ihysician, Jonsehohler nbil l'ahlie lastitution in the bominion.
robert wichtman, druccist, OWen sound, ont. Sole Agent for the Dominion.
Tu be lad from all Wheleale Drakgises in Monereal, Jurmato, Ihamithon and lanion, Ont., and Wianifes, Man.

## DRUGGISTS' CONFECTIONERY. ROBERT GIBSON \& SONS, Medicated Lozenge Manufacturers, CARITON WORK: ERSKINE STREET, HULME, MANCHESTER, 1, glasshouse yard, aldersgate st., london, england.

 Superior Boiled Sugars Have gained a High Reputation everywhere
## 

They are put up in $1-\mathrm{lb} ., 2-\mathrm{lb}$., and 5 - lb . Bottles. Packed in Casks or in 1 doz. Cases as required, and delivered F. O. B. at any Port in England. These Sweets are absolutely pure.

## SARSAPARILLA AND SULPHUR TABLETS.

As it is extremely probable these Tablets will have a very large sale, we beg to advise Chemists that we guarantec every pound of Tablets to contain equal to 24 ozs. of Compound Decoction of Sarsaparilla, besides the usual quantity of Sulphur, thus securing a really valuable blood purifier.

## HIGH-CLASS LOZENGES

 of mikey disoription.
## CHLORODYNE COUGH LOZENGES, CHLORODYNE JUJUBES, PEPPERMINT LOZENGES,

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

DIGESIIVE TABIETS. VOICE AND THIROAT IOZENGES for ginatrs and publio spiaters.
ORIGINAL SUGAR WORM CAKES
frate an innense sale, both at home and abroad ; will keep in amy climate, and give entire satisfaction. Put up in Hins contrining 3 doz., 6 doz, and 12 doz cakes.

TERROAT EIOSPITAI IOZEINGES (As per T. EI. Pharmacopocia)

All Lozenges are sent out in 2 fl . and 4-1/b. Bottles (bottles free) but allowed for if returned. Proprietary Lozenges Carefully Prepared, Stamped and Cut to any Size or Shape.

## Provincial Pharmaceutical Assoclation of Ontario.

Tho regular semiannual meeting of the Provincial Pharmaceutieni Association was held, pursurnt to notice, in the lecture soom of the Ontario College of Pharmacy, Gerrard st., 'Xoronto, on the afternoon of Thursday, Feb. Sth. President Willian Murchison occupied tho chair, the other members present including Messrs. G. A. McCann, Siecretary, Toronto ; L. W. Yeomnus, Helleville; 1lenry Watters, Othaw; John Mekee, Peterboro; J. A. Clark, Hamilton; D. 11 . Maclaren, Barrie; W. Scott, Port 1rope: A. B. Petric, Guelph, President of the Ontario College of Pharmacy Conncil ; II. Sherris, F. W. McLean; W.J. Davidson, W. 1J. Gilpin, 13. W. Camphell, J. II. Mackenzie, Vice.President of the O. C. P. Council, W. A. Margreaves, A. R. Fraser, 1?. W. Flett, George Little, J. J. McGarvin, - Peaker, R. Robinson, A. E. Wal. ton, all of Toronto, and others.

Upon calling the meeting to order, the President instructed the Secretary to read the minutes of the last regular mecting which were, upon motion, approved and signed, after which the President delivered his address which appeared in full in our iast issuc.

The conclusion of the President's remarks was the sigmal for a hearty round of applause which was renewed when Mr: Ieomans rose to propose a cordial vote of thanks to Mr. Murchison for his excellent address. Speaking to his motion Mr. Yeomans said he was particularly interested with what had fallen from tiac Pres dent in reference to the treatment of apprentices. It was always a question for employers to consider, how to artange so that their apprentices should have time for study, aud he had found it a good plan to leave them free for this purnose after supper. An hour or two could be got in this way every day. The practical work of the store would occupy them through the day, though ohe regretted for the sake of the young men now in training, that the mannfacturing business was largely passing out of their hunds.

The question of cutting prices, wheh had also been dealt with by the President, was an ever-present sore which it was very hard to heal, and witiout doubt the practice was doing great harm to the trade. It was contended in many quar. ters that the business was gradually slip. ping nexay from the druggists, and lent it was absolutely necessary to cut to retain the custom at all. He, the spealier, thought they must depend mostly upon retaining the confidence of the public by honorable, upright dealing, and by supplying none but the best goods at the price. They should also endeavor to foster o. kindly relationship among themselves, so that they might buy in conjunction with one another and in that way be able to purchuse in large quantities and secure the full advantage of trade discounts.

- Another cvil which was becoming ypro
threatening every year was tho practice of dispensing by physicims. d'his was cutting into their business seriously and should receive their careful consideration.

Mr. A. 13. Petrie seconded the vote of thanks, remarking that the address just delivered by their l'resident was as complete and careful a resume of the position of allairs to day as it would be possible to oller.

The motion was carried unanimously amid applause.

After Mr. Murchison had acknowledg ed the vote of thanks, the discussion upon the several matters touched upon in his address was continued for a short time.

Mr. Metiregor stated that one course the druggists of Brantford had ndopted in self-protection was to unanimously decide to sell nothing but "O. C." goods upon which there was no cut, and which no outside stores could purchase. The phan had worked admirably, and the public were begiming to appreciate the high grade of their goods, and call for them to the exclusion of inferior articles. Referring to the npprentice question, Mr. Me. Gregor said it was most essential that the moral chamacter of the assistants should be carefully looked after, and, if in cases of transgression and the caution of the employer were not heeded, it was better for both that they should part.

At the conclusion of the discussion, several matters of busmess were disposed of. The iollowing druggists were elected to membership in the Association:Mesisrs. McLaren, liarrie, Scott, lout Hope. Melean and Petric, Toronto.

The election of otlicers cance next. The constitution reguised that the retitiag: Executive should nominate their succes. sors, and the meetning cillier adopt or amend the nomanathon. ds, huncoer, only one member of the old Executive was present, liesides the President and Secretary, the President nominated Mes srs. Yeomans, Sherris and the Sectetary to bring in at report. This they subse quently did :Ls follows :-President, I.W. Xcomans, Bellecile, Vice-President, Henry Watters, Ottawa; 2ud Vice Pres ident, J. W. Gerrie, Mamilton, 3rd VicePresident, N. A. Hosworth, Stratford: Secretary, (i. A. McCanh, Turuhto, Treasurer, 11. Sherris, Toronto. Exech tive Committec-ETo. 1 electoral district, Angus Juchanan, Kemptville; No 2, (i. S. Hobart, Kingstom; No. 3, W. Howse, Whitby ; No. 4, IV. J. Davidson, Toronto ; No. 5, G. J. Little, Toronto : No. G, Doctor Slaven, Orillin; So. 7 , T. P. Suith. Flora; No. S, Jas. Marrison, Mamilton, No. 9, Chas. Mc Geerge, Ayr; No. 10, Chins. Austin, Simeoe ; No. 11, C. McCallum, London, NJ. $1:, \mathrm{J}$. Peppe, Brussels, No. 13, 12. D. Scott, Sarnia.

The report was adopted without amendment.

Mr. Xeomans was at onee called to the chair by the retiring president ant appropriately a.hauwledged the honor confe:red upon him.

The Convention neljourned after th:o
reading of the following patatical and very usefal paper, entitled,



## Mr. I'resithene and frllowe drugysts

When our zealous President, and egualby aralous Secretary, appeabed to me for something towards the programme of our annual meeting I did not feel that I could nadertake the task they wished to impose on me, and 1 can assure you that 1 shouk not have allowed my mane to appear on the programme had 1 not been told that there was great lack of material to present to the mecting. I did my lest to convince the gentlemen referred to, that I had nothing worth laging before the meeting, but, an an unguarded moment, I intimated that 1 thought 1 could furnish some hints on the preparation of elixiss which might be of interest to my fellowdruggiste. So I was committed to the position in which J now tind myself. It might seem almost necessary to apologizo for taking up your time with and askins your atturntion to a subject which suggests undisguised excomation from a large mamber of my confreces, but when I tell yon that it is not my intention to add a single formula to the ahmost endless namber of elixirs and that I purpose to refer to sery few formulas, 1 hope 1 shall lave anninilated? any antipathy which tho title of my remarhs to gun may hase aroused. I may say l haven't a word to say in favor of the elixirs as a clase: 1 sharo quite heartily with jun the opinion that they are open to properly ditected criti cism, and that when they are given a pro prictary chatacher, as is sumatimes dime, their use is : reflection on the ability of the practisang pharmacist to compound and disperase the situphe 1 ancedies of the materia medica. Some of them are doubt. less as potent preparations of the drugs they represent as could be derised, and possess the adratitage, or should do so, of being less repulsive to sensitive pratients than the undisguised medicines contained uthen. Whatewer ulacectivas may ins: raised against them, the fact remains that they are freguently prescribed by physicians, so that if we would be prepared to fulfil unce of the iapurtant futcions of our calling we camot athord to despise or neglect this latise chass of medicimal preparations.
Now, the first hint T have to olles is to make your own elixirs. In this connection, let mesesty a word in reference to the mznufacture of pharmaccutical preparations of every kind. I believe it is the custon in some sections to buy and dis. perse ready made tinctures. syraps, ointmente, eth., a custom which every phar macist who is jealous of the standing and reputation of his profession should deplore and hy all me tus discourage. It mntters not if these preparations bre of uniform, standard excellence which, 1 fear, is not always the case-the custom tends to luwer what slonuld be a professional call ing to the level of a mercantile trade. A mach sironger reason that can bo urged
nganst the handling of ready made preparations is the injustice to our apperetiees attendant on sath a procedure. Gur apprentices come to us expecting to bo trained and litted for the responsible duties of the drug business. Now, $I$ would ask, how can they become qualified to under. take these responsibilities if their practi cal açuanatance with the products of pharmacy be limited to handline them as articles of trade? They can, of course, compare the physical properties of the various preparations with the stamdard formuhated by the oflicial pharmatcopecia and apply the tests therein indicated to determine the nature and strength of the chemical bodies present on which the the therapeutic properties depend, but, how much less thorough will be the knowledge thereby gained than if the student had been engaged in every step of the transformation of the crude drug into the finished pharmaceutic product. True, they possess the admantage of as thorough a course of practical insiruction as could be given them in the limited tme devoted to such work in our College, but I think I am not making an extravigant statement when I saly that the experience there obtained camot compa:e in real useful. mess with the experience acguired in the careful and nethodic manufacture of the preparations demanded by the daily requirements of a drug busmess. 1 am dwelling at greater length on this subsidiary matter than the purport of my subject might seem to warrant, but $I$ believa my motive will commend itself to your approval, and if 1 succeed in inducing any of my business confreres to sive practical consideration to my counsel in this regard, I think you will agree with me thit this digression will have been amply justified. As has been intimated, my object is merely to give you some hints on the preparation of elixirs. Some of the hints I have to oller have been derived from $n$ somewhat extemsive practical experience in the manipulation of the class of bodies we are considering. The sreater part, however, of my knowledge of elixirs naturally has been ohtataed from: perusal of the published artieles relatitig to them which hate appeared in jourmals of pharmacy and from the compiations of formulas intended for the use of the practising plammacist. ft is therefore proper thas I should mention the works that have been of assistance to me in my search for and experimentation with satisfactory formulas. Among such books I would mame The National Formulary, Nelson's Handbook, Lloyd's Minmal on Elixirs, and especially Oldberg's linelicial Pharmacopoia. They are all of them helful to the busy druggist, and should have ir place in every pharzatceutical haboratory. I have particularly emphasized the value of Prof. Oldberg's Vinolicial Pharmaco. pa:ia which has been mg constant guide in the preparation, not only of elixirs, but of many other preparations. 1 would carnestly advise you, to furnish yourselves with a copy of it, if it is not now in your possession. The starting-point, or b:asis,
of all elixirs is, of course, the vehicle we comploy to calry, in a palatable form, the medicines preseribed by tho physicim. On it deperids, in great measure, the qual. ity of the finished preparation. The ob. ject to be attained is a llavoring agent which will most perfectly disguise the taste of disatgrecable drugs, and, at the same time, be itself devoid of objection. able clamacter, in oilher words, a fiavoring body that will ba acceptablo to the great. est number of individuals. For this purpose cinmamon, coriander, anise, orange, and other aromaties have been recommended, either in simple or compound form. Of these 1 most unhesitatingly advise the use of orange in the form of simple elixir, which $I$ use in preference to all other formulas ans the basis of elixirs. Nearly everything I have to say will be in connection with the preparation of simple clixit, which, indeed, might have been the title of my subject. The formulia I have to present to you for simple elixir is found in Oldberg's Unollicial Pharmacoperia, modified in regard to the system of weights and measures therein employed to suit the guantity $l$ prepare cach time. In this comnection I should say that the formulas given by Prof. Oldberg are all in metric system, but ample tables are given by the author for conversion into the ordinary standad. I would, however, recommend you to employ the metric system on atccount of the helpial experience it will afford your apprentices in familiariz. ing them with that system. For this pur. pose a set of weights ranging from 1 centigramme to 100 grammes, and conical measures of 30,100 and 1000 cubicecentimetres, and at eylindrical jar graduated to 300 cubicentimetres will be found sullicient for all your requivements. Following is the formula for simple elixir, atecording to the imerial standard as al. reaply intimated:

|  | uces |
| :---: | :---: |
| Hestmizedaled | , 45 mances |
| Simple syrup | 40 ounces |
| Wiater | 31 onnce |

Miv in theorder named, mid $f$ ounces of pow. dered lizeach chalk or punitied 'lalemm; shase occeasionally abl tilter till clear.

The spinit of orange is prepared by dissolving one ounce of fiesh oil of sweet orange peed in nine ounces of deodorized alcohol. As there is some difficulty in setting fresh oil of orange in Camada, I would advise you to buy it in New York. My custom is to buy one pound of the tinest oil obtainable and dissolve it at onee in the proportion of alcohol already stated. I maty say in passing that spirit of orange, as thus prepared, makes an excelleat havoring extract of orange, which is sometimes inguired for. Deodorized alco. hol may be prepared as follows:


Mix the lime nul slam, whl the alcohol ; shatie well and add the spirit of nitre. Set asidefor seven days. Filter flurough animsal chareoal (bone-black).

To awoid the nondescript color appear-
ance that complex tinctures usually exhilhit, it is costomary, in making elixirs, to use caramel for one class and cochineal or carmine for others. In references to caramel nothing need be said as there is no dilliculty in obtaining that articlo of good quality. I have tried several formulas for cochineal coloring and find none more sutisfactory than one I have used for a great many years, and sold as jellycoloring, for which purpose it is really excellent. Following is the formula:

|  |  |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

Woil till effervescence ceases; filter and abld water to make 16 illuil ounces ill which dissolve 16 ounces of sugar:

## Pharmacy of Cod-Liver Oil.

## 1. C. FiNK.

In the good old days when cod liver oil was taken without any thought of possible paliatibility, the product generally offered in the market was repulsive stufi, posses. sing a pronounced odor of sole-leatherand a rank lishy taste. To render the oil more palatable and, incidentally, more readily assimilable, comulsitication was esorted to, and the oil is now almosc invariably exhibited in the form of an emulsion, al. though physicians are aware that the intervening emulsifying agent is a burden to the weakened digestive organs of an invalid.

Now that the novelty has worn off; we we prepared to question whether or not the subdivision of the oil by emulsitication really facilitates absorption, inasmuch as it seems most probable that the sugiav and emulsifying medium will bo separated in the stomach, and the oil accumulate in large globules before reaching the duodenum, where by aid of the pancreatic ferments it is prepared for absorption.

From this it would appear that palatability is the chief adratutione possessed by emulsions, and now that Lofores Cons. Imear On. (D. D. \& Co.) has been rendered so palatable there secus to be little occasion to admmister mistares containing acacia, which is itself a calcium salt and las no place anong foods.

Sast, but not least, is the question of permanoncy. It is a well linown fact that cod liver oil grows rancid more rapid. ly in contact with sweetened water, which constitutes the base of nearly all emulsions, than when preserved pure in closed vessels. Lofores Con-Liver Oil is prepared with a special view to permanency. - Therraputic AFotes.

Whooping Cough has been treated by Dr. J. Taub (L'cot. Mcel. Chir. I'r.) by resorting to intubation. Ihe allows the tube to remain for some three to five hours and the paroxysms of cough do not appear until several hours aiter its removal. The tube is to be atplied every other diay.

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I＇ricg with perfanmer and clemiotizor attachimasat，\＄5 50 Drlco to I＇Hıyiciнns，－is 00
The coulter Yaporizer milg：Co．， Manufacturers for Canada，
＂MEE OEAMPION＂
Cor．King ：Bay Sts
Entrance， 03 llis＇st．Tt．Toronto，Ont．

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For Druggists，Manufacturing Chemists and Perfumers． THESE：AIF：MAIIF：IN THIEEE SITFS ： Suitable to mix－5 lbs．， 10 lbs ．and $25 \mathrm{lbs}-\mathrm{at} \$ 6, \$ 12$ \＆$\$ 18$ each．


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A simple，dumble，practical and cheap machine for the mixing，com－ pounding iand triturating of all powders intended for mannfacturing and componnding laking l＇cwders，＇rooth l＇owders，Face l＇uwiders，Condition l＇owders，zill all Compound Druggista＇Powiers．＇This machine mixes powders thomoughly，then forces same through sictes of the proper fine－ ness for the intended powders．

Twn Sieves， 40 and G0 mesh，with each Mixer．
WM．J．DYAS，Strathroy，Ont．，Sole Agent for Canada．


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## －maneracterkis or－

Soluble Hard \＆Elastic Soft CAPSULES． Improved Prench Pearls and Globules． SOMITB：BEPOIA工ITES．
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Planten＇s Comp．Cop \＆Cub Capsules， （Planten＇s Celebrated Black Capmules，）
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Copsules to orler．New Articles and yrivate Eormulas a Specialty：
Specify PLANTVN＇S CAPSULBS on all orderg． Gend for Samples and Formula Lists．Bold by all Druggiste．

Ifeware of Substitution of Inferior IBrands．


And walk upright in life．
Expands the Chest，promotes Respiration，prevents lzound Shoalders，A perfect Skirt．Supporter for Ladies．No harness－slmule－wulihe all others．All size for Men， Women，lloys mal Girls．

Cheapest and Only Reliable Shoulder－Brace．
 the boily crect，cypanding the Chest，prevectitint Rountl shoulders and Ifolloiw Cliest，is well hunder－
stook stookl（iood Health depends upon It．Many attenpis have been made to present a suitable article for this purphse，sill of which，howeser， wifre iljectionable in some respecta，which yre． Kinickerbocker imrace all oljections have lhen Kicrome．it is a Ciminhucd shoulder－ils rice und Sunimbiter．it provistes new and improved sumpenders for meti＇s phats，and supporters for taplies＇umderahirts，which do the doudle thty of holitug upath bracing up．

Sohd ly Drugrista．Send cheet－measure around the boils：Adilrces，

## Knickerbocker Brace Company，

Eistos，l＇s．，U．S．A．N．A．Jomisson，
President．
For kale hy Lyman Bros．tCo．，of Toronto， and other Wholexale Drumeiat：


## Practical Pharmacy.

As Incompatimity. - M. Sarebbe calls attention in the Bull. Chem. I'harm. to the following incompatible preserip. tion:

$$
\begin{aligned}
& \begin{array}{l}
\text { Solution dialyzed irens } . . . . . . \text {.s. gun. } \\
\text { Fowler's solution }
\end{array} \\
& \text { Fowler's solution..... ......... }+ \text { \& gin. }
\end{aligned}
$$

Adense precipitate wis presently observed on the walls of the bottle, due prob. ably to the hydrated ferric oxide produced by the action of the alkali in Fowler's Solution.

Mixiune of Pabahmiames.-IV. II. Cutting recommends the following mixture, which keeps well :


Dissolve the acacia in tho water and mix with the paraldehyde.

Cnsmamol.-This *namo was given to the Rectified Oil of Cinnamon by a French physician, Championiere, according to Rundschau. Ho recommends its use in the form of it salve for antiseptic treatment and gives the following formula:


For small operations Championiere also recommends the following mixture:


Memmol Mistunes.-Owing to the fact that very little water will cause menthol to separate from its alcoholic solution, this medicament is bestadministered in the form of an emulsion. II. Coup. land, Chem. and Drug., recommends the following three formulis:

$$
\begin{aligned}
& \text { i-Mentiol . . . . . . . . . . . ..... S grains. } \\
& \text { Powdered ncacia ......... of grains. } \\
& \text { Distilled water q. 8. ........... I itl. on. }
\end{aligned}
$$

Powder the menthol finely, mix it inti mately with the ncacia, and add the water gradually.

| - 「enthol | 5 graius. |
| :---: | :---: |
| lolk of egs | 1 11. $\% \%$ |
| Chloroform witer | $311.0 \%$ |
| Distille! Watter | $111.0 \%$. |
| 3-Menthol | S grains. |
| Tincture | dr: |
| Distilled water \%. | 1 tl \%\% |

Dilute the senegr tincture with twice its volume of the water, and triturate with: the powdered menthol, then gradually add the remainder of thes water.

Of the above three emulsions, that made with acacia is believed, on the whole, to be the best. It is thinner than the others, and when the mixture has separited into layers, on standing, it is more easily rendered homogeneous by shaking.

Tho enengat mixture is considered the next best.

A Nkw P'astren ***ass.-Mhurm. Cell. trallalle contains an article from, fournal American M/edical dswociation, in which Shoemaker recommends the above highly. Its composition is as follows:

$$
\begin{aligned}
& \text { Ciaonthoue ........... .... } 50 \text { pats. } \\
& \text { Hemes } \\
& \text { Sompy puater } \\
& \text { fis parts. }
\end{aligned}
$$

This mass is used also as the base in the following plasters in which the active ingredient is expressed as per cent.

Anthrarohin plaster . . . . . 3.5 per cent.
Alumplaster .............. 20 per cent.
lirgot plaster .............. 10 pur cent.
lismuth sulioninte phaster. 30 per cent.
Sulphar phaster . . . . . 30 per cent.
Chamomile plaster. . . . . . . . 10 per cent.
Belladoman plaster . . . . . . . .so per cent.
Hiytulacea phaster. . . . . . . . 20 per cent. **
Sorain Extancts which are habitually ordered in connection with ointments aro best kept on liand in the form of glycerites. They are fitly prepared by bringing together equal weights of eatract, slycerin and water, and after effecting thoruugh mergence, evaporating the water by heating tho mixturo on a water bath until its weight equals that of the extract and glycerine combined. They are also especially useful in the furmation of pills. As tha strength is reduced one-balf, double the quantity prescribed must be used.[Beginnineys in Pharmacy.

## Rational Formula forkills of Oleate of Mercury, and for Fowler's Solution.

MM. Quinquand and Portes contribute the following to la Merlicinc Sciontifigue:
mass of ulaats of mencums.
Dissolvo in a sullicient guantity of water, 30 gm . of medicinal soap and then precipitate by the addition of salt water; decast and repeat the operation several times. Cast on a bit of oil cloth and wash very lightly with distilled water, and tinally dissolve the sorpy residuc in at large quantity of water. in another vessel dissolver 13 gm .50 cgm . of bichloride of mercury in suthicient distilled water and mix the two solutions with constant ayitation. At the end of several hours collect the precipitated oleate of mercury, wash by malasation and preserve in parchment paper, kept carcfuliy from the light. The pills are made with this oleate and licorice, and should be immediately coated with melted salol. Each pill should contain l:5 cgm. of the olcate, representing about $\&$ egm. of metallic mercury.

Pills thus prepared are frec fromall the dufects and bad cifiects of the oleateother "ise prepared, as they du nut disturb) the gastric functions, and are absorbed in the intestine. They are especially valuable in the treatment of syphilis and syphilitic aflections.

## FOWLER'S SOLUTION.

An unalterable solution of srseniate of
potassinum may be mado by following the process of I'mub, viz.: Dissolve by the aid of heat, 1 gm . of arsenious acill in 5 cem. of caustic potash. Dilute loy adding 30 gm of water, 10 gin of alcohol and 10 gim. spirit of melissa. Fimally add sutic ient aleohol to make 100 gm . The doso is from 10 to 15 drops in the course of twenty four hours.-Nat. Drugyist.

## Drug Clerk Association.

## T'o the Eilitor:

Kinclly allow ate space to bring before my fellow drug clerks something which they know arends, but serm afraid to speak out about.

I mm a firm believer in the old saying, that "unity is strength," for wo have seen proof of it in every lane of labor, therefore, 1 agitate for an association, which is sorely needed by all drug elerks, and especially here in Camada, where tho standard is so very high, and the profession supposed to be one of the best (which it really might ace, if we woud unly make it suj, and the uhe ho suppused to be well paid.
lout, fullow i u : clerks, what consti. tates it good profession, one that pays $\mathbf{B 3}$ or $\$ 1$ per week for a man of 19 or 20 years of age? Not in my estimation. Why, we do not get any more remunera. tion for our services than a grocery or butcher boy, who requires to pass no examination in order to enter his business.

People have the impression that drug clerks are well paid, which is a very wrone one, but then the people only seo us when we are dressed up in a suit of clothes, which it took us months to savo the money to buy, and people always judge from appearances.
Alen are leaving the business avery day who have become proficient but cannot make one half the wages that other branches of business offer.

One word about the standard. They (the Council and druggists) have been, and are raising it very high, and the druggists are consequently getting better valuo in their clerks, and it is nothing hut right that they should pry for it accordingly. Inet them keep out the crowd by raising the standard for aduission, not by letting them into the profession and then driving them from it on account of small wages after they have become qualitied. It will belittle our profession. Arise, drag elerks, let us join hands and assert our rights.

Forever your hamble servant,
1F. I.I. J.acons.
$\left\{\begin{array}{c}5.56 \text { Parliament St, } \\ \text { Toronto, Ont }\end{array}\right.$
Toronto, Ont
Lisomen, dermal isum the ascaletin. of horse chesthut, has been found useful Ly Prohhel (Mcal. Chir. Rundsch.) for diasnosing losions of the corno:, the latter being stained pink in places whers thore is interraption of continuity of this epithelial covering.

## Canadian Druggist

WM. J. OYAS, EDITOR AND PUBLISHEF
FFHIRUAKL 16TH, 1501.

## An Imperial British Pharmacopœla.

Elsewhere in this issue wo present in full an address delivered by Prof. Atticld, II. IR. S., int a meeting of the Pharmaceu. tical Society of Great Mritain, held Fieb. 14th, and for a copy of which we are indebted to the author. Sinco the fusion of the three Plarmacopaias, the London, Edinburgh and Dublin, no event of as equal importance, it may be safely said, hus presented itself to the consideration of pharmacists as the proposition now unde to compile n work which, while thoroughly British in its charncter as embracing all that formerly appeared in the individual works beforo mentioned, and being authoritative in its bearing on all matters of pharmacy wherever tho Queon's dominions extend, still by its couprehensiveness would assume an Imjerial aspect.

In 1586 Prof. Attield suggested to the Medical Council the desirability of considering whether such changes in the Pharmacopacia should be made to better adapt it to colonial requirements and as an outcome of this sugge:tion, correspondence was entered into through the Privy Council, with the Colonial Office and India Office with this end in view. In the January issue of the Canadian Druggist we published the committee's report, as adopted by the Medical Council. In this report Prof. Attfield was named as reporter and editor, and no more fitting choice, nor one more acceptable pharmacists the world over, could have been made. Entering upon the work assigned to him with a clear perception of what is required in a text-book of this character and with a thorough understanding of the difficultics which may arise as to the actual fultilment of this long cherished idea, and one that if earried out in the mamer indicated by the author, must prove of incalculable benefit especially to colunial pharmacists; the address is one which must commend itself to every one interested in the compilation of such a work. We hopo in a future issuo to deal with some of the leading suggestigns marde in this paper.

## Drug Clerks' Associations.

A correspondent suggests the formation of associations by drug clerks for purposes of mutual protection and other objects. The formation of such associations would no doubt be of bencfit, not only in the uanner indiented by the writer, but also in other ways which, in our opinion, would be infinitely more desirable.
One of the first objects of such an organization should be self-improvement. Many of the young men who enter upon the life of a drug clork, although "edu.
cated" as fur as scholnstic experience goes, yet are very ignorant as to the lirst principles of business education, and very frequently as to the aims of the profession in which they are enlisting. To be a thorough pharmacist is not merely to be a vondor of drugs, a dealer in "notions" and similar lines of sundries, nor in fact to be meraly a eapable dispenser of prescriptions, but besides possessing a good education, th practical knowledge of the business part of his rocation and a fair insights into the scientific branch of the business, he must mako himself thoroughly acquanined with the theinpeutical, as well as the chemical, uses and characteristics of the goods he handies, and hava an intelligent idea of the highest aims and duties dovolving upon a member of so noble a profession. These cannot all be gatind im a day, nor are they the outcome of a college course, and the drug clerk who will strivomostassiduously tocultivate these traits and ambitions is the one who will succeed best, and as no one person can claim allítho intelligence and experience in a locality, 60 it is that gatherings of the nature proposed will lead to a more liberal exchange of ideas and an elevation of the standing and character of their employment. The drug elcrk of to dity is to be the phammast of tomorrow, and the mere timeserver of a clerk, if he ever happens to lave a business of his own, will be of the class of proprictors who are utterly regardless of the welfare of their cmployees, or the real interest of their customers. Gratification of self and a desire for money veing the sole aim and ob. ject of their ambition. This may in some measure beovercome by "rubbing against each other" in associations of the kiud proposed. Other objects might also be attained, namely, the earlier closing of drug stores, a relief, from some at least, of the Sunday labor and a general discussion of the many problems that aro continually arising both in business and educational matters pertaining to the profes. sion. Thus preparing for the future, the drug clenk of to day may, if he will, carve out in a great masure the business and the standing of his profession for the ycars to come.

As to the coniention of our correspondent, that drug clerks have to work for "three or four dollars per week," we must confess that we have never yet known any clerk that would work for that amount, nor can wo belicere that any man would ask a qualified clerk to give his time for any such paltry sum. However; it must bo remembered that a clerk is worth just exactly what he makes himself woorth to his employer. One that is properly qualified by having passed his examimations, and does everything he can towards the promotion of his employers' interests, can always depend on being reasombly well paid for his services.

Prlangin is a German specialty recommended for use in sea-sickness. It is said to be (Phar. Zait,) a solution of antipyrin, cocrine and caticinc.

## Wholesale and Retail Drugglsts.

A retuil druggist of Montreal, in a letter to the Daily IVituess of that city, complains of the discrimination mado by the Pharmacy Act in that Province infavor of wholesalers in contra-distinction to that of the retail trade. The letter, which we append, explains itself:
"According to the Quebec Pharmacy Act no person, unless he has obtained a certilicate from that body showing that ho has passed the preliminary ceamination, can be allowed to serve even a bottlo of patent medicine over a retail druggists' counter, und uiless he is a certified clerk or a licentiate of pharmacy he cannot dis. pensu even the most harmless prescrip. tion.
"Whilst in to wise finding fault with these very necessary restrictions, I wish to call attention to the very different position in which the wholesalo houses are placed. There appears to be no law compelling them to lavo any qualified person in their employ, but at the same time their employees areallowed to sond out in quantities not only harmless drugs but dradly poisons in any quantity that may be asked for by the purchaser. There seems in slight incongruity in this. Surely if it be considered necessary (and it undoubtedly is) that the retailerof drugs, etc., should tirst prove himself a competent person for the position, the samenccessity must exist in the case of the wholesalo dealers. Hut as the law stands at present there is positively no restriction at all, and the most dangerous compounds may be landled by assistants who have not gualified themselves according to the Quebec Pharmacy Act We retail druggista, on the contrary, have to pay high salaries to our nssistants, who themselves lave had to spend considerable time and money in qualifying themselves according to law, to stand behind our counters and I for one fail to see why the wholesale men are allowto do with impunity that which would entail a : eavy penalty upon the retailers. In conclusion, I think that before further risks ate run or aecidents happen, it might be as well for the Pharmaceutical Association to look into this matter and if possible have the laws in these respects amended, for ummerited blame frequently falls upan the competent retailer through the acts of the incompetent employees of the wholesalers."

Tue " Progress of the World" of the Revicw of Revieus is not confined merely to a review nud discussion of current political, fimancial, economic and sociological events. In this department of the March number, for instance, appears a report upon the geographical and scientific explorations that have recently been completed, or are now being carried on, accompanied by maps and portraits of the explorers.

Salophen, when triturated in the dark, cunits a bluish-white light.

## IMPORTANT

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| " | 1 gross and upwards, | - | 78.00 | " gross. |  |  |  |  |  |

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## Ón an Imporlal "British Pharmacopcila."


Tho author hins prepared the following paper entirely in his private capacity, yet with a due sense of the responsibility involved by his position us the appointed editor of the next pharmacopeeia. It is written with a threcfold object. Pirst, of acyuainting pharmacists and others in Great Britain, Treland, the Colonies and India, with the nature of some proposed alterations of the phamacopoin which have recently been considered by the (ieneral Medical Council. Secondly with a desire to encourage pharmacists to continue to work at phamaceatical researehas learing on the pharmacopecia by showing them (a) how their past researches have assisted the liditors of former phatmacoperias and the Eiditor of the Addendum of 1890 ; ( $l$ ) how such rescarches, condensed by the Amanal Reporter on tho pharmacopuia have been aceepted and acted on by the Medical Council; and (c) how these and similar researehes in the immediate future will maintain that conjunction of medical with pharmiceuticas work wheh is on all sides admitted to be of benclit both to medicine and to pharmacey Thirdly, it is written to invoke the aid of medical, chemical, botanical, and pharma ceutical friends, both at home and abroad In what must, in any case, be prolonged and arduous editorial labor. The whole paper must be regitrded as treating of what is more or less tentative, and subject to the future views and action of the Medical Council and of the Pharmacopeein Committee This much being remembered by readers, the author will not be accused of writing prematurely, but will it is to be hoped, bo credited with the simple desire to awaken interest in, and facilitate consideration of. , 3 important $n$ subject.
The British Pharmncoperia is produced under the Medical Aets of 185 S and 1862. the duty of providing for its compilation, and of deciding as to the necessity for, and the date of, any fresti edition, bein: placed by the legislature on the General Council of Medical Edacation and lRagistration of the Enited Kingdom. For such intiation, a medical body is clearly the most fit, especially when the actual compilation is carvied out by pharmaceutical, in addition to medical experts.
The current pharmacopeia is a condensation of the prior pharmacopreir of the three countries, namely, the London Phar macopreia (1618, 1650, $1671,1721,1746$, 1785, 1800, 1821, 1530, 1851), the Edinburgh Pharmacopuin (1699, 1723, 1736, 1756, 177.4, 1799, 1803, $1507,1509,1813$, 1817, 1539, (S 11), and the Dublin Phar macopmia ( $150 \mathrm{~T}, 1515,1825,1550$ ) -pos. sibly others, some, purhapa, reprints to gether witia adelitions made in the result ing conjoint pharmacopaia, or lsritish

[^0]Pharmacopevia (1861, 1s67, 1885, and Addendumi of 1890 .

Now, my concention of a the British Dharmacopeeia has always been what, for convenience of description and discussion, may be termed an Inperial British Dhar-. macopeein; a work which, while being strictly conservative yot properly reflect. ing the science of the time, should be ns useful in the remotest comer of the Quecn's dommions as in thes centre of London; 4 natiomal median book of which, as of the empire, it might be said, but without boasting and as simply expressive of its silent neveremding useful. ness, "the sun never sels on ite might." In 1856 that conceptina ripened. Tho present pharmacopecia had been published In the autumn of lsai, and one year after the editorial duties of himself and his col. leagues, Professors Iledwood and Bentley, hadeosed, the writer was requested by the lharinacoperia Committee of the Medical Council to advise the Council as to any procedure that might bo desiable to secure satisfactory future revisions. 'Ihe erply to this request, dated November lst, Issif, was printed and eirculated amongst the members of the Council, and, it may be added, has been acted on, in its entia. ty: by the Counct. It was two fold, and related (a) to the official recugnition of pharmaceutical research; (b) to imperial extension. It is necessary to deal with the former of liese two subjects before reverting to the latter.
The tirst (a) of the " vo sugge stions whereby the due pharmaceutical elliciency of the next British Pharmacopeia might reasomably be expected to be promoted was, that annually there should be prepared for and presented to the Phatmacoperia Committee of the Modical Comacil a printed "lieport on the Progress of Pharmacy in its Relation to the Fature Revision of tho British Pharmacopaia of 1SS5;" that is to say, a report on any and every original resenreh, or publishea experiment, or suggestion, relating to any one of the thousand or so articles, or sections, or monographs, of the pharmateo. preta (the number is now ( 1801 ) 1,003 , if the Appendix and Addendum be included), or on the arrangement or classilication of the contents of the volume, or on its nomenclature, systems of weights and measures, and so on; the report to include the reporter's own views, and his comments on suggested omissions, additions, or alterations. The writer had the honor of being appointed the Reporter, and his seven ammal reports bave been accepted and printed by the Medical Council from year to year. The first, for $1 \$ 56$, covered rather more tibin one year, namely, from the date of publication of the phasemacopoia in September, 18S.1, to the end of December, lisiti. The cighth, for 18533 , will be presented at the approaching spring meeting of the Conncal its Mas, lsy.t. The arrangement of the contents of the reports is alphabot:cal, hake thase of the pharmacopuitis itself, hence future reference will be easy ; especially if, as may be hoped, there should be added, in dua
time, a single general inden to all ther reports issued during the life of the present edition of che pharameoperin. Bach para graph of each report has full meterence to the volume and page of tho weekly jour. mal conlaining the origimal reserarh, ex periment, or sugbestion. In many cases subjects have not been reported at tho year's end, but when the papers upon them or the correspondence respecting them hase been muro or has iompheted. A stuck of these ammad iepuits lats lacha retained at the ollices of the Medienl Comncil sulticient in umber for each member of futuo compiling Committers, medical und pharmacentical, to hos sup. plied with an indoxed, min leased, bonvid sert, but insullicient for nuy further di,tri bution. A set, so far, is alacialy in the library of the Pharmarentical Society in dondon. A similar set, as far as pablish. cd, is now prosented to the hibrary of the Society in Edinburgh. Liy this "reporting" plan the labors of original workers will more vadily be recognized, and the duties of compilets provanhe ba fanilitated.
'he encouragement thas given to pharmacists to continue to make origimal phar macentical insestigations is obs ious. Fincr since the pharamasts of tho kingdom were organiad into a publicu body, in tha funn dation, mote than fifty seans "ges, of the Mharmaceutical Sucity of Great Britan, those members of the craft, whether pupil, assistant, or principal, "no possessed the necessary powers of accuate observation, reflection and deseription, and the necersary educational training as distinguished from the ephomeral results of "preparation for examimation," have, in fact, published such investigations, maging from the humblest "note" to the moot adianced "resentch," the outcome of persomal cost and aflort or of conjoint funds and labors of socicties, as read at meetinge of the students associations, assistants assuciations, and prin cipats' associations, in London, in Edin burgh, and in the leading provincial towns, or at the ammal meetingo of the British Pharmaceutical Conference, or as other wise publishad. Siali resiatrches hato sometimes bean ulely chemical, uecasion ally sulely botanical, rarely soluly plyni cal, now and then solely mechataical, though always bating un phamacy, but the great majuity hase be en of that con joint and definite nature that can only ba characterised properly as "pharmacenti cal," while they have, as a whole, worthily reflected the sciences on which pharmacy is founded. Aml the tirst British Phar macopoeia, issued in lstid, did contain more enilence than was aflurded by the previous three separato pharmacopocias, of such original work by pharmacists. But it seemed, at the thae, that the bext revisiun of that look might still better represent the adamsement mabl, in pharmaceutical iseatela sime the Plary mancentical suciety liad beet"established, and silue the praviono Jilinhargh Phar macuperis hani leath issud, sual still bettor retheet the increased activily of original workers during the then recont years of the Society's life the thirteen
years since the presious Dablin and London lhatrmacopoeias hated been issued. the writer, therefore, in 1861 , as one of the professorial stalio of the Pharmacentical Society, delivered two lecturce befure the Society "On the lachation of the British Pharmacopocias to Phamacology." Has collengue, Professor Redwood, also gave two similar lectures, "On the Chemical and Galenical Processes and Prepara tions;" and his collcague, Professor Bentley, two "()n the Urganic Materia Medica of the Mhamacopocia." The six lectures, all delivered by request of the Council of the Society, were reported verbatim, and will be found in the Phurmaceutical Journed, Ind ser., vol. $\because$, yp. $406,416,464,479,561,620$. and in vol. vi., page 7 . Iu due time the Medical Conncil ondered as new liritish lharma copocia to be prepared "under the direc. tion of a Committee," of which Sir Richard Quain, who had recently joined the Council, was Honorary Secretary, and "by Professor Medwood, of the Pharma ceutical Society, and Mr. Warington, of Apothecaries' Hall." 'Hhis second edition of the pharmacopoeiza was issued in 156", the preface stating, in reference to the first edition, which lind successfully fused the three Pharmacopocia of London, Edinburgh, and Dublin into one, "the important work of amalgamation having been efliected, and national difierences reconciled, in some eases at the cost of mutual concession, it has been thought desirable, in preparing a new edition, to submit the work to a general revision, with the view of removing any defects that might be discovered, aud of supply. ing iscertained deficiencies." The result was satisfactory. Sir Richard Quain threw himself into the task of general direction with chanacteristic energy, which has increased in efleet as hee ad. wenced from the Secretaryship to the Chairmanship of the Pharmacopocia Committee and, now, to the Presidentship of the Council. The labors of original pharmaceutical olservers and investi gators were : ippreciated and utilized. The sume statement may be made, the writer venturis to hogn, as rugards the thired edition of the pharmacopheia, issued is years ifterwards, in $1 s s^{\circ}$, in the produe tion of which, Mr. Warington having died, Professor liedwood's two colleagues
nimely, Trofnssor lientley and myself -were cditotialiy conioined. No worthy pharmacentical investigation, great or sumall, was knowingly omitted from con siderition in the compilation of the 18Sa pharmacopeia. That work was, as the writer stated whon defonding it in De cember, $1 S S 5$, against certain critics whom lie regarded, rightly or wrongly; as somewhat unwisely hostike (fharime crutienl dourual, 3 red ser vol. xvi., r.p. 46:) to tiol was. he snici, as regards its pharmacy "thr pharmarists" own phar macopria," and, further, in reference to the gralenical formulie as a whole, that the bulk sis already iargely constructed be phamacists: it is they who have supplica the chicf pharmaceutical materials of the
edifice, their own pharmaceutical experts being cemployed to ,put those and other materials together."

But tho free and full recognition of pharmatenatical research by the Medica! Council is still more obvious in the 1590 Aldendum to the present phatrameopecia. The labors of pharmacists at original investigation had become very inportant. 1t was only necessary, with the ever ready aid of Sir Richarel Quain, to dratw the attention of the Pharmacopecia Committee of the Medical Comacil to those labors, for a request to be sent to the Comncil of the Phamaceatical Society for pharmaceutical help in the compilation of the Addendam. (See ITarmatentical Journal, 3rd ser., vol. xa., pp. fit and 1009.) The result is seen on page 7 of the Addendum, where appear not only the names of the members of the Pharmacopocia Committee of the Medical Council but also those of a Pharinaccutic:al Pharmacopocia Committec who were responsible to the former comuittee for the production of the practical pharnacy of the Addendum. Mere stands evidence before all the world, not alone of the union of madicine with plarmacy, for that already existed, but of the liberal recognition of that union by the Mediaal Council, recognition desired by the lead. ing speakers :and workers of the Pharmaceutical Society for fifty years, and a fitting inaugural ervent for its Jubilec. The writer's pride wili be pardoned, even though his modesty be questioned, if he here reproduce two paragraphs from the report of the Pharmocopotis Committee adopied by tha Medical Council on November 29h, 1590 - ${ }^{-T}$ The Committec recommends that the best thanks of the Medical Council be prosented to the Comeil of the lharmaceutical Society of Great britain for the valuable assistance: renderexl." "The Committee view with satisfaction this conjunction of medical and pharmaceutical work in the production of the present extension of the pharmacopocia, at combination that cannot but be productive of future, as well as immedinte, ben-fit both to medicine and to pharmacy. To the Amual Reporter on the Phamm:copocia to the Mbedical Conncil, I'rofessor Attiedd, must beaccorded the credit of initiating and ors:anixing this desirabl: union." (Iharomeren-
 That lleporter is of coursegratilied at his success, but what he desires to cmphasize just now is that the union was really the result of pharmacists' prosecution of pharmacentical rescarch.

The forceast of future benclit was soon justified-anmuly, three years aiterwards. For within the past few months, on Decomber the 1S93, the Merdical Conseil adiopted the recommendation to invite the Pharmaceutical society to help in the compilation, not oi a comparatively suall Addendum, but of a new edition of the liritish Pharmacopocia (1'ill Appendix.) This faterering invitation coming drect from the Medical Conncil, it iollows that the SIedical Compiling Conamittec which
will, with the help of the medical authorities and their medteal experts throughout the kiagdon, decide on what additions they would recommend to be made to the present Pharmacopoein, and the Pharmacentical Compiling Committee whichs will, inter ser mad with other expert aid, decide on the best formbia, dec., for the additions, will he on that satisfactory footing that apparently leaves little or nothing to be desired in the interests of medical practi. tioners, pharmacists, and the public. Phamacists are governed by the plarmacopocia; they will now, as a result of their pharmatceutical research work, and through their pharanaceutical representatives, have a voice in its pharmaceutical construction. Here then is encouragement to phamacists to continue to work at phamaceutical investigation, encouradement ample and liberal, and coming from the highest constituted authority.

To revert now to the question of extending the area of uscfulness of ourgreat national "Book of Medicines."

The opportunity of agrain considering the ideat of possibly extending the usefulness of the pharmacopocia was afforded by a communication which camo before the Medical Council at the meeting on May 2 Sth, 1592, from the Government of India, in effect, recommending "the ounssion, in due time, of the almost useless and very expensive safiron from the pharmacopoeia, and a substitution, in ludia, of an indigenous oil for olive oil in the preparation of ointments, plasters and liniments." The Surgeon-General with the goverament of India thought "that this principle of excluding useless and expensive ingredients might be carricti further and extended to the general drug list, as he considered, for example, that oil of lavender in camphor liniment, and oil of cajuput in croton liniment were useless and costly additions."

The scond (b) of the writer's two suggestions of November 1st, 1536, to the Medical Council respecting the prosedure necessary for promoting the increased cfliciency of the nest British Pharmacopocia, namely that of imperial extension, was, therefore, once more brought before the Hharmacopoeia Committes on Mity ${ }^{2} \overline{5}$ th, 1843 , in the following terms, again raising the question in the words of the letter of $1: 56:-$ "Thu guestion as to Whether or not any clanges-ana, if any, what changes--can be effected in at future British Mharmacopoeia to better adapt it to Colonial requirements, or, in other words, the requirements of all the more distant parts of the British Empire. Towards that olject the Council piased the following resolntion:-"That he: Pharmacopocia Committes be anthorized to enter into correspondience, through the Privy Council, with the lndia Ofitice, and the Colonial Office, wilh a viow to ascertaining in what degrec, an any, the l3ritish Pharmacopseia can ise better fitted than at present to mect Indian and Colonial recquirements as regardsimportant natural drugs and pharmacentical preparations." In the following October letters wene
written to the Privy Counal by the Presidenti of the Medical Council. Theso have been published in t'he Jharmaceutr. cal Journal, vol. lini, pp. 170 to 472 (cule also Appendix.) A very large number of the copies of the letters were distributed in November last by the Inda ( Ohte and the Colomal Oftice, for use by the Medical and lhamaceutacal Authonties in India and the Colomes. This action was regarded by the Council as the first step towards the issue of another Betish Pharmacopoein-whenever that may be, in view of the lime that must be occupiod by the many and repeated communcations with even the most distant parts of the empire. In short, the Councll formally ordered the preparation of the work, and did the writer the honor of appointing hun editor.
That much, and that much only, has been settled. Whatever is sad or done by medical practitioners and by pharmaeists, at home or abroad, as the outcome of what is stated in this paper respectang the next edtion of the British Phammconocia, must be regarded as tentative and subject to the future vews and action of the Medical Comen, as stated already. So far as ation has gone at present we may perhaps interpret the at titude of the Council in this matter, towards the Colonies and India, to be, not one of desire to produce an Imperal Pharmacopocin, and of request for and in carrying out such a desure, but rather of willingness to make the Bratish Pharmacopoear more usciul than at present, both brondly and in all details, if it is not already sufliciently uscinl, whether in India or in any one of our Coloncs. The Medical Council has alrendy stated, in the two letters referred to, that ill suggestions shall receive the best and fullest consideration. They may be sent to the offices of the Council, addressed to the Registiar, 290 (ixford strect, London, W.

As to the form wheh proposed Colomal and Indian additions, alterntions, or omssions might take, the Medical Councilias directed as follows:- " Dach sugerstion should be as detanled as possible, and each list of suggestions as complete as possible." It may be risky to venture on advice to distant friends, but, for example, if the msertion of a new natural raw drug or artecle of materia medica is desired by modical practiconers, a parngiaph respecting it might bo drawn up in the general form of stmilar exsitiag paragraphs in the pharmacoporan, and then might follow incts and rensons in support of the saggostion. Any desiral pharmacoutical prepamtions of the drug might then be mentonod. Rowmulae for the prepnations of the snid drug would be drawn up by persons having adequate pharmaceutical knowiedgn, and be in a form to fit theun for insertion smongst the similar existing oflecial iormula for extracts, limiments, ointmente, pilis, thetures, de. pharmaceutical incts and scrasons tor insertion then following. New definite chemienl substanees might have similar litarary taatment. Proposed new
preparations of old vogotable or mineral articles of the materia median might be similarly prosented for consideration. Adjustments of strutgh or potency of existurg perparations will not bo diflicult in a phatmacopoem which is alrundy largely an amagamation of threr phama copoctas, but there must bo rexsonable concession when important pereentagh alterations are suggested and reasomable respect for the status ques. Similar re marks ruply to tho omission of anay existang ingredient of a formula or the melusion of a new ingredient. The total omission of a drug from the present piiar macopocia will hot be suggested without the most careful consideration by the medical authonities making the sugges toon. Opmions on matlers having broader bearings than the foregoing prob ably will be welcomed, but will neecs satily merge nio subjects to be discussed in thuir gencral imperinl rolationships rather than from a local standpoint.

To turn now to the discussion of the character of the next British Phammacopoen 4 its hout editorial aspocts, a discussion which it is interded that this paper shall initinte, all views, it may be stated once tuore, of course being subject absolutely to the controiling voice of the Medical Councal atad the Pharmacopucia Committce.

Cienrly it would be unwise to alter the nonenclature of the: present phat ma copocia in any inportant rospect. Ia, lie recently issued Pharmacopocia of thic Unted Sutates, the Jatin nomenclatu** of the provous edition is retained white there is at half and hatif alteration of the linghsh nomenclature. For instaner, Maynser Sxujphas and Tinatara Opii ap pear in that old dress which, let us hope, they will long retain. While, however, under the leading title Timetura Ojiii there appears the landing English tithe Findure of $O_{p u t m,}$ which also is a traus lation, under the leadiag Latin title Maguantz Sidiphas, there appears, not the translation oi Choss; words, namely, Sul thate of dragnesitum, but, in a singtc line un type of Egyptian blackunss, Magerenionn Sudphate, and so on with the whole of the satenical and the chemicel nomenclature. Here is a sacrince of the advantages of transintion and of literary eleganes to mere "up todate" cheanistry and its will o- the wisp nomenclature. Sutentitic chenists cinian the right to alter thrir views of Whe duruical constitution of matteq as oiten a- may be desirable, to substitute one crutch, or rather hatpeng: of hypothe sis or theory for another wheneter the advancing strides of chair science may render such a course expodiont, to chauge notation in accoriance with their views whenever the conjoint wisdon of thr tollowers of chemistry crocts a guide post: and to give now consistent ammos to formulae. fut the pharmacist and the medical practitioner, and the writer as $n$ proionad, if anxions, guide oi both, thonld place in the front rank of ther sualificatzons for a name, not supposed constitation, which is leere today and
gone to montin, but pormaneres a mum which khat!, if pessiblt, Iprombuiguouk, contain no numeral syllablex be recog. nised throughout the "Mpire, ath possess the very minititan of inetability. Chemistay is unfortanaly spitting off from phamacy Chnatist: thros armon other than "thequista and drugmests. and "chernist• suad drumsistas" ure noning up who are mot the former, or scirntilic "chertuists," but "pharemacists" alone bet ur, perhays, nexpl what appears to bo the inevithble and be sonterit with the matue "pharmatist," but therewith let then adopt the mistes, "plarmacy for the Thamaciat" 1tharmaciste should have their own nonmetatul, which, while not inharmonious nith the fropuently thang ing nonet sedature of dewnistry, shatl havn the piane sirtaty of all prossble german cace Dew butist atedical practitioners or pharmaciste wit syegat is with this recent antion of the corppilers of the olher wise highty ingrovel Pharnacopoein of the linited ctatios. Let us trust that that we shath wetain in our maxt British Tharmacopoeia inet ther latinaned linglish leading chemion manas of the prosent ©dition as at ald, with purhas no socalled indeclimble sabstantiver
The writer's view wapmeting offing synonyus, more mpeciat'y those which tend to remove dificulties and weretain ties rospecting the composition of what may be termed hourchold momedies, havo buen set forth in the pharmaccutical pross, atal so far have bregi strongly supported. The 1hiarunacutical Pharma coporia Comaniter may le trustavl to nive a pratical sutcom: to the mater The subject is wide in itseli nud in its beraings, bat is pertups, findy iocussed in the lRepots for 185:, 18ss, 1589, and $1 \$ 90$.
liespucting olfial weights and measures, pharuacists nould math hedp by discussing the questies ai die sutastitution of grains by measur that is, "fluid g.nilis" or "strina mensuroe" for minims We ase ounces forst swd fluid ouncer (il ons.). Why bot grains (ard) nal Guid grains ith gral, the minime pradually, in the course of years, droppin: out oi uset Viewed in the lyght af variation in doscu, the sulject lins not spparently muds Lhoraprutical inpportarse, sud its legal luarings ane mat insaproblile, but ita pharmaceutical iomportninec is considerable is relation to the efterntion of necurncy in conpmonding motutions soad in dixproteming, and us prometing simplicity of avintionship of wrights is mensumes In the
 will be found a erries of formulan for oflicial licyocers, it which 1 part by wright of action principhe is contained in 100 similar jarts by measure for remopleo. 1 ounce of armatic in lue llaid nunces of solution, of 1 grain its lvo thaid graina. In the teclitical lanograsion of pharmacy theore are true "I per ent onlutions" becuuse of the suyplind practice, which never tiend in alosodind - natmely, "solids by wripht, hequids by messure." Where the words "ons: per cent." are not
qualitied by something expressed, something understood, or an implied practice, then, of course, the words "onu" and "per cent." must, by the ordinary laws of lauguage and logic, apply to the same thing or comlition and not to dissimilar things or conditions. $A$ solution containing 1 grain in 100 minims is scarecty an equally techmically true one per cent. solution, and certainly not an rqually simple teclmical one per cent. solution. The writer must not yetexpress a decided opinion on the question of the abolition of the minim.

But a still more important gucstion ie lating to otlicind weights and measures is the growing demands en our attention of the metric decimal system. This is now practically the sole system in the Unitod States pharmacopocial. Our colonists in Canadat must largely use that pharmatcopoeia; and it may be expedient to give them otticial formulae on the metric sys. tem. We must, of course, assume that the medienl practitioners and pharmaneists of the old country, at least, would not at present aceept at pharmacopocia on the metric system alone. Camot those mono. graphis of cur current pharmacopotia which include weights and measures on the imperial system, be foliowed in every case by formulac: on the metric system? Sometimes it will only be neerssuy to repeat the lines containing the quantities, the directions applying to cither system: sometimes the ditretions will ndmit of ndaptation to cither system. sometimes the paragraphs of directions in terms of the ingerial system will also have to be repeated in terms of the metric systrm. The book need not be increased materially in size by such an cxtension of matter, for the "spacing," at least, might be less likeral than at present. It is not now desirable further to enter on this gues tion, for necerssarily it must be fully discussed ia the Cclonies and Tudia, and xiterwards at home.

Colonial and Indian atdifions to the phanuacopoeia have been mentioned. Considering the activity exhibited in the: search for and in the making public of new drugs during the past twenty years, additions of many really new drugs cannot be expected. The question of home xidditions is important for medical consideration, but is one on which pharmacists may be able to supply sone information to median authorities in regard to the fequency or infrequency with which the more firmly established "new remedics" am prescribrd. Here attention may drawa to the following paragraph in the prefice of the new Pharmacopotin of the United States:- "In accordnace with the positive instructions of the Convention, those of the new synthetic remedies which cannot be produced otherwise than under patented processes, or which an: protected by proprictary rights, were not admitted into the pharmacopoeia."

It would be outside the seope of this paper to toucl: nin the questions of bolanical nomenclature; general mechanical processes; how far the pharmacopocia auny
be made more, or less, an undergraduate's book than it present, that is to say, whether or not, for ex:muple, exphanations of tests should bo ineluded, and, on the other hand, whether or not most of the descriptive sentences at the commence. ment of the seetions or monographs should becexcluded; nor to consider any general rules relating to the limits of denamed of purity of articles.

Still less can now be considened the details respecting any particular articie or monograph of the pharmacopocia.
The extremely important suljeet of pharmatological restarch on the medical side, the suhiject on which the question of additions to or omissions from the pharmacopocia should larsely depend, has not bren touched in the paper. Such research, by many workers, is much needed.
The younger wotkers at original pharmacentical investigation will not accuse the writer of merging editor in professor, nor the older of merging editor in reporter, if he ventures to bey them to continue to experiment-experimentexperiment, THere is dignity as well as definitencess in the words "pharatacerutical research;" and it is on accurate pharmaceutical research, properly so called, from a simple observation to :an elaborate in. vestigation, far more than on strictly chemical, plysical, or botanical restarch, that the position which pharmacists have won for themselves in the production of the pharmaseatical portion of our pharmacopocia can be maintained, it is on published accurate pharmaceutical, research in the main, that the pharmaceatical basis of future lamerina British Pharmacopoejas can be constructed satisfactorily.

Iostierint -The decision by the Medi. cal Council to entertaia tie plan of giving the British Pharmacopocia an imperial character has been welcomed cordially, not only by thos: present at the meeting of the menbers of the Pharmaccuticai Society of (ireat 1)ritain, when this paper was read, but by spazkers and writers representing all classes interested in the project.

## Improved Syrup of Ipecac and Opium.

## 11. I. Ginmes, l'u. G.

Symp of Ipmec and opium, or Symp of Dovers jewherer, is one of the unonicial prepar. ations that has taken a position of srowing importance bin dee armamentarian of the prac: tising physicious. It is more ayrecalice to the
 often caters into praceripioms for pecteal troubles.-Ennuining effectively with other erpertonants amb biving the selative anil dia phanetice effecis froprenily dusirell in the treatuncuz of pulumuary dreases
Eornular for this prepration have lece: puhtistel in the rarimus inamacuatian jowr. mats from tine to times and of all that have come to my nutice thant of the "Natimuld Formulury is the inst, throuth alse npeat to criticisn. The tementy of ham extratt of ifxeac to, cuns fermecitation when mixed with syrup, has cansel mach annoyance protally to ciery whanacist at sone time in his criperi: cnec. This cendoncy is manifat in symip of

Dover's prowider: not the the dowese that it is in syrup of ipecate, U. S. P., Lut still to mel atm extent as to occesion investigntime by the writer as to the means of remuving this drawbrick.
The fullowines furmanda is me which has treen evolved in my halur.atery, itul promluces a tyrup that can le kept petifeetly for a long time:
 Bealorizen Tincture upima


 thent add the kyrup.
 represeats $\overline{\mathrm{t}}$ gratins (:3) etor.) of Dover's pawiler or $\&$ araill ( 3 ctg.) each of iperace and apian. The presence of the sather cuasiderable quanties of deosherized tincture of opilus is the: prepuration, makes the resulting syitup of less density than is desiable, if U. S. D. syrup, he
 obviate this, 1 prepate a syruy ly ainsolving, wits the aitl of gentlu heat, tif pemads Av. (3.172 kilos) uf gromulated gugir in 3 pints $(1, t \geqslant 0$ c. c) of witer, and stritining through uns!ia when nemfly cosol. This quantity of "splecial syrup", will ine sudlicient tu matio tho volume specitied in the formula.

The use of glycerin th the extent af alsunt ten per ceat., cannot he oljectionable forns at therapuatic stanlpuint, and is certainly alniatalily allapted to the purpose, pharmacentically cont sideren. Stinup of Dover's prowider prepared in this mamer las kept peofecty for at long


## Sanguinal.

It is wall kwown that metallic iron, and most innrinanic sults, are no: cassily and rapially alo. sorivel into the body, but is funmal in an mantereal state eventuially. Tis this fatt is due the presence of such a mambet of organic pregharations of iron, such as iron luphunate or illmmenate, and similar comjonnds. The gesearelucs of Ifamilarger show the case with which orgathic componnis, capalile of mpind
 tlue vegetahle orgatism. On acconnt of this fact. fresh blood of amimals is lociug uson! as a reanely for chlomsis and anathian. Dried defibriaste l blow and pare hamoghobin an the dinuid form have recently leen usel too in this connection. That ohjection to mang of these more or leas nathmal preparations is alicir lia. bility to decompusc Phe following preparation, containing it fair proportion of allobinc:aon mater, is free frotn all inmmentiate decomposition products, athi con, zherefore, le recomameniled:

> Natiral caltsol blood
> i)s liarnogilahitn......

The value of the matumi salis of the homel is in all prolatility depenucnt on the fow specitic eravity of the serum in cases of anamia. --lrotheder Zcitung.

Sobreos: for mating syrup of iodide adirna is manle by lioussillon, aceording to the followint formula which he daims yichls as malter. able jroluct: A lomiting sulution, composed of
 and distifled water $\mathbf{3 0} \mathrm{g}^{\mathrm{t}} \mathrm{m}$., is filtered inso it Aast conzainiag 220 gan. pure nentral glycerin, :he filter washed with trailing discilled water: the liquids are well mixeil and suljected to a moderate heas until the measurve $2 x 0$ gin. Tho solution is then tilled into well ilrich hottles, which are clasel?, and upon combing the stoppers are covereal with prallim. Jour de Jhirm. al oic cinm. $\overline{\text { - Journal of Pliaronary. }}$
finab is a solable woon tar pupparation make loy heating together three partia oi tar atml ont of ureen soip, atil graidually nelding dirce paris of 10 -per-cent solution oi protake. It is $n$ brownish, elear liguia, soluhlo in mater, is not canstic. and has leen fonni io present the formaisn of thateria is culture ancdia.


## Radlauer's Somnal.

 AETEYL-CEIORALURMTHAN.(!と;(GISTE!E:D)
TEE NEWEST \& MOST EFPICIENT SOPORIFIC REMEDY.
I:aken in doses of 32 grains, or half a ecasponful, in milk, alu or coguac, promuces in half-an-hour a quict refreshing slecp. lastiag froms six to cight hours, with no unpleasuat after effects. The effects of Somsan, are more pileasant than those of Chloral Hyilrate and Morphas. Fperiments made in the Town Hmpitals, Moabit :anl Primlrichshain. Konigliche Charite and Koniglicho Universitats lolihlinik, Merlin, hase shown that Sonsmis, floes not aceclerate the pulse ansi does not upset the xtomach. Somina, is especially pecommethe for Nercous lasmmuin, Neurasthenia, Spiual Complaints, lufectiony Diseases, Diralysas. Dleiant cholia, Ifysteria, Morghinisthos, abm Diabetes. The low price ai Eown:


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Astismaves is of espectal service in cases of hulluebab, Nemalgia,



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 pulalication if fiverilile. In return for which we will ho pleased to give Ehem the leacfit of ang whlvertising conu:ceted therewith if leaired.

Thanking the Ding Trate for their ansistance towanis the sthocess of our lienselies, and rexpestially soliciting a comtinuanct of kanc.

## licsurectfully,

THE DODDS MEDICINE CO., Limited.

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 HAMILTON, ONT.

## Practical Microscopy, with Methods and Formule for Pharmacists.

## 1: S. Mllit.Alll), Ill. C., f. C. S.

Tho increased interest with which pathological mieroscopy is resarded by the medical profession, especially in relation to bacteriology, is an excellent reasun why pharmacists should açuire some know ledge of the subject. It has frequently been suggested that pharmacists should undergo a special course in practical histology and pathology in order to reliero the physician of the tedions, and consequently irksome duty of asecrtaining the presence or absence of pathogenic orgam. isms or abnormal structures. Suitable classes are held at most of the medical colleges and sehools throughout the country, whilst the pathological departments of large hospitals are well equipped, and much mformation and enperience can bo obtained there. The object of the present paper is to give an outline of methods for students, and some of the principal forumbe for the solutions and stains which pharmancists maty be called upon to supply.
the: menoscors.
A good microscope is the necessary ad. jumet of overy pharmacy, whether the owner be an enthusiast in the subject or not. Students who havo to purchase the instrument should avoid second-hand microscopes, unless by reputed makers and in excellent condition. It will be found that at $\frac{2}{3}$ inch and $\frac{1}{6}$ inch objectivers are anple for most purposes, provided they have good definitious and angles of aperture about $35^{\circ}$ and $110^{\circ}$ respectively. Excellent instruments for the purpose are provided by Swift, Watson de Sons, Baker and others, for about $\underset{L}{ } 10$. For the examination of some bacterin, the use of a t'anch oil-immersion objective is imperitive. This may be obtatined for and extrit $£ 5$ to $\# \mathrm{~S}$. The microscope should be fit ted with a good condenser on the lbbe model, and a double nose-picee is very useful. Other neeessary apparatus will comprise a irevering and combedding micro. tome, turntable, ghass slips and covers, de.

## injectivg.

It is often advisable to injuct colored fluids into the arteries in order to observe their relation to the tissue generally. It is impossible to briefly describe the method of injecting stains into blood vessels, and to properly performs the operation requires trainints and considorable practice. The two principal injection fluids are prepared as follows:

Fearutey's Carmine Golatino-Carmine 3 grons.; lig. ammon. fort., 6 ce.; glacial acetic acid, 6 cc. or g. s.; gelatine, 7 grms.; water, SO ce. Sonk the gelatine in 50 cc . of water for six hours. Rub the carmine with the ammoniat in a mortar, and after two hours tramsier to a bottle, and gradually ald the acid until the color changes to a bright red. Molt. the gelatine and add the carmine solution with countant atirring.

Fimarney's Prossian Mhe Gelatime. Soluble l'russian blue, 2 grms.; gelatine, 7 gruss; distilled water, 91 ce. lub tho powder in half the water, and allow to stand half an hour, when pour off the clear solution. Soak tho gelatine as in the carmine formula, and when melted add the bhe solution gradually with constant stirring. Both masses should bo made with Lest French melatine, amd may be filtered through hut dlamel directly befure using.

Alcohol is the most largely employed hardening agent. The strongest methylated spirit, i.e., $\mathbf{0 5}$ o. p., is most frequently used, and the fresth tissue or specimen to be hardened is allowed to macerato in it, changing the spirit daily, for a week or even longer.
Ranvier's alcohol is mado by mixing one volume of methylated spirit with two parts of distilled water.

Muller's ituid. Bichromate of potas sium, 2.5 grems.; sulphate of sodium, 1 rrm.; water, 100 cc . Is very hargely used in hospitals, de., as particularly suitablo for macerating large pieces and whole or gans. lt must be changed occasionally, and the maceration required is much longer than with alcohol. Specimens can be kept practically indefinitely in it.

Klain's l'huill-Chromic acid, 0.2 grm. distilled water, 60 ce . Dissolvo and mix with 30 cc . methylated spirit. To bo made fresh as required. Ilardens speci mens quicker than with Muller's Fluid, but must bo changed in the same way. Specimens after thorough hardening, should be placed in ruming water for at hour, then in a mixture of three volumes of methylated spirit and one volume nater for a day or two, and finally kept till te guired in methylated spirit.
Decaloifying J'luid.-Ciromic acil, 1 grm., distillud water, 200 ec., nitric acid, $\because \mathrm{cc}$. For dissolsing the salts of bone, whilst hadening the matria.
Gilycerine Decalcifiguy Plund.-Hydro. chloric acid, $\overline{5}$ ce.: Elycerine, 95 ce. Ob. jects, such as teeth, bone, Ne., are tested frequently when macerated in these liguids by means of a necdle. The thid is got rid of by well washing with tap water.

## Embendist and section cutring.

The commonest method of embedding is in carrot. It is suitable for tirm tissues, cither vegetable or animal, but very thin sections cannot be cut. In vegetable histology this is of little in. portance, as the cells are so much larger than the average amimal cell, which, in the latter ease, is still further reduced by hardening. $A$ cylinder of carrot is cut by means of a large cork borer to firmly fit the well of a Stirling's or Cole's microteme. The cylinder is then sliced into two halses longitudinally, and the tissue is phaced between the semi circular pieces in a space scraped for it. The cylinder is now preded into tho well, zo that tho slit in it poizts rizite and left of tho operator.
'Ihe sop of the microtome is Ilooded with methylated spirit, and the raror slowly worked through the earrot and tissue. Byfueans of a serew at tho base of the level of the eylinder is gemerally misol betwern each slice. The section is ready for straiaing and momating.

Cellourdar.-. Hadened tissth is placerd tirst in a misture of alcolal mad ether, and then in a solution of shering's celloidiu. This is mande liy disoulining tho celloidin in a misture of equal parts of absolute akeohol and ether; A very thin solution is tirst used contaning 3 per cent. of celloidin, and then a 10 per cent. solution of the consistence of mucilage. When remover from these the liguid speedily erraporates, leaving a fiim of celloidin. This is increased by painting over the piece of tissun with more of tho thick solution and allowing the ether to evaporate. Sections are casily cut from thes, eithe: by clatngnge in or frecesing on to the mierotume, heepping the ramor moist with methylated spirit. The sections may atso be kept in it until cleared for stain ing. 1 s useful for delieate tissues, de.
l'arafia embedding is useful whorea large number of very thin sections are required, but is tronblesome and mositis. factory compared with other methodr.

Frosing in cium. .-The tissuc, thoroughly washed free from spirit or hard cmus ngent, is yhaced for $1 \cdot 2$ hours in a mixture of macilage acacin threo pats, simple syrup one part, with 1 per cent. carbolic aced ut thymul. With a brush, phace a little gum only on the top of a freazing microtone, such ats Catheart's and freere the tissue on. Then with the plane iron moistened with water cut off a lump, tirst to barely half the depth of the specimen. If tirmly froan, cat sharply across, raising the level after each stroke by means of the screw. Dip the kinfe into a bowl oi water, and shake the cut. thers off. If sentions are required to be kept bufore staming and mumating, thry should be placed in eyual parts of meth. spirit and water. Although they have a tendency to curl up, yot when transferred again to a bowl of water they instantly opers out.

## STMNiN:

The olyject of staining sections is to render the structure more distinct and determine the various parts. Nuclear stains, as the name indientes, net upon the muchei of cells, laving the protoplasm and vellulose but faintly tinted. The most useful nuchear staims are hamatosy. lin, carmine and safraniar.

Eltrlich's Hipmntorylian (Squire's form). - Hamatoxylin 2 grins, , mmbonium carhonate, 0.1 gras.; proof spirit, 40 ce. Dissolve and expose to the air in a slablow dish for 21 hours. Make up the volume to $\{0$ ce. with more spinit and ruld ammonia alum 2 grms, dissolved in so co. distilled whir. glyerin 100 ce., S.V.R. so ce. and ghacial neetic acid 10 co. ; tilter. The stain is diluted with water and tho sretion immersed in it for 12 hours and afterwands wasled with tnp water or
water containing a traco of alkali. Lithium carbonate dissolved in tap water is used by some histologists. Excess of stain may be removed by washing in $d$ per cent. acetic acid solution. Persomally, I prefer tho following method as much more satisfuctory and oxpeditious: Macerate the section in the undiluted solution for five minutes in a watcl.glass, gently warming over it ilame. Transfer the section to a llat disin containing ncidulated alcohol for a fow seconds (if left too long the color is washed out), rinsing the specimen by gentle agitation with a needle. Transfer back again to tap water where it will open out at once, and by agitation the acid is got rid of. Fimally, dehydrate in methylated spirit before mounting.

Acid Alcohol.-1lydrochloric acid. 1 cc.; absolute alcohol, 70 cc . distilled water, 30 cc .

Lithium Carmine.-Carmine, 2 grms.; Jithium carbonate, 1.5 grm.; distilled water 100 cc . Digest for a few days and filter. By subsequent use of acid alcohol only the nuclei are stained, and picric acid can bo used as counterstain, or in ono solution as with picrocaraine.
licrocarmine-Carmine, 1 g:m.;strong. er solution of ammonia, 3 ce . ; distilled water, 5 ce.; gently warm to dissolve, and and 200 cc . of a saturated solution of picric acid; boil and filter. A drop or two placed on section itself when on the glass slip. and gently warmed, gives good results, care being taken that the section is tloating in the stain. Excess is drained off and wiped away around the section, which is then mounted in larrant's liquid. Nuclei appear bright red and tissue yellow.

Safranine.-Safranine, $0 . \bar{z}$ gru. ; reetified spirit, 20 cc ; distilled water S 0 cc . Is ustful for staining intracellular structure. It is also a specific stain for amyloid degeneration of the kunney, ise., the amyloid material reacting with an orange color, the normal tissue being pink.

Methyl Fiolct.-Methly violet 0.5 grm , glacial awetic acid, 5 cc ; water to 200 cc. Allow the section to remain in this stain for some minutes, wash well with water, and mount in Farrant. Amyloid material is colored red, and the rest a bluish color.

Methylene blue.-Methylene blue, 0.5 gron.; rectified spirit, 15 cc .; distillcd water, 85 cc . Useful for staining sections of brain, spinal cord, fic. It is also largely employed as a counter-stain in the ex. amination of bacilli, or as a direct stata of micrococci, sc.

Methyl, or Iodine Grecir. - Methyl green, 1 grm. ; rectitied spirit, 20 cc ; distilled water, so ce. The section is immersed for a minute in the undiluted stain, washed with water, and mounted in glycerine or balsam. Amyloid tissue is stained pink, nuclei blue, glandular structure dark green, and tibres bluish green. According to Squire the amyloid reaction is due
to the presence of methy! violet in commercial iodino green.

Eosin,-TMosin, 1 grom, ; rectilied spirit, 20 ce. ; distilled water, 80 ce . Anadmirable counterstain to hamatoxylin, as it gives a red background. It reguires somes delicate manipulation to obeain good results.
(ientien livict. - Gentian violet, 0.5 grm. ; rectified spirit, 20 cc ; distilled water, 80 ce. Is a good nuelear stain, if the section is afterwards rinsed well in acidulated water. Also used for bacilli.
Osmic Acid.--1 per cent. solution in distilled water. It is usually recommend. ed to bo krpt in the dark, as it is readily reduced; but it has been recently shown that if the distilled water is absolutely free from organic matter, light does not affect the solution. It is : specific agent for staning fat and fatty degeneration in sections, or in the lump.

Ifagenta.- Fuchsine, 1 zrm.; rectified spirit, lis cc. ; distilled water, 85 cc. Used for detection of the comma-bacilli of Koch, dic.
 grom. ; rectified spivit, 15 ce. ; carbolic acid, liquefied, 5 cc . distilled water to 100 cc . An excellent stain for tuberclos bacilli. Neclsen's method is to take the section from lung, immerse in weak spirit, and allow to stain in the reagent for several hours: decolorise in 2 per cent. solution of sulphuric acid in alcohol for 15 minutes, wasla for the same time in water, courterstain in methylene blue for half-a-minute. again wash in water, dehydrate in absolute alcohol, clear and mount.
Gilbas' Doublc Stain. - Fuchsine, : grms. ; methylene blue, 1 grm., mix and add 3 cc . Aniline oil dissolved in 15 cc . of rectilied spirit, and lastly, 1 j cc . of distilled water. Is used for cover glass preparations, where pus, sputum, :Ece, are examined for tubercle bacilli. The stain is heated gently and the preparations immersed for five minutes, washed in methylated spinit till no more colone is removed, dry by warmings, and mounted in aylol. balsam.

## DEHYDHATING AND CLE.MBING.

Deliydration of sections which have been previously stained or removed from water is necessary before mounting in balsam. Absolute alcolol is the best agent, although methylated spirit will answer if allowed longer time. The section is transferred to the glass slip, nud, if from water, allowed to drain. A few drops of absolute alcohol are dropped into the section so that it is corered and floats in the liquid, and allowed to remain for five minutes. If the section his been made in celloidin it must not remain more than twe minutes in absolute alcohol or it will dissolve a porion. Clearing is usually effected by means of eloveoil or cedarwood oil. Gedar wood oil is better than clove, is the latter removes some of the aniline colors. The alcohol is drained off from the slido and the area around the section sarefully wiped, at drop or two
of oil is placed on the slip close to the edge of the section, and by inclining the slip is allowed to run under the section, which it soon saturates. It is left for a few minutes, then drained by inclining the slip on to the blotting.paper, and tha area around the section agaia wiped elear. Excess of oil may be removed timally by gently dabbing with clean blotting-piper. muUnting.
The best mounting medium is Canada b.alsatn, which has been thinnea with either xylol or benzol. A drop of xylol billsum is placed on the section, and a clean cover glass very gradually lowered over all. The proper application of cover ghasses is important, or otherwise air bubbles will deprecinte the value of the specimen. One edge of the cover glass should touch the slip, and a portion of it, as it is lowered, be covered with the xylol bulsam. As it is gradually lowered it will drive the balsam evenly along over the section and expel all air. They should be left for a week to set.
f'arrant's Medizm is made, by Cole's method by dissolving 100 grms. gum acacia in 200 cc . of cold saturated solution of arsenious acid and adding 100 cc . of glycerine. liitter bright. Air bubbles may be excluded by pressing evenly and hard upon the cover glass or gently rotat. ing it. It requires about a fortnight to sot.

Gilycerin Jelly is preferred for botanical scetions, and the following form, published originally in the Britisha cend Colonial Druygist, answers well :-Gelatine, 1 oz . water, $60 \%$; soak two hours, and add slycerine $\boldsymbol{i}$ ozs. and carbolic acid 1 per cent. Warm and fiter whilst hot.

The final stage of mounting is to ring the cover.glass with cement. Balsam mounts alone do not require it. White ainc coment is popular, and should be followed with a coat of asphalt varnish. If glycerine occurs in the mount, the cement should bo preceded by a ring of gold sige, or marine gluc. It is doubtful if it is worth while for the microscopist or pharmacist to make these, but formule for them have been published already in the B. © C. D. - B. a C. D. Diary 1S3\%.

Cocalne and lsobax in the: Presence or Gincemin.-The precipitate formed by borax in an aqueors solution of cocaine hydrochlorate disappears on tho addition of glycerin. This renction presents a remarkable phenomenon, on the applica. tion of heat. The solution beconses turbid, the turbidity appearing first al the surface, and gradually extending downward, until the entire mass is uffieted. On cooling, the turbidity disappears completely. The author (a writer in the Re. pertoire de lharmacie), thinks the reaction may serve for the determination of the presence of cocaine. Ife has thus been able to recognize one part of cocaine in 1000 parts of a solution of the same.

The magnesium light was first applied te art yhotography in 156t:



Fio. s.

THIS form of medication is very popalar in Europe, where it has, to a great cotent, superseded the pill and capsule. The argoments for its use are, greater solubilay in the stemach, and a shapo which readily conforms itself to the shape of the thruat, making the net of swallowing easier.
liy the use of CHAPIREAOSS CAOHETS the pharmatst is caibled, upon short sotice, to int up powders in a form agrecable to the patient. The ontfit neces sary for filling CHAPIREAU'S CACHETS is exceedingly simple, cenily manipulated and mexpensive. It consists of a small cabbuet upon the underside of the lid of which are fasteved 10 aickel-phaten moulls (Fig. 1.) The lower hateres of the cachets are plaeed in these moulds, and "fillers" (Fig. 2) are slipped over the top to insure the even filling of the catehet. (iranuated compessums (Fig. 3) are then applied to frire the powder into the eatehct.

Holders (Fig. 4) are used to piek up the upper part of the cachet, and for moisteniug
 and joining to the lower half. An automatic handle (Fig. i) is used for handing the holders amd ejecting the filled catehet. Fig. 6 is a water cup used for moistening the ealges of the cachets.


Fic. 4



Fia. 2.

Fila. 3.



ric. 0.

The expense for the cachets is practicalily nominal.

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T
IIA＇I＇when $n$ concern has a preparation thut won＇t sell on its own merits，or if desiring to steal the fruit of another＇s sowing IHES IAITATE A SUCCESSFUL OND．

A IUronto concem labels their mixture Pennyroyal Wafers，because if calling it nuything else，it woulln＇t sell withont expendituro of considerable money to alvertise it as others do， taking thas a dishonest advantage of what has been spent to create the increasing demand now had for the genuine and original Pennyroyal Wafers．They go still farther，and cut the price on their product to you，hoping thereby to sccure your co－operation ；failing to get results，they add as another inducement，＂to give you a gold watch＂too；a still further proof of its cheap worthlessuess．Can you look your customers in the face and with hooest conviction of doing right sell thent a substitute for the genuine Pennyroyal Wiafers made by us，and by whose alvertising they have been brought to your store to buy？$\$ 8.00$ per dozen is the price for the gemuine，and no bribes given，to encourage you to deceive the pubia． Your continued favors sts in the past will greatly oblige，

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## Formulary.

$=-$ -
Cabmolate roorit wisil.
Tinct. cardhmon comp.
'l'inct. my'ril.
Tinat vanilla, ata ..... ............... ji.
Acisl, carbolic ................ . Nliv.
Cilycuria
II. $\mathrm{S}_{\mathrm{ii}} \mathrm{i}$.
linet. whitesoap(e0per ct. hydro.
ale ), enongh to matio ...... . Oi.
Cl, hadisinc: I,IQUID foll Cl.OTHES, bitc.
Ciastile soup in sluwiugs ......t druss.
Ciarbmitte of somis . . . . . . . . . . . dims.
Borax . . . . . . . . . . . . . . . . . . I irm.
Belizol . .... . .... . .... ...... 1 Ih. oz.
Strong solution of anmoniat . . . 1 fl. \%
Distilled water ................ 1 pint.
Boal the soap in the water and add the borax and sodia, and, when quite cold, the ammonia and benzol. Shake well before using.-D. aul C. Drueg. Diary.

## NON-IUISONOUS Liquil) mhass folisht.

Ruchu alam . . $10 \%$
Pripoli .. $40 \% 8$.
$\qquad$
Dissolve the alum in the whter with heat, then add the tripoli, and shake well before using. Poured on a soft rag and well rabbed, this will burnish brass like gold.

SHMUP OF FFiHme citho-chlioumbe.
A tasteless syrup of chloride of iron, representing 30 minions (approximately 40 drops) of the tincture of ferric chloride to the ounce may be prepared as follows:

Take Tisct. Ferric Chborile* ..tl. 31.
Sodium citrate .................tr. w.. 13.


Mix the tincture of ferric chloride with the water and dissolve in the mixture the sodium citrate and the sugiar, with the aid of heat. When cold add sullicient syrup to make 16 thuid ounces, and fla vor to suit.- Western Druggist,

NOTH EXTRHMINATOR.
Ratehouly . . . . . . . . . . . . ..... 10 parts.
Vnlerian ........................ 5 parts.
Valcrialy
Camphor . . . . . . . . . . . . . . . . . . 4 pats.
Napthatin. . . . . . . . . . . .
Scoteh snulf. . . .............. ${ }^{1}$ pharts.
Orris rout . . . . . . . . . . . . . . . . t puts.
Sumlual root................... 5 parts.
Oil ciassiat ......................
Oil cucalyptus . . . . . . . . . . . . . 2 parts.
The patchouly, valerian, camphor, orris and sumbul roots are to be conarsely powdered and thoroughly mixed with the other substances.

The following veterinary remedies will prove useful since but few druggists know what to give in such cases :-
ror hons: conic.
Whiskey ..................s ill. ors.
liancture of assafutida......... 1 月. oz.
Sweet spirit of nitre............ it. oz.
Spirit of chlluroform ... ...... i il. o\% Mix.

## A (GOOD HOLSE BLISTER.

Powiered canthardics..... . of drans.
Oil of urigamm............. 4 II. diss.
Oil turpeutine............... . \& if. its.
Alcohol........................ 16 fi. ozs.
Mix.
-Meyers Bros.' Draggist.

| roumbe banve de pellek: <br> lismuth oxide. <br> bismuth subearinomate. <br> Ricostarch. $\qquad$ <br> Perfume $\qquad$ <br> cheaper formula: <br> Rive llane <br> light car <br> lirenel chalk................. |
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A little Cologne water or white rose bouquet is as good as anything to perfume with.
I.IT:UII BI.INC DR: 1PEIt.I:.

| Oxitu of hismuth | , |
| :---: | :---: |
| Onide of zinc | 3 |
| (Elycerine... | 1 druns |
| liose water | 7 \%\%s. |
| Bay rum | $10 \%$ |

lub down smooth in a motar. Shake before using.-Brilish ame Col. Druyist.

## Pllel: ssINi:.

Tho following makes a most excellent and soothing remedy, particularly valuable in painful and ulcerating piles:

| Cocaine hydrochlorate | 40 parts. |
| :---: | :---: |
| Morphino sulphate. | 12 parts. |
| Atropine sulphate | S parts. |
| T'tunin | 10 parts. |
|  |  |

Visclin stidicient to make. . 1000 parts.
Mix. Label "Use a few minutes befote and a few minutes after groing to stool. Wational Drugyist.

## E.LU DF: QUISINE:

| 'Abke quinine suphhate...... I drant. |  |
| :---: | :---: |
| Clycerin Ti ilratus. |  |
|  |  |
|  |  |
| 'lineture of rhatayy | 20 dramis. |
| Spirit of lavender | ratus. |

Mix.

## PHEPABATION OF KOHMLS.

The Drogisten Zeituny gives the follow ing: To a gallon of fresh milk, atd 6 drams of yenst and 3 ounces of sugar, and let stand from ten to fifteen hours, when it may be strained and filled into stron: bottles of suitible capacity. Cork the bottles and tie the corks well down and preserve. The temperature of the receptacle in which the bottles aro preserved must not be higher than $20^{\circ} \mathrm{C}\left(68^{\prime} \mathrm{F}\right)$, or the bottles will burst.

## stl.mipoos.


Cissile soap, white ... ................ I
Curd soinp, powdered............. . " "
"otassinth carbonate.... . . . . " 1
Honey

- 1
l'erfune of suit
Make a homogencous paste by heating with a sufficient quantity of water.


## s.m.scriser silsmbors.

| Rosemary water.............fl. 0\%. |
| :---: |
| French rose wate |
| St. Thouas bay rum........ "\% |
| Ammoniam carbonate .....tl. dr. f |
| Sodium carhonate |
| Salicylic acid.............. gr. E) |
| Prepare and use as the preceding. rosice illanion. |
| F'incture quillaja... .........tl. \%7. |
| Dan de crog |
| Glyceriu |
| Elisid extract pilocarpus....tl. dr 1 Quinine sulphate ..... . ... gr. 30 |
|  |  |
|  |

Dissolva the quinine in the man de cologne and tincture of yuilhajn with the aid of heat. then med the rematining ingredients and tilter if necessary.

'To the rosemary water, in which has been dissolved the bovac and ammonimm salt, add the rest of the ingredients and mix thoroughly by agtation.

The hair is moistened with the liguid and rubbed vigomously to produce a copious lather.

## 

The following formalas ate used largely by lmirdressers.

'Lhe whites of eng (nlout two) are thoroughly beaten up presious to being mixed with the water and water of anmonia, tho remainins ingocelieats are added in their order and the whole stirred briskly.

| boras $\qquad$ . ... ($\square$ il. $1 \%$ |  |
| :---: | :---: |
|  |  |
| New Eughand rum . . . . . . . . ${ }^{\circ} 15$ |  |
|  |  |
|  |  |

Incoporate the boras in fine powdor with the glycerine and add the bay ram and New Baghand ram gradually and with constint stirring to the mixture. The proviously well beate:a white of egg is audded lastly, and the whole stirred thoroughly until an oven mixture results. - Hrastorn brompiv.

## Antikamnia.

Thes is a combination of choments belonging 20 the coal-tar group, and is an American product. It is a white erystal. line powior, odorless, atal has as slightly burning taste: .oluble in hot water and in diluted atcohol, bat not in cold water. It aets as antipyretic, malgesic and anodyne. The importance attaehed to this drug, I thiak, is dao to its anodyne and analgesic power, and the celerity with which it ach. Als an antipyretic in fevers, it acts mome slowly than antigym, but is not attenderl with as mach de. pression oi the cardise sytam and cyanosis. Whenever a sedative and an analgese tosether is indieated. this remedy meets the dem:and. In sovere headaches it is romedy porn acolloner... C. A. Jumas, M. D., Lumisilh. Merliat

 is led to believe, as ther result of experiments, that thrye exist: an onide of arsenic of the composition Ass:

# Photographic Notes 

Development.

## 1: \% Mensmiri.

Development, in in photographic sense, means the art of bringing out and lixing the latent inage in a phate which has received an exposure in the camera.

If a plate be exmminednfter it has been exposed, it will ise found inpossible to dreect that any change has taken place. There are several theories put forth as the actual change which dons tike when a plate is exposed, a very popular one being that of an electrical action being get up, and to that theory I myself lean.

There aro several developing agents in use at the present day, the best known of which are pyrogallic iecid, hydroquinone, and iton. Though the hydroquinone is comparatively new in the fiedd, it has already found many admirers.

In both py rogallic acid and hydroquinone developers (neither of which edaciog agents alone would develop a plate satisfactorily), there is added :an acceleritor, such as carbonate of sodia, potash, sodium hydrate (caustic soda), or ammonia.

It is also necessary to havea restrainer, such as bromide of ammoniun:, or bromido of potassium, withont which wo should find great difliculty in bringing a negativo up to the printing density.

There is also another ingredient which is not absolutely nocessary, mamely, sulphite of sodia. It acts slightly as a re. strainer, but it is added to a developer to prevent the plate being stained. Many workers, and amoung them a considerable number of professionals, use little or no sulphite, preferring the printing quality of a yellow negative.

If the development be prolonged with a developer without sulphite, the stain is so bad at times as to make the printing very slow, but it can be readily removed in any ordinary clearing bath:
'The following is a simple and eflicient one:
Saturaters solution of (common) ahum ${ }^{2}$ ows.
Fiydrocharic acial ................... 1 o..
Which bath may be used repeatedly until much discolored.
For the production of beautiful-looking negatives, lantern-slides, transparencies, opals, bromide paper prints, and enlargements, the iron or ferrous-oxalate developer is generally used, becmuse of its nonstrining quality. Its drawback for negative work is the little chance $i$ tgives of modifying it to correct over and under exposure. The following are the propor. tions:


The above solutions are used in the proportion, three parts of $P$ to one part
of I . Thas to davelop at half.plate pour into the samasure $1 \mathrm{~d} 0 \%$ of $J$, being careful to remember to pour the iron into tho potash, not wier rersu, otherwise tho developer will be at once spoiled.

With a plate which has been correctly exposed, you may bo sure of getting a clean, spatikling image with the iron developer; which may bo used again and agitin until its streugth is uxhmusted.
In case of under exposure, a thing not uncommon in Eughand, where the light is very poor and in.otanatancous exposures are made, have at hand a solution of 20 grains of hyposulphite sodn to $10 \%$ of water, and to each ounce of the dencloper add from 10 to 20 drops. You have then one of the most powerful detail giving devolopers known, and you may rest assured that the full result of the exposure will be brought ont. The negative can then be brought up to proper density by intensifying it with mercury and mmonia. If, on the other hand, you find the plate over-exposed and developing too guickly, have by you a solution of restrainer, 20 grs. of bromide of potassium to $10 \%$. of water, and into each ounce of the developer put about? drm.

Negatives produced by iron develop. ment are crisp, sparkling, full of soft half. tone, and of olivergreen tinge, though they do not possess, to my way of thinking, the printing quality of the negative do reloped with the pyro ammonia developer.
The most generally used, and, in my humble opinion, the best developer for negative work is the pyro ammonia developer. It is capable of modification to almost any extent. It is ulso very cheap, recommending itselfstrongly to the professionals, and all who desire to secure the best results at the lowest cost. Above all, it is a developer which gives a printing quality to a negative unequalled by any other mode of development.

Pyoo may be used with almost any alkali, such as carbonate of sodit (common washing sodia), potash, caustic soda, or ammonia. Whe following witl ba found to be is thoroughly good working formula for a pyroammonia developer, which has given good results with every brand of phates with which I have used it.

Dissolie : 0\% of re.erystallised sulphite of soda in 12 o\%s. of warm water, and when cold neutraliso with citric acid, which is done ly adding smiall doses of the citric acid until there is no change of color if a line be drawn upon neutral test paper: should the test paper turn blue, more acid must be added, but if red, too mach acid has been used (which slows the developing). When cold, add $10 \%$ of pyrogallic acid, and babel "Pyro."

| ```Mrmide of potassimm.................```tames, "themide." |  |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

To duvelop, use the above in the following proportions:-

Proo. Bromide. Ammonia.



It is better, in making a developer, to use distilled or boilded water, as in ordinary tap water there is so much impurity, which causes the developer to deteriorato in quality.

Tho above quantitics are sulficient to develop 100 half-plates.
The following simple formula is the one I generally use for instantancous work:

$$
\begin{aligned}
& \text { Winter .................... . } 20 \text { ors. } \\
& \text { Sillphite of sodit. } \\
& \text { linomide of ammunitu... } \\
& \text { 0\%. } \\
& \text { Aımвиia........................ } \text { if }_{4}
\end{aligned}
$$

Using 1 drm. to the o\%. of water; and dry pyro till sulficient density be obtained usually taking from $\frac{1}{2} \mathrm{gr}$. to 12 gr .

With plates which will stand sodium hydrate (caustic sodia) substitute $10 \%$ for the $1,0 \%$ ammonia. If development be continued for an exceptionally long time, the negative will be slightly stained and, therefore, of greater density, on account of its yellowness, than it itppears by tramsmitted light.

A very clean and good developer is the pyro and potash, and I do not know of a better formula than that by beach, as follows :--

IVIto șot.1'T10s.

Dissolve the salts separntely, and then mix. For normal developer take 1 drm: of pyro solution and make up to 20 ozs. with water, adding 20 miuims of potashsolution. For under-exposure use more of the potash solution, and for over exposure viecrersa.
A thoroughly good bydrcapuinone dcveloper is the following:-
(1.)


Take $10 \%$ of each solution, and add 3 ozs. of water for use. When the plate is sufficiently developed, it is washed for $\Omega$ few minutes, and tived in a bath of

Hyposulphite of sodn... .... 5 oze.
Water 20 "
Aud when thoroughly fixed (all the whitish opacity removed, wash in rumming water for about one hour, and place in draining mack (out of the dust) to dry slowly.

The power to correct too much contrast and want of contrast is very great with the pyro developer. Take, for example, a portrait of al lady with a dark, sallow skin and white dress. If developed with s normal developer in the ordinary man-

## $\$ 6.00$ and $\$ 10.00$

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ner, as though no great contrast existed, we should get a negative better suited to the dust-hole than tho printing frame. The dress would be so dense as not to print at all, while the face would be much over-printed.

One way of correcting would be to slight ly over expose; that is to expose for the yellow skin, by which time the white dress would be much overexposed, and, is every school boy knows, an overexposed plate, or portion of stame, develops thinly, so we see that by simple over ex posing, the contrast to an extent is can celled.

A better waty to correct is in develop ment thus: commence development with a mat!er weak dercloper, wery weok indeed in pyo and bomido; and here let me say care is necessary, or is will result. Watch patiently, addings simall doses of the accelerator till all the detail you requite is obtained. Tho negative will then be thin all over, which will simply need to be strengthened up with is dose of pyro and bromide, so that by simply keeping back the pyro we can modify the contrast to almost any extent. One more way is by using a small stop in the lens, but for portraiture it is of no use for two reasons, firstly, that it gives too much detail to be artistic; secondly, that it makes the exposure too long.

To produce contrast we slightly under expose or develop quickly, by keeping. back the accelerator, and using a developer strong in pyro and bromide.
'Iake, for example, the portrait of a person with a red shin, yellow or black dress. If a full exposure bo given, a flat result will be obtained, the person laving the appearance of having been hattened into the background.

To correct the flatness and produce contrast, slightly undereexpose, using a fairly large stop in the lens, and develop with the developer strang in pyro and bromide, using a fairdose of the accelerator at the last moment to bring out the details.

In speaking of the merits of various formule, we have a dilicult subject in hand, as most, if not all, the makers of dry-plates issue a formula with them best suited for their dovelopment. Sonse of them advisen weak developer, while some advocnte one strong in all its constituents. For my part $T$ am in favor of a strong developer handled with carc. I can speak from practical experience that the liford plates developed with the makers' formula will give results that leave nothing to bo desired. I do not for one moment disparage the goods of other plate makers, but simply wish to say that I am able to obtain better negatives with the Ilfords, finding them easier to work and capable of bearing a stronger duveloper (one which contains caustic sodia) without frilling or staining.

A simple arrangement I have found of use when developing very rapid plates is to cover the developing dish with a sheet of orange or ruby glass let into a cardboard lid, for any rapid plate, if exposed
for a suflicient length of time even to a ruby light, will beathected liy it.

After tho development lins fairly com menced, a brighter nght may be used "ith safety. I find it best to work with all the light obtaimble (that is safe), to be ablo to correctly estimnte the density.

Makers of ginss bottomed dishes speak londly in their fasor, but 1 have found it diflicult to judge of the density owing to Hise darkening of the developer.

In conclusion, I must placo pyroammonia as the best negativ: developer, and leave iron and hydroquinone (for the development of bromide papers, opals, luntern slides, ete.) to fight the batthe, giving the preference to the iron ilevelop er.-llh. Journal.

## Controtypes or Positives Diroct in the Camera.

The plate is exposed in the camern and developed as usual, care being exercised, however, that it is not fogged. It should be then well washed till quite free from the developer. I'the following solutions are requited:


Place thedevelopedand well-washed neg. ative in solution D till the black image is quite converied intor red one; then wash well in three successive baths of solution Cand soak in solution lis till the red inage disappears, and thoroughly wash. Expose the plate to dillused light for about 30 seconds, or to lamp or gaslight for about five to ten minutes, and then do. velop with is well restrained eikonogon or puranidophemal developer. The idea is not new, but may be useful. -Signor Corsi in Jinll. del Soc. fot. Ital.

Piotos that Xieh, Colons. - At the last meeting of the Patis Acadetoy of Sciences some colored fhotograplis of the spectrum on albumen nad bichromated gelatin, by M. G. Lippman, were exhibited. It was stated that albumenised and gelatinized plates, soaked in bichromate of potash, may be employed for photograph ing in colors. Whey are used like silver salt pintes, being placed so that the mer cury is in contact with the film. The colors will appear immedintely after im mersion in water, which developes and also fixes the image. It disappenrs on drying, but reappears as soon as the plate is soaked. The colors are very brilliant,
and visible at all anglos. 'These of gelatin phetes are bought out by simple brathing. 'The theory is analageus to that of silver plates, the masiltar and manima of interforence prodacing ligeroscopic and nonlyggroscopic layers with -arying refanctive indices.
 spherieal enliss lenss was fubud in one of the tombs of the lhamohes, it was looked upon 心, pronep, (ha most wominful lens in axistence, thoush later investigntions therew doubt upon the bener that the obs. foet had ever bered used as a leons for any oplical purpose. line this as it may, wis thum that the paltu wall bee carroed ott by Professor llawn's wonderful leus, whib. ited in his heeture on liguid Atmospherie Air. It was composed of ligmol orven colelosed in at apherimal varumi bissed. Its temperatare was eno below rero, a point at which, as we hase persiouly shown, all chomical action, caerpt that jinduced by light upona photogeaphere plate, censes. let, cold as this lens was, it was able to concentrate the mays fam an electric arro, permetting them to pass though emeng and ignite a piece of black paper held in their focus. Brit. Aomer, of bhutoprophy.
 lishes a process for enlanesine phothgraphic tilms wilhout enlarging apparatus. Tho methon is familiar enough in England, and depends upon the stactehing of a tilm loosened by hydrofluerie acid. The formulat for the stretching solution is given as follows:

| (Bitric abil <br> (blycerine <br> Aectic acill (alı-ial).... . . ... 1 |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |

All by weight. The unvarnished tilm haid in this solution gradually detaches it self from the phate, and enlarenes itself at the same time. A fimal rinse in water white the film is tamsferred to a larger plate, concludes the operation.

To Racoven Foceran Pradis. ... Make a solution as foilows:

| Clromie necil | $\mathrm{CiO}_{80} \mathrm{gr}$ |
| :---: | :---: |
| Brommle of Patissium | fion Pr |
| Witer | 10 c |

And immerse the plates for five minutes. Afterward wash wery thoroughly, and rear up to dry. Or instead of the above, make the folowing:

If Ingevobrumac canaut be whtaned, nse: IIgdiouhionic doid or a soluble: Bromide. in tire last case a fow drops of sulphuric Aeid heing added to the solution. Use as before.- Parigic Conast I'hot.

Finores.n. .. Fluoreal is at new developer contamus sodum sulphite, helma in the proportion of 6 parts per 1,004 and lluorescein, the function of the latter being to arrest any light waves of short wavelength that may have penerated nito the deviloping room. - Phatagraphy danmal.

Phenol sulphoricinoleate is a solation of 20 parts pure phenol.

# Books \& Magazines. 

Ine Dispensatory of the Uuitel Stabes of America, by Dr. Geo. D. Wood and 1)r. Franklin Jache; seventecnth edition, with illustratious. Publishers, J. 15. Iippincott Company, Philadelphia. We are in receipt of adrance sheets of this publication, which, we ate informed, is now about ready for gemeral sale. Tho publishers hasve evidently spared no pains to make this edition of an invalunble text book quite "up to date" in all the requirements for the study of pharmacy and its kindred subjects. The publication of a new U. S. Pharmacopuia has remiered necessary very many changes in the work which have been done with a completeness which must commend itself. Thr Detric System, the New Chemical Nomenchature, the Atomic Weights of Mryer and Seabert, together with changes in liotanic Nomenclature, all appear in the present edition.

A I'ructical 1'hotagraphy, fur A mateows. -Ghown S vo., cloth Price, ls. larrclay \& Sons, limited, publishers, 95 Far-rington-st., London, England. This work is one that should les in the himels of exely amateur photographere as well as the dealer in supplies. Full instructions ate given in all bratches of the art and an ":appendix" contains a mumber of formata which to drugesists who dral in photo supplies arn alone worth many timas the price of : L.e lecob:s.


Thu Chicaten Magazine of Corront Inpics, th:e popular home magazine, is resplendont with interasting articles upon subjects of inmediate interest to every thinking re:uler, by writers of world-wide reputation. The contents of the March number are 'the Wilson laill, by Mon. Win. E. Mason: After Mr. GladstoneWho 7 by Charles liobinson; Medical Exprert Testimony, by fo Marrison Mettler, A. M., M. D.; Civic Federation, Ada C. Sweet; locm, "rhe Daily Creed," by 11on. Menj. S. Parker; Municipal polities, Jolm M. Stahl; licecnt Mrogress in Glacial Gcology, by Ifenry 13. Jummeli; Scenes Firom an English Country Parish, by Lilian Sprat ; Sketch of the fate Geo. W. C!aids (illustrated), by J. O. Jackson. These, with other interesting articles, among which are short stories, poems, etc., by authors of mational reputation. So solad reading pages. \$1.j0 per year. Single copy, 15 cents.

## "Thio Voung Man in liunjuras"

Eidwarl liok's sucecssful article in tho January Cosmopolitan on "The Joung Man in Lusiness" has been reprinted in a tasteful and handy booklet form at 10 cents by the Curtis Publishing Company; of Philadelphia. To this reprint Mr. Bok has added some it payes of extitorial matter answering "Three Uncertain Young Men."

## Serihmer'n Magarinc.

Seribucrs . Magaziue for March opers with the second article of Joel Chandler Harris on "The Sea Istnod IIurricans"
this one dealing especinlly with the great relief work which is being conducted by Miss Clara Barton and the lied Cross Society. The distress in these islands is likely to increase until the first crop shall be gathered in the late Spring, so that the necessity is apt to be direst at a time when the public has, for the most part, lost intenst in the catastrophe. Mr. llarris, in his tour for Scrilucr's Mayazine through all these islands, has presenter not only the distressing part of the catastrophe but the humorous side of it which the sea-island negro so plentifully furnishes. IIe has used the finest literary skill in depicting these strange islands and their picturespuc inhabitants, so that, after reading the article, one feels that he has actually lived in new and curious surroundings. 'The striking illustrations by Daniel Smith, made from sketches on the spot, add to this impression of reality.

## 

The persomality of a fanous man can at times be brought delightfully close to us, and this is particularly trus of the picture we get of Nathaniel Hawthorne in his youngest daughter's description of "My Inather's Literary Methed" in the Marcla lateliss Jome Joumarl. Truly is the curtain that has so long lidden llawthome from view gently raised. Many mothers will have cause to thank Mrs. Burton liingsland before sine finishes her series of articles on the wisest training of "A Dizughter at. Sixteen," the first article appearing in this issue. The Mev. Iyman Abbott writes vigorousily and critic:ally of the different relations of a church to its choir, and Mrs. A. 1). T. Whitney gives the second of her delizhtful "Friendly La:ters to Cirl Friends." The biography of the number consists of an interesting sketel, with portrait, of Mrs. Charles 11 . Parkhurst, andof ancqually delightful one, with portrait, of President Tyler'sdaughter, who was at one tine Mistress of the White House. Mr. Stockton carrics "Pomona" still further in her travels abroad, and makes her adventures funnier with each letter. "My literary Passions" continues to afford Mr, Howells opportunity for expressing lis estimate of books and their authors, while the editor discusses with much force three or four phases of a young man's life in the outer world. The cover of this March issuc, typical of Phillips Hrooks' doves, which alwiays hovered round Trinity Church, and do still, the work of IIenry Sandam, is most artistic and makes this magazine at thing of real heauty. Published by The Curtis Pub. lishing Company of Philadelphia, for ten cents per number and one dollar per year.

## The Cosinempilitan Maparine.

Who are the most famous writers and artists of both continents 9 The Cosmoprititan Magnaine is endeavoring to answer this inguiry by printing a list from month to month-in its contents pages. This magrajine claims that notwithstauding its extraondinary reluction in price, it is bringing the most famous writers and artists of Furope and America to interest
its readers, and in proof of this claim, submits the following list of contributors for the five months cading with February : Valdes, Howills, Paul Heyse, Francisque Sarcey, llobert Grant, John J. Ingalls, Lyman Abbott, Frederick Masson, Agues lepplier, J. G. Whittier, (posthumous,) Walter Desant, Mark Twatin, St. Georig: Mivart, Paul Bourget, Louise Chandler Moulton, Flammarion, Tissandier, 1 . Dempster Sherman, Adam badeau, Capt. Cing, Arthur Sherburne Mardy, (icorg Duers, Das Maupassant, Sir Didwia Arnold, Spiellagen, Andrew Lang, lBerthelot, IF. H. Boyesen, Hopkinson Smith, Iyman J. Gage, Dan'l C. (iilman, Fian: Von Ienbeach, Thomas A. Jamvier. And for artists who have illustrated during the same time: Vierge, Reinhart, Marold, IE. 1). Small, 1)am Beard, Josic Cabrincty, Oliver IIerford, lemington, Mamilton Gibson, Otto B:acher, II. S. Mowbrity, Otto (iuillomet, F. G. Attwood, Hophinson Smith, Geo. W. Eidwards, Pitul de Jongpre, Habert Dys, 1. II. Schelf. How this is done for $\$ 1.50$ : year, the editors of The Commo. politare alone know.

Frank I.evtiér Jronular Monthis:
Tho leading article in Frouk Jocslic': Jopular Monthly for March is a picturesque account of the four leading "European 1’:rrliaments"--those of Great Britain, France, Germany and Italy-by that experienced observer and graphic writer. Frederick S. Druicl. The illustrations accompanying this paper are as timely and up-to date as the text, including riews of (iladstone in the llouse of Commons, the scens: in the Frenc!, Clamber of Deputies on the occasion of the explosion of Vaitlant's boub, the stormy session at Monte Citorio at the time of the recent Italian Cabinct crisis, and the projected new palace of the lieichstag at Berlin. J. Wil. liam liosdick illustrates, with a series of claborate drawings, his own entertaining descriptions of "An Artist's Winter at Fontainebleau." Other notable illustrated articles are "Tasmania," by E. Trowbridgo; "Fort Mamilton," by Don C. Scitz; "Morrors of Capital Punishmene," by W. II. Garrison; "ILow to Get Married, though in lirance;" by Dr. 13. Sherwood Dunn ; "A Truc Eskimo Romance;" by Dr. J. M. Mills, Surgeon of the Peary llelicf Expedition; and an appreciative review of the life and work of the late Professor Tyudall, by Henry Tyrrell. A new scrial story, entitled "The Silver Sliafts," by Frances Swand Williams, br:gins in this number. Thare is also, amongst the complete short stories, 2 peculiarly striking one by Maley inainbridge Crist, called "The Woman's Story of Tolstoi's "Krreutzer Sonata.")

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## Business Notices.

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Such is the heading of at descriptive pamphlet issued by Utard it Co., advertising their Cachets, a most pleasant and desirable form of administering medicines in powder form, and one which promises to be largely used by all first.class pharanacists. The Canadian Specialty Co., of 33 Front st. East., Toronto, have been appointed sole agents in Canadia for these goods. Sce full page advt. showing descriptive cuts of cachets and apparatus for filling, etc.

Gimancinc latrela
Lansing of Wood have established :an agency in Windsor, Ont, for their patent Glasscine Labels. See advt. opposite page ${ }^{2}$ of this issue.

## Toothache fimin.

Have you a stock of Giblon's Toothache Gum: If not, send to your jobber for $\pi 3$ dozen lot and get an atutomatic casel sign and stock-holder combined.

Domilis kithnoy litic
The Dodd Meelicine Co., of Toronto, will supply adutg. matter for their preparations to any druggist sending an ajuli. cation.

## Jennymyal Tea.

Slocum's Pemyroyal Ten, which has lneen but a short time on the market, hass slready secured a large sale, and the prospects are that it will ine one of the most popular of this class of proprictary reme. dies. Have you read the sdet.? See it.

## Death of Mr. A. W. Ball.

The death of Mr. A. W. Fall at 1)enver, Colorado, on the $13 t h$ Jrnuary, removes from the register of the Ontario College of Pharwacy $a$ young man of bright promise, genial disposition and strict integrity of principle. With all, who had the plessure of his acquaintance, he was personally popular. Itis temperament was of that decisive character which alwayz lenis an impression of force and encrgy ; and which, when ac. companied by natural generous impulec, inspires confidence, rospost and tras re-
gard. For a period of five or six yeurs past ho battled against physical intirmity; and, with a determination which knew no yield, 10 didn't give in until advised about six months ago to seek a southern clime an the hope that a tendency to consumption might be averted. Accompani. ed hy his devoted wife he removed to Denver, where, after a sojoura of livo months, he peacefully sank to rest. His remains were bnonght to Kingston by his wife for interment in the family burial plot at Cataraqui.

Mr. Ball entered the drug business as an : apprentice with Mr. A. Leach, of Nillbrook, in 187 t. remaining with him afterwards until he graduated in the spring turm of $185 \%$. In the same year he purchased the drug business of Mr. (i. A. Dovlin, at 1091, Qucen-st. west, in the city of Toronto, and conducted it for threce or four years with marked success. In 18S8, he was appointed to succeed Mr. J. E. Konnedy as examiner in dispensing for the Council of the Ontario Collego of Pharmacy. Shortly after failing health induced hin to sell out to Mr. U. F. Hots. ford, and hetrivelled for a time representing Messrs. Lyunu, Knox aC Co., Montreal. After regaining his health somewhat he opened n new business at West Toronto Junction, and, a year or two later, disposed of it for the same re:ason as before For a timo he engaged with Messrs. Hooper it Co. as manager until failing health induced him to relinguish that position also. At a later period he becane manager of the Gladstone Pharmacy and only gave that up upon being advised to zo South in the hope of recorery.

IIs devotion to his family was a marked characteristic of his life, and it is un derstood that insurance and beguests will. ed to him leave them in comfortable circumstances. Ine married Georgina A., daughter of James Reid, Esq̧., Kingston, in ISSG, and she, with their two sous, still survives him.

## A Substitute for Olive Oil.

The linited Consul at Stuttgirt reports that on account of the great expense and ditheulty in procuring jure olve oil for tible purposes, there have been many attempts made in cermany to produce from other substances than the olive, an oil which, having all the qualities that recommend olive oil, could be sold at a lower price. In Southern Germany; for aome years past, oil has been produced from the becech-nut ; it has given great satisfaction, but has not conne into general use, because the production has been smail, and the oil has never leyn pushed on the market. One reason why more has not been done in the production oi beach nut oil has berat the great scamity of the nut in ecertain jears. The beech. nut contains but 92.75 per cent of oil, but when the nuts are plentiful, the ease with winich they cas bo gathered, the face that there is wo other expensc, oxsent
the pressing, and tho good prices that have been received for the oit, have made the production of the vil wry protitable It is only of late that the sereds of tho Dinden tree have been used for tho production of the oil. According to the report of Dr. C. Muller to the German Botanical Suciety, this oil has a mamber of excellent gunlities, which appear to make it certain that the seed of the lin den treo will hereafter be considered one of the principal sources for obtaitings table oils. The linden treo is a certain bearer, so that a large qututity of seeds may be counted upon each antumm. It is maintained that the oil has a pecoliarly fine thavor, frec fromall bitter or aromatic taste, and that it has tho appearamee of olive oil. It belongs also to the oils which do not exaporate. Oit made from Linden seed will never becontermeid. It has no tency to oxysemate. If will stand a great degree of cold wilhout frecaing, as lir. Muller exposed it to 3 below zero with out noticing any changer. Chemis' amd Drugis'

## SITUATIONS WANTED.

W
 a sitantion as . Invistant on Dhanazer. cight 3 cirs catcriellce, gand roferement. Al dress-" Dhecesist," Stayner, Unt.
 who lus hat several y aras eapurionce as manager of different wores, wishes to pecure ia similar position. Is willing to take an antry i:t the busibess. Satisfactory reforences diliders

aituation WaNTEL de assistame loy a young mans with nearly two ami a lindi years city experience. (Gimel alispuner : hext
 lisantford, Ont.

## WANTED.

D
 in llestern Ontario. five all necessay particulars didiress II. E. L.dsvis, liox sig, Hecton, (1at.

WANTEB-Noda Fobatain in gom rumbing nimler. (osse foll deseotgotion amel prict.


## FOR SALE.

$4^{1}$

 in proma combtrons and nearly as dood is sew. A sanp for cavh. Smutr di Ji fis, fowmamille, Oat.
 cash. Ifor 15, Fistevan, N. 11.1

B
 tumty for a young irubingine wherse ex prenses will be light. For anl:" all all cestal!. ashed trug basiness in a thriviug silh.ge in the Connty of Niddlesex. Bn the :nxin lite of the
 small, cleasi anil well sefectent. boxpenser light.
 cash. Theasuma fors selling Eniling lic ith ithid is ilesire for re:inument. l'resent pimprictor awny both store nul dwelling, and will maki derms right to auitallu person. For further informa sion apply to W. Mincotisos, itls Quacs Sis. 17., Terosiso.

## Estimation of Uric Acld.

The estimation of uric acid in urine is not an ensy task, and good methods for it are always welcome. An accurate and fnirly simple process was recently communicated to tho Royal Socicty by IE G. Hopkins, BSc. of Guy's llospital, which depended on the complete insolubility of the uricacid in a saturated solution of ammonium chloride. Messicurs Aithatad and Butte have just publistied the following method, involving the use of hyposulhite of copper. The process was brought out some little while ago, but improvements have been effected in it, so that it is now as follows: 100 grammes of the urine are taken, and carbonate of soda added to precipitate the phosphates and to dissolve any precipitated uricacid. It is best to operate with warm solutions. Half of the tiltered liquid is titien for the estimation. The following two solutions are prepared:

A
Sulphate of copper...... 1.4.S4 graus.
'lartaric acid ... ..... hases.
Distilled water ......... 1000 grms. l
Suliums hypmouphite..... S0 gims.


For the estimation, 2 parts of solution A aro mixed with $S$ parts of $B$, which gives a solution containing at known
quantity of copper hyposulphite, of which 10 cc. precipitate exactly \& centigrammes of uric acid. To effect the precipitation 50 cc. of the filtered urinc are titrated gradually with the copper solution. To determino the end reaction, it is necessary to filter a fow drops of the mixed liguids until the point arrives when tho filtrate gives no precipitato with more copper solution. It is also important to see that no excess of copper has been added. The calculation is then simple.--Repertoire.

## Aluminum.

Aluminum, when reduced to powder and mixed with a solution in water of gumlac, gives a metallic paint which covers well and may be shaded with aniline colors dissolved in witer. The solution of gum-lac is made by bringing to boiling point a mixture of guin-lac and borax and an alkali, such as soda or aurmonia. The solution inust contain at least from 15 to 20 per cent. of gum-lac. Aniline colors are added to produce the shade desired, and aluminum is added in suflicient quantity to produce a paint sufficiently fiuid for application with a brusli. The color is brilliant, very dur. able and impermeable, and may be applied to iwetals, paper, wood and woven miteri. als. It may be rendered supple by the addition of a small quantity of glycerine.

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## Latco monitinns.

ALUM, in bbls.
ALUM POWDERED, in bbls. FINEST EPSON: SALTS, in bbls. FINEST SUBLIMED SULPHUR, in bbls. ROLL SULPHUR, in bbls. CHLORIDE LIME, in casks. SALTPETRE XTALS, in kegs. SALTPETRE POWDERED, in casts. POWDERED HELLEBORE, in bbls. GLYCERINE, in tins.
WHITE CASTILE SOAP, bars.
WHITE CASTILE SOAP, cakes.
PARIS GREEN, in casks and drums. GIBSON'S CANDIES, full assortment.

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OUR CANADIAN LABORATORY.

Should you need an assortment of Seely's Perfumes before our representative calls upon you, mail your order to one of the above mentioned firms, or send direct to us, and they will receive prompt attention. Thanking our friends for past favors, and wishing them all a prosperous New Year, we remain,

Yours very truly,
SEELY MANUFACTURING $\mathbf{C O}$.

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Extra Purified

# EPSOM SALTS 

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AND OTHER batamin houses.
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Manufacturers of :-Hyposulphite of Soda, Sulphite of Soda, Glauber Salts, and Sulphate of Potash.

## Canadian Druggist Prices Current:

CORRECTED TO MAROE 10th, 1894.

The quotations given represent average prices for quantitics usually purchased hy Retail Dealers. Larger parcels may be ohtained at lower figures, but quantities smaller than those named will command an advance.

## $A$




| 1*S - Purity, 100 sticks in box | 75 | 9 | Un | 38 | 40 | Bremurn, Ammonia-citrate, oz | 41 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| "، l'urity, 200 sticks in box | 160 | 150 | Valerina, Jinglish, if truc.... | $\stackrel{3}{20}$ | 25 | Salicylate, oz ..... ........ | 30 | 36 |
| " Acme Pellets, 5 lb . tins | 200 | 200 | Virginia Suake, lb........... | 40 | 45 | Sulcurimonate, | 275 | 00 |
| "4 lozenges, \% lli. tims.... | 150 | 170 | Yellow Dock, lb............. | 15 | 18 | Subnitrate, | 250 | 60 |
| " Tar, licorica \& 'Toln, 5 |  |  | Rum, lay, ga | 225 | 250 | Bowax, 1 | 9 | 10 |
| Il. tins...... .. .. | 200 | 200 | Essectice, | 300 | 325 | Powdered, | 10 | 11 |
| Luruns, $0 \%$. | 30 | 35 | Sacohabis, | 12. | 150 | 1homisx, oz. | 8 | 13 |
| Iscoronilus, | 70 | 80 | Srep, Anise, Itulim, sifted, | 13 | 15 | Canmium, liro | 20 | 25 |
| Nact, lb. | 120 | 125 | Star, lb. | 35 | 40 | Iorlide, | 45 |  |
| Massa, | 160 | 175 | Burdook, 1 | 30 | 35 | Casclum, Hypop | 150 | 160 |
| Moss, lechund | a | 10 | Camary, bab | 10 | 7 | Yodite, oz. | 95 | 100 |
| Inish, 1 ll | ${ }^{3}$ | 50 | Caraway, ib | 10 | 13 | 12hosplate, precip., Ib......... | 35 |  |
| Musk, 'comyuin, | 4600 | 5000 | Cardmuma, | 125 | 160 | Sulphite, or | 5 |  |
| Nutanits, li, | 21 | 25 | Celery . | 30 | 35 | Cermam, Oxala | 0 | 12 |
| 1'owdered, | 95 | 30 | Colchic | 75 | s0 | Cimsomise, | 15 | - |
| Nutames, l . | 100 | 110 | Coriander, | 10 | 12 | Chilomil, Hy | 100 | 110 |
| Nux Vomica | 10 | 12 | Cumin, lb | 15 | 20 | Croton, o\%. | 75 |  |
| Puwidered, | 8 | 27 | Fiemel, 11 | 15 | 17 | Chlororonst, | 65 | 200 |
| Oакия, li, | 12 | 15 | Fenugreek, powdered, | 7 | 9 | Cischonise, sulphate, | 25 | 30 |
| Oñ\%MET, M | 70 | 75 | Fhax, cleancil Ib | 31 |  | Cinchosimise, Sulph | 15 | 20 |
| Citrine, 1 l | 45 | 50 | Ground, | 4 | 5 | Cocalse, Mur | (i) 5 | 850 |
| Pabaineinve, | 15 | 15 | Memp, Ib | 0 | 62 | Correat, Sulph. (Blue Vitrol) lb. | 7 |  |
| Peruen, hack, | 2 | 25 | Mnstard, whi | 11 | 12 | Iodild, | 05 | 70 |
| Powdercd, 16 | 25 | 30 | Powilered, 11 | 15 | 20 | Corperas, lb | 1 |  |
| Prich, hack, ll | 3 | 4 | pumpkin, | 25 | 30 | Ethen, Acetic | 75 | 80 |
| l3ergundy, true, 1 | 10 | 12. | Quince, | 65 | 70 | Sulpharic, | 40 | 50 |
| 1hastris, Calcined, i, | 225 | 325 | Rape, lb. | 8 | 9 | Exal.gine, on | 100 | 110 |
| Adhesive, Yil | 12 | 13 | Strophnathus, | 50 | 65 | IF Oncramine, Sulp., crystils, gr. | 25 | 30 |
| lelladona, 11 | 65 | 70 | Worm, 1 lb | 22 | 25 | Ionise, 11 , | 500 | 550 |
| Gallanum Co | S0 | 85 | SEanity Mistun | a) | 30 | Iodurors, | $6 \cdot 00$ | 700 |
| Leat, 11 , | 25 | 30 | Soar, Cistile, Mottlea, pure, lb.. | 10 | 12 | Iorol, | 130 | 140 |
| Porre Meats, per (0) | 100 | 110 | White, Conti's, 1 | 15 | 10 | Incos, by Mydr | 100 | 110 |
| Rosin, Common, Ib | 23 | 3 | powilered, it | 25 | 35 | Carlomate, Pre | 15 | 16 |
| White, ll | 31 | 4 | (ircen (Silpo Vir | 12 | 25 | Siwe | 35 | 40 |
| Rxsonels, Whit | 20 | 30 |  | 50 | 55 | Chloride, ll | 45 | 55 |
| Rocninire: Satit, | 2.5 | 28 | Tundestine, Cli | 75 | so | Sol., 1 ll . | 13 | 16 |
| Root, Aconite, ill | 22 | 25 | Venice, Ib | 10 | 12 | Citrate, U. S. P., | 90 | 100 |
| Althea, cut, Ib | 30 | 35 | Wax, White, | 50 | 75 | And Ammon., lb | 75 | 80 |
| Belladona, | 25 | 30 | Yellow | 40 | 45 | Ant Quinine, | 150 | 300 |
| Black, lib.. | 15 | 16 | Wron, Gumiac, rasp | 5 | 6 | Quin. und Stry | 18 | 30 |
| $13 i t t e r, 1 \mathrm{l}$ | 27 | 30 | Quassia chips, ils | 10 | 12 | And Strychuin |  | 5 |
| Blactherry, | 15 | 18 | Red Smumers, gro | 5 | c | Dialyzed, Solution, | 50 | 65 |
| Lumderk, crushen, | 18 | 20 | Santal, ground, 16. | \% | - | Ferroeyanide, lb. | 65 | 60 |
| Calauns, slicell, white, li.... | 20 | 25 | CHEMICALS. |  |  | Hypophosphit | 20 | 25 |
| Camada Suake, $H_{1}$ | 30 | 35 | Acm, Acetic, 16. | 12 | 13 | Iodide, | 40 | 45 |
| Coliosh, miack, 16 | 1.5 | 20 | Glacial, lib | 45 | 50 | Syrup, li, | 40 | 45 |
| Collelicusa, It | 40 | 45 | Bencoue, Englis | 20 | 25 | Lactate, oz. | 5 |  |
| Coluame, 11 , | 20 | 22 | Gernam, oz | 10 | 12 | Pernitrate, solution | 15 | 6 |
| Powdered, | 25 | 30 | IRoracic, 11. | 20 | 25 | 1/hosphate sca | 125 | 130 |
| Colesfont. 1 ll . | 38 | 40 | Carlolic Crystals, | 30 | 33 | Sulphate, pure | 7 |  |
| Comfrey, crushed, | 20 | 25 | Calvert's No. | 210 | 215 | Exyicated, il | 8 | 10 |
| Curcma, powdered, | 13 | 14 |  | 135 | 140 | Aud l'otass. Tar | 80 | 85 |
| Dandelion, lb | 15 | 18 | Citric, lb | 65 | 70 | And Ammon. Tartra | 85 | 90 |
| Elccampane, | 15 | 10 | Gallic, o\% | 10 | 12 | Leav, Acetate, white, 16. | 13 | 15 |
| Gulangal, It | 15 | 18 | Hydrobromic, dilutel, lb .... | 30 | 35 | Carbonate, | 7 |  |
| Gelsemiun, ll | 22 | 25 | Hydrocyanic, diluted, ${ }^{\text {a }}$ oz. vot- |  |  | Iodile, oz | 3 | 0 |
| Gentiam or Ge | 3 | 10 | tles doz ............... | 150 | 160 |  | 7 |  |
| Gromen, 16 | 10 | 12 | Lactic, concentr | 22 | 25 | Lime, Chlorinated | 4 |  |
| Pouiderci, | 13 | 15 | Muriatic, 1b... | 3 | 5 | In packaycs, 1 l , | 6 | 7 |
| Ginger, Afrie | 18 |  | Chem, pure, | 18 | 20 | Lithina, Mromil | 40 | 45 |
| Po., lb. | 20 | 22 | Nitric, 1 ll . | 10. | 13 | Carbonate, oz. | $30^{\circ}$ | 35 |
| Jamaica, bleht, ib | 27 | 30 | Chem, pure, | $25^{-}$ | 30 | Citrate, oz . | 25 | 30 |
|  | 30 | 35 | Oleic, ${ }^{\text {durified, }}$ | 75 | 80 | Iodile, 02. | 50 | 55 |
| Ginsenj, 1 b | 300 | 325 | Oxalic, lla... | 12 | 13 | Salicylate, | 35 | 40 |
| Golden Sual, | 75 |  | 2hensphoric | 100 | 110 | Magnislum, Cal | 55 |  |
| Gold Thread, Ih. | 90 | 95 | vifute, | 13 | 17 | Carionate, lb | 18 | 20 |
| Hellelore, White, prwi., lib.. | 12 | 15 | pyrogallic, oz | 35 | 38 | Citrate, gram, l | 40 | 45 |
| Indian Hem | 18 | 30 | Salicylic, white | 1 \$0 | 200 | Sulph. (Epsom si) | 1780 |  |
| Ipecat, lb.. | ${ }_{2}^{2} 8$ | ${ }^{2} 75$ | Sulphuric, carbo | 2.1 | 23 | Manganeste, blac | 5 |  |
| Powdered, | 2 so | 300 | liottles, 1 lb . | 5 | 6 | Mestiole, oz | 45 | 50 |
| Jalap, ll,. | 55 | 60 | Chem. ${ }^{\text {n/ }}$ | 18 | 20 | Mzrcuir, ib | 90 | 95 |
| powdere:, | 60 | 65 | Thnuic, lb. | 90 | 110 | Ammon (White Preo | 125 | 130 |
| Kava Kava, | 40 | 90 | Tartaric, pov | 40 | 45 | Chloride, Corrosive, | 100 | 110 |
| 1,icorice, ll. | 12 | 15 | Achiavind $/ \mathrm{lb}$. | 90 | 100 | Calomel, 16 | 115 | 120 |
| bowdered, 1 | 13 | 15 | Aconitine, grai | 4 | , | With Chalk, 1 | 60 | 65 |
| Manidrake, ll | 18 | 18 | Aivas, cryst., ll | 19 | 3 | Iotide, 1roto, | 35 | 40. |
| Masterwort, 16. | 10 | 40 | lowdered, lb | 3 | 4 | Bin., oz | 25 | 30 |
| Orris, Flarentine, Powdered, lb . | 30 40 | 3 3 | Ammonia, Liquor, ib | ${ }^{3} 3^{3}$ | 10 | Oxide, Red, | 130 | 135 |
| Pardered, lb..... in | 40 | 45 | Ammonius, liromiale, | 63 | 75 | Pill (Blue Mass), ib. | 70 | 75 |
| Parcima lianat, true <br> jink, lb | 40 70 | 8 | Carionate, | $\frac{12}{35}$ | 43 | Mhle Sugar, powdered, | $2 \begin{array}{r}30 \\ \\ \hline 00\end{array}$ | 210 |
| parslcy, ib | 30 | 35 | Nitrate, crystals | 40 | 45 | Mruiate, oz.. | 203 | 210 |
| Pleurisy, 1 l | 20 | 25 | Mturiatc, hi. ... | 12 | 10 | Sulphate, | 200 | 200 |
| Poke, If | 15 | 18 | Valcrianate, | 25 | 60 | Pxisis, Sacharate | 35 | 40 |
| Quen of the Meadow, | 18 | 20 | Amiln Nitrite, or | 16 | 18 | pressactise, oz | 40 | 45 |
| Rdatany, 16. | 20 | 30 | Astinervis, ot. | 85 | 00 | Priocinlinz, Dluri | 5 | 6 |
| Rlubarl, ll . | 75 | 250 | Avtnymis or.. | 100 | 110 | риряим, оz............ | 100 | 110 |
| Sarsapurilla, Hon | 40 | 45 | Ansivic, oz | 200 | 225 | Prosphonds, lb. | 90 | 110 |
| Cut, ll | 50 | 65 | Answic, Donoma | 25 | 30 | Potassa, Caustic, white, | 55 |  |
| Senega, | 55 | 6 | Fowler's, sol. | 13 | 15 | Pupassium, Acetate | 35 | 40 |
| Squill, li.................t. | 13 | 15 | Imide, 0 \% | 35 | 40 | 1icarbounte, | 15 | 17 |
| Stillingia, ll | 22 | 25 | White, lb | G | 7 | 13 c ¢romate, 1 lb | 14 | 15 |
| l'owidered, lb. | 25 | 27 | Atroirsk, Sulp | 700 | 800 | litrat (Cream 'Tart.), | 25 | 30 |

The Docline in the Cum-Arabic Trade and its Lesson.

There has long treen a saying to the effeet that no man was absolutely indispensable, no matter how much ho might appear so. There nover was a man yet who understood abusiness so well, bat that, if necessity arose, some one else could be gotten to fill his place sitisfactorily, and wo may add, that as a usund thing, when entergencies do arise by which such changes are rendered necessiny, they result in permanent benefits that could havo acerued in no other way. As with men, so with matter, and a striking instance of the truth of the principle is furnished in the case of the gum-arabic trade during the last thirteen years. The Pharmaceacisclie loost of a receat diate, has the following :
"Frou the year 1875 to 1830 , the normal prices of gum-arabic ranged, in Trieste, according to quality, from 65 to 75 Austrian florins per 100 kilograms ( 200 pounds), the Geiviri gum bringing from 45 to 55 Horins. The immense arrivals of gum from the Soudan, in the beginning of 1852 , ran prices down to 38 . 42 forins for the better class, nad from 26 to 30 tlorins for Gehziri gums.
"The Egyptian insurrection again brought these prices up some 10 or 15 Horins respectively and the immediately following revolt in the Soudan, and the edict forbidding exportation, at once raised the price of Soudan gums already in Europe, to 300 florins, and prices continued to adrance until 600 thorins per 100 kilograms was reached.
"Ihe existing stock was soon exbausted, even at this price (about $\$ 1.50$ per pound), and for a time Europe was absolutely without gumearabic, or even of Gehziri gum. In 1585.56 the first lot of Gelairi gumarrived, via Cassana, but this source of supply was soon shut off by the ItalianAbyssinian war.
"In 1890 gumbarabic and Gelariri gum again appeared in the market, not in very considerable quantities, but sulicient to bring the price for the first down to 100 140 florins, according to class, and the latter to 50.70 florins.
"In 1892, notwithstanding the importations were not any more considerable than in the preceding year, there was at drop of 20 per cent in prices, and gums fell back to the prices of twelve years previously. The diminution of importation of all zarieties (Arabic. Gehziri, Senegal, etc, which in 1881 amounted to 40,000 quintals, and averaged 30,000 quintals for years) continued, and last year but 10,000 quintals of gum, of all sorts, were imported.".
This constant decrease of demand for gum-arabic is due mainly, and almost solety, to the discovery of cheaper substitutes for the guni in the arts and indus. tries, and these substitutus hisve proven so satisfactory that, notwithstanding the -present low prices, there is a demand for only 10,000 quintals por anum, or ouly
one quarter of the amount of gum needed in 1881. The probathility is that had the searcity, and consequently enormously high prices, not have occurred, the world would lave continurd to use 10,000 or 50,000 quintats per annam, and the effiective substitutes would still be unknown. $\rightarrow$ Ntul. Drugyise.

## Cod Liver Oil Roport.


'Tromson, Norway, Feb. Th, 1891.
Stormy weather hiss continued to impede the winter fisheries, which maty now be considered wearly anded with a yield of codliver oil probably not exceeding one thited of last year's proluction.

The Lofoden fishery has commenced with pretty satisfactory prospreto. It is, however, alarming to now, that tha livers are unusually poor. A catch of 600,000 codfish has only yielded 1350 hektoliters of livers agatinst last year 1950 hekt. out of the same guantity of fish. I calculate that it will need 10 millions of cod or 10 millions more than ever caught at to foden to make up a total quantity of cod liver oil similar to the adrgregate yiadd in 1893 from the Winter \& Lofoden fishcries.

In spite of these facts the foreign importing markets have bren slack and $T$ have heard of sibles at 60 sin . cif. I wish to see a little more of the Lofoden fishery trefore quoting tirm, fearing if stormy weather should continue is hitherto, it will be impossible to execute orders at the above ligure.
In the aseantime I book orders at competitors' prices atnd will quote firm on enquiries by letter or wire.

Bono Sahtcyiac dem Sonertios, containing four grammes each of boric and salicytic acid in a liter, proposed by Ces. aris and Carcano, has been found of such value in an Itslian hospital that it com. pletely replaced the mercuric chlorite solution. The addition of the boric acid adds permanency to the salicylic acid solution; the strength of the solution can be increased so as to contain six grams salicylic acid per liter, although this solution wais only occasionally used.-(Bollet. Chim. Farm.) I'harm. Kly.

Achtic Achafor the: Pebidaition ue Extmicts, - F. Iloliman proposes to replace alcohol by aceticacid in the preparation of extriacts. The fluid extracts so prepared contain about 25 per cent. of extractive, 30 per cent. of acctic acid, and $4 \overline{0}$ per cent. of water. They are very aromatic, nad their preparation is very coonomical. Experiments with nux vomica and belladonna have been very successful. The extraction is more rapid than with alcohol, and at the same time more complece, and the percentage of alknloid is liggl and fairly constint, and decomposition products appear to le less frequent than when alcohol is used.as tho solvent.-Liepertoire do lharmacic.

Thr. Dicombustrion of C'moneroms. Lithanman, who has leven investigating tho netion of oxidisiag agents on chloroform, disputes the results obtained by Eimmerlins: and lengyel who stated that the decounosition by means of chromic neid was as follows:
$2 \mathrm{CICl}_{2}+30 \quad 20 \mathrm{COCl}_{2}+\left(\mathrm{Cl}_{2}+1 \mathrm{H}_{2} 0\right.$.
Erdmam, however, states that no trace of free chlorive is to tre found, but that the reaction is
$\left.\because \mathrm{CHCl}_{2}+\mathrm{CrO}_{3}+20 \quad 2 \mathrm{COCl} \mathrm{I}_{2}+\mathrm{CrO}\right)_{2}$ $\mathrm{Cl}_{2}+\mathrm{H}_{3} \mathrm{O}$.
since he wasable to distil over a brownish oil, which could be identitied as chromyl chloride. - Apotheker \%itung.

Nen Pas. Exompant. Prof. Carles (Bide. de la sive. de lhurme de burdiatici) gives the following process for preparing pills of alterable medicaments, such as potassium permanganate, silver nitrate, gold chloride, the iodides of mereury, ete, which with this eacipient do not change in appearance and presere the active principle indelinitely. Irriturate, kaolin, :3; anhydrous sodiam sulphate, 1 , and water, 1 , the mass remains plastic during di. 10 minutes, but after fifteen minutes becomes so hiardened that it can be thrown on the floor without danger of hreaking. With this mass tho mediuanent in line powder is incorporated.

Cumsintans: is it kind of collodion, in which the ether and alcohol employed is solsents for pyroxylin, are rephaced by methyl alcohol. It ditlers from collodion, in thast tho solvent exaporates more slowly, and in forming a transparent film, which allows the part it protects to be seen and the progress of the treatment followed. An elastic eristalline call lys obtained by addiner 20 gm . cristalline to 5 gm. castor oil and 10 gun. Camula turpentine: Cristalline dissolves pyromallic and salicylie ateids, chrysarobin and other medecaments. The only disad vantage of its use is its odor.-(Somatins . Mrelicale.)-Amer. Sournal of Pharmacy.

Antispismint: is a remedy formed by the combination of one moleculo of the sodium compound of marceine and three molecules of sodium salicylate. It contians at per cent. of narceine. It is a white. slightly hygroscopic powder easily soluble in water. Exposel to tho air it deposits narceine, owing to the absorption of carbonic acid with the formation of sodiam carbonate in which narceine is very insoluble. - lommal ald Jhermacic a' Aurers.

In pills containing creasote, according to a correspondent of the Iharm. J'ost, the creasote should be thoroughly mixed with twice its weight in powdered liy. orice root, and then aldin: sullicient slycerin until the desired consistency is reached. by this method a plastic mass results, in whicis the creasote is equally distributed.

| Bromild, HL................ | $60^{\circ}$ | 40 | Tartal: Eimbtig, | 60 | 65 | I.emon, 11 | 275 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carbonate, lis | 14 | 18 | Thimot, (Thymic acid), o\% | 55 | 60 | Lemongrass, | 150 | 160 |
| Chirmate, Fin | 23 | 30 | Vяbations, о\%.......... | . 200 | 210 | MMustari, kis | 60 | 45 |
| Powdered, | 30 | 33 | Cisc, Acetate, | 70 | 75 | Neroll, oz. | 425 | 450 |
| Citrate, Ib | 75 | 90 | Carbomate, il | 25 | 30 | Orange, 1 | 375 | 500 |
| Cyanide, 15 | 40 | 65 | Chloride, gramular, | 13 | 15 | Sweet, ib | 325 | 350 |
| 11 ypphiosphites, | 10 | 12 | Iodite, ${ }^{\text {oy }}$ | 60 | 06 | Origanum, | 65 | 70 |
| Iodide, 115..... | $4(x)$ | 410 | Oxide, lb | 13 | 60 | Patehouli, or | 175 | 180 |
| Nitrate, granl, 11 | -8 | 10. | Sulphate, if | 9 | 11 | pemuyroyal, | 300 | 335 |
| permangamate, Ib | 60 | 55 | Valorianute, | $2 i$ | :0 | Peppermint, | 4 | 450 |
| Prussinte, Red, Ib | 5 |  | mgsemmial olla. |  |  | Pimentu, 16. | 26 | 275 |
| Yellow, lb. | 32 | 35 | Onl, Almomi, bitter, ox. | 75 | 80 | Rhatimin, oz | 780 | $8{ }_{8}^{80}$ |
| And Soud. Turtate, Sulphuret, $17 . . .$. | $\begin{aligned} & 3010 \\ & 25 \end{aligned}$ | 35 30 | Sweot, lh. <br> ......... | $\begin{aligned} & 50 \\ & 40 \end{aligned}$ | $0$ | Rose, oz.. . Rosemary, | 700 70 | 800 75 |
| Sulphuret, It Prolvilamine: | $\begin{aligned} & 25 \\ & 35 \end{aligned}$ | 30 | Amber, crude, Rec', lli... | 40 | 4 | Rosemary, <br> Rue, oy.. | 20 | 75 30 |
| Quistse, Sulpho, luaik | 30 | 32 | Anise, il | 275 | 300 | Sandalwoorl, | 550 | 900 |
| Ozs., oz. | 35 | 38 | 13is', 0\%. | 50 | 60 | Sassafras, | 75 | - |
| Qumstuss:, Sulphate, c\%s, o\%. | 10 | 20 | lergamot, | 400 | 425 | Savia, lb |  | 56 |
| Salicis, il.. | 375 | +00 | Cate, 11 | 90 180 | 100 | Spearmint |  |  |
| Santonis, or............... Sinver, Nitrate, eryst., o\% | $\begin{aligned} & 90 \\ & 90 \end{aligned}$ | 100 | Сајириt, | 180 60 | 190 | Spruce, 1 b <br> Tansy, II | 4 | 70 50 |
| 保Ea, Nitrate, eryst., o\% Fused, oz. | 100 | 110 | Curaway, | $3{ }^{10}$ | 375 | Thyme, white | 180 | 190 |
| Sonsum, Acetate, ib | 30 | :35 | Cassia, | 140 | 150 | Wintergreen, | 300 | 350 |
| Bicariomate, kgs., | 275 | 300 | Cimmmon, Ceyton, o\% | 150 | 160 | Wormseed, li, | 50 | 375 |
| Bromide, 11. | $6: 3$ | 65 | Citronfle, lb..... | 70 | 76 | Wormwoorl, 1 b | 0 | 675 |
| Carbonate, m . |  | 6 | Clove, 16 | 160 | 165 |  |  |  |
| Hypophosphite, | 10 | 12 | Copaiba, | 160 | 175 | Castor, ll | 9 | 11 |
| Hyposulphite, 11 | 3 | 0 | Croton, 1 l | 150 | 175 | Coul Liver, N . | 90 | 100 |
| Iodide, oz . | 40 | 45 | Culvel, 16 | 500 | 600 | Norwegian, ga | 100 | 1. 25 |
| Salicylate, | 180 | 200 | Camuin, Ib | 550 | 600 | Cotrunstep, gal | 10 | 120 |
| Sulphate, | 2 | 3 | Erigeron, | 20 | 25 | Larly, ga | 0 | 00 |
| Somsis., \%\% | 85 | 00 | Fennel, lb . | 160 | $1 \%$ | Ratw, gal. | 63 | 0 |
| Sideit Nitis. 1 lb | 30 | (f) | Geranium, | 17 | 180 | Neatspoot. | 00 | 110 |
| Strostiom, Nitrate, Ib | 18 | 20 | Rose, ll . | 320 | 350 | OLivk, gat. | $1: 30$ | 135 |
| Sthyctisins, crystals, $0 \%$. | 100 | 110 | Junipher herries (tinglish), ib. . | 450 | 500 | Salual, gal |  | 40 |
| Sumponal, o\%......... | :12 | 34 |  | 70 | 75 | Pasm, ib. | 12 | 13 |
| Supinuer, Flowers of, 1 l | 23 | , | Iatvender, Chiris. Flemr, lb.. | 300 | 350 | Sprerst, gal.. | 178 | 180 |
| Pare precipitated, Ib........ | $13^{2}$ | 20 | Giarden, lb............. | 150 | $17 \%$ | Tundexatise, | 65 | - |
| The standard Brands. MLLIOWS - OF - LACH - BRAND Sold Annually. | If |  | a' if Padie' imunó |  | d | $p^{\prime}\\| \\|^{\prime}\{S$ | $8$ |  |

# "DERBY PLUG," $5 c$. and 10 cts., "THE SMOKFRS' IDEAI," "DERBY," "ATHLETE" CIGARMTTES, ARE THES BRST. 

D. RITCHIE \& CO.,

## Montreal.

## Drug Reports.

Canada.
Business is very goorl, considering the inmpassable state of country roads this spring.

Quinine maintains ligh price.
Cocoa Lerves, lower.
Oil Cubebs, ?ower.
Ergot, easier.
Oil Lemon, declined.
Opium maintains high price. Morphin shows signs of sympathizing with it.
Cream Tartar, which has been very low during the month, has advanced, aud shows signs of a further rise in price.

Silver shows signs of advancing.
Vanilhas are worth more money.
Camphor stendy, usually advances about this time.

Finx seed is high.

## England.

Iondon, Feb. 27th, 1894.
There has been a sligh improvement noticeable in both home and export. trade, but no indications of the revi-
val which was expected. Prices are for the most part unaltered, the chemien market remaining very stemdy. The recent drug auctions have passed off with fuir demands.

Opium is hardening and will probably alvance; in fact, agents here decline to execute orders at previous rates. The American demand, in view of $\$ 1$ duty, is given as the principal cause.

Jaborandi leaves are scarce, although sevoral parcels are expected.

Cocaine is dearer, a sharp riso having been notified by manufacturers.

Chloral hydrate makers have also advanced their prices.

Morphia manufacturers have advised an medvance, but so much remains in second hands that it is hardly carried out.

Jalap is in good demand at full rates.
Ipecacuanha is slightly easier but well maintained.
Senega Root, Cubebs and Camphor are falling somewhat.

Chlorate of Potash is gradually climb. ing down and Citric Acid is oferen at lower prices.

Phenol Sulphoricinoleate is a solution of 20 parts pure phenol, i. c., carbolic acid, in 80 parts sodium sulphoricinoleate.

## Cod Liver Oil Report.

## fRom soit, hye hotmhor.

Tromsoe, Norway, Feb. 21st, 1894.
Reports from Lofoden are very discouraging. It appears we are stepning into a period of small fish with lean livers and as $\Omega$ matter of course a fall off in the yicld of cod liver oil-similar to what last happened in the years 1883 and 1884, when prices rose to an enormous height.
Up to date there have been caught at Kiofoden 3 millions fish yielding 1330 hektoliters cod liver oil besides 3170 hekt. livers for the production of cold drawn oils. The corresponding figures last year were $2,000,000$ fish, 1914 hekt, cod liver oil and 4842 hekt. livers, showing a decline in the yield of livers and the fatness of the same of about 30 per cent.

Stormy weather is still prevailing on the grounds and fish appear to be scarce.

Prices have risen considerably during the last fortnight and a further rise must be expected.

My last sales have been effected at Git sh. but this price can liardly be maintained. Secing the probability of the next reports causing an further considerable rime, I daro not quote firm to diay, but beg my customers will please to wire their wante, when I slanll promptly quote firm by tele. graple.


[^0]:    Read at a mecting of the lharmacontical society of (ireat 3rituin, on lierlacsiay;
    February 14th, 1894.

