



COLONIAL BUILDINGS, 44A CANNON STREET, LONDON, E.C.
Published on the 15th of each Month.

NINETEENTH YEAR OF PUBLICATION.

Subscription, 10s. per year, payable in advance;
commencing from any date.
Post free to every country in the world.
Single Copies, 1s. each.

A Copy of THE CHEMISTS' AND DRUGGISTS' DIARY, published annually, is presented to every subscriber. Price to non-subscribers, 3s.

Advertisements, Remittances, Subscriptions, Orders for Copies, and all communications must be addressed to "THE PUBLISHER OF THE CHEMIST AND DRUGGIST."

Cheques and Post-office Orders to be made payable to *Edvard Halse* and crossed *Martin & Co.*

No one is authorised to collect money without production of the Proprietors' lithographed form of receipt.

SCALE OF CHARGES FOR ADVERTISEMENTS.

One Page, 5l.; Half Page, 2l. 15s.; Quarter Page, 1l. 12s. Special Rates for Wrapper and the pages preceding and following literary matter. The above Scale of Charges will be subject to a discount of 10 per cent. upon seven, and 20 per cent. upon Thirteen insertions, prompt quarterly payments; the Thirteenth appearing in the DIARY AND TEXT-BOOK. Seven lines and under, 4s. 6d.; every additional Line, 6d. Advertisements of Assistants Wanting Situations (not exceeding 12 words) inserted at a nominal charge of 1s. each. For such advertisements when replies are to be addressed to this office an extra charge of 6d. must be paid to cover cost of transmission.

All Advertisements intended for insertion in the current Month must be sent to the PUBLISHER OF THE CHEMIST AND DRUGGIST on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 A.M. on the morning previous to publication.



The May meetings of pharmacy have just commenced. This day (the 15th) the Chemists' and Druggists' Trade Association holds its first annual meeting, at the Freemasons' Tavern, at 12.30. At 2 P.M. a general meeting of the trade convened by this association occurs. At 6.30, at the same place, there will be a dinner in aid of the Pharmaceutical Benevolent Fund. To-morrow (the 16th) the annual meeting of the Pharmaceutical Society, to be followed in the evening by a *conversazione* at the South Kensington Museum, to which, we believe, some ten thousand ladies and gentlemen have been invited.

We have received the annual report of the Chemists' and Druggists' Trade Association. Over 1,000l. has been collected in donations, while 2,880 annual subscribers have been entered. The legal and other occupations of the society are briefly narrated, and show that much energy and organising ability have been displayed. The association has only been in existence about nine months.

A meeting of the Scotch contingent was held at Edinburgh last month, when the branch was fully organised, Mr. Davison, of Glasgow, being appointed president, Mr. Mackenzie, of Edinburgh, vice-president, and Mr. Fairlie, of Glasgow, honorary secretary. The local superintendents were also appointed. The Scotch list, it appears, at present only numbers 180 members, but it is likely it will rapidly increase now that the framework has been completed.

The Pharmaceutical Report for 1876 has been issued, and is

much shorter than usual. The action of the council during the past year seems to have been so meagre that the authors of this report have had to introduce some well-worn old homilies, quite out of place in such a document, in order to give it a decent appearance. The society is 1,100l. richer by the year's transactions, and out of its ample income has spent only 185l. in law charges, a fact which may certainly be looked at from two points of view.

A determined attempt is being made by some of the metropolitan chemists to close their establishments at an earlier hour than is usual. An enthusiastic and largely attended meeting was held last month at Bloomsbury Square, and it was generally agreed that the object was practicable and desirable. It is to be hoped that at least the richer ones will not stop at the theory.

We are informed that more than fifty of the chief chemists in the Notting Hill and Bayswater district have agreed to adopt the resolutions passed at the meeting at Bloomsbury Square on April 18, in respect to early closing and Sunday closing.

Some metropolitan chemists' assistants are trying to form an assistants' association, with the usual objects of promoting friendly feeling and scientific intercourse. So far good; but at first they had also the not very criminal purpose of "supporting those principals who are desirous of shortening the hours of labour." They asked the loan of the Pharmaceutical Society's Lecture Theatre for an evening, but some of the eagle eyes on the council saw "coercive trade unionism" in this proposal, and they therefore refused the request. The council is by no means bound to lend the theatre to all applicants, but we are not clear why they question the reasonableness and legitimacy of such an agitation on the part of the assistants.

An Excise prosecution of considerable importance has been commenced by the Board of Inland Revenue against Mr. Lamplough. A decision, subject to appeal, has been given by Baron Cleasby to the effect that the pyretic saline manufactured by Mr. Lamplough is subject to medicine stamp duty. The defence urges that if that interpretation be supported, other compounds of a similar character, and certain mineral waters will be equally liable.

The advisability of including chloral hydrate in the schedule of legal poisons is now under the consideration of the Law and Parliamentary Committee of the Pharmaceutical Council.

A chemist at Ross has been fined 6d. and costs by the local magistrates for an alleged sale of syrup of poppies without a poison label.

Messrs. Rouch & Co., chemists, in the Strand, were lately fined 40s. and 2l. 12s. 6d. damages for carelessness in sending out some chemical which exploded after it had been delivered. According to the report the chemical in question was *aqua regia*, and a curious part of the circumstance was that it lay quite quietly for several hours, but suddenly exploded as soon as "a well-known author and novelist" looked upon it.

A destructive fire occurred, early on the morning of April 25, at the business premises of Messrs. Bragg & Co., charcoal biscuit bakers, 14 Wigmore Street, Cavendish Square. The house, consisting of 14 rooms, was burnt out, with the roof off, before the efforts of the firemen to extinguish the flames were successful. Messrs. Bragg are insured in the Sun Fire Office. The house of Mr. Mathews, chemist, next door, had the roof damaged to a considerable extent. Mr. Mathews is insured in the Liverpool, London, and Globe.

An amusing item of news occurs in our Irish report. A correspondent had written to the council asking that certain of the

regulations in connection with the examination might be relaxed in his case, in consequence of his ancestry and lofty connections. The council was democratic enough to refuse his request.

At the last Irish Pharmaceutical meeting Professor Tichborne read a paper "On Crystals on the Surface of Ung. Hydrargyri Iodid. Rub.," and Mr. H. N. Draper contributed a valuable pharmaceutical observation in regard to the detection of alcohol in essential oils by means of magenta dye.

Mr. T. Fell Abraham will succeed Mr. A. H. Mason as president of the Liverpool Chemists' Association. We publish a part of the valedictory address delivered by Mr. Mason at the last sessional meeting of that association.

Another valedictory address which contains several points of interest is the one delivered by Mr. Frazer at Glasgow a week ago. In his characteristic and vigorous style Mr. Frazer discusses several subjects of pharmaceutical importance, arriving at conclusions curiously inconsistent (in our view) with the facts which he narrates.

Mr. S. U. Jones, President of the Chemists' and Druggists' Trade Association, addressed a large meeting of the Hull chemists on April 25, and gave an account of the work done by the association. Mr. C. B. Bell presided, and Messrs. Baynes, Anthony Smith, F. Earle, Councillor Chapman, Kirby James (Beverley), G. Myers Goldsmith, and J. F. Smith, took part in the discussion. A large number of chemists joined the Trade Association at the close of the meeting; and on the next evening Mr. Jones was entertained at a supper, given by the members of the Hull Chemists' Association, at the Cross Keys Hotel, Hull, when about twenty gentlemen sat down.

For the Board of Pharmacy of Victoria, whose formation we recorded in our last, the following were appointed by the Government on February 6:—J. Bosisto, M.P. (president), C. R. Blackett, H. Brind, G. E. Green, J. Holdsworth, W. Johnson (Government analyst), and George Lewis.

Professor Redwood lectured on "Spectral Analysis" to a very full audience in the Pharmaceutical Society's lecture theatre on May 2. The lecture was an interesting summary of the theories of light, and the special subject under discussion was well illustrated by numerous experiments with the society's new spectroscope.

Mr. William Thomson, of Manchester, replies in this issue to the criticisms on his investigation into British dispensing which we quoted last month from an American source.

The London School of Homœopathy has been fairly floated. The inaugural address was delivered recently by Dr. J. Gibbs Blake, of Birmingham. A respectable number of students have entered their names.

Our class of chemical students has been exercised recently by a mixture of ammonium and potassium alums in equal parts, with slight impurities. About forty samples were distributed; twenty-three reports were received, and nine students failed to detect potassium in the mixture. The editor of "Our Corner for Students" thinks public analysts could hardly have done worse.

The death is announced of Mr. John Sanger, the head of the well-known firm in Oxford Street. The deceased gentleman had not for some years taken any active share in the business. We also notice the deaths of Mr. Martin Murphy, Principal of the Liverpool College of Chemistry, and of Mr. Gossage, the founder and head of large alkali works at Widnes, originally a chemist and druggist at Leamington.

MEDICAL NOTABILITIES.

IN continuing our series of eminent physicians and surgeons, it is needless to remark that we make no attempt to range our groups in order of superiority. Many subscribers were good enough to express their approval of our plan of publishing such portraits, and we shall no doubt continue the course at intervals.

HORACE BENGE DOBELL, M.D. (St. Andrews, 1856), consulting physician to the Royal Hospital for Diseases of the Chest, is a voluminous writer and an active thinker. His works have mostly had reference to diseases of the chest and of the heart. His experiments with the pancreatic emulsion and his many suggestions of apparatus, &c., designed for the comfort of sufferers, have attracted considerable attention.

There are two RICHARD QUAINs in London, one being known as the surgeon and the other as the physician. It is the portrait of the latter which we present in this group. Dr. Quain is a graduate of London University, and took his M.D. degree in 1840. He has occupied the position of treasurer to the General Medical Council, and has been an active member of its Pharmacopœia Committee. As a general physician, and in the treatment of consumption and heart diseases especially, Dr. Quain has a high reputation.

Dr. J. RUSSELL REYNOLDS, the well-known Professor of the Principles and Practice of Medicine at University College, and editor of the "System of Medicine" which bears his name, is a graduate of London University, his M.D. degree being dated 1852. Dr. Reynolds has written many essays, most of his work having reference to diseases of the brain, paralysis, and epilepsy.

Dr. BENJAMIN WARD RICHARDSON, F.R.S., has led a singularly active life, and our space does not allow us even to barely enumerate the services he has rendered to social and medical science. He was born at Sowerby, in Leicestershire, in 1828, and graduated M.D. at St. Andrew's University in 1854. In 1856 he became a member of the Royal College of Physicians, and was elected a Fellow of the same in 1861. In the earlier part of his career he carried off some of the noted medical prizes, gaining in 1854 the Fothergill gold medal for an essay on the diseases of the child before birth, and in 1856 the Astley Cooper prize of 300*l.* for an essay on "Coagulation of the Blood." The discovery of the ether spray for the production of local anæsthesia, and the introduction of bicliloride of methylene, are his most important achievements; but besides these, he has contributed numerous papers to societies and scientific journals, many of them indicating important original investigations, and all tending towards the relief of pain or the cultivation of hygienic science. He has published researches on the ethyl, methyl, and amyl series, on hydrate of chloral and uitate of amyl, and of late his lectures on alcohol and his scheme of a city of health have attracted very general attention. In 1868 Dr. Richardson was presented by 600 of his medical and scientific associates with a fine microscope and 1,000 guineas, "in recognition of his various contributions to science and medicine."

SAMUEL WILKS, M.D. of London (1850), is the Lecturer on Medicine to Guy's Hospital, and in that position has won a special reputation for the originality and ability of his treatment of the subject. We lately reproduced a lecture of his on alcohol, which, no doubt, many readers studied with gratification and profit.

The prescriptions of Dr. C. J. B. WILLIAMS are so widely known all over the kingdom that his portrait will certainly be of interest in this series. Dr. Williams has been M.D. of Edinburgh since 1824, and during these years has devoted his

THE CHEMIST AND DRUGGIST PORTRAIT GALLERY.



HORACE B. DOBELL.



R. QUAIN.



J. RUSSELL REYNOLDS.



B. W. RICHARDSON.



S. WILKS.



C. J. B. WILLIAMS.

attention chiefly to consumption and diseases of the chest. He is Physician-Extraordinary to the Queen, and senior consulting physician to the Consumption Hospital, Brompton. He first wrote on "Diseases of the Lungs" in 1810; in 1871 he published a volume on "Pulmonary Consumption," which embodied the results of his ripper experience.

Pharmacalia.

Competition, keen though it may be at present, has neither injured the School of Pharmacy at Keenington, nor chilled the energy of its director. On Tuesday, April 17, there was the annual distribution of the prize medals for chemistry, botany, materia medica, and pharmacy. These are sessional rewards offered to those who have successfully competed at the examinations which are conducted at the school premises.

They are distinct from any other public official examinations, and give a fair indication of the progress of the students. One of the most remarkable facts we have yet had to chronicle is that the names of the prizemen of the South London establishment for the eighth session, just elapsed, are found without exception in the Pass List of the April examination of the Pharmaceutical Society. This school, like history, repeats itself, and it has sent out from its laboratory the only majors who have succeeded in the late contest at the Square.

Were we to judge by the demonstrations of applause which on the Tuesday already mentioned were exhibited by these young votaries of science, we should say they quite appreciated their instructors. Dr. Muter came in for his usual welcome; Mr. Dodd retained his popularity; and Mr. Baxter had no reason to be dissatisfied with his reception.

To maintain a school in the full tide of its prosperity is an arduous task: there is no sign of weakness or shadow of decadence, but the doctor may fairly ask from his "old boys" that some amongst them should reflect honour on systematic training by distinction in the world outside. Life we know is short, and art, they say, is long—but art has infinite variety of pathway, one of which may surely be trodden with success by some of the numerous band who first learned how to learn at the South London School of Pharmacy.

* *

There is something new under the sun at last. Time was—the halcyon period is within the memory of this generation, when a man was asked to be good enough to stand as a candidate for the membership of the council. A kindly, but strongly worded letter from the secretary represented the undesirability of responding—No. That was the Augustan age of pharmacy, during which period, dark as some supposed it, much solid work was done. We have even dared to think that it might contrast not unfavourably with the exertions of a more modern era.

It is true that the elder councillors had no wish to be heard for much speaking, and though freely labelled as obstructives, they did not land the society's affairs in any perilous condition.

We accept, unquestioned, the wisdom, or otherwise, of the decision that the conversations of the council room should be reported fully—the pages of official journalism bear monthly record to what extent our literature has been enriched or attenuated in consequence. We have now entered on a third phase of politics which we are bound to note; and we accept it likewise as a sign of the temper and spirit of the day. Candidates for the office of councillor announce to their constituents in printed circulars what, should their election be secured, they propose to say. That in the case of men who are comparatively unknown this mode of canvassing is both fair and advantageous we perfectly allow, nor would we suggest the faintest implication of discredit; yet we point out that to insist upon its universal application, or to desire its general adoption, would lead to consequences which in common we should lament.

There have been, are, and ever will be, a class of representatives held in the reverential respect of every pharmacist, who shrink from publicity as by natural instinct. Some of these are the very salt of pharmacy, as they are the ornament of their own circle. We deprecate the undue assertion of a principle which, unless governed with extreme wisdom, may lead to disastrous

consequences, and however much we believe in the advantage likely to accrue in having a public statement of a candidate's opinions, we respectfully raise a warning voice, or rather direct attention to another view of the question, and again we say that we ask our fellow pharmacists not to exact the publication of the views of an aspirant to the council as the sole rule of conduct with respect to his election.

[It is hardly necessary to point out that the writer of "Pharmacalia" is not invariably in accord with opinions advocated in other parts of this journal. We desire that our pages should contain the views of all sections of pharmacists, and that the truest may ultimately prevail, but in this matter we cannot avoid expressing our dissent *toto cælo* from the views of our esteemed collaborator.—Ed. C. & D.]

* *

Liberavi animam meam. Now we turn to the far more congenial task of recording what some of our excellent *confrères* have said. Mr. G. S. V. Wills, a successful and energetic teacher, comes forward on the educational interest. He dates from Westminster College, and represents the opinions of those engaged in the instruction of future chemists, as well as of those actually in business. He is prepared to combat the aggressive movements of co-operative stores and other unlicensed bodies. He will insist on legal qualification, and will give his best consideration to matters submitted to his notice.

Mr. Walter J. Churchill appears as the firm supporter of the trade interests of the society, while not neglecting the extension and support of pharmaceutical education. He is an active member of the executive of the Chemists' Trade Association, which he desires to see working in harmony with the parent society.

Both organisations may prove of infinite service. Not himself a prescribing chemist, he would use his utmost effort to maintain the rights of dispensing pharmacy to prescribe within due restrictions; nor would he yield such right until the medical profession abandoned their interference with the retail trade. He is strongly in favour of the appeal to the Court of Queen's Bench relative to the subject, and he would leave no stone unturned in case of adverse decision to restore the ancient privileges of the trade.

Mr. Thomas Preston Gostling is the Norfolk candidate on behalf of the country chemists. He advocates a thorough, practical examination for the Minor, and a high theoretical and practical qualification for the Major. He would contend for the privileges of the dispensers, based on their known efficiency; and he deploras the existing practice of medical men supplying as well as dispensing medicine in the country. He would support any well-considered measure for suppressing the encroachment of the co-operative stores.

Mr. W. Bulgin follows suit, and Sheffield recommends Mr. G. A. Cubley.

Lastly comes Mr. Edwin B. Vizer, who, in our opinion, was placed beyond the necessity of making a formal confession of his faith. He would do battle with the co-operative stores, readjust the examination fees, and give the question of counter-prescribing his diligent consideration. He approves of the newly-created Trade Association, and counts upon it for valuable assistance. We should be glad of any circumstance, council work or aught other, that would bring this cheerful and effective pharmacist more in personal contact with his London brethren.

* *

If Mr. Daniel Frazer will return to the council and his friends, all shall be forgiven. And shall we never more read those wonderful resolutions, the length of a little sermon, and quite as instructive? Will he never again move and have his being in a labyrinth of discussion, somewhat wordy but always fraught with purpose? Will he never hereafter find himself misunderstood and require a few folio pages to explain the mystery of what he meant? This will never do—and none of us can afford his loss. He is the best-hearted of oppositionists, and, though fond of war-paint, loves the calumnet of peace.

One bright autumn day, when the leaves are clothed with russet, and the purple hills look down upon the golden corn, and the glory of the heather tempts the stranger to forsake his southern home, we would fain descend upon Daniel Frazer, resolute and with a notion of our own.

We would seize his every book which bore a reference to pharmacy, present, past, and future, and consign them to the bosom of the Clyde. For week-day reading he should have

nothing deeper than the *Family Herald*, or more abstract than Sir Walter. But Mrs. Barbauld's hymns should be permissible on Sunday.

Then, taking rail as far as Greenock to avoid the odours, we would sail in company to Helensburgh; or delay some weeks at that sweet spot Dunoon; or come to anchor altogether at the isle called Arran, where stands one of the best hosteleries in or out of Scotland. That would work the miracle—Daniel would come back to judgment a better phraser than he ever was; and by the assembled councillors, amongst whom he is sadly needed, and by all of whom (save number fourteen on the list) his absence would be deplored, he will be regarded as a perfect cure.

* *

Those who are familiar with the current pharmaceutical literature of the day will not have failed to observe the popular comments that have been expressed on the unfortunate mischance at Manchester connected with the inhalation of nitrous oxide gas.

It is needless here to point out that to ensure a reasonable hope of perfect safety it is requisite that the anæsthetic should be free from chlorine, and that all trace of acidulous impurity or of the higher oxides should be removed by ferrous sulphate or potassium hydrate. With scrupulous care in preparation and skill in administration our best precautions end, and neither N_2O nor any other remedy can escape the possibility of misadventure.

We would refer the reader to an admirable letter contained in the *Medical Examiner* of April 26, where the case seems to us well put by Stanmore Bishop. He objects in a trenchant manner to what he terms lay commentary. He asserts that a mutual responsibility exists between the patient and the physician; and that practitioners are not as gods, holding in their hands all possible contingencies of life and death. Two deaths only are recorded as having occurred from the exhibition of the nitrous oxide; others, we know, have been induced by chloroform. It is said, therefore, that an anæsthetic should never be administered by a dentist except in the presence of a medical man. In Manchester there are over a hundred dentists, and the use of anæsthetics is common to three-fifths of them. One operator gives the gas not less than three times a day: the fees range from one guinea to half-a-crown. Even in a crowded city, where distances are short, would the physician be willing for half a dentist's fee to attend every summons dictated by a toothache? Transfer the matter to the country, where Anna Maria is waiting for a dental operation. Vainly she consults the dentist, perhaps one of our confraternity—for the doctor must be sent for; while another intelligent authority insists there must be at hand the requisites for restoration from collapse, the galvanic battery and similar appliances. "Why not," adds Mr. Stanmore Bishop, the village priest, "to administer the last offices of the church?"

By all means let hospital students be allowed to learn how to exhibit anæsthetics, and let every dentist who uses nitrous oxide be acquainted with cardiac sounds, and be able to detect important pulmonary diseases. "Beyond this," summarises the writer, "our ordinary everyday life is the result of carefully considered possibilities and a choice of probabilities. In everything we can but use our knowledge to the utmost, and leave the result. No man can infallibly foretell the end in the simplest affairs of life, and it is only the coward who refuses a real good because there is a dim possibility of danger attaching to it."

* *

Shall we say nothing about the revival of the early closing movement because other and imperative occupations have deprived us of the honour of sharing personally in its advancement? The warmest wishes of every sensible or compassionate man must welcome the shortening of those melancholy long hours which form a serious drawback to the calling of a pharmacist.

Years ago determined exertions were made to bring the occupation of a druggist within that reasonable compass which men engaged in other lines of business have not found it detrimental to adopt. Progress was arrested formerly by young men who, while assistants in great firms, were eloquent in the cause, but who, the moment they became the masters of some suburban corner shop, were found blazing with coloured lights and shutterless while half the world had gone to bed and the rest were

returning home by midnight trains. Pharmacy so carried on is a pursuit from which we would carefully warn our children. Obviously their education might be utilised to gain more tangible reward—and we pay our sincere tribute of respect to those who generously bestow their time and influence to further a philanthropic scheme which may appeal with confidence both to humanity and common sense.

* *

The brief annual report of the Council of the Pharmaceutical Society has for some time been in the hands of the members. Most of its items are satisfactory, and the transference of part of the practical work from the Major to the Minor will be universally recognised as a step in the right direction. We should be glad if, at some fitting time, the indefatigable curator, Mr. Holmes, whose diligence requires no prompting, would give us an account of some of those historic specimens of botany and materia medica which are contained in the Hanbury collection. We feel sure that the execution of such a literary task, not too severely scientific, nor yet too popular, would be appreciated. The expense connected with the examinations will probably provoke inquiry; but we must remember that the one first duty of our corporate society is to promote education: that the advance of knowledge amongst our ranks is at once our title to respect and our surest means towards trade prosperity. All other efforts, however good, must be held subservient. Once let British pharmacy be represented by examined men, and adulterated drugs as well as illegal practices will be things numbered with the past.

* *

Great satisfaction will be felt by London pharmacists at the revival of the evening lectures at Bloomsbury Square: those whom distance must prevent from personal attendance will yet be able by the reporter's aid to gain some notion of the mode and matter of the discourse. Many will recollect the time when the evening lectures of Pereira, Fownes, and Professor Redwood were the first means of bringing the society prominently before the world, and were held as one of the most valuable agencies in awakening a desire for a higher intellectual standard. The subjects chosen were always of extreme utility in themselves, though care was taken to select such topics as at the moment claimed the special interest of the public. It may be conceded that with our more highly developed systematic training the same necessity for popular instruction does not exist as heretofore; but we must bear in mind that very large class amongst us who are not, and of necessity have not been, students and who yet are keenly alive to the pleasure of a well-illustrated and lucid explanation of scientific truths; nor must we forget that equally large class who from pressing business engagements are unable to work out for themselves the theories and investigations of the day. Professor Redwood has deserved well at the hands both of professed students and of hard-working chemists, in having provided so excellent an occupation of their evening leisure as his discourse on spectrum analysis, which we imagine is but the precursor of future efforts on his part in a similar direction. We are bold enough to express a wish, which will be re-echoed by every British pharmacist, that one who has been so long and intimately connected with pharmacy, practical and theoretical, will at no distant date give us an original and standard treatise on British pharmacy. Financially it would be most profitable, and it would complete the circle of pharmaceutical literature issued by our professors. We have but to state the complete success attending the doctor's experiment on Wednesday, May 2, in which we should be sadly wanting were we not to include the son.

* *

Liverpool has sustained a personal loss, and chemistry a man of mark, by the decease of Martin Murphy, who was but 48 years old. This age seems fatal to the chemist, and it is inseparably connected in our mind with sorrow. The record of this life is soon told, nor do its incidents possess distinctive features. An earnest love for one branch of art, viewed in its scientific, not its commercial, bearings; an unwavering, and as we think (reasoning from the career of other men), an unwise devotion to the one cherished study; a success of slow growth, yet infallible in its certainty—this is what the biographer has to tell of Martin Murphy and of the select few who follow his example. We are pained to read that from 1853, that is 24

years ago, the responsibilities of the Liverpool College of Chemistry devolved wholly on him, and that at that date he used to teach and performed all the analyses, which Muspratt ceased to examine, but adopted as his own. We read also with unfeigned regret, and with another feeling still more vivid, that three-fourths of Muspratt's "Dictionary of Arts and Science" was actually written, or revised, or corrected by the youthful philosopher. The president of the Liverpool Chemists' Association gives the information that Murphy "for two years worked 16 hours out of the 24, and such was his interest in the work that he rarely felt exhausted." "He seemed almost to live in the region of chemistry for the time. Nothing else was thought of; hence in a great measure resulted the very general knowledge which he possessed in all branches of industry." Hence in our opinion in a great measure it resulted that it was the mournful duty of two Liverpool representatives to follow the remains of Martin Murphy to their last resting place. Let us, while throwing the greenest of laurel wreaths upon his tomb, add rosemary—that's for remembrance—and bid others recollect that there are prudential limits, even in devoted study which nature will allow no man to overstep.

* *

May is upon us, bringing in its train the promise of the summer and the annual announcement of garden lectures on botany. Friday and Saturday, so early in the morning as eight o'clock, Professor Bentley will, as usual, give his practical demonstrations in the inner circle at Regent's Park. We note the fact here lest any should miss the opportunity through inadvertence. These garden discourses are intended by the Professor more as practical demonstrations than as lectures, every subject being worked out from the living plant illustration. Though last Saturday morning was gloomy in the extreme, and heavy clouds prevented the student from minutely observing details, the Professor's introduction bore no trace of external depressing influences. He described as happily as ever the various kinds of leaf structure and insertion, and denounced energetically the views enunciated by the *Standard* that Latin and the higher branches of education were unnecessary to the pharmacist. As far as botany was concerned, a knowledge of the dead languages was of great advantage as a key to scientific definition—a sentiment in which we need hardly say we conscientiously agree. Long may pharmacists and others have the chance of following such admirable instruction as the demonstrations of Professor Bentley at the Gardens of the Regent's Park. In the great world outside there are wars and rumours of wars—the world beloved of newspapers and distrusted by Carlyle. In the tranquil world of pharmacy there are rumours of dinners and conversazioni. The day this journal makes its appearance the Benevolent Fund will be holding its decennial celebration: the morrow will find the members assembled at the general meeting at the Square: and at night each member and associate in business may admit himself and a lady, as perhaps he will, to the South Kensington Museum.

EARLY CLOSING IN LONDON.

THE chemists of Notting Hill and Bayswater have for some time (as reported in our columns) been at work endeavouring to promote the earlier closing of pharmacies in their district, and having obtained the loan of the Lecturo Theatre of the Pharmaceutical Society, they announced a meeting there for April 18, at 8.30 p.m. Mr. George Webb Sandford, of Piccadilly, occupied the chair, and the room was well filled with proprietors and assistants.

The CHAIRMAN said he presided as an individual, and not as representing the Council of the Pharmaceutical Society, though he did not imply for a moment that the council were not favourable to the movement. They felt, however, that they might occasion discord if they took up the subject in their official capacity. He had had a long experience of early closing. When he first went to Piccadilly the business was carried on from half-past six in the morning till eleven at night, but twenty years ago he began to close at nine o'clock, and for the last four years his shutters had been closed at seven o'clock, and the shop had been finally closed at eight. He had been

able to do this quite irrespective of his neighbours, and he had no occasion to repent in the smallest degree of the step he had taken. Of course he had always somebody in attendance after the shop was closed. He read notes which he had received from Mr. Felix Stevens, of Judd Street, who urged united action; from Mr. Hills, who was one of the most earnest supporters of the movement, and who thought the best way of carrying out the early closing movement was for chemists to cultivate a better knowledge of each other; and while he thought it advisable that they should be as obliging as possible to their customers, at the same time, if they adopted an earlier closing of their window shutters, they would be educating the public to supply their wants in medicine at the same time as they did their general shopping. The writer added that some kind of provision must be made for emergency. Another note was also read from Mr. Shaw, of Liverpool, to the same effect.

Mr. HARRIS (Highgate) moved the first resolution:—

That the earlier closing of shops and offices of other trades having become almost universal, and many chemists and druggists having adopted earlier closing with advantage, this meeting deems it desirable to extend further so beneficial a change, and suggests to their brethren, chemists and druggists generally, an adoption of shorter hours of business.

Mr. LOWE (Portland Place) seconded this. He did not see much difficulty in getting earlier closing if druggists were united.

Mr. GREENISH (Dorset Square) said that for a period of five-and-thirty years he had been identified, more or less, with early closing. Soon after going into business for himself he had closed his shop altogether on Sundays. He had not put a brass plate on his door to state that medicines could be obtained at any hour, but he had given his customers distinctly to understand that his establishment was never left without himself or one of his assistants being within reach. He had adopted the plan of putting up his shutters at eight o'clock, and closing finally at half-past eight, and that practice had never been attended with any inconvenience. Many, he had no doubt, would leave that meeting brimful of good intentions with respect to early closing, but if they went out the next night and saw a red light or a window shutter down their resolution would give way. What he would recommend each of them to do would be to go home and put his own shutters up, and, others doing the same, early closing would be an accomplished fact.

The resolution was carried unanimously.

Mr. W. C. JONES (Bayswater Road) moved:—

That this meeting is of opinion that the window shutters might be closed at 8 o'clock, and the doors at 8.30, without inconvenience to the public, and even on Saturdays, with due regard to the requirements of the neighbourhood, an abridgment of the hours of labour might be effected.

The motion was seconded by Mr. WHITE (Regent's Park).

Mr. OWEN (Islington) did not at all believe in putting the shutters up half an hour before the shop was closed. If they were going to put their shutters up at eight o'clock he should be very glad indeed if they would close their doors at the same time. To put up the shutters without shutting the doors was a mockery and a delusion, and it was an inducement to prolong the hours to an indefinite time. He had always shut customers and everybody in at nine o'clock, and let them out at the side door. He should be glad to adopt an earlier hour. He believed that there was no good in the late hours. The public would appreciate those who took care of themselves.

Mr. HAMPTON (St. John Street Road) said that he closed his place of business earlier than his neighbours closed, but he did not judge his neighbours harshly on that account. He hoped that there would be some efforts made in the various localities of London to bring the chemists together to discuss the matter amongst themselves.

The motion was then carried unanimously.

Mr. POSTANS (Baker Street) moved:—

That while suitable arrangements should be made to supply the necessary requirements of the public on Sunday, this meeting recommends that door shutters as well as window shutters should remain closed on that day.

He did not quite see why it was that they in England were so late in their business, when they were by no means so late in other countries. In Dublin and Edinburgh all druggists' shops

were closed at eight o'clock, and he believed that in many districts they were closed at seven.

The motion was seconded by Mr. COOPER (Gloucester Road)

Mr. BERRY (Camden Town) spoke to this resolution. He was rather averse to half measures. If a chemist did business on Sunday let him proclaim the fact at once by taking all his shutters down, instead of adopting the present practice of taking down one or two shutters. Let them either proclaim honestly, as the publicans did, that they were prepared to do business on the Sunday, or let them join in the general practice of observing the first day of the week.

Mr. ANDREWS (Leinster Terrace) remarked on the large proportion of chemists' shops with either some of their window shutters down or the door shutters down, and he had found this to be the case in some of the larger shops at the West End of London.

Mr. STACEY heartily agreed with the resolutions, and it was his desire to discourage Sunday trading to the utmost. Chemists, however, had a public duty to perform, or, otherwise, he should have closed his shops on Sunday long ago. In some houses it was almost impossible to avoid having the door open. Where iron shutters were in use they were obliged to have the shutters up in order to obtain light, although they kept the door upon the spring. To the passer-by it looked as if the shop was courting business, although that was not the case. He spoke also of the special difficulty the chemists in the West End had to deal with, in the fact that they had not only to deal with the aristocracy and with gentlemen, but also with "gentlemen's gentlemen." The man-servant preferred often to bring a prescription in the evening, after he had served up the coffee, when he could stroll out with his cigar.

Mr. OWEN thought Mr. Stacey must have forgotten that the chairman was also in business at the West End. He thought Sunday closing among druggists at the West End could be carried out. He himself had shut up thoroughly on Sundays for nearly 25 years, and had never had a single complaint. The few shillings he used to earn on Sunday were entirely made up during the week.

A general conversation followed, many gentlemen being called on by the chairman to express their opinions.

Mr. WILSON spoke from an assistant's point of view.

Mr. HORTON said a great number of assistants were very fond of closing early, but when they got into business for themselves many of them showed a great tendency to keep open late.

Mr. TAYLOR (Baker Street) also remarked, humorously, that having once tried early closing, he had found that when the shutters were up his assistant left him all the work to do. He would, however, recommence the experiment.

The resolution was carried unanimously.

Mr. LONG proposed—

That with a view to carrying out the previous resolutions, Messrs. Hills, Sandford, Cartledge, Stacey, Greenish, Hampson, Owen, Horn-castle, Andrews, W. C. Jones, Long, Butler, W. O. Jones, Stockman, Matthews, Drury, Postans, Taylor and Betty, be appointed a committee, with power to add to their number, to take from time to time such steps as they may deem expedient.

Mr. LONG gave a history of their efforts at Notting Hill, and expressed the hope that ere long they would be able to close at an earlier hour still, and he was not introducing a chimerical idea, for in many large provincial towns they closed at seven, and had done so for a long time, and had a half-holiday in the week.

Mr. BUTLER seconded the resolution.

Mr. KENNEDY (secretary of the Early Closing Association) spoke. He said chemists and druggists were almost the latest in closing of any tradesmen in London, and he had often thought that when the hours were prolonged the business was absolutely degraded in the estimation of the public. The artisan worked only 51½ hours in the week, while the chemist, at a moderate calculation, worked 80 hours, to say nothing of Sunday. He believed, as one of the speakers had said, that a very great deal of practical good would come of local meetings. The Board of the Early Closing Association would be happy to give any assistance in their power in aid of any steps that might be taken to bring about a curtailment of the present protracted hours of business.

The motion was carried unanimously.

After some votes of thanks the meeting, which had been very enthusiastic and unanimous throughout, separated.

The Pharmaceutical Council.

THE council met on May 2. Messrs. Atkius, Brown and Schacht were absent. From the librarian's report presented to the council it appeared that the library now contains 4,830 books, 60 having been added since the beginning of this year, and nearly 300 in 1876.

Professor Atfield reported 77 entries in the laboratory since the commencement of the session, 48 students being now at work; Professor Bentley had 40 students in his class at present; and Professor Redwood had 32.

A little talk occurred respecting the Benevolent Fund, in connection with the forthcoming dinner. Mr. Hills wanted to make a special appeal with a view to the education of orphans. The president concurring in the idea of presenting this point prominently, Mr. Mackay said he was glad to hear the suggestion, and asked if it was designed to found an orphan asylum, or to get children into existing asylums. The president thought they had better not spend money in bricks and mortar, and Mr. Owen said if they could vote 100*l.* or 120*l.* to a single case, instead of 20*l.* or 30*l.*, as was the case now, they could often secure the election of an orphan.

[*Could the argument against "voting charities" be more concisely presented? According to these remarks—which are perfectly accurate—wealthy patrons can generally BUY the admission of their own protégés into these asylums, to the exclusion of others who have neither money nor friends, and for whom, therefore, the institutions were expressly designed.—Ed. C. & D.]*

Mr. Robbins thought such an advantage might be confined to the orphans of members of the society, but the president did not think such a regulation would be wise, as they particularly wanted to attract subscriptions from outsiders. Mr. Shaw thought they ought to try to raise the invested fund to 20,000*l.* as at present the interest on the sum invested was not sufficient to pay the annuities. The president and Mr. Robbins, however, doubted if subscribers would care to see more money hoarded for the benefit of a future generation.

Mr. Betty presented a petition from some chemists' assistants asking for the loan of the Lecture Theatre for a meeting of June 6. They wanted to form an association for promoting friendly feeling, discussing social, trade or scientific subjects and supporting those principals who are desirous of shortening the hours of labour. Mr. Hampson proposed and Mr. Greenish seconded the loan of the theatre for the purpose; but Mr. Stedford, Mr. Hills, and others thought a tendency towards "coercive trade unionism" was lurking in the last clause of the programme, and consequently the request was refused.

The coroner at Carlisle had written, calling attention to death which had occurred in his district from an overdose of chloral, the jury at the inquest having recommended that the drug should be added to the list of poisons in the Pharmacopoeia Act. The president thought it was time to take some such step, without waiting for more outside pressure. Mr. Shaw thought chloral should be in Part I. of the schedule. The subject was referred to the Law and Parliamentary Committee.

A letter from a member in the Isle of Man pointed out that the young men there had to go to Liverpool to pass their Preliminary examination. The hardship was recognised, and the dignity of being itself a "local centre" was conferred on the island, Mr. W. A. Broarey, of Douglas, being appointed superintendent.

REPORT OF THE COUNCIL.

To be Presented to the Annual General Meeting, May 16.

THE month of May again brings the Council of the Pharmaceutical Society and their constituents together to review the proceedings of the past year, and take counsel on such matters as may present themselves for consideration.

The financial statement usually takes precedence of other matters in the report of the council, not exclusively as a question of income and expenditure, but also, and perhaps

more especially, as indicating the present and prospective strength of the society; the advance of education as tested by examination; and the growth of the class of which the society is the acknowledged representative.

It will be seen that although the number of members is slightly below the return of 1875, the total amount of subscriptions is in excess of that year's, owing to the greater accession of associates and apprentices or students.

The number of candidates for examination in 1876 considerably exceeded that of 1875, *i.e.* Preliminary, 1,054, against 824; Minor, 468, against 285; Major, 101, against 82. The transference of part of the practical work from the Major to the Minor examination has proved beneficial, and the fact of a reduction in the percentage of failures from 50 to 46.3, is evidence that the change has not been prejudicial to the candidates themselves.

It will be remembered that in the last report the council called attention to the fact that the Preliminary examination had been committed to the College of Preceptors. This arrangement has now been in operation long enough to enable the council to judge and speak satisfactorily of its working. The percentage of failures has been even more reduced than in the Minor examination, the examiners' statistics showing only 42.4, against 50 in the previous year; thus clearly the alteration has had no deterring effect in diminishing the number of applicants. This fact is satisfactory alike to those who look anxiously for the time when only educated men will be found exercising the responsible duties of pharmacy, and to those also who have been gloomily foretelling the coming dearth of assistants.

It has frequently been said, and cannot be too often repeated, that chemists taking apprentices have in their hands a great opportunity of advancing the important interests of pharmacy in Great Britain, by insisting on a previous examination and registration of their pupils.

The amount of expenditure from year to year must necessarily vary. The increased number of applicants for examination, the better arrangement of the museum, the publication of a catalogue, and the provision of a separate set of specimens for the use of the lecturers, swell the amount of disbursements.

The North British Branch has been rendered more complete by the appointment of a paid assistant-secretary, entailing, of course, additional cost to the society. This appointment was mentioned in 1876, but it has not hitherto formed an item in the expenditure.

On the other hand, the expense of the journal has been considerably reduced; and the society did not expend as much for law charges as in 1875.

The new regulations announced last year for the distribution of prizes were acted on in October last, and it was gratifying to find, on the testimony of the professors, that the recipients were well worthy of the distinctions awarded, and of the perpetuation of their names in the Calendar of the Society. An addition to these prizes will be made in several future years through the liberality of Mr. Thomas Hanbury, who has presented to the society, as well as to the British Pharmaceutical Conference, thirty copies of Science Papers by his late brother, Daniel Hanbury, and thirty copies of the "Pharmacographia" by the same author in conjunction with Professor Flückiger.

Although it may be matter foreign to the business of the society, the council cannot resist the gratification of pointing out to their fellow members the gift, from the same donor, of the admirable portrait of that distinguished scholar and pharmacist, the late Daniel Hanbury.

The library now contains about 5,000 volumes, and it was found necessary to provide accommodation for additional books which had accumulated subsequently to the extensive alteration in 1873. The number of readers in the library and the applications (both from London and the provinces) for books, furnish satisfactory evidence of the value of this part of the society's operations. A list of books suggested by gentlemen using the library comes monthly before the committee, and great care is taken in the selection of those to be purchased. The legacy bequeathed by the late Daniel Hanbury continues to be applied in the purchase of standard works of exceptional value.

In the museum considerable efforts have been made to augment the collection and to maintain it in perfect condition. Previously specimens were removed from the cases day by day for the use of the lecturers. Although such an application of them was of great value, certain disadvantages arose therefrom, and it was determined to provide as far as possible a separate collection to illustrate the lectures. Again reference must be

made to the kindness of Mr. Thomas Hanbury and the lifelong work of his brother. The valuable collection of materia medica and the herbarium formed by Daniel Hanbury, both containing many historic specimens, have now become the permanent property of the Pharmaceutical Society, and a special apartment has been assigned to them.

At the evening meetings many interesting papers have been read and discussed. The council cannot too urgently invite members and associates, especially the younger ones, to join in these pleasant gatherings. Besides affording opportunities for obtaining and diffusing valuable information, these periodical meetings tend to keep up that feeling of good fellowship and *esprit de corps* which is the very life-blood of a society.

During the past year the School of Pharmacy has been well attended; the classes, although somewhat smaller than those of the previous session, have been marked by diligence and an evident desire on the part of the students to avail themselves of the means offered for improvement. It is gratifying also to see that many of the young men who attend the school in the day, with some others of former sessions, embrace the opportunities offered by the periodical evening meetings of the Students' Association, which are held, by permission of the council, in the house of the society.

No measure affecting the interests of chemists and druggists has been proposed in Parliament since the last meeting of the society.

Many prosecutions for infringement of the Pharmacy Act have been instituted during the past year and successfully carried through. In still more cases the Registrar has compelled offenders to discontinue their illegal practices. A very daring attempt to obtain registration by fraud, which for the moment was successful, occurred at the end of last year. A candidate for the Preliminary employed another person to represent him before the Board of Examiners. The case was tried and the offenders convicted at the Central Criminal Court: a full report appeared in the *Pharmaceutical Journal*. It is mentioned here more particularly to put superintendents of the Preliminary examinations on their guard, and to show the necessity of identifying the candidates.

It will be remembered that some difficulty arose last year respecting the preparation of belladonna and aconite liniments with methylated spirit. The Board of Inland Revenue issued an interdiction against that practice, and it was felt to be the duty of the council to memorialise them on the matter. The memorial being couched in terms to show that the council would in no way encourage or connive at any infringement of the Methylated Spirit Act, or any substitution of methylated for rectified spirit in the composition of medicines for internal use, met with that courteous consideration which has always been accorded to the council by the authorities at Somerset House, and the previous decision of the Board was reversed.

The operations of the Benevolent Fund during the past year have been satisfactory. Four fresh annuitants were elected in October last, making 24 annuitants up to Christmas, representing an annual charge on the fund of 720*l.* The casual grants to applicants amounted to 470*l.* It is gratifying to observe that the annual subscriptions have exceeded those of 1875 by about 200*l.*, and the number of subscribers has increased from 1,706 to 2,347, showing a more widely spread interest in this important fund.

Before the official publication of this report, although after its preparation, an important gathering in aid of the Benevolent Fund will have been held. The council decided on announcing a dinner at the present time for various reasons.

It is now ten years since the last dinner, which proved eminently successful, was held for a similar purpose. Ten years is the period allotted to firms as the limit of their privilege of voting in consideration of their respective donations, and many will doubtless be glad to renew that privilege as well as to extend aid in so good a cause. Another very important point is that the annuities, which must never be jeopardised, now exceed considerably the interest on invested capital, and although the council would not for a moment anticipate any diminution of the annual subscriptions, they cannot as prudent guardians of the fund omit putting this question prominently forward.

By a new regulation, which will come into operation in 1878, a provision is made to give votes, in proportion to his previous subscriptions or donations, to any person who may at some future time be under the necessity of seeking aid from the Benevolent Fund and be placed on the list of candidates for an annuity.

FINANCIAL STATEMENT FROM JANUARY 1 TO DECEMBER 31, 1876.

Receipts.		£ s. d.	£ s. d.
Balance in Treasurer's hands, January 1, 1876 ..		476	7 2
Balance in Secretary's hands, January 1, 1876 ..		84	13 10
Balance in Mr. Mackay's hands, January 1, 1876 ..		30	14 1
Life Members' Fund Interest		89	1 3
Government Securities—Interest		445	19 2
Subscriptions:—			
1,811 Members, Pharmaceutical Chemists ..	1,901	11	0
836 " Chemists and Druggists	877	16	0
706 Associates in Business	741	6	0
814 Associates not in Business	427	7	0
934 Apprentices	499	7	0
36 Entrance Fees	75	12	0
	4,514	19	0
Fines upon restoration to the society	52	8	3
			4,666 7 3
Registration Fees:			
62 Pharmaceutical Chemists, Major Examination	325	10	0
232 Chemists and Druggists, Minor Examination	730	16	0
27 Chemists and Druggists, Modified Examination	28	7	0
642 Apprentices, Preliminary Examination ..	1,348	4	0
24 Registration Fees as Chemists and Druggists	126	0	0
8 Fees for Restoration to the Register ..	8	8	0
			2,567 5 0
Examination Fees:—			
746 Preliminary, Modified, and Major Examination Fees	783	6	0
273 Preliminary Examination Fees	573	6	0
			1,356 12 0
Balance due to Mr. Mackay, December 31, 1876 ..			13 0 2
			£9,638 19 11

Expenditure.		£ s. d.	£ s. d.
Advertisements			1 8 0
Apparatus			3 16 0
Annuity—Dr. Redwood		100	0 0
Carriage of Books to or from Library, and other parcels ..			13 16 4
Certificates of Death			19 17 10
Conversations	238	19	3
Pharmaceutical Meetings	20	5	9
			259 5 0
Examiners, Boards of—			
	England and Wales,	Scotland.	
Fees to Examiners	686	14 0	136 10 0
Fees to Superintendents—Prelim. Examination	216	6 0	25 4 0
Hire of rooms for Prelim. Examination	64	18 5	4 13 0
Travelling Expenses	74	3 0	6 18 4
Refreshments for Examiners	64	19 8	3 7 4
Apparatus, Drugs, Chemicals, &c., for Examinations and charges in connection therewith	38	4 3	12 0 9
	188	13 5	
	1,145	5 4	
Fees to the College of Preceptors			1,333 18 9
Deputation from Scotland			110 15 6
			24 19 0
			1,469 13 3
Fixtures and Fittings			159 15 7
Furniture			38 16 0
Gratuity:—Assistant Secretary			2 0 0
House Expenses			231 7 6
Journal			629 14 10
Laboratory:—			
Professor of Practical Chemistry—Endowment of Chair		100	0 0
Prize Medals, &c.		6	18 6
			166 18 6
Law and Professional Charges			185 7 3
Lectures:—			
Professor of Chemistry and Pharmacy—Endowment of Chair		100	0 0
Professor of Botany and Materia Medica—Endowment of Chair		100	0 0
Subscription to Royal Botanic Gardens		21	0 0
Prize Medals, &c.		9	6 0
			230 6 0
Local Secretaries' Expenses			3 4 9
Library:—Purchase of Books, &c.		63	3 1
Librarian's Salary		190	0 0
			253 3 1
Museum:—Purchase of Books			20 2 0
Ornator's Salary		150	0 0
Temporary Assistant's Salary		41	16 8
Specimens, Bottles and Sundries		102	6 10
Catalogue of Materia Medica Specimens		106	12 8
			400 16 2

	£ s. d.	£ s. d.
Branch of the Society in Scotland:—		
Assistant Secretary in Scotland—Salary ..	120	0 0
Fixtures and Fittings	29	11 0
Furniture	16	17 2
Rent, Taxes, and Insurance	92	2 1
Printing and Stationery	13	17 6
Stamps and Telegrams	8	9 10
Sundry items	53	12 5
		334 10 0
Postage		254 0 5
Provincial Education—Grants to Provincial Associations		40 0 0
Register		30 17 3
Repairs and Alterations		273 12 2
Rent, Taxes, and Insurance		489 19 0
Returned Subscriptions to Associates		22 1 0
Stationery, Engraving, Printing, and Office Expenses		323 10 10
Salaries:—		
Secretary and Registrar	450	0 0
Assistant Secretary	250	0 0
Clerks and Servants	800	11 6
		1,500 11 6
Cost of Materials supplied to Bell scholars—		
session 1876-7		10 0
Diploma Cases		8 8 0
Council Medal Dies		37 10 0
Sundries		11 3 9
Travelling Expenses—Country Members of Council		
		240 14 4
Refreshments for Council		34 1 3
Balance in Treasurer's hands, December 31, 1876 ..		1,703 6 1
Balance in Secretary's hands, December 31, 1876 ..		57 6 3
		£9,638 19 11

The Chemists' and Druggists' Trade Association.
SCOTTISH BRANCH.

A SPECIAL MEETING of the Scotch members of this association was held in the Hall of the Bible Society, St. Andrew's Square, Edinburgh, on April 25. There was a fair attendance of chemists from different parts of the country, and a large number of apologies had been received from gentlemen interested in the association, but who were unable to be present.

Mr. George Blanchard, of Messrs. Raimés, Blanchard & Co., was called to the chair. After a few opening remarks he called upon Mr. James M. Fairlie, convener of the committee on the Scotch scheme of the association, who made a statement explaining the condition of the association as regards Scotland. The membership was somewhat over 180, and the donations and subscriptions received since July last amounted to about 85l. Little effort had been made in Scotland to obtain members as yet, the engagements connected with the conference meetings in autumn last having prevented an energetic canvass being made in the chief districts, but he had no doubt that if the scheme which had been planned was properly wrought, that number might be easily doubled, if not tripled, within the next six months. He (Mr. Fairlie) had been in communication with most of the leading pharmacists in the country, and, with the exception of a few of the older pharmaceutical chemists, the great bulk of the trade was in favour of the association as a defence body against the unjust attacks of analysts, Excise officers, and unfriendly medical men, and he believed that a personal solicitation was all that was required to obtain their hearty support, financially and otherwise. The plan drawn up by the committee, and adopted by the executive, he thought was well adapted to bring about such results. The country had been divided into 10 districts: in each of these districts there would be a local secretary in constant communication between the members in his district and head-quarters. It was also expected that once a year at least a meeting of the trade would be held in the principal town in each district, when the members of the general committee would be elected, and other business interesting the trade at the time considered. In this way local jealousies would be broken down, and a better understanding as regards business come to. From the correspondence he had had from all parts of the country he knew that some such step was earnestly desired, but the question arose who was to move in the matter. The elder men say the juniors should take it up, and the young men say the seniors should, with the result that nobody did anything; but the general committee to be appointed that day would be the moving spirit in all such matters, and he

believed the result of that day's proceedings would be of lasting benefit to the chemists and druggists. If each performed his share of duty, with such an association as that now formed there was little to fear from such attacks as had been made upon many chemists in England. If the present laws were insufficient, then, as a powerful, united and determined body, the Legislature would scarcely deprive us of those just rights which had been established by use and wont.

On the motion of Mr. Borthwick, Selkirk, seconded by Mr. Laird, Dundee, the report was received and adopted.

The appointment of the committee was then proceeded with, and after a list of names submitted by members from the various districts was gone carefully over, it was moved by Mr. Nisbit, Portobello, and seconded by Mr. James Anderson, Musselburgh, that the following list be appointed:—District of Kinross, Clackmanuan, and Fife Shires, Mr. David Storer, Kirkcaldy; Edinburgh, Haddington, and Linlithgow Shires, Messrs. George Blanchard, James Mackenzie, and Mr. H. Laird, all of Edinburgh; Berwick, Peebles, Roxburgh, and Selkirk Shires, Mr. J. G. Alexander, of Galashiels; Dumfries, Kirkcudbright, and Wigton Shires, Mr. William Allan, Dumfries; Lanark and Western Counties, Messrs. Davison, Fairlie, and Kinninmont, of Glasgow, Macnought, Greenock, and David Murdoch, Falkirk; Perthshire, Mr. Peter Stracey, Perth; Forfarshire, Messrs. Charles Kerr and W. H. Laird, Dundee; Aberdeen and Kincardine Shires, Messrs. D. M. Mackay and A. Strachan; Banff, Elgin, and Nairn Shires, Mr. Robertson, Elgin; Inverness, and Northern Counties, including the Western and Northern Islands, Mr. David MacRitchie, Inverness.

The following nominations were then made:—President, Mr. Thomas Davison, of Glasgow; vice-president, Mr. William Mackenzie, Edinburgh; and hon. secretary, Mr. J. M. Fairlie. It was moved by Mr. Mackenzie, and seconded by Mr. Fairlie, and agreed to after some discussion, "That the arrangements for district trade meetings be remitted to the committee, with powers," and Messrs. Mackenzie, Laird, Fairlie, and others were appointed a deputation to attend the annual meeting of the association, to be held in London on May 15.

After a few remarks by several of those present with regard to different matters affecting the trade interests, a hearty vote of thanks to the chairman brought the proceedings to a close.

FINANCIAL STATEMENT OF THE CHEMISTS' AND DRUGGISTS' ASSOCIATION FROM ITS FOUNDATION TO APRIL 30, 1877.

RECEIPTS.		£ s. d.	£ s. d.
2,850 Annual Subscriptions at 5/-		720 0 0	
Donations		1,028 16 6	
Less—Outstanding Subscriptions and Donations		87 11 0	
			1,661 5 6
			£1,661 5 6
EXPENDITURE.		£ s. d.	£ s. d.
Advertisements		20 3 0	
Canvassing Expenses		36 2 3	
Hire of Rooms for Public Meetings		11 16 6	
Law Costs:—			
Counsel's Fees		21 5 6	
Solicitor's Charges		103 14 2	
Charges and Expenses of Witnesses		201 12 10	
			326 12 6
Office Expenses:—			
Furniture and Fittings		30 16 5	
Gas		2 16 9	
Rates and Taxes		5 6 8	
Rent		14 16 10	
			53 16 8
Postages			135 5 4
Reporting			31 6 6
Salaries:—			
Secretary		116 13 4	
Clerks		8 16 6	
			125 9 10
Stationery and Printing			143 12 0
Sundries			25 13 0
Travelling Expenses:—			
Executive Committee		64 19 5	
Secretary		62 19 10	
			127 19 3
			1,037 16 9
Balance at Bankers		552 9 5	
Do. in Treasurer's hands		70 19 4	
			623 8 9
			£1,661 5 6

Examined and compared with Books and Vouchers, and found correct.

(Signed) LAUNDY, HARRISON, HARRIS & CALNEGOTI, Auditors.
Birmingham, May 5, 1877.

THE SOUTH LONDON SCHOOL OF PHARMACY.

THE sessional prizes were distributed at this institution on April 17. The Rev. J. B. Harris occupied the chair, and Mr. Baxter, the secretary of the school, gave the prizes to the students, none of them knowing previously who had been successful.

Mr. Sandwith received the bronze medal for Senior Chemistry, Mr. Shepherd the medal for Junior Chemistry, and Mr. Jones the bronze medal awarded for Botany; Mr. Story obtained the medal for Materia Medica; and the Pharmacy Medal was won by Mr. Longman, who had been within a few marks of clearing the whole of the medals. Certificates of merit were awarded to Messrs. Worfolk, Longman and Mortlock for Junior Chemistry; in Botany, to Messrs. Longman, Story, Sandwith and Temple; in Materia Medica, to Messrs. Longman, Jones, Cook, Bristed and Worfolk; and Pharmacy, to Messrs. Story, Bristed, Jones, and T. Pryce Jones.

Mr. Ince, in the course of some advice to the class, expressed his conviction, based upon the school examinations of the past few days, that among the students were men to whom the reputation of the establishment could be safely entrusted. He appealed to the students to do what they could to advance the interests of the school, and by their actions in life to honour the place whence they had derived so much advantage. The speaker impressed on the students the necessity of availing themselves of every one of these occasional examinations, as such attendances would greatly obviate the fatal nervousness which seizes on the ordinary student in the society's examining-room.

The chairman also addressed the students, and urged the benefit of examinations. Examinations tended to engender accuracy, quickness, and self-possession; and although some might think a *vivâ voce* a very nasty thing, it was really never as hard as a written examination.

After a few observations from Dr. Muter, whose rising was the signal for a perfect tornado of cheering from his pupils, a cordial vote of thanks was accorded to the rev. chairman, and the proceedings terminated.

LONDON SCHOOL OF HOMŒOPATHY.

A CROWDED meeting of medical men and others interested in the subject has been held to celebrate the opening of the new school bearing the above title, in the board room of the Homœopathic Hospital, Great Ormond Street. The Right Hon. Lord Borthwick occupied the chair. Among those present were Mr. S. Gurney, Mr. J. Ellis, F.R.S., Capt. W. Vaughan Morgan, Mr. J. B. Cramporn, Mr. A. R. Pitt, Mr. F. Rosher, Mr. J. Boodle, Drs. Yeldham, Pope, Drysdale, Drury, Dudgeon, Black, Bradshaw, Mackechnie, Hale, Bayes (hon. sec.), G. Clifton, A. C. Clifton, &c., and a very large number of professional men and students of medicine of both schools. The inaugural address was delivered by Dr. J. Gibbs Blake, M.D. Lond., of Birmingham. It was listened to with marked attention. The lecturer commenced by denying all sectarian and party feeling; he claimed perfect liberty of opinion in all scientific matters, arguing that science cannot be fairly governed by "party." He defined homœopathy to be an attempt, using the words of Hahnemann, "to effect a mild, rapid, and permanent cure," by choosing "in every case of disease a medicine which can in itself produce an effect similar to that sought to be cured." That this plan of treatment necessitated the observing the effect of drugs on the healthy human body. That the totality of symptoms and physical signs are, as far as drug treatment is concerned, equivalent to the disease. That the individual patient must be treated, not an imaginary *materies morbi*, or picture of disease. That the dose of the drug must be small enough not to produce physiological action. That one single medicine (only) must be given at a time. He pointed out how utterly unscientific the mixing of many medicines together in one prescription is, saying, "What should we think of a chemist who wished to test water for the presence of lead if he were to mix together, in varying quantities, solutions of iodide of potassium and sulphuretted hydrogen, and then were to use the compound solu-

tion, in place of the two separately? Yet this is a moderate way of stating the case, as, even now, ten different drugs are often mixed together in one prescription by the physicians of the older school." The lecturer protested against the use of the words homœopathic and infinitesimal as synonymous terms. He gave several reasons for the establishment of a school for teaching special therapeutics founded on the system of Hahnemann, and known for convenience's sake by the name of the School of Homœopathy. First, that it will increase the number of practitioners versed in the knowledge of homœopathy; at present the demand exceeds the supply. Secondly, the promotion of research into the physiological effects of drugs on the healthy human body. The lecturer expressed himself as adverse to experiments made with drugs on the bodies of animals, as he considered them of far less value than those conducted scientifically on the healthy human body, since these last include the subjective as well as the objective symptoms induced. This point is well worth the consideration of the vivisectionists. The lecturer thus summarised his argument on this point:—"Now, there are other lines of investigation which are suggested by the propositions that have been given above in the definition of the word homœopathic. 1. The experiments should be made on the healthy human body. 2. The subjective symptoms should be recorded. 3. The experiments should be unbiased by any maxim. 4. For the explanation of the maxim *similia similibus curantur*, experiments are required." The lecturer proceeded to give illustrations of homœopathic action of drugs, and concluded a very interesting lecture with these words of Whewell ("History of Inductive Science")—"A certain succession of time and of persons is generally necessary to familiarise men with one thought before they can advance to that which is next in order"—using this sentence to point to one reason why the progress towards the acknowledgment of the law of similars, and its outcome in the small dose, has been so slow hitherto. We understand that a fair number of students of medicine have already entered their names as students on the extra-academical lectures to be delivered, in connection with the London School of Homœopathy, by Drs. Richard Hughes and Dyce Brown.

"TRADE IS A LITTLE DULL."

IT has hardly got dull enough yet, though, for some people to make jokes about, as is witnessed by the following little story which is stumping the round of the American commercial press. It appears that in spite of all their genius and perseverance the Yankee "drummers" or commercial travellers, are finding their results continually diminishing.

One of these gentlemen, who had just returned from a trip for Thistle Brothers & Co., of Boston, did not show a very large exhibit of orders to balance the liberal expense account allowed him by the firm, and Mr. Thistle, after looking over the return said—"Mr. Rataplan, I am afraid you do not approach the dealers in the right way; I used to be very successful in this line. Now just suppose me to be Mr. Bigher, of Sellout, Illinois, and show me the way you introduce the house."

Accordingly, Rataplan stepped out of the counting-room and re-entered, hat in hand, inquiring, "Is Mr. Bigher in?"

"That is my name," answered Thistle, urbanely.

"My name is Rataplan, sir; I represent the house of Thistle Brothers & Co., of Boston." Thistle, in his character of Western merchant, here rose, offered the salesman a chair, and expressed his pleasure at seeing him.

"I am stopping with Overcharge, at the Stickom House, and have a fine unbroken lot of samples, which I should like to show you; think we can show you some special advantages, &c." And Rataplan delivered himself of a neat speech in professional style.

"Very well, very well," said Thistle; "I don't see but that you understand the way to get at customers."

"Excuse me, Mr. Thistle," said Rataplan, "I am afraid you do not understand the style of Western merchants just now: suppose you exchange places with me, and we repeat this rehearsal."

"Certainly," said Thistle, and picking up his hat, he stopped out. Returning, he found Rataplan with his chair tipped back, hat cocked fiercely over his right eye, his heels planted on Thistle's polished desk, and a lighted cigar between his teeth.

Thistle looked a little staggered, but nevertheless commenced—"Is Mr. Bigher in?"

"Yes, he is," responded Rataplan, blowing a cloud of pure Connecticut into Thistle's eye; "Who on earth are you?"

"I represent the house of Thistle Brothers & Co.," said the astonished employer, coughing out a quart of smoke from his throat.

"The blazes you do! Are you one of that concern?" "No, sir, I am not," said Thistle.

"Well, it's very lucky for you that you are not, for I've had two drummers to one customer in my store for the last two months, and if I could get hold of one of the stupid fools that send 'em out here at this time I'm blessed if I wouldn't boot him clean out of the town of Sellout."

"That'll do, that'll do, Mr. Rataplan," said Thistle; "I have no doubt you did the best you could for the interest of the house. Trade is a little dull."

MEDICAL DEFENCE AT BIRMINGHAM.

THE *Birmingham Daily Post* of April 21 had a very forcible leader respecting a recent action in that town brought by the Apothecaries' Company against a herbalist in the County Court. "On the merits of the case," said the *Post* "we have nothing to say; the company is no doubt justified in defending the interests of the trade or profession which it represents. But we should like to know by what authority the police are imported into these cases? A Birmingham detective was the chief witness. He went to the herbalist, feigned illness, obtained medicine, and then presented himself as the witness by whom the case was proved. This does not seem to us to be proper work for the police; nor is it quite pleasant to read of the subterfuge and deception by which the detective qualified himself to give evidence. If the charge had been a criminal one, the police might properly have been employed, and possibly the use of artifice to obtain proof of guilt might, under such circumstances, be justified. But this is really a trade union prosecution, under which the Apothecaries' Company seeks to punish somebody who is alleged to have trespassed upon their preserves; and we quite fail to see what business the police have to interfere with the matter at all. The wisdom of such prosecutions is open to question, especially as we understand that they are being directed against druggists who venture to prescribe for a cut finger or a sore throat; but if the Apothecaries' Company thinks the trade interests of its members ought to be defended by such means, then we suggest that the agents of the company itself should go about to collect the necessary evidence."

Replying to this sharp attack, Mr. W. J. Reeves, of Birmingham, who appears to be worthy of something better than his cause, writes to the *Birmingham Post* thus:—

"Sir,—I am the solicitor employed in Birmingham by the Society of Apothecaries; and, therefore, with reluctance, I have to answer certain observations contained in an editorial notice in your issue of this morning. In the first place, you are quite misinformed in "understanding that proceedings are being directed against druggists who venture to prescribe for a cut finger or a sore throat." I am happy to inform you that the law would not enable the society to proceed for a penalty in any such case; and, in any event, there is not the slightest wish existing on the part of the officers of the society to interfere in any way with the business of chemists and druggists." We have ourselves italicised the most remarkable sentences in this letter.

After going through the rest of the leader, Mr. Reeves adds:—

"Permit me, through you, in conclusion, to assure the public that my instructions are positive not to institute any proceedings in a trade union or protective spirit, but solely where necessary on public grounds; and to remind you that the Society of Apothecaries is a public body, charged by Act of Parliament with the performance of public duties of the highest importance to the well-being of the community."

The editor of the *Post* informs Mr. Reeves that his society has actually claimed the power which he, their solicitor in Birmingham, says they do not possess.

A quantity of correspondence followed, most of the writers freely expressing their disgust at the conduct of a little clique of doctors in the town, who, under the pretence of public welfare, were trying on a piece of trade unionism in a particularly disagreeable form. But by far the most disgraceful

exposure of their proceedings was occasioned by the publication of a circular announcing the formation of the "Birmingham and Midland Medical Protection Society," in which it was stated that Mr. Oliver Pemberton had kindly consented to act as president if the proposed association should meet with the general approval of the profession. We conclude this narrative with an extract from the manly and generous reply of Mr. Oliver Pemberton himself. He wrote:—

"Sir,—Your publication in this day's paper of the circular of the so-called Birmingham and Midland Medical Protection Association, in which a most unwarranted use is made of my name, enables me not only to express my opinion of the value of that document, as far as I am concerned, but also to place on record my view of the wisdom and fairness of these prosecutive proceedings generally."

Then, after narrating the steps he had taken in reference to the prosecution of a certain museum of anatomy in the town, Mr. Pemberton continues:—

"The impression that I was willing to give both time and money to endeavour to rectify such an evil as that to which I have alluded induced a highly respectable member of the profession to ask me if I would act as president of a Medical Protection Association. My reply was, 'Give me a list of those who wish this, and show me the objects they have in view, and I will say if I accept the post or no.' This is all that has taken place, and no one was more astonished than myself to receive the circular."

"Sir, I have no sympathy with these petty prosecutions of chemists and herbalists. I emphatically decline to belong to any society that conveys to my mind in its doings and purposes so much that is mean and paltry. I would not interfere with the purchase over the counter of herbs and simple remedies for one moment; I would rather advise members of my own profession to dissociate themselves more and more from competition with these in the sale of drugs; but I have sympathy with the prosecution of obscene quackery, and I would spend both time and money in helping the authorities of this great town to remove from themselves the imputation of sanctioning the continuance of a scandal, repulsive no less to one's feelings of what is right than to what is decent in good government."

THE CHEMICAL SOCIETY.

Thursday, April 19, 1877.

DR. GLADSTONE in the chair.

The following papers were read:—

"On the Estimation of Manganese in Spiegeleisen and of Manganese and Iron in Manganiferous Iron Ores," by E. Ridley. For estimating manganese in spiegeleisen the author recommends the indirect method—i.e., estimating the iron, adding 5 per cent. for impurities, and taking the difference as manganese—for accuracy and rapidity. For the estimation of manganese in its ores the author prefers to separate the iron as basic poracetate with carbonate and acetate of ammonia, and to precipitate the manganese with bromide and ammonia, taking care that the ignited precipitate contains no baryta, zinc or lime. For the determination of the iron, a standard solution of bichromate of potash yields the best results, the iron being reduced with pure sulphite of soda.

"On a Method of Detecting Small Quantities of Bismuth," by M. M. Pattison Muir. The author proposes Schneider's reagent, consisting of a clear solution of 12 grms. of tartaric acid and 4 grms. stannous chloride in caustic potash: 1 part of bismuth in 210,000, if warmed to 60 to 70° C., with this reagent gives a brownish colour.

"On Certain Bismuth Compounds," by M. M. Pattison Muir. This paper gives an account of the properties and reactions of bismuth ferricyanide.

"Notes on Madder Colouring Matters," by E. Schunk and H. Roemer. Munjistin: this substance resembles purpurioxanthin acid in its physical properties. Purpurin: a pure specimen was examined, and its properties given. Alcoholic lead acetate gives with purpurin dissolved in alcohol a precipitate soluble in excess; with alizarin a precipitate insoluble in excess. Triacetyl-purpurin and brompurpurin were prepared and analysed by the authors. By heating pure purpurin in sealed tubes to 300° C. it was found to be partially converted into quinizarin.

Thursday, May 3, 1877.

DR. GLADSTONE in the chair.

The treasurer announced that 1,000*l.* was placed to the credit of the society by the son of the late Fellow, Mr. Lambert. The following papers were read:—

"On Some Points in Gas Analysis," by J. W. Thomas. The author finds that nitric oxide is absorbed by caustic potash and pyrogallic acid, and recommends that a known volume of pure oxygen should be introduced after the absorption of carbonic acid, and any decrease of volume noticed as nitric oxide. He states that an excess of caustic potash should always be present in the alkaline pyrogallate, but that too much of the latter should not be used.

"On the Decomposition of Nitric Oxide by Pyrogallate of Potash," by Dr. Russell and W. Lapraik. The authors state the probable action of the above re-agent is to convert nitric oxide into half its volume of nitrous oxide, but that simultaneously another more obscure re-action takes place, so that 58 to 76 per cent. of the gas is absorbed, instead of 50 per cent.

"Contributions to the History of the Naphthalene Series. No. I. Nitroso- β -Naphthol," by Dr. Stenhouse and Mr. Groves. Nitroso- β -naphthol was obtained by the action of nitrosyl sulphate on β -naphthol, and purified by conversion into a barium compound, &c. It crystallises in brilliant hydrated yellow needles or anhydrous orange-brown plates or prisms. It melts at 109.5° C. By treatment with dilute nitric acid mononitro- β -naphthol is obtained. By acting on the barium compound of nitroso- β -naphthol with hydrogen sulphide a precipitate is formed which, by the action of potassium dichromate, is converted into β -naphthaquinone, melting at 96° C. This substance is interesting as being the first instance of two isomeric quinones derived from the same hydrocarbon.

"On Asbestos Cardboard and its Uses in the Laboratory," by W. N. Hartley. This substance resembles thick cardboard, and is formed principally of asbestos fibres: it can be cut or moulded (by moistening with water) into any shape, and is extremely useful for crucible supports, muffles, &c.

The society adjourned to May 17, when the following papers will be read:—

M. M. P. Muir and S. Suguira, "On a Slight Modification of Hofmann's Vapour Density Apparatus."

J. W. Mallet, "Note on the Fluid contained in a Cavity in Fluorspar."

J. B. Hannay, "Examination of Substances by the Lime Method."

W. Ramsay, "On the Dehydration of Hydrates."

M. M. P. Muir, "On Certain Bismuth Compounds, Part VI."

J. Philippson, "Theory of the Luminous and Non-luminous Flame."



AND

Literary Notes.

Tables of Materia Medica: A Companion to the Materia Medica Museum. By T. Lauder Brunton, M.D., F.R.S., &c., Lecturer on Materia Medica at St. Bartholomew's Hospital. London: Smith, Elder & Co.

THE attempt to teach or to learn any abstruse subject by the aid of classified tables is a flattering fancy, but it must not be too greatly relied upon. Every student imagines that if he could find the science which he wants to master arranged in a tabular form he would be able to go ahead much faster in the acquirement of a knowledge of it. But if he is tempted to use such a classification as a short cut, he will most assuredly miss the goal towards which he runs. He may by chance pass an examination by such aid, but he will not certainly have gained anything in real knowledge beyond the few stray facts which may happen to remain in his memory when the examination is over. A science can only be properly learned by the method which Mr. Stokes, the memory professor, has so well

reduced to a formula, "Observe, reflect, link thought with thought, and think of the impressions."

That tabular arrangements of facts may be used for cramming purposes is not, however, a sufficient argument against them, and Dr. Lander Brunton's recent work is a good illustration of this remark. *Materia Medica* is not a subject which lends itself easily to the arts of the crammer, but as far as it does allow of such a process Dr. Brunton's book has no doubt valuable merits. But it has also merits in another and more legitimate direction. We should recommend it most sincerely as a sort of chart for the guidance of a class in *Materia Medica*. The author has with a good deal of skill and with very patient labour, grouped the various substances of the *Pharmacopœia* into classes suitable for simultaneous study. To state his method as briefly as possible we must say that first of all the substances are divided into the two classes, inorganic and organic. In these the original substance is named first. Thus, for example, sodium chloride, which is found native, is placed first, and the various salts or compounds derived from it follow in as much order as can be obtained. The magnesia division is studied by treating the sulphate first, the carbonate next, and the calcined next. In the first division, after naming the substance, the following classification is given:—Source, preparation, properties, reactions (generic and specific), impurities, source of impurity, tests, action, use, dose. In the organic section the arrangement adopted is as follows:—Source (botanical and geographical), part used, preparation, characters, substances resembling it or adulterations, how known, composition, action, use, dose. It will be obvious that Dr. Brunton's plan proceeds on an intelligent basis, working from the native substance to its more elaborated compounds. The student thus gets a better notion of the whole history of each. By the juxtaposition of any particular impurity, its origin, and the suitable test for it, much is also made clear; and the two columns which show substances similar to that under consideration and the distinguishing points seem to us particularly useful. The author intimates his intention to publish another work soon, treating more elaborately the therapeutic aspects of the *Materia Medica*.

Notes on Assaying. By P. de P. Ricketts. New York. 1876. A very useful manual with the above title has recently issued from the Art Printing Establishment at New York, and it is quite worth the compliment of an English edition. It is designed both for the practical assayer and the more advanced chemical student, and embodies the system of teaching practised in the School of Mines of Columbia College, New York. The work is divided into four sections, treating respectively on apparatus, reagents, analysis by the dry and wet methods, and the chemical and physical analysis of ores and precious stones. An appendix contains compendious instructions with regard to blowpipe analysis. We are rather surprised to notice that in the chapter on apparatus there is no mention of the scorifiers, muffles, furnaces, and crucibles manufactured by the Patent Plumbago Crucible Co., of Battersea, which are now so generally used in the United States, as well as elsewhere, for metallurgical purposes. In this matter Columbia College seems a trifle behind the chief commercial establishments of America.

We have to acknowledge the annual report of the Smithsonian Institution of Washington, U.S., which, with its appendix, always contains a most interesting collection of scientific matter. The contents of this volume are mostly geological and ethnological.

We have received the first number of another trade journal, *The British and Foreign Confectioner*. This journal, it appears, like so many of the rest of us established to meet a decided and long-felt want." It contains some interesting articles on oranges, lemons, limes, and pine apples, as well as other matter more distinctly technical.

The editors of *New Remedies*, a lively and prosperous pharmaceutical publication of New York, and of the *Analyst*, the journal which holds the proud position of representing the Society of Public Analysts at home, have done us the honour of forwarding bound volumes of their last year's publications for our shelves. We appreciate the kindness, and shall in return damage their subsequent issues with our scissors more vigorously than ever.

A NEW EDITION of Herbert's "Metropolitan Handbook," with four maps, and a great deal of useful information about London has been published.

MAY'S "British and Irish Press Guide," which is published annually by F. L. May & Co., of Piccadilly, is the most conveniently arranged and the cheapest newspaper directory in the country. All the journals and magazines published in the United Kingdom are classified in various manners, and their leading characteristics, price, &c., are given. The titles of the chief journals on the Continent are also given. To large advertisers this little guide is invaluable.

TWENTY PARTS of Bentley & Trimen's "Medicinal Plants" have now been issued, making, we believe, about half the complete work. The high character of the illustrations and text is fully maintained as the work progresses. Careful articles on *Erythroxylon Coca* and *Eucalyptus Globulus* in recent numbers indicate the intention of the authors to make their survey of the vegetable kingdom, as far as it yields medicinal plants, as universal as possible; and though the book will be a costly one, we trust it will be so widely distributed in public libraries that most pharmaceutical students will find it accessible.

In their series of "Text-Books of Science," Messrs. Longmans have lately issued a very complete manual on "The Art of Electro-Metallurgy," by G. Gore, LL.D., F.R.S. The early part of this treatise gives a historical sketch of the art, and discusses the scientific foundation of it in a sufficiently lucid manner; but the greater part of the book is occupied with an exposition of electro-metallurgy in its practical aspect, and this is so thoroughly treated that, with this book as a guide and with some intelligence, one might readily attain to a good sound knowledge of electro-metallurgy. The "special technical section" with which Dr. Gore concludes the volume must have considerable value to all those already engaged in the art, and the manual is completed by a list of books and another of patents relating to the subject in hand.

Two very good lectures on the steam engine were given in connection with the Exhibition of Scientific Instruments by Mr. F. J. Bramwell, C.E., F.R.S., and these have just been published in a sixpenny pamphlet by Messrs. Macmillan & Co. The lecturer found some difficulty in discussing the subject comprehensively enough in such limits, but it is just to him to say that a perusal of this little book is sufficient to give a very good notion of the scientific principles on which steam engines are constructed, their varieties, and the history through which the invention has passed. Of course, in reading the lectures one loses the advantages of the models by which Mr. Bramwell was able to illustrate his lectures, but this is to some degree compensated for by the insertion of a few diagrams. For ourselves, however, we think the substance of the lectures was quite worth a little more abundant illustration, and perhaps some slight elaboration, even at the risk of doubling the not very crushing cost. For readers already somewhat familiar with mechanics the treatise is not hard to follow; but the majority will need to exercise some little of that "scientific use of the imagination" for which a special training is required.

We are compelled to postpone notices of several books which have reached us lately.

Provincial Reports.

GLASGOW.

MR. FRAZER ON PHARMACEUTICAL POLITICS.

THE annual meeting of the Glasgow Chemists and Druggists Association was held at Anderson's College on May 7.

Mr. FAIRLIE (honorary secretary) read the annual report, after which Mr. D. FRAZER (president) delivered a valedictory address. After referring to the position of the Association, Mr. Frazer said he proposed to comment on two or three matters which had somewhat exercised the pharmaceutical world of late. He said the first of these is the milk of sulphur question. Every dog has his day, and the dog of the pharmacists during the last few months has certainly been the said milk of sulphur question. For letters, lectures, speeches, and articles in the

Pharmaceutical Journal, and in *THE CHEMIST AND DRUGGIST*, and discussions in the law courts, this has been the burning question of the season. Many men, many minds—and as men, happily, are not automatons—this diversity of opinion is not only natural in itself, but is at once inevitable and right. Where there is life there is animation; where there is death there is only stagnation. In the present case Tom swears by “the genuine old milk of sulphur,” and Dick by the “sulph. precip., P.B.,” while Harry goes in for both. Well, I suppose I had better be out with it—I go in with Dick for the “P.B.” article. Doing this myself, I am quite sure you will not wonder that I think everyone who does not is just as far wrong as they are bound to believe I am.

My reasons are very simply stated. Sulphur is sulphur—it is not sulphur and lime. Sulphur is prescribed by medical men, and the public ask for sulphur, or for milk of sulphur. Unquestionably 99 medical men out of 100 mean the pure article, and just as large a portion, I believe, of the chemically ignorant public mean the same. When they ask for the milk of a thing, be it what it may, surely common sense tells that something better is meant than the article without the prefix itself. The cream that rises upon the surface of new milk does not gather up any foreign substance to it; it is the richest part of the milk. Such, I am quite sure, is the idea the average purchasers of milk of sulphur have when they purchase it, rather than the flower of sulphur. Will any pharmacist tell me that if he frankly told his customer that the milk of sulphur he was selling contained a large percentage of lime, whereas the flower of sulphur was comparatively a pure article, and only a half or a third of the price, he has so low an opinion of the intelligence of his customer as to say he would, after such an honest statement of fact, give a preference to the mixed article? I am told that in some districts in England some druggists sell a hundredweight or more of the milk of sulphur in a month. I am extremely curious to know this. If these druggists could purchase the sulph. precip. for 5*d.* per lb., and have to pay 8*d.* per lb. for the said milk, would they continue to supply the lime article, merely because the public had been, as is alleged, accustomed to it, and found it so much easier to mix? Would they not do, as I had to do some thirty years ago, when introducing pure linseed meal, and genuine brown mustard, and poudrons magnesia instead of the light, instruct the public that the new articles were better than the old? I believe they would, and with the same success as I had with those articles. I confess that it took an immense amount of persuasion to induce the public to substitute the pure articles for the adulterated ones, but I would give them nothing else, and now they come to me from all quarters to get them. Besides, I believe it is all a bugbear about the public insisting upon getting the mixed article. The much-abused public, as a rule, know nothing whatever of the composition of the article sold. And, most delighted am I to record it here, it was brought out in the famous Runcorn trial that out of fifty samples of milk of sulphur examined by the public analyst, forty-five were found by him to be pure!! Surely this thoroughly disposes of the question as to the difficulty of inducing the public to purchase a genuine article.

Another question that has caused some, as I think quite needless, discussion, is the tea, dessert, and table spoon measure one. I have a strong impression that if everybody would be content to attend to their own business, the world would be none the worse, but all the better for it. As to the bearing of this very trite remark on the present case, it is simply this, our business is not to prescribe, but to dispense, and in dispensing, we have properly but to “do as the doctor orders.” He knows quite as well, as we do how much the spoons in domestic use vary, and we are bound to believe him intelligent enough to take this variation into calculation when writing out his prescription. I was very glad to see this view advocated in one of the last letters on this subject that appeared in the *Journal*, but was, I confess, surprised, that so very able, and so experienced a pharmacist as Mr. Proctor, of Newcastle, should have put himself to so much trouble in a matter that, for the life of me, I cannot see pharmacists have anything to do with.

When speaking of prescribing, I wish to say here that I was surprised last year at a discussion that occupied the columns of the *Journal* for some time, viz., as to the dispenser retaining the prescriptions for the patient, and charging for copies of it. I maintain that the prescription is as much the property of the patient, and as little that of the dispenser of it, as are his

spectacles or his household furniture, or anything that is his—his by purchase or by inheritance.

As to prescribing by pharmacists I remain of precisely the same opinion as I was when I referred to the subject in my opening address. As long as we honestly seek to confine ourselves to our legitimate field, and do not encroach upon the proper domain of the medical practitioner by making a trade, if I may so term it, of prescribing, no respectable body of men will interfere with us, and no law will be put in force against us. Regarding the famous Nottingham case, it is true that the actual case selected for trial does appear to bear hard on the pharmacist, but it is, at least, equally true that the party in the particular case tried was regularly in the habit of trespassing—and trespassing very largely—on the domain of medical men of the town, and doing so in a manner to bring great gains for himself.

As for the Trade Association, I will not rediscuss this question. Suffice it to say, I abide absolutely by all I stated on the subject in my opening address. Indeed, I confess all that has happened since has only strengthened my view on the subject. Notably amongst these things that have strengthened me in my views were its defence of the sale of the lime milk of sulphur, and of the prescribing Nottingham pharmacist. I still maintain that in a law-governed country such as ours, the common law of the country is amply sufficient to protect every man in it, in the honest and lawful prosecution of his own legitimate business; and so, if the two chemists involved in the above cases had not transgressed that law, they would have needed no defence society, and no lawyers to defend them, any more than I should have needed this assistance had I not sold wine without a wine licence.

I have only one more general topic to mention: it is as to the mode of sending representatives to the London Council. At this hour the whole country is called upon to elect fourteen councillors to supply that number of vacancies. You in Glasgow are asked to record your votes for men you never saw and never heard of; at least, there are not a few names of whom I have never heard, and whom, to my knowledge, I have never seen. I felt this to be an anomaly the first time I sat at the council-table, when every face but that of Mr. McKay was strange to me, and our vice-president came all the way from Dartford, in the extreme south of England. I said to him then, he could know nothing of us, as I could know as little of him. I then suggested territorial representatives, that the country should be divided into districts, London, of course, getting the lion's share in the representation, each sending a man known to it. Scotland, I suggested, should have two—one for the east and one for the west half, or for the north and south halves, as might be arranged, &c. I broached this subject frequently in private, and would have brought it before the Council by a motion, could I have got any support to warrant me; but failing this, I left the matter over. This is one point in which I agree with the Trade Association territorial representatives, and if they take this topic up as it bears upon the London Council, I, for one, will wish them every success in it.

It only remains that I should thank you most heartily for the kind expression of feeling exhibited towards me, in the unanimous vote of thanks passed in my favour at your last meeting, for what services I have been able to render to you on the London Council during the last six years, and for the very kind expression of regret at my retiring from it at this time.

I assure you I value this expression of feeling greatly, but I confess that it, with similar expressions of regret for the same step conveyed to me by my friends in the council itself, has only greatly deepened my own intense regret at having felt myself shut up, from family reasons, to take the step I did. Your loss you can repair by sending such a man as Mr. Baildon, who, in many respects, is better able to fill the seat I occupied at the council board than I can pretend to be, but my own loss cannot be made up, for, though the friendships made in London, with Londoners and London visitors, will, I believe, remain, the opportunities of exhibiting the ties so made must now be of the rarest.

I think it is right in all frankness here to add that, though the first thoughts of retiring from the council arose in my mind from great disappointment felt at the unanimity with which my views on the Trade Association were condemned at a meeting held for discussing these views, as well as from other representations made to me privately as to my views on the vexed milk of sulphur question, it was not because of these my retirement ultimately turned. All that irritation had passed

...and my intention to raise them from the question of the possible removal of the latter to a place where I would be some distance from the coast would have, says the villagers of ...

I have had only one result from the ... and the ...

REPORT

THE ANNUAL MEETING OF THE SOCIETY OF CHEMISTS AND DRUGGISTS.

The meeting of the Society of Chemists and Druggists was held at the ...

The following were present:—Mr. ... Mr. ...

... were held from ...

A number ...

A ...

A ...

The ...

The ...

REPORT OF THE SOCIETY OF CHEMISTS AND DRUGGISTS.

The ...

The ...

The ...

... giving a ... which was ... and yellow ...

The ...

A ...

On a Simple Method of Detecting the Presence of Alcohol in Essential Oils.

This was based on the application of ...

The ...

Table with 2 columns: Substance and Result. Includes entries for Alcohol, Ether, Glycerine, etc.

Mr. ...

The ...

...

MEMORIAL ASSOCIATION.

The ...

THE CHEMISTS' ASSOCIATION.

The ...

The ...

decrease of seven associates since the last report was presented. A full account of the proceedings of the association during the past 18 months was given in the report.

The adoption of the report was moved by Mr. Richard Reynolds, seconded by Mr. E. Brown, and carried.

The following gentlemen were then, by ballot, elected to serve on the committee and act as auditors during the ensuing year, viz.:—President, Mr. Peter Jefferson; vice-president, Mr. Richard Pick; secretary, Mr. Samuel Taylor. Committee: Messrs. Joseph Bentley, John Bowman, Edward Brown, John Hellowell, T. B. Stead, and Edwin Yewdall. Auditors: Messrs. F. Reynolds and James Abbott.

A vote of thanks to the old officers for the manner in which they had conducted the affairs of the association during the past 18 months was passed on the motion of Mr. Richard Reynolds, seconded by Mr. Abbott.

LIVERPOOL.

CHEMISTS' ASSOCIATION.

THE fourteenth and concluding general meeting of the twenty-eighth session was held at the Royal Institution, Colquitt Street, on April 26, the President, Mr. Alfred H. Mason, F.C.S., in the chair.

Before the general business the President read an

OBITUARY NOTICE OF THE LATE MARTIN MURPHY, F.C.S.

He was originally intended for the priesthood by his parents, but circumstances occurred at the time when he should have gone to college to study theology which prevented this being carried out. In 1845 his eldest brother induced him to leave Ireland and join him as a shop assistant in Liverpool, preparatory to entering into commercial business. Martin went, however, to Warrington, and accepted a temporary engagement at Muspratt's works (then the only chemical works in this part of the country). There he met Dr. Sheridan Muspratt. The doctor had just come home from Germany flushed with high chemical honours, and was about starting a college of chemistry in Liverpool. Finding in Martin Murphy more than ordinary intelligence and a great desire for learning, Dr. Muspratt induced him to persuade his parents to allow him to be bound for seven years, in return for which he was to receive a thorough knowledge of the science and art of chemistry. This was granted, and he soon became one of the doctor's favorite pupils, and it was prophesied that he would prove a chemist of no mean repute. He had a deep love for the study, and whether he could make it answer his necessities in life as well as any other occupation or no, would not induce him to withdraw for one moment his attention from the study. From 1853 to the demise of Professor Muspratt, the responsibilities of the College of Chemistry devolved entirely upon Martin Murphy. Not only did he teach, but he performed all the analyses, and such was Muspratt's confidence in his accuracy and ability that he ceased to examine any of his results, but adopted them as his own. In 1854-5, Muspratt's "Dictionary of Arts and Science" was published, and I am told, said Mr. Mason, that three-fourths of the work was actually written by Martin Murphy, or revised and corrected by him. He told me that for two years he worked sixteen hours out of the twenty-four, and such was his interest in the work that he rarely felt exhausted; in fact, the large and varied field of scientific inquiry which the writing of that book brought before him so absorbed his mind that he seemed almost to live in the region of chemistry for the time. Nothing else was thought of; hence in a great measure resulted the very general knowledge which he possessed in all branches of industry.

After the demise of Dr. Muspratt, Murphy was offered the superintendence of large chemical works at a very high salary. For a time the lure seemed to influence him, but only for a time. He soon dismissed the thought, and resolved to keep to chemistry as a profession, even though it should prove less remunerative. The College of Chemistry he wished to make a place where students might obtain a thorough chemical knowledge in reality, and not only in name. One great characteristic he had was a thoroughness in his studies, and a fixed determination to adhere only to facts, and not to accept a statement on the *ipse dixit* of any person. He strongly advocated the necessity that in chemistry there should be no guessing, or taking things for granted; expediency had no toleration with him. He never felt so much annoyed as when a money-grubber attempted to prostrate the science to his own interest. Never did he attach his name to a certificate upon the correctness of

which he was not prepared to stake his reputation. He had a gront objection to sensationalism; wild theories he left to those who had a glib tongue to propound them, and laughed at their own discomfiture rather than grieved. He always thought it possible to reconcile the most profound scientific investigations with Holy Writ, and he did not admire those who, with only a little knowledge, professed to fathom what was, and always will be, beyond their conception.

Had he lived he purposed writing a work on chemistry, which he said would prove a handbook, not only to manufacturers, but also to consumers and others interested in the arts.

He had just completed the erection of extensive chemical works, at Old Swann, for the manufacture of oxide of cobalt, for potters' use, by a method he had devised, and he was sanguine as to very profitable results.

It has pleased Providence to take him away from us. May our loss be his gain! I had been so constantly brought in communication with him, in connection with the affairs of this association, and learnt to appreciate his words of encouragement, that I was led to place a high estimate upon his opinion. I feel that we have lost one of the brightest ornaments of our association, and I could not let this opportunity pass without bearing testimony to his abilities, the display of which we were so glad to avail ourselves of, and which he so willingly gave.

He died at his residence, Old Swann, on the 23rd inst., after a painful illness, at the age of forty-eight years, and was buried yesterday, several of the leading chemists in the town and neighbourhood being present to pay a last tribute of respect to his memory. He leaves a widow and two daughters, and your council has requested me to convey a vote of condolence with them in their bereavement.

On the motion of Mr. A. H. Samuel it was unanimously decided to embody the sympathy of the meeting in the vote of the council.

VALEDICTORY ADDRESS.

The President then delivered his valedictory address. He commenced by enumerating the papers read and communications made before the association during the session, and gave details as to the attendance. Allusion was also made to the *conversazione*, which was described as the most successful in the annals of the association. The President then continued as follows:—

During the last few months considerable agitation has been raised in the chemical journals respecting the status of the Chemical Society of London, and a few of the Fellows thought it expedient to blackball some candidates for fellowships who did not come up to their requirements. This action was strongly deprecated at the annual meeting of Fellows, held a few weeks ago. My own impression is that it has had a beneficial effect out of London. The ultimate result of the discussion is that the Chemical Society has now decided to elect as Associates (at a reduced fee) gentlemen who are interested in the science. It has considerably raised the fees and standard of qualification of Fellows, and also made more stringent the obligation which Fellows have to sign, and this is the full extent of its powers. But some of the leading scientific chemists have decided to form a new body, to be styled "The Institute of Professional Chemists of Great Britain and Ireland." The objects of the organisation are to be the general advancement of chemistry in its application to the arts, manufactures, agriculture, and public health. Secondly, to ensure that persons adopting the profession of consulting chemists, or acting as analytical chemists for reward, are qualified by study and training for the proper and competent discharge of the duties they undertake.

The vexatious proceedings which have been taken under what, for the sake of brevity, I will call the "Adulteration Act," by incompetent analysts, will, I am sure, make such an announcement as the foregoing welcome.

Alluding to the recent letter in the *Analyst* by Mr. Dupré, who said that "during the last five years he had carefully examined 165 samples of drugs and medicines purchased at the better class of chemist's shops in all parts of the metropolis, and had found no less than 71 adulterated, some to a very considerable extent," Mr. Mason said, if Mr. Dupré had reported convictious instead of the wholesale statement he has made, we might be more easily disposed to credit it, but we may fairly assume from the average results of prosecutions for the sale of impure drugs that when the majority of cases are thoroughly investigated the analyst is at fault. When a druggist has painted upon his shop or printed upon his labels "pure drugs and chemicals" or "genuine drugs and chemicals," he admits that sophisticated

articles are sold by some others, and he leads the public to infer the same thing, and there is not a doubt that in unfair competition dealers are tempted by the greed of gain to vend sophisticated goods; hence the value of the Adulteration Act. Any dealer jealous for his reputation does not now supply an article which does not exactly coincide with its label; but it is a matter for serious consideration whether the pharmacist may feel safe in trusting to what should be his very backbone and standard, the British Pharmacopœia. Some preparations may be made strictly in accordance with the Pharmacopœia and found deficient on analysis, and there are instances when sufficiency of description and methods for detecting sophistication are wanting. It is to be regretted that when necessary to print another Pharmacopœia these deficiencies were not supplied.

Take a recent prosecution as an example. If a druggist is to be prosecuted for selling balsam capivi as adulterated when it answers the Pharmacopœia requirements, and at the instance of an analyst who admits in evidence that he has never studied pharmacy, when is he safe? If the value of capivi depends upon certain proportions of resin and oil (as natural capivi imported from different countries varies in these proportions) the Pharmacopœia should state what the proportions are to be, and provision could be made accordingly, as in the case of scammony.

The fraud practised by the natives of countries from whence crude drugs are imported is sometimes marvellous. Take opium, for instance; it is not uncommon to find rather formidable traces of lead (without chemical analysis), in the form of bullets. Shot and leather are often found in musk pods. Some admixtures are attended with danger to life, as in the instance to which Professor Bentley called attention a short time ago, of valerian root being adulterated with white hellebore. Of course the educated pharmacist can easily detect this. And here we have evidence of the necessity for the dealer to show proof of such knowledge by being qualified at Bloomsbury Square.

We have a public analyst in Liverpool, and we may congratulate ourselves that he is a gentleman of high scientific attainments and blessed with common sense, not disposed to institute such vexatious proceedings as milk of sulphur prosecutions. It is fair to assume that he does not neglect his duties, and that some of our members may have sold articles for his investigation; the absence of prosecution is evidence, therefore, that the chemists and druggists of this town are a most respectable body of men, fully alive to the responsibilities of their calling.

Since the failure of the Arctic expedition several newspaper correspondents and the editors of the medical journals have discussed the therapeutic value of lime juice. I am inclined to believe that any evidence from seafaring men disparaging the virtues of lime juice is entirely due to unsound quality, impurity, and sophistication. It is rather an important matter to us in a large seaport town that this should be investigated. A captain trading to the West Indies told me that the lime juice supplied to ships in Liverpool was obnoxious to the sailors, and they refused to drink it, but when he got his lime juice where it was produced the result was contrariwise. Lime juice supplied to ships is provided under bond to save duty upon the alcohol employed to fortify it, and apparently under Government control: there is no doubt that large quantities of deteriorated lime juice mixed with lemon juice and fortified with very crude spirit is taken on board. If genuine racked lime juice fortified with pure spirit was always supplied, I think we should never hear complaints of its non-beneficial effects.

The issue of the "Year-Book of Pharmacy" is an event of some importance, and we may congratulate our honorary member, Mr. Siebold, upon its value. The able article which prefaces the work shows that the editorial duties are in the hands of a learned man.

After some comments on the classes and a reference to the late William Gossage, F.C.S., of Widnes, as an example of another self-made man, Mr. Mason finished his address by saying:—

Gentlemen,—I do not say farewell this evening: if we are spared to meet in September I shall have to present our official report to you, but I cannot conclude without expressing my deep obligation to all of you for your kind assistance in enabling me to present this review of our proceedings and your ready forbearance with my shortcomings. I wish particularly to acknowledge the cheerful and invaluable assistance I have experienced from our honorary secretary, Mr. Williams. The

minutes he has recorded and the published reports of our proceedings are quite sufficient evidence of the ability and zeal with which he has discharged the duties he has undertaken, and I desire to express my personal obligations.

A lengthy discussion followed, in which several members took part, and on the motion of Mr. Shaw, seconded by Mr. Redford, an unanimous vote of thanks was accorded to the President for the address.

Mr. Woodcock (vice-president), in eulogistic terms, nominated Mr. T. Fell Abraham as president elect for 1877-8, and the ballot being taken, the President declared Mr. T. Fell Abraham unanimously elected president for next session. In the absence of his son, Mr. John Abraham thanked the meeting for the honour conferred, and promised to convey the wishes of the association to him.

REGISTERED CHEMISTS' ASSOCIATION OF LIVERPOOL.

The second annual meeting of the Registered Chemists' Association of Liverpool was held at the Royal Institution, Colquitt Street, on Thursday, April 5, at 3 o'clock, P.M., when the report of the committee, and the treasurer's financial statement, duly audited by two members, were read and adopted. Mr. Abraham was unanimously re-elected president, and Messrs. Woodcock, Shaw, Fletcher, Blackburn, Mackinlay, Stewart, N. Joseph, Wm. Evans, Wm. Wright were elected members of committee in place of those who retired by seniority, and to fill up two vacancies which had occurred.

At a meeting of the committee, on the 17th inst., Mr. Redford was unanimously re-elected vice-president, Mr. Shaw treasurer, and Mr. Benjamin Dickens, honorary secretary in place of Mr. Wharrie, who retired from the office. It was resolved that a second and re-arranged edition of the "Retail and Dispensing Price Book" should be at once got up.

SHEFFIELD.

The annual meeting of the Pharmaceutical and Chemical Association of Sheffield was held at the rooms, Tudor Street, March 7, 1877.

The following elections and arrangements were made:—

President: Mr. W. V. Radley. *Vice-Presidents:* Mr. W. Ward, F.C.S., Mr. F. Hudson. *Council:* Mr. G. A. Cubley, Mr. H. E. Ibbitt, Mr. G. Ellinor, Mr. W. Jervis, Mr. H. W. Maleham, Mr. J. P. Hewitt, Mr. G. Carr. *Treasurer:* Mr. W. V. Radley. *Hon. Sec.:* Mr. J. Turner.

The Treasurer gave his statement of accounts for the past year, which showed that although there had been a deficiency in the amount of subscriptions paid in, still there was a small sum in hand; whereupon it was carried that the Treasurer's account as read be passed, which showed a balance in hand of 6*l.* 6*s.* 9*d.*

The best thanks of the meeting was accorded to Mr. W. Jervis, for his service as president during the past year, to which he replied, expressing regret that so little had been done during his year of office, but it was mainly owing to the apathy of the members.

The following resolutions were passed at a meeting of the above association, April 27:—

1. That this meeting heartily approves of the defensive action taken by the Chemists' Trade Association in reference to the prosecutions for the sale of milk of sulphur, and trusts that this vexatious question will now be set at rest.
2. That this meeting believing in the time immemorial right and privilege of chemists to prescribe across the counter in simple ailments, not indeed pretending, or by their customers understood, to be medical men in a professional sense, but merely acting as private persons, clergymen, and others, are daily doing to the great advantage of the public, particularly the very poor, hereby pledges itself to support the Trade Association in the steps it is taking in the Law Courts in defence of this ancient right, and calls upon every member of the trade to contribute liberally hitherto pecuniary aid to the association at this crisis of affairs.
3. That this meeting impressed with the very important results, and wide spread interests pending, and involved in the question of counter prescribing, respectfully, but earnestly appeals to the council of the Pharmaceutical Society to aid the trade in every possible manner in fighting this great battle.

4. That in order to secure a fair and satisfactory representation of the chemists and druggists of Great Britain at the Council Board of the Pharmaceutical Society, it is desirable that gentlemen should be selected from various parts of the country. This meeting, therefore, views with satisfaction the nomination of Mr. G. A. Cutley, in whose ability and usefulness it feels the greatest confidence, and whose election it feels most anxious to support.
5. That the secretary forward a copy of the third resolution to E. Bremridge, Esq., asking him to lay it before the next meeting of council.

Scientific Notes from Foreign Sources.

PROFESSIONAL CONFIDENCE.*

DR. BERRUT, of Paris, has lately been sentenced to pay a fine of 100 francs for refusing to be sworn as a witness regarding a case of abortion. The doctor endeavoured to defend his refusal by the oath of secrecy required by the French law (Article 378 of the Penal Code) to be taken by all physicians, surgeons, pharmacutists, accoucheurs, &c., by which these persons are required to observe strict secrecy respecting any private information which they may have acquired in virtue of their profession, under a penalty of from one to six months' imprisonment, together with a fine of from 100 to 500 francs. From this the writer (M. Crinon) concludes that, even supposing a physician should take an oath before a court of justice engaging himself to reveal "the whole truth" respecting any affair with which he had become acquainted in the practice of his profession, still his *prior* oath, exacted by Article 378 of the Penal Code, would justify him in refusing to answer any particular questions which might involve a breach of professional confidence. Under these circumstances, M. Crinon thinks a physician ought also to be permitted to decline being sworn as a witness at all in a case where he felt unable to give any evidence whatever without violating his previous engagement, and hopes that the Supreme Court, if appealed to, will not sustain the sentence of the "Cour d'Assises" which condemned Dr. Berrut. To us it appears more desirable that some modification of the 378th article of the Penal Code should be introduced (if that be really so stringent as M. Crinon supposes), making it clearly appear that while the obligations of professional secrecy deserve all respect in ordinary cases, they can never be deemed of sufficient weight to be suffered to interfere with the administration of justice.

PROPAGATION OF HEAT.†

M. OLIVIER has found that under certain circumstances heat is not propagated by direct proximity. His experiment was thus conducted:—A bar of steel of certain dimensions being selected, the operator places one hand over the centre of the bar and the other over one of the extremities. The other extremity is then heated by rapid friction with energy. At the end of a few minutes the *further* extremity of the bar becomes so hot as to compel the operator to remove his hand, while his other hand, which had been placed over the middle of the bar (and, consequently, nearer to the extremity warmed by friction), perceives no heat whatever.

A NEW ANÆSTHETIC.‡

RABUTEAU recommends hydrochromic ether for this purpose. He describes its action as a mean between those of chloroform, ether, and bromoform, free from all irritation or causticity, and therefore exerting no injurious influence either on the skin or the air passages. He also states that, however it may be introduced into the system, it is entirely eliminated by respiration.

PROCESS FOR THE EXTRACTION OF SUGAR.§

To a saccharine solution add a saturated solution of chloride of barium in the proportion of 64 parts of the anhydrous salt to 100 parts of crystallisable sugar, and boil the mixture. To

this add a solution of caustic soda, of the same density as the chloride of barium solution (40° B.), in the proportion of 35 parts of caustic soda to 100 of sugar, or 55 of the former to 100 of anhydrous chloride of barium. A sucrate of baryta is thus precipitated, which may be decomposed by carbonic acid, and the sugar dissolved out. By the subsequent addition of hydrochloric acid, the carbonate of baryta is restored to its original form of chloride, and may be again used as at first.

CELLULOID.*

This substance, though prepared by Mr. Hyatt, an American, as long ago as 1869, has only lately been turned to much practical account. It is prepared by subjecting ordinary paper to the action of a mixture of nitric and sulphuric acids; washing this till all trace of acid disappears; drying the product, powdering the same, and mixing it with camphor; drying and repeatedly pressing this mixture, at last applying heat, when the celluloid appears in the form of transparent, elastic rods or slabs. As it is hard and not easily broken at ordinary temperatures, susceptible of high polish, and capable of being cut into extremely thin plates, yet elastic, and, at high temperatures, malleable, plastic, and even fusible, it has become extensively used in the manufacture of the rims of eye-glasses, cheap ornaments, cigar cases, &c., and, when coloured, as a means of imitating ebony, lapis lazuli and malachite. It has also been employed in making elastic belts, trusses, &c., and some of its applications in dentistry were patented as early as the year of its discovery.

NEW APPARATUS FOR THE ESTIMATION OF FIRE-DAMP.†

M. J. COQUILLON has invented a novel apparatus for this purpose, of which he gives us the principle, but not the details. Having observed that hydrogen and all hydrocarbons in the gaseous state may be completely burned in the presence of oxygen by the introduction of a heated wire of palladium, and that all gaseous oxygen compounds are similarly affected in the presence of hydrogen, he substitutes this agent for the electric spark in the eudiometer. It has the further advantage of causing but little explosion. He remarks that the present method of detecting fire-damp by means of the safety-lamp, which indicates the presence of the gas by a blue halo surrounding the flame only when the fire-damp exists in the proportion of 6 to 8 per cent. in the atmosphere, is very unsatisfactory; because, when present in such large quantities, the risk of an explosion is imminent.

INVESTIGATIONS ON THE GASTRIC JUICE.‡

M. RICHEL has been enabled to institute a series of experiments on this subject under singularly favourable circumstances. A young man came before him on whom, in consequence of incurable stricture of the œsophagus, gastrostomy had been performed, and a permanent gastric fistula been established. The œsophageal stricture being complete, swallowing was, of course, impossible, so M. Richet was enabled to procure the gastric juice without any admixture of saliva. He finds the average proportion of hydrochloric acid to amount to .17 per cent., the proportion being increased by wine and alcohol, but diminished by sugar. The ingestion of acids or alkalies made little difference, as the normal proportion was soon restored. The acidity of the gastric juice is increased during the process of digestion, especially towards its close. The sensations of hunger and thirst are in no way associated either with gastric acidity, or with the state of the stomach as to emptiness or repletion. Ordinary kinds of food occupy three to four hours in digestion; but milk takes only half this time, while all traces of water or alcohol disappear from the stomach in about three-quarters of an hour. M. Richet has availed himself of this favourable opportunity for the purpose of investigating the nature of the free acid in the stomach, and hopes shortly to publish his researches on this subject.

* *Répertoire de Pharmacie*, April 25, 1877, pp. 247, 248.

† *Répertoire de Pharmacie*, April 26, 1877, p. 253.

‡ *Zeitschrift des allg. österr. Apotheker Vereines*, April 20, 1877, p. 181.

§ *Moniteur des Produits Chimiques*, April 23, 1877, p. 57.

* *Moniteur des Produits Chimiques*, April 23, 1877, p. 58.

† *Répertoire de Pharmacie*, March 25, 1877, pp. 168, 169.

‡ *Répertoire de Pharmacie*, March 25, 1877 pp. 166-9.

II. BUIGNET PRIZE.*

MADAME BUIGNET has instituted an annual prize of the value of 1,500 francs for the best essay on the application of natural philosophy and chemistry to medical science. The prize is to be adjudged by the French Academy of Medicine, and in the event of no essay possessing sufficient merit to deserve the prize in any particular year the amount will be carried forward to the next year, when two prizes will be awarded.

PREPARATION OF PURE NITROGEN.†

AN easy method of preparing this gas in a perfectly pure state is by means of heating together concentrated solutions of chloride of ammonium and nitrate of soda in the proportion of their equivalents (*i.e.* 53.5 : 69).

SUPERSTITION IN THE EAST.‡

A CURIOUS superstition still prevails in some parts of the East as to the mode in which certain plants which are regarded by the natives as panaceas (*e.g.* mandragora) ought to be gathered. They must not be plucked by the hand of man; so one end of a cord is made fast to the plant and the other end to the tail of a dog, so that when the animal moves from the spot he tears away the plant from the ground.

RHÆADIN.§

SOME time ago Selmi succeeded in preparing a "new substance" from the juice of the capsules of *Papaver rhæas*, which he believed to contain an alkaloid analogous to morphia. The more recent researches of Hesse have demonstrated that rhæadin is the principal alkaloid ingredient. This agrees with morphia in being sparingly soluble in ether, but does not give the characteristic reaction with permuriate of iron. The juice also contains meconic acid. After evaporation, rhæadin forms about 2.1 per cent. of the solid residue.

ALKALOIDS OF THE CALABAR BEAN.¶

DR. HARNACK, of Strasburg, has demonstrated the existence of a second alkaloid in the Calabar bean, to which he has given the name calabarin. It is easily distinguished from physostigmin, the alkaloid to which the characteristic physiological reactions of the drug, such as contraction of the pupil, are attributable. The latter is soluble in ether, and gives with potassium-iodide of mercury a precipitate soluble in alcohol. Calabarin is insoluble in ether, and its precipitate with the double salt of mercury is insoluble in alcohol. Its physiological action is also different, as it gives rise to tetanus. Much of the conflicting character of the results of experiments with this drug is doubtless to be ascribed to the fact of the preparations in general use containing these two ingredients in varying proportions.

ROTATORY POWER OF ETHEREAL OILS.¶¶

IN an extremely interesting article on this subject, Herr F. A. Flückiger gives it as his decided opinion that the extent and direction of the rotatory influence of these bodies on the polarised ray can afford no satisfactory proof of the genuineness of any particular ethereal oil. He even goes so far as to assert that, to the practical pharmacist, this kind of investigation is unworthy of attention in such cases, however interesting the subject may be in itself. Many of these volatile oils, he remarks, are not simple oils, but consist of a mixture of oils in by no means constant proportions. As some of these constituent oils rotate to the right and others to the left, their proportion being inconstant, it necessarily follows that two different specimens of the same oil may affect the polarised ray in a very

different manner. Some ethereal oils have no action of this kind at all, and an adulterated specimen of one of these will, of course, at once betray its impurity if it shall be found to exert any such action; but this is the whole extent to which this mode of investigation is here applicable. The writer calls in question the common opinion that the taste and smell of plants are invariably due to these oils, remarking that some volatile oils—for example, that of *Nigella sativa*—are almost inodorous. To some of the so-called "volatile" oils, he adds, the epithet "volatile" is not appropriate, since he has found not a few of them incapable of complete distillation.

FILTERING PAPERS.

THE *Pharmaceutische Centralhalle* for March 1, 1877, pp. 65, 66, contains a few remarks upon the various kinds of filtering paper, by A. Gawalowski, of Prague, the result of three years' personal trial. He coincides with the opinion of Mohr and Fresenius, that the preference generally accorded to J. H. Munktell's paper (the so-called Swedish paper) over that prepared by some German firms is unwarranted. The former, indeed, yields a smaller percentage of ash, and also (sheets of equal size and different varieties being taken) a less actual weight of ash. Thus, the percentage in J. H. Munktell's paper is only .20, against 1.00 in the "ordinary" filters of Alvis Kreidal, of Prague, and 3.30 in the "ordinary" filters of Schleicher & Schill, of Düren, while the actual weight of the ash after calcination is represented in these three cases by 0.0006 grm., 0.003 grm., and 0.010 grm. respectively. When, however, the sheets are dried at 100° C. he finds that the "chemically pure" of Schleicher & Schill, of Düren, become lighter than those of Munktell, the former weighing 0.281 gr., and the latter 0.291. He further remarks that the term "chemically pure" is a misnomer, traces of iron being present in all the varieties he examined. These were more abundant in Munktell's filters than in the "chemically pure" of Schleicher & Schill. In the "ordinary" filters of Schleicher & Schill, however, he met with larger traces of iron, while, as we saw above, the ash amounted to no less than 3.30 per cent.

METHODS OF ADMINISTERING SALICYLIC ACID.

WE quote from the *Pharm. Centralhalle* of March 8, 1877, convenient formulæ for the preparation of a saturated solution of salicylic acid. The proportion of salicylic acid to carbonate and bicarbonate of soda in a saturated solution being 1:1.04 and 1:0.65 respectively, an effervescent mixture may be thus prepared:—

	Grms.
Acidi salicylici	8
Syrupi aurantii corticis.. .. .	30
Aq. destill.	207

Transfer these into a flask, and add

Natri bicarbonici.. .. .	5
--------------------------	---

Cork the flask immediately, and keep in a cold place till solution is effected. Dose: One to two tablespoonfuls every hour or two hours.

Or an effervescent mixture of a very durable character may be thus prepared:—

	Grms.
Acidi salicylici	5
Natri bicarbonici puri.. .. .	10
Aq. destill.	6.0 ad 650

Transfer these into a flask, and add

Acid. sulph. dil.	22
---------------------------	----

Cork immediately, and lay aside for an hour, shaking the vessel from time to time. Dose: A wineglassful occasionally. (For diabetes, &c.)

Or a simple mixture may be thus prepared:—

	Grms.
Acidi salicylici	8
Aq. destill.	184

Transfer into a flask, and add

Natri carbonici crystall.	8.5
-----------------------------------	-----

Cork immediately, and keep in a cold place until solution be effected.

* *Répertoire de Pharmacie*, March 25, 1877, pp. 191, 192.

† *Monde Pharmaceutique*, March 20, 1877.

‡ *Pharm. Zeitung*, March 28, 1877.

§ *Zeitschrift des allg. österr. Apotheker Vereines*, April 1, 1877.

¶ *Pharm. Zeitung*, March 31, 1877.

¶¶ *Archiv. der Pharm.*, March, 1877, pp. 194–207.

AMMONIACAL SALTS AND TRIMETHYLAMIN.*

In an interesting paper, Professor Husemann calls special attention to the poisonous nature of certain drugs, some of them in very common use, in which this characteristic is apt to be forgotten. He selects the above as examples, and relates a number of experiments directed to the investigation of the local and remote effects of these substances. With much probability, he attributes the ignorance or disregard of the toxic properties of sal-ammoniac, for example, to its having been long daily employed in various forms in the treatment of a vast number of diseases, until familiarity with the drug had produced insensibility as to its dangers. He further adds that the toxic dose of most compounds of ammonia is, in the case of man, larger than the analogy of the experiments on the lower animals would have led us to expect. In these latter, at any rate, sal-ammoniac is of equal toxic strength with bromide of potassium. In the case of trimethylamin, although this was suggested as a panacea for rheumatism by the Russian physician Avenarius nearly twenty years ago, the offensive taste and smell of the drug retarded its adoption in most countries for a long time, so that until the thesis of Lagrange at Strasburg in 1870 again called attention to its value in the treatment of rheumatic articular diseases, its properties of any kind were but little studied. The poisonous character of sal-ammoniac, though too much overlooked in more recent years, was pointed out as early as 1678 by Courten, who clearly indicated its convulsive action among the remote symptoms which Professor Husemann is here chiefly considering. This is also mentioned by Van Hasselt, yet, strangely enough, in standard works on the subject no instance is recorded in which this symptom is mentioned in the case of human beings. The writer offers two explanations of this. He suggests that, when taken by the stomach, the affinity of ammoniacal salts for the walls and contents of that organ may result in the formation of new compounds incapable of absorption, or, at least, of producing remote toxic symptoms; or that, in poisoning cases, such large doses were taken as to produce almost immediate paralysis, the convulsive stage being so short as to escape detection. More recently (1868) Crichton Browne relates a case of suicidal poisoning by sal-ammoniac in which both tetanic and cerebral symptoms are enumerated. Professor Husemann thinks that the degree of toxic power in ammonia compounds is in direct proportion to the amount of contained ammonia, except in such cases as that of sulphide of ammonium, which, when swallowed, sets free a poisonous gas, or in those compounds in which the other constituent possesses virulent poisonous properties, as the arseniate. He admits, however, that modifications in this respect are produced by various concomitant circumstances, such as the greater causticity of some compounds, and so forth.

After interest had been again excited in trimethylamin by Lagrange's thesis in 1870, various experiments were tried with it at the Hôtel Dieu and Hôpital des Enfants, and in 1874 Peltier recommended it for acute rheumatism, for which disease it was originally suggested by its discoverer. The results of the experiments of Martineau, however, were not very favourable; in fact, he denied its activity altogether in the prescribed doses. This is attributed by Professor Husemann to the various preparations of the drug being of very unequal strength, and to its volatility being such as to occasion some loss of strength every time the phial in which it is contained is uncorked. In England it attracted the favourable notice of W. H. Spencer, but in Germany the rising fame of salicylic acid caused trimethylamin to be comparatively neglected. Its toxic action resembles that of ammonia and its salts, but is much weaker. It has distinct convulsive power. It is, in part at least, eliminated by the breath, which Professor Husemann thinks to be very uncertain in the case of ammonia. He suggests that the latter may, in this respect, resemble alcohol and some other substances; which, when taken in moderate doses, are entirely consumed in the system, although, in excessive doses, part is eliminated unchanged by the breath or otherwise.

A NEW OXIDE OF SULPHUR.†

SOME time ago Buchholz prepared a blue substance by the distillation of a mixture of sulphur and fuming sulphuric acid. R. Weber has analysed this body, and gives it the empirical

formula S_2O_{11} , naming it sulphur-sesquioxide. It is a very unstable compound, depositing sulphur in the presence of damp air, and still sooner in water; while on the application of heat, and even at ordinary temperatures, it is decomposed into sulphur and sulphuric acid.

LOCAL APPLICATION OF CROTON OIL.*

M. LIMOUSIN has succeeded in preparing croton oil pencils, by means of which the application of croton oil to the surface can be more accurately localised than when the oil is used in its natural state. Two parts of croton oil are added to one of cocoa butter and one of white wax, melted over the water bath; when the mixture begins to cool it is poured into cylindrical moulds, in which it soon solidifies. Although the pencil only contains 50 per cent. of oil, still, owing to the avoidance of all loss through volatilisation, the revulsive action of the drug is found to be even more powerful in this form than in its natural condition, and it has been successfully employed with the view of obtaining this action by Dr. Jules Simon at the Hôpital des Enfants Malades. Dr. Lailler has used these pencils in the treatment of tinea tonsurans. The pencils seem to retain their properties at any rate for several months.

A WEST END PHARMACY.—Messrs. Cooper & Co., of the Gloucester Road, Brompton, have lately had their pharmacy remodelled; and as there are some special points of novelty, especially in regard to the dispensing department, a few descriptive notes may be of interest. On opening the inner folding glass doors of the lobby an electric bell informs the assistant that a customer has entered. Opposite the door, and facing the proprietor's desk (which is surrounded with plate glass instead of the usual wood fittings), is placed a physician's writing desk, provided with pen, ink, black leather folding blotting-pad, containing prescription paper, and on either side such books of reference as "The Court Guide," "Medical Directory," "Post Office London Directory," &c. On the serving counter is arranged a row of bent-glass show cases, which have a novel feature attached to them. On opening the bent-glass top of each case a tray the size of the case is liberated by a spring: this serves to place the goods on whilst the customer is choosing the article. This is a most convenient and useful arrangement. The dispensing counter has been manufactured from a design suggested by Mr. Cooper. It is planned for six assistants, three on each side. The top is about two feet in depth, giving ample room. Opposite the assistants are arranged, of course, the chemicals, extracts, and preparations required for dispensing. The great point of novelty in this counter is that each assistant has scales, measures, mortars, knives and scissors, pill machine, powder folder, pill coating utensils, cork drawer, cork presser, evaporating dishes, all arranged within reach without moving from his position. The pill machine pulls out like a drawer ready for use, with a recess for the cutter by its side. On the same principle a powder folder slides out, both being fixed in their places ready for use, without moving on to the counter. The same with the cork presser, which pulls out from its recess by the side of the cork drawer. Beneath are arranged drawers of proper dimensions to hold the articles likely to be required in the dispensing of prescriptions. There are also cupboards behind the assistants. At the end of each counter is the dispensing desk, under which are the label drawers, recesses for ledgers and prescription books, &c. By the side of the counter speaking tubes are fixed, communicating with the laboratory. A small lift is also placed handy to the dispensing counter, for bringing up anything which may be required from the warehouse below, and for sending down empties; and last, though not least, at the extreme end of the counter a small tank or reservoir is arranged, with two taps, always supplied, one with hot and the other with cold water. This, though a part of the dispensing counter, is entirely out of observation, yet no screen of any description is placed between the dispensing and the serving counters, and all the assistants may be seen at work by the customers in the shop. The whole of the work has been executed with artistic skill and taste by Messrs. George Treble & Son.

* *Archiv. der Pharm.*, March, 1877, pp. 214-234.† *Archiv. der Pharm.*, March, 1877, p. 249.* *Répertoire de Pharmacie*, March 10, 1877, p. 129.



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

OFFICE—Colonial Buildings, 44a Cannon Street, London.

RENDALL'S THEOBROMINE,

OR
CONCENTRATED COCOA,

BEING a first-class article, and nicely got up, commands a good sale by all Chemists who bring it under the notice of their customers.

In 1s., 2s., 3s. 9d., and 7s. 6d. tins, through the Wholesale Houses, or direct from the Proprietor,

J. M. RENDALL,

28 QUEEN STREET, EXETER.

Chief Wholesale Agents—

SANGER & SONS, 150 OXFORD STREET, W.

"LEA & PERRINS'" SAUCE, THE "WORCESTERSHIRE."



In consequence of Spurious Imitations of LEA & PERRINS' SAUCE, which are calculated to deceive the Public, LEA & PERRINS have adopted a NEW LABEL, bearing their Signature, thus—

Lea Perrins



Which will be placed on every bottle of WORCESTERSHIRE SAUCE after this date, and without which none is genuine. Sold Wholesale by the Proprietors, Worcester; Cross & Blackwell, London; and Export Oilmen generally. Retail, by dealers in Sauces throughout the World.

November, 1874.

PURE FLOUR OF EGYPTIAN LENTILS,

In Bulk or Canisters.

Essex Flour and Grain Co.,
LIVERPOOL ROAD, LONDON, N.

IMPORTANT TO CHEMISTS, SODA WATER MANUFACTURERS, AND OTHERS.

Removal of Lead from Water.

THE SILICATED CARBON FILTER

entirely removes Lead from Water, thus meeting the complaints that arise from time to time as to the presence of Lead in Aërated Waters.

For confirmation of this assertion, see the opinions of such authorities as Dr. BARTLETT, Professor WANKLYN, and others, at page 74, December, 1876.

REDUCTION IN PRICES.

GENERAL MINERAL WATERS DEPÔT,
27 MARGARET STREET, REGENT STREET,
LONDON.

PURE CRUSHED LINSEED.

PETER MUMFORD & SON'S PURE CRUSHED LINSEED.

BEST QUALITY. NO OIL EXTRACTED.

Ground so as to retain the natural colour of the seed without being heated.

22s. per cwt. Special Quotations for Larger Quantities.

REPORTS AND ANALYSES ON APPLICATION, POST FREE.

NEWCASTLE GRANARY AND STEAM MILLS, FARRINGDON ROAD, LONDON.

RECTIFIED SPIRITS OF WINE.

First Quality, British Spirit only.

56° over proof, 21s. 6d. per Gallon; net, 21s. 6d. 60° over proof, 22s. per Gallon; net, 22s.

Sherry for Medicated Wines, 7s. 6d. per Gallon. Marsala for Medicated Wines, 9s. per Gallon.

HENRY BRETT & CO., Brandy Distillers, Old
Furnival's Distillery, Holborn, London.

HOMŒOPATHIC MEDICINES.

E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital,
Manufacturing Homœopathic Chemists.

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

For Particulars apply at 59 Moorgate Street, E.C.

FOR PARTICULARS OF

THE

ANALYSED TEA ASSOCIATION,

And Extracts from "Lancet,"

See Page 49.

THE PHARMACEUTICAL YEAR.

THE history of the past year, as far as the Pharmaceutical councillors have had the making of it, seems to us more creditable to their discretion than to their valour. We cannot say that in this respect the retiring council differs much from any of its recent predecessors, but we certainly do hope to live long enough to see at least one council which will set fire to something. Since the Pharmacy Act was passed the trade has been fair prey for anybody—analysts, Irishmen, Civil servants, grocers, Government, apothecaries—all the world, in fact. We do not by any means hold the council responsible for all the catastrophes which have overtaken us, but we do believe seriously and earnestly that they might have used their position, their power and their influence, to better advantage than they have done. We believe that with more vigour they might long ere this have checked the co-operative stores in their open defiance of the Pharmacy Act. We believe they could have proved their copyright in the title of "Pharmaceutical Chemist" within the British Empire; and we believe they might and ought to have shown the medical profession that the whole trade was united in the resolution to defend to the last ditch its prescriptive and natural right to sell and recommend

drugs freely, so long as no false pretence was assumed. We have no prejudice against the council, no interest to gain by making these animadversions: we try to realise the delicacy of their position, as acting for the public as well as for the trade; but we do think that "mene, mene, tekel, upharsin" is a just verdict on their conduct of pharmaceutical affairs since 1868.

The council's report for 1876 is before us, and demands a few remarks. Its most distinguishing feature is its brevity. It occupies about half the space of previous reports, but most certainly this advantage has not been arrived at by any process of condensation. On the contrary, it impresses the reader with a conviction that its composition has been paid for at per line. For example, we are told that the classes in the School of Pharmacy "have been marked by diligence and an evident desire on the part of the students to avail themselves of the means offered for improvement." In other words, they have been marked by diligence and—diligence. There are plenty of other instances of periphrasis. The authors of the report have evidently had hard work to make it turn a single page by the mere record of the work effected by the council, and their resort to the insertion of small homilies, such as the paragraphs advocating the registration of students previously to apprenticeship, and attendance at the evening meetings, is therefore perhaps excusable.

Another characteristic of the report is the cheerful, almost jovial, key in which it is pitched—a tone which we venture to remark is not justified by the circumstances of pharmacy at the present moment. The ingenuity with which the writers extract "satisfaction" and "gratification" from facts which would strike more ordinary observers as adverse would be worthy of Mark Tapley himself. The number of "members" continues to decline; but the council consoles itself by noting that the subscriptions of associates and apprentices more than balance this diminution. A large increase has occurred of those who entered the trade in 1876: "this fact is satisfactory"—an assertion which may be questioned, at least in a commercial sense, by those already in. The percentage of apprentices who pass the Preliminary Examination under the College of Preceptors is $7\frac{1}{2}$ per cent. higher than under the old system. This fact is also regarded as satisfactory, as it is supposed to prove that a year has improved the education of our youth by $7\frac{1}{2}$ per cent. It seems to us quite as probable that the Preliminary Examination is now $7\frac{1}{2}$ per cent. easier than it was. The number of students in the society's school has diminished, and this in face of the large increase of successful candidates at the examinations. But the council finds its balm in the diligence already quoted. The prosecution of Mr. Colegrove and the removal of the prohibition of methylated spirit in the manufacture of certain liniments seem to us the only subjects which the council can legitimately boast about.

We might comment on the omissions which are "conspicuous" in the report. We might, for example, remark on the absence of any allusion to the troubled question of counter prescribing. That the council has done nothing in this matter is perhaps sufficient reason for not referring to it; but that justification is precisely the cause of complaint. The formation of the Trade Association, we should have supposed, would have been as worthy of mention, if not as "gratifying," as the incorporation of a Students' Association, which has the honour of half a paragraph. The Bloomsbury council has had an official introduction to the council of the Birmingham society, and consequently the omission of any notice of its formation or proceedings seems to indicate that the former body is still determined to regard the association as a rival rather than as an auxiliary.

In 1876 the society spent 200*l.* less in law charges than in 1875, and the financial result of the year is a net profit of more than 1,100*l.* These figures are not, we think, quite so gratifying—to employ the council's pet adjective—as they would be in a

private account. So long as the Pharmacy Act is systematically infringed by co-operative stores in large towns, and by grocers and oilmen in small towns, the law charges of the society which alone has authority to prosecute ought to be heavy; and we fear the items of 185*l.* for law charges, and 238*l.* for a *conversazione*, represent too accurately the tendency of the council as at present constituted.

If the ostrich with her head in the sand be the model of true statesmanship, if to avoid contact with an enemy be the ablest attainment of generalship, if to keep the vessel in port be a sign of skilful seamanship, then the Pharmaceutical Council has abundant claim to all the satisfaction and gratification which it so freely bestows upon itself.



Editorial Notes

THE CHEMISTS' AND DRUGGISTS' TRADE ASSOCIATION — ANNUAL REPORT.

THE Trade Association has just issued its first report, bringing the record of its proceedings down to April 30. The report gives a concise narrative of the work accomplished since last July. The victory in the milk of sulphur case is one very tangible result of a great deal of energy. The report, however, very justly remarks that a matter of far greater moment is now under attention—the question of counter prescribing—and though the association closes its year with over 600*l.* in hand, it must be remembered that it has commenced a campaign at every step of which money must be expended freely. All the chemists and druggists in Great Britain are more or less seriously interested in the contest; and yet we regret to know that still more than half of them are supinely looking on while the minority provides funds to defend rights common to all. We hope the meeting in London announced for this day (the 15th) will be a spirited one, and will give the association renewed impetus to carry on the work it has so well begun.

A CRUCIAL EXPERIMENT.

THE *New York Tribune* tells a strange story of the suicide of a young chemist named George C. Wheeler, living at Dundee, Canada. He was a hard student, 22 years old, who rarely went into society, but lived by himself, working in a small laboratory by day and watching the stars by night through a small telescope. About six months ago he told his friends that he had made a chemical discovery that would carry his renown to the ends of the earth. The hallucination which took possession of him was that he had succeeded in making a preparation which, when scattered on a dead person, would restore life. Neither the arguments nor jeers of his friends changed this belief. He resolved to kill himself, in order to have the efficacy of his resurrection powder tested. In a letter which he wrote on March 3 he says:—"My physical atomic state, after the ordeal, I desire shall be taken in charge by Professor McLouth, of the State Normal School, who, taking a portion of my 'creative, all-changeful material assistance,' will scatter a few particles over the dissectary remains, and then place them in the receptacle of my 'galvanic, magnetic-electrical power,' when the elements will resolve themselves into a new combination, and I will appear a living evidence of the truth of this new discovery." A large bottle, containing a thin fluid, labelled

"creative, all-changeable material assistant," was found beside the letter.

The maniac had constructed for his death a sort of guillotine, which could be set in motion and would work by itself for about ten minutes. That portion of his experiment was only too frightfully successful.

ANALYTICAL AMIABILITY.

The public analysts, as far as they are represented by the *Analyst*, seem disposed to turn the cheek to the smiter with the most infinite Christian grace. Last month Mr. Bell and the staff of the Somerset House Laboratory generally were favoured with some of their condescending patronage; in the May number of the journal in question the editors stretch out arms of love even towards our correspondent, Mr. R. M. Holborn. They eagerly assure us, too, that they are not responsible for the statements which Mr. Dupré is pleased to call analyses; while the milk of sulphur decision they are wise enough to regard as a special blessing to analysts above all others, inasmuch as they are now "set free from another *questio vexata*." In another editorial remark occurs this observation, "When we commence to vituperate traders as strongly as the trade journals expend their spleen upon us, it will be time for them to speak." Poor persecuted analysts! You wonderfully remind us of the man who, having killed his parents, implored the jury to take pity on a poor orphan!

A MYSTERIOUS EXPLOSION.

If any provincial reader will kindly turn to our legal report he will find there a narrative disclosing the method in which medicines are, or at any rate have been, sent out in the West End of London, which will probably fail to fully convince him of the advantages enjoyed by the inhabitants of the metropolis in regard to pharmaceutical facilities. Captain Smart, described by his counsel as a well-known author and novelist, lives under the same roof as Major Furlong. The Major had ordered some medicine from Messrs. Rouch & Co., in the Strand. As far as we can comprehend, Messrs. Rouch seem to have done up the medicine in one parcel, and written the address on another, the latter also including the prescription and the proper instructions. Entrusting the whole to a certain "boy," whose interesting characteristics it is not difficult to picture to oneself, they started the three, the boy and the two parcels, on their various adventures. The parcel with the prescription, the proper instructions, and the address seems to have detached itself from the group, and only returned the next morning, when the boy conscientiously delivered it. It was then more ornamental than useful. By what strange chance the "boy" and the other parcel arrived at the correct house is not explained. It was on the morning of April 9 when he and the landlady of the house in question were introduced. The boy probably had his mind engaged on some bold pirate's or romantic heroine's difficulties, and was therefore unable to say whether his precious burden was destined for the Major or the Captain. The landlady was consequently left to the exercise of her own intelligence in the matter. This led her astray. Perhaps she had noticed that the Captain had been off his feed for a day or two, or perhaps she liked the Captain better than the Major: anyway, she placed the small torpedo on that gentleman's table. Endowed with a far higher degree of reason than parcels are usually credited with, that trencherous, innocent-looking little monster conceived a diabolical scheme. It waited patiently on the table from the morning till nearly 11 o'clock at night. Towards that hour the door opened and Capt. Smart entered. Fearlessly, as became a gentleman of his profession, he marched up to the table, as coolly as he would march up to the cannon's mouth, and looked straight at that ferocious parcel for the space of one moment. This important fact we

have on his own evidence. Whether the parcel quailed under his eye, or haughtily returned the gaze, will now never be known; for an instant later the catastrophe occurred which hurried it into eternity. The Captain had turned from the table and had just sat down when with a violent explosion the parcel disappeared. The table and table-cloth *appeared* to be burning—it does not seem clear whether they actually were burning—and some other damage was also done. There was surely nothing unreasonable in Captain Smart's sending to Messrs. Rouch & Co. to ask for an explanation; indeed, an explanation would be interesting even now in elucidation of a scientific mystery, for an analytical chemist deposed in the Court that the mixture consisted of *aqua regia*, an article which he described as "stronger than nitric acid and more destructive than vitriol." The innocent public is left to infer from the report that it is also a substance which is subject to explosions unless kept in an upright position. Mr. Rouch declined to explain all the secrets of that Mephistophelian parcel; but, instead, we blush to write it, he indulged in a pun. He thought the request was an attempt to extort money, and he said he was as "Smart" as the Captain. Most people will agree that *4l. 12s. 6d.* was a moderate price to pay for the perpetration of that wretched joke, though those of us who are not lawyers are still at a loss to know exactly the Act of Parliament under which the fine was imposed.

PROPRIETARY MEDICINES IN FRANCE.

Two French specialities, the Pastilles Paterson and the Vin de Bellini, the property of Madame Veuve Fayard, Lyons, were recently sold by auction, and were bought by M. Dehaut, Faubourg St. Denis, Paris, for 335,000 francs (13,400*l.*). A well-known patent medicine dealer in Paris, M. Hugot, of the Rue Vieille du Temple, bid as high as 330,000 francs, and after the sale, it is said, he offered Mr. Dehaut 5,000 francs for his purchase, but the latter preferred to hold, and has since announced new conditions to the trade, less favourable in regard to discount.

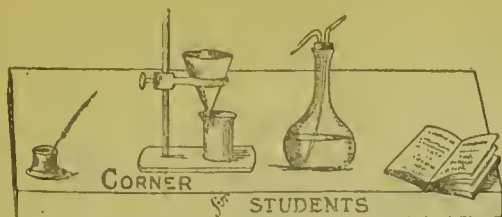
BLOWPIPE APPARATUS.

A PRIZE of 10*l.*, which has been placed at the disposition of the Council by Col. A. A. Croll, is offered by the Society of Arts, with the society's silver medal, for the best set of blowpipe apparatus which shall be sold retail for one guinea. The apparatus must, at least, contain blowpipe, blowpipe lamp or candle, spirit lamp, charcoal or charcoal pastilles and holder, platinum wire, glass tubes closed at one end (matrasses), open glass tubes, platinum-tipped forceps, magnet, hammer and anvil, and four reagents, viz., borax, microcosmic salt, carbonate of soda, and nitrate of cobalt. These instruments and reagents, together with any others which may be thought desirable, must be packed in a box. It must be understood that the above list of apparatus, &c., is only intended to include such as are absolutely indispensable, and it is expected that the set will contain additional instruments and reagents, the selection of which is left to the competitors.

Special attention should be paid to the following points:—

1. Solidity of construction.
2. Compactness and portability.
3. Facilities for packing and unpacking.
4. Number of useful instruments and reagents in addition to those mentioned.

The society does not engage to give the prize unless some apparatus appears to show sufficient merit, and some advance on what is now obtainable for a guinea. All apparatus for competition must be sent to the society's house on or before August 1, 1877. The successful competitor must guarantee that a proper supply of the apparatus shall always be on hand for sale in England.



CONDUCTED BY RICHARD J. MOSS, F.C.S.

THE subject of the next exercise in qualitative analysis will be one of the chemical compounds of the Pharmacopœia. It is to be submitted to a systematic qualitative analysis, the name of the substance is to be determined, and a report made as to its purity.

Students who wish to compete should send us their names and addresses before the 20th inst. On the 25th the samples of the substance will be forwarded.

Students' papers will be received up to June 15.

ANSWERS.

The substance distributed for analysis in March consisted of a mixture of potassium and ammonium alums in equal parts. It contained slight traces of iron (trid), calcium, and chlorine. This mixture was intended as an exercise in the detection of the alkalies, as we had observed that many of our correspondents were decidedly weak on this point. No less than nine students out of twenty-three failed to detect potassium in the mixture. This is very bad; public analysts could scarcely have been worse. The failure in detecting potassium is due in each case to the neglect of one or two simple precautions to which we shall briefly direct the attention of our correspondents. The spectroscope affords the easiest and most certain means of detecting potassium, but, unfortunately, as few students have a suitable instrument at their disposal, we must pass it by without any further notice. As is well known, potassium and its salts impart a peculiar violet colour to the Bunsen flame: this colour is easily recognised when there are no other flame-colouring substances present, but such a substance as sodium, or any of its salts—even in small quantity—will entirely obscure the violet potassium coloration. Under these circumstances a piece of blue glass may be employed for the detection of potassium. A piece of glass quite opaque to sodium light should be selected, so that a Bunsen flame coloured by sodium is not distinguishable from the uncoloured flame when seen through the glass. With a little practice the student will find that by means of this simple appliance he can detect the colour produced by potassium in the presence of considerable quantities of sodium. It is absolutely necessary, however, to go through a series of experiments with mixtures of known composition before attempting to analyse substances of unknown composition.

In testing for potassium by the wet way, one important precaution must always be observed, no matter what re-agent be employed—the solution under examination must not be dilute. There is no use whatever in adding platonic chloride, tartaric acid, or sodium tartrate to a dilute solution with the view of precipitating potassium. The student will naturally ask, how is he to know that the solution is not too dilute? The answer is, by having it concentrated. When the filtrate from ammonium carbonate, or the liquid which has failed to give a precipitate with this re-agent, and from which magnesium if present has been separated, is evaporated to dryness and ignited to expel ammonium salts, the student must first judge whether the residue is accidental (from unavoidable impurities in reagents) or is due to alkalies in the substance under examination. The flame test is then applied: it will not perceptibly diminish the residue, as a minute speck on a well ignited platinum wire is all that is required. The next thing to be done is to dissolve the residue in the smallest possible quantity of water: if one drop suffices the solution may be made too dilute by adding a second drop. A small quantity of platonic chloride is then added: if the solution to be tested amounts only to a drop or two it might be placed on a watch glass. The platonic chloride solution may then be added by moistening the end of a glass rod with it and touching the rod to the liquid in the watch glass. If there is very little potassium in the liquid the crystalline precipitate will not appear

until after some time. These instructions will not aid the student unless he become familiar with the precautions by practising with mixtures of known composition.

PRIZES.

The First Prize for the best analysis has been awarded to H. J. JACKSON, Bawtry.

The Second Prize has been awarded to PHILIP PRINCEP, 1 Trevor Terrace, Knightsbridge, S.W.

Marks awarded for Analyses.

H. J. Jackson (1st prize)	..	..	..	..	..	95
P. Princep (2nd prize)	..	..	..	..	..	92
Wash Bottle	..	..	..	..	..	90
Dolomite	..	..	..	..	..	85
C. J. B.	..	..	..	..	..	82
W. Furlong	..	..	..	..	..	80
Blowpipe	..	..	..	..	..	80
Delta	..	..	..	..	..	80
W. H. B.	..	..	..	..	..	75
Hæm Picnm	..	..	..	..	..	50
T. R. . .	..	..	..	..	..	50
Potass Iodid.	..	..	..	..	..	50
Test Tube	..	..	..	..	..	50
Excelsior	..	..	..	..	..	50
N. D.	..	..	..	..	..	48
J. C. . .	..	..	..	..	..	48
Otto	..	..	..	..	..	45
Rnmex	..	..	..	..	..	45
Rivault	..	..	..	..	..	40
One and All	..	..	..	..	..	40
Wales	..	..	..	..	..	35
Sp. Gr.	..	..	..	..	..	35
T. G. L.	..	..	..	..	..	30

TO CORRESPONDENTS.

* * * All Communications should include the names and addresses of the writers.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

Dolomite.—It is important to form some estimate of the quantities of substances found; the potassium, for example, was in too large a quantity to be regarded as an accidental impurity.

C. J. B.—There was not enough magnesium present to be detected in the small quantity of substance you had for examination. It is probable that you did not allow sufficient time for the trace of calcium to be precipitated.

Blowpipe.—See remarks to *Dolomite*.

W. H. B.—The relatively large quantity of water of crystallisation ought to have suggested to you that the substance consisted for the most part of alum.

Hæm Picnm.—Great care is required in the application of the platonic chloride test, as the precipitate formed with potassium is not very insoluble in water.

T. R.—You must practise with solutions of known composition, or you will never be able to make a good analysis of unknown substances.

Test Tube.—You give the evidence of three tests to show that potassium was absent: this only proves, however, that your solutions were too dilute.

Excelsior.—The residue which you thought was pure alumina contained also potassium sulphate. The statement of Atfield's to which you refer is quite correct.

A. D.—In the preliminary examination you obtained indications of potassium, but you did not make any further examination for it.

J. C.—It is strange that you could have observed that sodium was absent by the flame test without noticing that potassium was present.

Rnmex.—You made a bad guess at the relative quantities of chlorine and ammonia: there was a mere trace of the former present.

Rivault.—Ammonia is very easily detected if you employ dry calcium hydrate moistened with the liquid under examination: boiling with potassium hydrate is not nearly so sensitive a test.

Wales.—You did not submit the substance to a systematic qualitative analysis, and therefore your results are of no value. After a proper preliminary examination you must proceed with a thorough qualitative analysis, employing but one portion of the solution, and adding to it the several group reagents in their proper order.

T. G. L.—It is impossible that the substance could be easily soluble in water, and at the same time contain barium and the sulphuric radical.

NAMES OF BRITISH MEDICINAL PLANTS.

By W. G. PIPER, NORWICH.

Poppy and Papaver.

Though this plant is one of the best known and most gorgeous of our flora, though its name is a household word, yet very few persons have any idea of the connection there is between the name and the thing. The name has an empiric meaning and nothing more. It is the sound whereby we indicate the plant; but for any reasonableness in the word, for any vital connection between it and the thing it represents, if it were Otahaitan it could not be less expressive. Yet this word, like most others, has a hidden meaning which is curious and instructive, and its history is worthy of our consideration.

As there are in other languages names of this plant having the same meaning and derived from the same root, it will be well to enumerate and compare them.

Papaver, as all pharmacists know, is the Latin name of this plant. But although Greek is the fountain whence many Latin names of plants are drawn, yet I can find no trace of the word Papaver in that language. Among the lineal descendants of the Latin tongue we find the word appearing several times. Its Italian equivalent is Papavero, the Portuguese is Papoila and Papoiera, and the French is Pavot. Turning from these to the Gothic languages on the north of the Alps, we find that the Anglo-Saxon name is Papig or Popig, the Welsh is Pabi, and the English Poppy. The names of the Poppy in the German and other Gothic languages are not in any way connected with the words just mentioned. Post, the Sanskrit and Hindu name, is probably from the same root as Poppy.

These being one family of the names of the Poppy, what do the words mean, and whence are they derived? It has been stated that the etymon of the English word Poppy is the Celtic "papa," *pap*. It is urged in support of this that it was a custom among the ancient German women to add the seeds of this plant to the pap which they gave their children, for the same purpose that nurses now administer Godfrey's Cordial. But the Poppy seeds are not narcotic in the slightest degree. They are simply oleaginous and nutritious. And further, it is a matter of history that the narcotic properties of the Poppy were not in general use till the plant had been cultivated for centuries for the sake of its seeds, which were much used as food. And it seems to me that a further objection to this etymon is to be found in the word itself, or, at least, in the idea which it conveys to our minds. I imagine that the old German mothers relied on nature for the sustenance of their babes, and that the abominations of infants' foods and the other accessories of hand-raising are modern needs and modern inventions. It seems improbable that the word *pap*, in the sense in which we now understand it, has been known long enough to give rise to a word so widely distributed as Poppy.

But even supposing this to be the immediate origin of the word Poppy, it does not entirely satisfy our inquiries. We are compelled to ask further—"What is the origin of *Pap*?"

Though with our present light we cannot discover the primary origin of language, we can frequently trace words so nearly to their sources that there is but one step between us and the unknowable; until, generally speaking, it is impossible to conceive any reason for the word, or any logical connection between the word and the thing.

When we can so trace a word to its original root, it is eminently instructive to do so. We can then trace the path by which we have received it into our tongue. We can see where it has branched off into other languages. We can trace the connection between words utterly distinct in their present meaning, and which can only be connected in this way—by getting at the idea which underlies all the various meanings which the words now have.

Root words are discovered by comparing together as many related words in as many languages as are practicable, selecting the sounds or signs which are common to all, rejecting such as are accidental. In this way we probably get as near an approximation to the original form as is possible, as we reject all that may be considered to result from external and circumstantial causes.

By this process philologists have discovered in the Sanskrit, the oldest Indo-European tongue of which we have any

memorial, a root which has the general meaning of food. This root is *Pa*, and although it has been said that as a general rule it is impossible to account for the origin of root words, yet an ingenious theory has been propounded to explain the one under discussion.

It has been noticed that a syllable radically connected with this is one of the first articulate sounds a baby utters. So universal is this phenomenon that the only exceptions are a few savage tribes which appear to be physically incapable of pronouncing the lip consonants, P, B, and F. All the rest of the babies in the world learn to utter this word as soon as they begin to speak. We are not troubled to inquire why this is, though a sufficient explanation might be given. We must, however, notice that this sound or word is generally applied to the male parent. Hence his name is connected with the idea that it is his place to provide food for his family. We shall have occasion to show that the name of the female parent generally has reference to the act of parturition. These considerations are, perhaps, premature. We have yet to show how it was that food came to be associated with the sound *Pa*.

The first words a child utters are the expression of mere bodily sensations. Among these, hunger doubtless takes the first place. So instinctively is this recognised by mankind that a nurse always stops the baby's mouth with food whenever it is opened for any other purpose but respiration. As the sound *Pa* was and is the most frequent utterance of childhood, and as the universal testimony of mankind proves that hunger is its chief and most frequent sensation, it is not to be wondered at that the sound and the sense came to be associated. Nor is it wonderful, when the family relations came to resemble those that now exist, that this sound should be transferred to the father. It is well known that among the German races our family life, or something closely approaching it, was in existence long before the conquest of Britain by the Romans.

Such being the suggested origin of the root *Pa*, and such being its undoubted meaning, how came the name of the poppy to be derived from it? How is it that so many nations use the same name for the plant? There must be some widespread reason for it, for such things do not happen by chance.

It is a well-known fact that in very early times the Poppy was largely cultivated by the Greeks and other Eastern nations. And this was before its narcotic properties had attracted much notice—certainly before so large a demand had sprung up for it in this capacity that it could be profitably cultivated. It was cultivated only for the oily nutritious seed, which it produces in large quantities. These seeds were much more largely used as food at that time than they are now, and even at the present time there is a larger consumption of them in this way than is generally imagined, although it is entirely confined to the Continent. The introduction of more palatable and profitable food plants has driven the poppy out of the field as an esculent, although it is well known to retain it as a drug and "oil yielder."

It is a well-known fact that things are often named from a single prominent character or use. This was a much more prevalent phenomenon in the earlier history of our race, and is now almost solely illustrated by the nicknames so freely bandied about among the lower orders. The oak is named from its acorn, which was formerly the most important product of the tree, and whose shape resembles an egg. Oak is generically connected with egg. Wheat is named from its whiteness: it yields whiter flour than any other cereal. Oats are so called because they are the grain commonly eaten in the higher latitudes. So it may be that the poppy, being frequently eaten, came to be named from the root *Pa*, food. Though the use has almost perished, the name remains, an illustration of the fact that words are the most indestructible of monuments.

Here I must interpolate, for the sake of much that is to follow, a few remarks which I find it difficult to make fall in with the rest of my notes. The changes of form which roots and words undergo in travelling from one language to another are an important and interesting branch of inquiry. Without going fully into the subject I will give the results which have been arrived at by the labours of philologists during the last century. It has been discovered that these changes follow a certain definite law, the word law being used in the sense of an observed order of facts. No explanation of the cause of these phenomena has been offered: they have simply been observed and arranged.

Words, in passing from one language to another, undergo certain definite and almost invariable consonantal changes.

These changes are most readily understood when the consonants are arranged in a tabular form. The nine commoner consonants have been arranged in three classes from two different points of view. From the parts of the vocal organs chiefly used in producing them they are divided into labials, dentals, and gutturals—lip, tooth, and throat consonants. From certain differences in sound they are divided into thin, middle, and aspirate. The following table exhibits them arranged according to these classifications. The names of the consonants used by the advocates of phonetic spelling are the best to use in this inquiry, for they are much more logical and systematic than our ordinary English names. In this system the thin sound of H in Health is called Ith, the heavy sound in Those is called Thic. G hard is Gay, G soft and J are united under the name of the latter:—

	Lip.	Tooth.	Throat.	
Thin ..	.. P ..	.. T ..	.. K ..	} Guttural, as in German and Scotch.
Middle	.. B ..	.. D ..	.. G ..	
Aspirate	.. F or V or PH ..	.. TH ..	.. H ..	

Two more terms may need explanation. The Greek and Latin languages, with their descendants—Roumanian, Wallachian, Italian, Spanish, Portuguese, and French—are called Romance languages. The German, and all the other European languages and dialects, with the exception of Russian, Basque, the Keltic, and a few other languages, are called Gothic languages.

It is found that words with thin consonantal sounds in the Romance languages change those sounds to aspirate when transferred to Gothic tongues. Aspirated consonants in the Romance become middle consonants in the Gothic, middle in Romance become thin in Gothic, and *vice versa*.

Thus the root Pa in the Romance languages would become Fa in the Gothic, and it is under this at first unrecognisable form that we must search for it. The thin consonant P becomes changed to the aspirate of the same class, namely F.

To return from this digression. Looking at the series of names—Papaver, Papavero, Papoilera, Papoila, Pavot, Poppy, Popig, Papig, and Pabi—they evidently split up into two classes, leaving one name which cannot at first sight be placed. We have Papaver, Papavero, Papoilera, and Papoila on the one side, Pavot not placed, and Poppy, Popig, Papig, and Pabi on the other. The names in each of these classes are seen to be more nearly related to each other than to those of the other class. Papavero is more nearly allied to Papaver and Popig to Poppy than Papaver is to Popig or Papavero to Poppy; while, at the same time, Popig is more nearly allied to Papaver than to Coquelicot, another name for the same plant. The two classes are allied, though the relation is not so strong as between the members of the same class. This resemblance and difference is not un instructive, although the fact it reveals may not be new. It shows us that the Romance languages are closely related to each other, and, further, that geographical distance lessens the relationship. The law of invorso squares almost applies here. The Italian is the most like the Latin, Portuguese is least like it, while Spanish links the two. At the same time the Gothic languages resemble one another closely, although the small series of words we have here is not sufficiently representative to be of much value. The cause of these phenomena must be left for the present, with the single remark that it is to be found in the history of the race.

Of the Romance names Papaver is evidently the most ancient, so that if we trace its origin we do so for the Italian and Portuguese as well. Papaver is evidently a direct importation from the Keltic, with sufficient modification to distinguish it from the root Paba. In the same way wheat is distinguished from its immediate root, White. From the Latin Papaver the Italians get Papavero, and the Portuguese, by the frequent change of R to L and the equally common elision of an unimportant syllable, get Papoila.

The connection of Pavot, the French name, with these other words, is not so evident. The consonant changes already mentioned will help us to discover it, and at the same time it must be remembered that vowel changes are not subject to the same regularity that we find among consonants. If the consonants remain the same, the vowels may generally be neglected.

French occupies in some respects a middle position between the Gothic and Romance languages, though more nearly allied to the latter. Its geographical position illustrates its position in philology. A glance at the history of Gaul will help us to understand the nature of the language. Gaul, as its name

reveals, was originally inhabited by a number of tribes all speaking dialects of Keltic, of that language whose descendants are now found in Welsh, Gaelic, Breton, &c. Gw or G is a frequent representative in French of W or V in other languages. Gui, the French for mistletoe, is the Latin viscum, and the English wasp. German Wespe, Latin Vespa, is French Guepo. Gaul may hence be Waul or Vaul. Waul is the same word as Wall in Cornwall and as Wales, and this fact shows us wider relations than would otherwise appear. The Gaels of Scotland, the Gauls, and the Galatians are of the same stock as the Welsh, the Cornwallish, or Cornish, and the Wallachians, and their language, whether called Welsh or Gaelic, is the same at root. All these peoples were at one time of their history considered to be foreigners. So their name tells us.

The Keltic-speaking races that inhabited France were conquered by the Romans, who established themselves firmly throughout the region. At first the language remained distinct, but in the course of ages the Latin gradually assimilated itself with the Keltic, though remaining the most prominent factor, and thus was produced the language now called French, but which for our purpose may be designated Keltic-Latin.

The Kelt, doubtless, had the name Pabi, or some similar one: the Romans had Papaver. They might have amalgamated and produced a word much like our poppy, for it is an almost invariable rule that in changes of this sort the longer word is lost or shortened. Although in this case the longer word Papaver is lost, yet the influence of the Latin was sufficiently powerful to enable the law of "letter shunting" to prevail partially. The second p of the Papaver is changed to the aspirate v, while the Keltic influence is strong enough to retain the first. Such I imagine to be the origin of Pavot.

The Gothic names do not deserve discussion even of such length as we have given to the Romance names. The Welsh Pabi is probably the oldest form. Papig and Popig, the Anglo-Saxon, may have been borrowed from some Keltic race, or they may less probably have survived from the time when Kelts, Romans, and Saxons were one race—speaking but one tongue. The English Poppy is evidently the direct descendant of the Anglo-Saxon Popig, connected with the Welsh by the other Anglo-Saxon form, Papig.

The blanks in this series of names are as curious as the names themselves. How is it that we have no Greek name resembling these words? How is it that the Spaniards, surrounded by nations using this name, have yet substituted Adormidera for it. Adormidera is a good name, referring, not to the food-producing character of the plant, but to its narcotic properties. How is it, again, that neither German, Dutch, nor Norsk, nor any other of the Gothic tongues but those whose home is in England—how is it that none of them have this name? Is it that I have not looked far enough, or are they really absent?

I have endeavoured to obtain the Gaelic, Erse, Breton, Manx, and Wallachian names for this plant, but without success. I feel sure that they would reveal much that is curious, and should feel much obliged if some correspondent would help me to any of them.

The Hindu and Sanskrit name of this plant is Post. It never happens that two nations hit on the same name for anything by accident. The fact that the name is the same in those two languages proves their relationship. But Sanskrit is the language whence we get the root of Poppy, so that Post and Poppy are probably related.

The form of the word supports this idea. It has already been mentioned that vowel changes are not important, so that o being substituted for the a of the root need not trouble us. And the termination st of the word Post is not a greater difference than we might expect to find between a word and its root. But that Hindu and English are related to one another is, I expect, a new idea to many persons.

Returning to the root, I will just indicate a few branches that spring from it, some of which are not directly connected with the subject under discussion. A derivative of the word Poppy itself is Popple or Papple, a rather common popular name for the Corncockle, *Agrostemma Githago*. This is evidently a diminutive, the termination *le* or *el* having almost invariably that effect. Thus, Thimble is a little thumb, and Settle a little seat. It refers to the smaller size of the flower of the Corncockle as compared with the Poppy. I shall have occasion to mention this name in support of another derivation.

From the root Pa we get Baby, the creature that uses the cry. The Pator of the Latins becomes the Pero of the French and

Father (English), Vater (German), and from the same word by a different source, the Italian, and through the French we get Papa and Pope. From the Latin Pasco we get Pasturo and Repast through the French, and Feed, Food, and Fat through the Gothic languages. Panus is Latin for a head of millet. Connected with this word is Panis (Latin), Pain (French), Bread; and also Panic (grass), in Latin Panien, the generic name of an important family of pasturo grasses. Intermediate between these last two families of words is the following:—Pastinaca (Latin), Pastnip, Pasuep (Old English), Parsnip (modern English), and Pannis (Guernsey, *i.e.*, Norman French). Pabulum and Pollen seem to be both from this root. Pappelu is a German name for *Althæa officinalis*, the Marsh Mallow, or for some species of Mallow. The immediate reference of the word is to the glutinous nature of the plant, as is proved by several allied words in that language. Nevertheless, I think it may be referred to the root Pa.

Coquelicot.—1. *Its own History.*

It is well known that the common French name of the Corn Poppy (*Papaver Rhæas*) is Coquelicot.* This name has now no meaning in French, and there are no other words that are evidently connected with it. Near a single village on the borders of Scotland this plant is called Cockeno,† and in Guernsey it is called Coeq.

These three names are evidently of the same origin. They are all without meaning in their respective languages, and, therefore, are probably very old.

Their origin is without doubt the Keltic root "coch," red.‡ Apply this to explain them, and they immediately start into life full of the picturesque power and vigour which modernly invented words seem to have lost.§ Will these names teach us anything else? We must get to know something more about them. And, firstly:—Are there any like names in other languages? Have we any grounds to expect such names elsewhere? What does their presence or their absence mean? Secondly:—Are there any other words derived from the same root? What are they? What is their history? What can they teach us? Each of these queries will engage us for a time.

The Poppy is one of the most conspicuous of European herbaceous plants. Its flowers are red, which is a significant fact, for all things that are red were formerly connected with the blood, and the blood was believed to be the life. And so all red things were, and are even now, considered peculiarly sacred or peculiarly powerful. The mystery that surrounds life, which even a savage dimly feels, has overcast them with its glamour. Proofs of this might be multiplied to weariness. But just to indicate a few. We are told, and rusties firmly believe, that it is unlucky to take robins' eggs. And why? In olden times the bird was dedicated to Thor, and was protected by his thunder. The more modern explanation is that it tried while Our Saviour was on the cross to draw some of the nails from his hands, and so its breast got stained with blood. But this latter is an invention of the Christian missionaries, who, finding it impossible to eradicate the superstitious reverence for the bird, tried to give it a Christian colouring. The robin is the only British bird which is conspicuously coloured red, and this is the reason why it came to be revered in the first place, and then dedicated to Thor. . . . Again the Rowan tree, or Mountain Ash (*Pyrus Aucuparia*), was imagined to be a protection from witchcraft and magic; and it obtained its character from the glory of its red berries. Even in the last generation Scottish school-boys used to carry in their pockets a cross made of Rowan tree wood tied with red thread, and fully believed the old couplet—

Rowan tree and red thread,
Haud the witches' in' dread.

Finally, we find something of this sacredness hinted at in one or two places even in the Old Testament, where red things are mentioned when there seems to be no reason why blue or yellow or green would not have done as well. That something of this reverence attached to the Poppy is proved by one or two seemingly trivial facts. It is called in some places "thunder and lightnings," and children are forbidden to gather it, "for," they are told, "if the petals drop off as you gather it there will be a thunderstorm." I seem to see here a forgotten reference to the god Thor, the god of thunder and lightning. And further,

* Not Coquelicot, as it is sometimes pronounced.

† Johnston's "Botany of the Eastern Borders." London, 1856.

‡ *Ibid.*

§ *E.g.*, magenta, a colour named after a place where a battle was fought!!!

in East Anglia it is believed that smelling at the flowers will produce headache. Although the flowers have a rather heavy odour, yet this seems such an exaggerated idea that it must be the relic of some darker belief.

A further ground for expecting to find other names connected with Coquelicot is that we find related names of the Poppy extending from Calcutta to Land's End, from the Brahmapootra to the Atlantic.

Therefore, as the Poppy is known and named from Hindostan to Wales as it is conspicuous for its redness, are we not entitled to expect that other nations beside the French and Scotch will have hit on that character to be recorded in its name? Nevertheless, although I have made careful search through all the books to which I have access, I cannot find a trace of any such name, with one possible exception. A Spanish name for this plant is Casca. This may possibly be derived from Coch, for the Spaniards, adopting the word Coccus into their tongue, call it Coseoja, an analogous change to that which we find here.

What should we learn from this fact and from that other—that three nations speaking different tongues, unintelligible to each other, all situate in the north-western corner of Europe, have all a name for the same thing which, though very different in outward form, has still the same root and the same meaning? I think we may learn that when the Poppy was named a nation speaking one tongue covered the whole of this corner of land, inhabiting not only France, but Great Britain, Ireland, and all the surrounding islands, and that since that time they have not spread beyond those limits. And that, since the Poppy was so named, the nation that named it has perished, and monuments unreadable to most persons, such as these words, are almost all that remain to perpetuate their memory. For, if this nation had inhabited other districts besides France and Britain, would they not have left the name behind them as they have left it in France? And if they had spread over other countries, would they not have carried the name with them?

These three names tell us that the remote ancestors of French and Britons were of one race and one tongue, though for hundreds of years this was forgotten, and we have regarded each other as dire and natural enemies.

Before considering the subject of co-derivatives in other languages I will mention two French plant names which seem to be allied to this word. Coquelourde, according to a French dictionary by Boyer, is synonymous with Pasque-flower, *i.e.*, *Anemone Pulsatilla*. And according to the same authority the Winter Cherry or *Physalis Alkekengi*, otherwise called Red Nightshade (Boyer), is called in French Coquerelle or Coqueret. Neither of these being medicinal or particularly interesting we will leave them here.

Looking further afield, can we trace to this same root any other words in our own or other languages? Reversing the process by which I arrived at my results, I will refer to a stem springing from the root stock which has produced many branches. And these branches have spread so far and covered so wide an extent of meaning that most people see only the ends of them, and little think that far away they are not only the same at root, but even for a large portion of their descent.

The most celebrated dye the ancients possessed, next to the Syrian purple, and sometimes confounded with it, was a scarlet, yielded by what they supposed to be the berry of a tree—a round, berry-like, pulpy substance—much given to decaying and generating little worms; dull coloured outside; yielding a crimson juice, and found adhering to the oak tree. This they called Kokkos: why, they do not tell us. But with the light we have gained it is clear to us that they had hit on the characteristic of the thing, and from that named it. Before I go on to trace the genealogy of the many descendants of this word, let us pause a moment and consider how the civilised, polished, cultivated Greeks came to have the same word, in the same sense, as was used by our remote and savage ancestors.

It cannot for a moment be supposed that the Greeks have borrowed from the Kelts. After they had become a nation their contempt for foreigners was so great that they refused even to try to understand them, and so nicknamed them from their unintelligible babble, "Barbarians." At least, so say some. The Kelts were one of the most remote and savage even of the barbarians. On the other hand the Kelts would not, or rather could not, borrow from the Greeks, for, setting aside geographical position, Keltic contains the root of the words we are discussing evidently surrounded by its native soil. This root is still in use among the Welsh, the lineal descendants of the Kelts.

The only other alternative is that both Greeks and Kelts are children of one parent, descended from the same stock, originally of one language. Now from the changes of circumstances of the things that stand round them, and through the lapse of ages on ages, they have become so far changed that for centuries they have lost all traditions of their single ancestry, knowing nothing of each other.

By means of such words as these philologists have traced the history of mankind backwards, æons and æons behind the oldest of historic records, beyond fable and tradition, even up to the point where geology takes up the tale and leads us further and further back, till the mind refuses to grasp the countless ages that must have elapsed since man, the master of the world, appeared.

Avoiding details, I will briefly sketch something of the history that is revealed to us by words and their study.

Ages and ages ago, in the plains of Western Asia, dwelt a race of men we now call Aryans. At first they were simply hunters, living by the chase, without government, without houses, without domestic animals, without weapons except those of stone; low savages, almost as low as the lowest now existing. But they increased in numbers, and as they did so found their country too narrow to contain them: game became scarce; they had a hard fight for life. So a great body of them, rather than live on in such hard quarters, chose to risk unknown dangers, and, breaking off from the herd, turned westward. They crossed what is now called the Volga, ever travelling towards the setting sun. There were fierce tribes in their way, but the Aryans were the stronger race, larger bodied, larger brained (the weakly ones had perished in the struggle for life); so they drove the aborigines before them, as sheep before wolves, slaying and being slain almost incessantly. Spreading themselves northward and southward, they drove out the inhabitants of the lands they reached, and compelled them to take refuge in the cold, inhospitable north, where their descendants, whom we call the Esquimaux, continue to this day.

The Kelts remained, covering the whole of Europe. The country was so large that there was room for all. They lived isolated tribes, each fighting for his own hand. They lived and died, bore children, multiplied, and forgot their home in the east. But there the Aryans went on multiplying, and being somewhat crowded, and, what is more, the greatest inventors the world has ever seen, they became a pastoral race. Wild game became scarce, so they preserved it, and tamed sheep and oxen, and mastiffs to guard them; and invented waggons and built houses, and even fenced in their land with hedges. They worshipped a great All-Father under the image of the sun, a worship as pure as any that the world saw before Christianity was revealed.

But, as I said before, they multiplied, and, being earnest souls, would have all of one faith. Being at the same time sturdy, independent thinkers, this was impossible, and so, finding themselves cramped mentally and physically, two more great branches broke off. One set off southwards, traversed the passes of the Himalayas, and flooded Hindostan. The other started westward, taking with them their cattle and their habits. Whether they left any part of the main stock behind them I know not. By the sheer weight of their superior wisdom they drove the Kelts back and back over the steppes of Russia. Then they separated into two bodies. One travelled on south of the central mountain range and covered Turkey and Greece, Italy, and Spain. The other travelled towards the north, and covered all the plains of Germany. The Kelts that came before were driven up the shores of the western sea, filling all France and Britain and Ireland.

As the Aryans increased in number they drove the Kelts back with ever-increasing pressure, till at last they were overlaid in France and lost all hold of England; so now they only remain just out of the ocean on the shores of Brittany, where the Bretons live, and in Wales and Ireland, Scotland and Mona, where the Welsh and Erse and Gaels and Manx are the descendants of that ancient tribe which once covered all Europe.

This, told in a few words, accounts for our finding the same words both in the rude Keltic and the refined Greek, and for the well-known fact that while the nations south of the Alps speak languages much like each other—Italian and Spanish and Portuguese, for example—the languages of the people of the north differ from those of the south, but still retain points of resemblance. And this accounts, too, for the marvellous, but none the less interesting and veritable fact that all the languages

of Europe (with but few exceptions), as well as those spoken between Hindostan and the Black Sea—Sanskrit and Zend, Greek, Latin, and German, French and Welsh, English and Spanish—seem to be descended from some original stock now lost. And this accounts still further for the fact that Coquelicot and its two relations are found crowded together in the north-west corner of Europe. We must suppose that the name was not invented until the Kelts had been confined to these limits. Such is a bare outline of the history of our race, learnt, not from records, not from monuments or pyramids, but from the still more enduring and trustworthy relics which exist in language. Words such as Coquelicot have taught us all this.

I must again thank my correspondents for their communications, and think I can best show my appreciation of them by asking for more.

APPROXIMATE QUANTITATIVE TESTS.

By J. BARKER SMITH.

Fifth Paper.

V.—CHEMICALS (a).

THE permanganate test has now been applied to about thirty articles of the *Materia Medica*, comprised in the groups tannins, uorphia, colouring matters, and essences.

In this paper it seems proper to make a few general remarks on the test, and to ascertain what ratio the standard (50 c.c.) permanganate bears to the molecule of potassium permanganate in grammes.

Experiments show that the permanganate regularly applied will denote differences in bodies in a manner that must place it foremost amongst useful approximate quantitative tests. If the part performed by oxygen in function and reaction be considered, it may be safely predicated that this test, both in animal and vegetable physiology, will give indices of the utmost practical value. It is not too much to expect that it will help to solve questions relating to circulating fluids, secretions and excretions, normal and abnormal.

The standard (50 c.c.) permanganate used in these experiments is equivalent to 5 milligrammes of potassium permanganate, or $\frac{1}{200}$ th gramme, and if the molecular weight of KMnO_4 be taken as 158, then the 5 milligrammes will be equal to $\frac{1}{31600}$ th of a molecule of permanganate in grammes.

Acidum Arseniosum.—One gramme of the opaque variety was dissolved in 100 c.c. of water acidulated with hydrochloric acid, and another gramme in 100 c.c. of weak potash solution, by means of heat. Of these solutions diluted, one of arsenious acid in a thousand, 5 c.c. were required to decolorise the acid permanganate. The decolorising power of arsenious acid according to these experiments may be stated as $\cdot 005$ gramme.

This would seem to indicate that four molecules of potassium permanganate will oxidise three molecules of arsenious acid (anhydride), or that two molecules of permanganate give three molecules of available oxygen.

Liquores Arsenici.—As regards arsenious acid, oxidation takes place in a regular manner, but it will be found more convenient to dilute the official solutions ten times.

For instance, 12 c.c. diluted to 100 c.c. will approximate to a solution containing one per thousand of arsenious acid. For more details, the official, or iodine method, may be consulted. A reference to p. 113 will show that the effects of the compound tincture of lavender may be neglected.

Acidum Uricum.—A sample of uric acid was dissolved in a solution of potassium hydrate, and precipitated by boiling with hydrochloric acid. One gramme of this uric acid, carefully dried, was triturated with liquor potassæ until dissolved, and the solution diluted to a litre. One gramme of uric acid, purchased as pure, was treated in the same manner.

The quantities of the one per thousand solution of uric acid required to decolorise were from 8½ to 9 c.c. The decolorising power of uric acid would thus be $\cdot 009$. Acidulation by hydrochloric or by sulphuric acids, moderate variations of temperature and acidity, did not sensibly affect the result.

One hundred cubic centimetres of the potassium urate solution were then shaken up with about two grammes of acetate of lead, and the solution, being acid to test paper, allowed to stand two hours. In one experiment the decanted solution indicated 7 centigrammes per litre of uric acid remaining in solution: in

another experiment, the filtered solution indicated only 5 centigrammes remaining.

Urina.—Concentration of urine, acidulation by hydrochloric acid, and weighing the uric acid precipitated after twenty-four hours, seems to be an ordinary method of uric acid analysis. The simple test I would suggest is founded on the observations made under the preceding section. The necessity of a simple means of estimating uric acid is evident from the following quotation from Bouchardat's "Annuaire de Thérapeutique," 1877. After stating that the quantity of urea excreted in the twenty-four hours appears to augment in simple complaints of the liver, and to decrease in serious ones, it goes on to say, "Les recherches sur les variations de l'acide urique à ce point de vue sont encore, ou à peu près, complètement à faire, ce qui tient sans doute aux procédés minutieux que réclame le dosage de cet acide, et par suite, à la difficulté d'en faire l'application aux recherches cliniques." As an absolute test, my process will require supplementing: as a comparative test it seems useful. An example will best illustrate.

The sample of urine under examination is clear, free from albumen and deposits. 5½ c.c. are required to decolorise the acid permanganate. Treated with acetate of lead for two hours, agitating occasionally, 8 c.c. are now required, acidulation being made by hydrochloric acid in this case, as the sulphuric acid precipitates the lead and obscures the end of the reaction. Before the precipitation 5½ c.c. have been found equal to .009 grammes uric acid; after the precipitation 8 c.c.; the former denoting 1.6 grammes per litre, the latter 1.12 grammes, the difference being .51 gramme, or actual quantity per litre. Urea does not affect the test; blood does. Urine after precipitation still reddens on being boiled with hydrochloric acid, and no doubt purpurine is one of the substances affecting the test. Parts of bullock's blood, soluble in water, gave .14 gramme as decolorising power of blood. If 5 milligrammes permanganate be supposed to afford $\frac{3}{4}$ milligramme oxygen, then .14 gramme blood requires .00076 gramme oxygen, &c.

Acidum Sulphurosum.—One volume diluted to a hundred volumes. Of this solution 22 c.c. were required to decolorise. A supplementary test by the Pharmacopœia method determined an acid scarcely more than a third the proper strength. One volume of official sulphurous acid, diluted to a hundred, should give a solution of which 7 c.c., approximately, will decolorise the standard.

Hypophosphites.—Sodium and calcium salts examined; decolorising powers .07 and .08 gramme respectively; probably of good quality. The sodium salt did not dissolve in 10 parts of rectified spirit; but the insoluble portion when dried answered to the test of ignition.

mate only the pure potassium iodide which was present in the solutions, but simply evaporated part of each solution to dryness and weighed the dried saline matter, which I presumed was pure potassium iodide; and only in two or three cases did I take notice in my paper of impurities at all. I will go a step further, and say that in the majority of the samples I examined no trace of potassium carbonate was present; and in the large majority of the remainder only traces of that substance were found. The only foreign matter, therefore, of which I did take cognisance was water, and Mr. Smart says that this body is present in "comparatively pure" potassium iodide to a little over one per cent. Mr. Smart, however, does not mention how long ago it is since he made the analysis of the potassium iodide which he mentions, because manufacturers of this drug may have lately succeeded in making a purer product; nor does he mention whether the stopper of the bottle or vessel which contained his sample fitted well, because we know that potassium iodide absorbs water from the atmosphere, and is decomposed by carbonic acid forming potassium carbonate. I can speak more highly of the purity of that drug, be it known to the credit of our British pharmacists, than Mr. Smart. I found from a trace to under decimal two per cent. of water in several samples which I examined; and this, together with what I have mentioned with respect to the potassium carbonate impurity, leads me to advise you to protest against Mr. Smart coming to such an unscientific conclusion, and trying to cast the "odium" of it on your shoulders.

I dispute the point that a druggist has any right in "making up" physicians' prescriptions to give what Mr. Smart says in business is called "good weight."

The last paragraph of this criticism is amusing. He says my experiment "has a fallacy at its bottom." Probably the *Philadelphia Medical Times* did not give my mode of analysis, and possibly Mr. Smart may be justified in his own mind in arriving at that conclusion. I did not know, and am sorry if my paper should have cast "odium" on our dispensers; and I was equally unaware that I had drawn any conclusions, either unscientific or otherwise, from my results. In my paper I did not try to show to the dispensers either their faultiness or freedom from error. I think, however, it showed a fair proportion of both, and I considered that it would be interesting to dispensers to see what these proportions really were.

In conclusion, sir, will you allow me to suggest that, if you compare your introductory paragraph to Mr. Smart's criticism, with the articles which you wrote last year, you will find that it is entirely illogical, but no doubt the facts have escaped your memory.

I am, &c.,
Royal Institution, Manchester: WILLIAM THOMSON.
April 24, 1877.

ASKING FOR MORE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—Now that the chemists have taken into consideration a movement for earlier closing, I wish, if not trespassing too much on your valuable space, to bring before their notice one suggestion which, though not novel in character, being in reality an extension of Mr. Jones' proposition, would, if adopted, be the means of somewhat reducing our now excessively long hours of business.

My request is that the assistant last on Sunday duty be allowed a half-holiday from 1 or 2 p.m. during the next week, either Saturday, or some other day more convenient to his master. Which of his colleagues would not gladly work a little harder once a week for a few hours, possibly knowing his *confère* is enjoying a ramble through some of the country fields, there seeing for himself whether the plants are in flower as described in the organ of the Pharmaceutical Society?

I well know this "half-day" is not an easy gift for some small houses, but I think you, sir, will agree with me that there are not so very many but could grant this very modest request, more particularly as now it is customary in a goodly number of London houses to give their assistants each a "long night" weekly (usually from 4 or 5 p.m.); surely a few hours cannot make so great a difference!

This "long night" is insufficient compensation for Sunday confinement in air perhaps vitiated with nissafœtdia, valerianate



INACCURATE DISPENSING.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—In an article which appears in your issue of this month you publish the criticism of Mr. Charles Smart, captain and assistant-surgeon U.S. Army, on a paper read by me before the Manchester Philosophical Society "On the Degrees of Accuracy Displayed by Druggists in the Dispensing of Physicians' Prescriptions in different towns throughout England and Scotland."

This criticism, you say, was published in the *Philadelphia Medical Times*, and this "disinterested champion," as you call him, challenges the conclusions at which I arrived, and, you remark, "seems to have pretty fairly upset them." It is in my opinion hardly necessary to defend myself against this criticism, because it is sufficiently illogical to pretty fairly upset itself.

First, I did not know that I had published any "startling statements," because in an article which appeared in your journal about the time the paper was read, you said in substance that it showed that the druggists of Great Britain had done very well.

Second, As I clearly pointed out in my paper, I did not esti-

of zinc, or belladonna plaster, as our whitewashed faces well bespeak.

This half day is given in several provincial towns, both large and small, and its difficulty might, I think, be easily surmounted by our London houses.

AN ASSISTANT.

A DISPENSER'S NOTE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I have had the following prescription to dispense:—

Phosphori gr. 1-50th
 Ext. nucis vom. gr. ¼
 Quiniæ sulph. gr. 1

M. nt ft. pil. 1, mitte xxiv. One to be taken twice a day.

The plan I adopted was as follows, one grain of phosphorus being weighed for the sake of greater accuracy:—

Ext. nucis vom. gr. 12½
 S. V. rect. q.s.

Ut ft. solutio crass.

Pulv. quiniæ sulph. gr. 50

M. bene et adde—

Ext. gentianæ gr. 50
 Lycopodii 3ss.

M. ft. mass et adde solut. sequent—

Phosphori gr. 1
 Carb. bisulphid. 3ss.

Vel q.s. ut ft. solutio. M. ft. mass et divide in pil. 50, mitte xxiv.

This plan is similar to that recommended by Mr. Addington in the *American Journal of Pharmacy*, and copied into THE CHEMIST AND DRUGGIST in the March number of last year, p. 83.

I should like to ask if the physician ordering the above prescription really intended it to be dispensed exactly as written. If not, would it not have been better to have found some formula that was practicable, by consultation with a dispensing chemist?

Yours obediently,
 G. N. M.

May 4, 1877.



PROSECUTION FOR SALE OF SYRUP OF POPPIES WITHOUT A POISON LABEL.

At the Ross Petty Sessions, John Stafford, chemist and druggist, of Ross, was summoned for selling a certain poison, called "Syrup of Poppies," without its being labelled as poison, at Ross, on April 7.

Mr. Williams appeared for the defendant.

The fact was proved that a woman had bought a pennyworth of syrup of poppies at Mr. Ross's shop, and that the same was afterwards found labelled merely "syrup of poppies."

Mr. Williams, in the course of an eloquent address to the Bench on behalf of his client, observed that the chemists of Ross appeared to have conducted their business upon very strict principles, for during the nine years that the Act had been in force no case had ever been brought against either of them as to the way in which they dealt with the public. He knew that Mr. Stafford, in particular, conducted his business with great care, and would prove that when this person went to the shop and asked for this preparation of poppies he (Mr. Stafford) was in the shop, and he would call a witness to state what transpired, for he was assured that he (Mr. Stafford) had cautioned the woman, and that a proper label had been placed upon the bottle, such labels being constantly at hand to place upon bottles containing these and similar preparations before they

were taken from the shop. If the policy of the law had not prevented his putting Mr. Stafford in the witness box, he should have been most happy to do so, and then Mr. Stafford would have stated upon oath what had really taken place. But as he could not do so, he thought that from his character and position as a respectable tradesman the Bench would attach as much importance to his simple assurance, coming as it did through him (Mr. Williams), as they would if he were able to appear in the witness box; and when they found Mr. Stafford's assistant telling them that before the preparation was handed to the woman she was cautioned in respect of it he felt certain they would hesitate before they accepted her testimony in a case of such grave importance as this. Besides, she did not come before them with such clean hands as a person should have who appeared in support of such a prosecution as this. From the beginning of the case to the last moment when she presented herself in that Court, she had been guilty of nothing less than a series of concealments. She had concealed the purchase of the syrup in the first place from her husband. There was no doubt of that. She had put the bottle in the place where it was found by the policeman. There was not the slightest doubt about that. She had told the Bench she had not given any of it to the children; but that was contradicted by Dr. Fernandez. Would they, therefore, believe the delusive evidence of such a woman in order to criminate a respectable tradesman? It was a known fact that people were in the habit of removing the label printed "poison" as they left the chemist's shop, and he had not the slightest hesitation in saying that this woman, when she went away from Mr. Stafford's, must have pulled the word "poison" off the bottle. In order to show the uniform system on which Mr. Stafford conducted his business, Mr. Williams produced a book, showing how everything was entered that was required by law to be entered, and said that there had not been a single instance from the time Mr. Stafford had been in business in which any neglect of this kind could be imputed to him; and this was a reason why he urged all he possibly could in order to controvert the evidence of a woman upon which he asked the Bench not to rely, for they certainly ought not to do so. He also asked them if they could believe that Mr. Stafford would have imperilled his reputation by such an omission, when it could be clearly shown that he had always been most careful and considerate in the transaction of his business. He thought they could fairly assume that the proper label had been put on the bottle, and, after they had heard the shopman's evidence, he hoped they would say that, although it was a case which required their consideration, they did not believe that Mr. Stafford was guilty of the offence, and would accordingly dismiss the charge. After showing the Bench the various kinds of labels used by Mr. Stafford, and directing attention to a red one with the printed word, "Poison," which he contended was the kind used on this occasion, he called

Albert Porter, qualified assistant to Mr. Stafford, who deposed: I have been with Mr. Stafford about five months. I remember a woman coming for syrup of poppies. Mr. Stafford was in the shop: she bought a pennyworth. I heard Mr. Stafford caution her about the preparation of poppies. When these preparations are sold, I am in the habit of putting one of the labels produced marked "poison" on the bottles. I cannot swear I did so on this occasion, but, according to my habit, I think I must have done so. I have been in other chemists' shops, and have seen people take off the label as they left the shop, especially after buying laudanum. I do not remember the day when the woman came. I believe I placed a proper label on the bottle.

By the Bench: The reason I have for believing it is that it is my custom to do so.

The Chairman said the magistrates were unanimously of opinion that it was their duty to convict. But it was not any great reflection upon Mr. Stafford in his business, because, speaking from his own experience, Mr. Stafford's business was as well conducted as any shop of the kind that he had dealt at. This was one of those accidents that would occur even when the utmost caution and care were used; and the Bench believed that the omission was accidental. But as the label was not put on the bottle, in conformity with the Act, they had no alternative but to say the charge was proved. The defendant would be fined in the nominal penalty of 6*d.*, the costs being 1*l.* 7*s.*

Mr. Williams remarked that there was such a coin as a farthing.

The Chairman replied that the penalty was sufficiently

nominally to show that they were clearly of opinion that it was an accidental omission. He was in the habit of dealing with Mr. Stafford, and his confidence in him was not in the least shaken by this case.

ROBBERY BY AN ASSISTANT.

At the Liverpool Assizes, last month, George Johnson Ashmore, 27 years of age, chemist's assistant, pleaded guilty to having at Garston, on March 22, stolen 20 packets of tea, 8 bottles of champagne, 2 bottles of whisky, 2 cases of perfumery, and other articles, the property of Edgar Humphries, his employer. William Henry Ashmore, farmer, brother of the other prisoner, was charged with having received the goods, knowing them to have been stolen, and was acquitted. George J. Ashmore was sentenced to four months' imprisonment.

IS LAMPLOUGH'S SALINE LIABLE TO MEDICINE DUTY?

In the Exchequer Division of the High Court of Justice, on the 7th inst., before Baron Cleasby and a special jury, this question came on for trial. A penalty of 10*l.* was sued for, but the Attorney-General, who appeared for the Crown, in opening the case, said the object of the Government was not to inflict penalties, but to settle a dispute which had existed for some time between the Revenue Department and Mr. Lamplough. The question whether the compound was liable to duty depended upon the fact whether it was an artificial mineral water or a medicine, and the construction of three Acts of Parliament—the 52 George III., c. 150, and the 3rd and 4th William IV., c. 97—which imposed and repealed duties on such articles. The first of these Acts exempted from its operation "all artificial mineral waters, and all waters impregnated with soda or mineral alkali, or with carbonic acid gas, and all compositions in a liquid or solid state, to be used for the purpose of compounding or making any of the said waters."

The Attorney-General, however, contended that the second-named Act repealed this exemption. If it did not he maintained further that it came under the Act as a medicine, and was not entitled to be regarded as a compound for the production of an artificial mineral water, because its value as a medicine depended upon the presence of chlorate of potash, which was not a mineral alkali, but a neutral salt, and never found in a natural mineral water.

Mr. Baunister, Deputy Principal of the Laboratory, Somerset House, deposed that he had analysed a sample of "Pyretic Saline," and found it to contain 45.7 per cent. of tartaric acid, 52.4 per cent. of bicarbonate of soda, and 1.9 per cent. of chlorate of potash. Upon solution of this compound in water, tartrate of sodium was formed, carbonic acid was set free, and 1.4 per cent. of the bicarbonate of soda and the whole of the chlorate of potash remained undecomposed. Chlorate of potash was not found in any natural mineral water, although chloride of potassium was. It was supposed that the medicinal activity of chlorate of potash depended upon the readiness with which it gave up its oxygen. He thought that the other constituents would also have a remedial effect in some of the diseases referred to.

The Attorney-General also showed that Mr. Lamplough had recommended his preparation as valuable in the relief of many diseases, and asserted in his prospectuses that on one occasion in the Court of Queen's Bench he had succeeded in establishing his sole right to make this preparation.

For the defence the exemption clause in the Act 52 George III. was relied on. It was argued that many artificial mineral waters did not exactly represent the natural waters which they professed to imitate, and it was stated that the effect of a decision for the Crown in this matter would be to render such waters as potash water, &c., liable to medicine duty.

Ultimately, the question resolving itself entirely into one of law, a verdict was entered, by direction of the learned judge, for the Crown, for a penalty of 10*l.*, with liberty to the defendant to move to enter a verdict for him, the Court to be at liberty to draw inferences of fact.

WEST END DISPENSING.

At Bow Street, on April 21, Messrs. Roush & Co., chemists, in the Strand, who were represented by their manager, G. H. Turner, were summoned for having sent out a dangerous explosive liquid, and causing damage to a tablecloth and other

property in chambers occupied by Captain Hawley Smart, at St. Martin's Chambers, Trafalgar Square.

Mr. Montagu Williams, in support of the summons, said that the matter had been taken up on public grounds by Captain Smart, a gentleman in the military service, but also well known as an author and novelist. If he had been pursuing his literary occupations at the time of the explosion he might have been deprived of his eyesight or otherwise injured for life.

It appeared that on the morning of April 9 a boy delivered at the chambers a small packet, resembling a medicine bottle. There was no address written on the bottle, and the boy was unable to say for whom it was intended. The landlady, Mrs. Billingham, thinking that it must be for Captain Smart, desired the servant to place it on that gentleman's table, and it was left there until the return of the Captain between 10 and 11 at night.

Captain Smart deposed that he saw the packet lying on his table. He looked at it for a moment, and then sat down in front of the fire, with his back towards the table. Suddenly he was startled by a loud explosion, like the bursting of a soda-water bottle, and he saw that the packet on the table had disappeared. The room was filled with smoke and a suffocating vapour, causing him to open the door and windows, and as both the tablecloth and table appeared to be burning he procured a wet cloth and took other means to prevent the spreading of fire. He found that the bottle had been splintered to atoms, and the neck of it, with a cork in it, was found upon the floor. Stains caused by the contents of the bottle were to be seen on the carpet, the furniture, and a portion of his own wearing apparel, and he burnt one of his fingers through taking up a fragment of the bottle. The labels of Messrs. Roush were still adhering to the bottle. He sent to them for an explanation of the matter, but they treated the inquiry with such nonchalance, not to say rudeness, that he resolved to place the matter in the hands of his solicitors.

Mr. G. H. Ogston, analytical chemist, of 22 Mincing Lane, described the mixture as a most dangerous one, stronger than nitric acid and more destructive than vitriol. It was known as *aqua regia*, and was a combination of nitric and hydrochloric acids, and he was surprised that any chemist could have sent out such a preparation without a proper description of it, and a caution as to its dangerous character written outside.

The defence was that the mixture had been made up from the prescription of a medical man, and, when sent out by the boy, was accompanied by proper instructions, the prescription, and the address of the gentleman for whom it was prepared—viz., Major Furlong, who resided in another set of chambers under the same roof as Captain Smart. It happened that the boy neglected to deliver the prescription, &c., and address. With respect to the statement that the clerk of Messrs. Frere, complainant's solicitors, was treated with insolence by Mr. Roush—who said it was an attempt to extort money, and that he was as "smart" as the complainant—it was alleged that the complainant and his solicitors had behaved in a very "bumptious manner," and that Mr. Roush consequently lost his temper. It was urged that the occurrence was merely accidental, and that there being no wilful intention the complaint could not be sustained; but Mr. Flowers remarked that such an explosion would probably have happened in Major Furlong's chambers, with similar or worse results.

The defendant said if the instructions had been delivered with the bottle it would have been seen that the bottle was to be kept in an upright position, and the defendant's boy was called to prove that he lost the paper at the time, but, finding it afterwards, delivered it the next morning.

Mr. Flowers said there had been great carelessness, and fined the defendants 40*s.* and 2*l.* 12*s.* 6*d.*, the amount of damage done by the explosion.—*Times.*

POISONOUS CONFECTIONERY.

At the Liverpool Police Court, on May 1, before Mr. Ruffles, Henry Edwards, confectioner, 7 Brunswick Road, was summoned at the instance of the Health Committee for having sold confectionery, namely, sugar oranges, in the manufacture of which poison had been used. Mr. Gil, from the office of the town clerk, appeared for the prosecution. Dr. Commins appeared for the defence. On the 24th ult. an inspector of nuisances bought at the defendant's shop several sugar oranges, which were afterwards analysed by Dr. Brown, who found that they had been coloured

with chromate of lead amounting to upwards of one grain per orange. They were injurious to health, chromate of lead being an active poison. Dr. Commins stated that the confectionery was manufactured for the defendant by a man named Ferguson, to whom the defendant supplied genuine harmless colouring matter. Ferguson, however, had taken it upon himself to use chromate of lead, but of this the defendant had no knowledge until these proceedings were instituted.

Ferguson was called, and stated that he used chromate of lead for the purpose of improving the colour, but without knowing that it was a poison. He manufactured these oranges for the defendant and other confectioners. He had never told Edwards that he used chromate of lead.

The defendant was examined as a witness, and stated that it was impossible to tell from the appearance of the sugar oranges that chromate of lead had been used. If he had had any suspicion that this or any other injurious substance was used in manufacturing the articles he would have had them analysed.

Mr. Raffles (to Dr. Brown, who was present): Do you think that the defendant could have told by experience of these things, when they came back from the manufacturer, that they had deleterious stuff in them, or that he might fairly have supposed the genuine colours only had been used?

Dr. Brown: I think he ought to have noticed it, though I believe his word when he said that he did not notice it.

Mr. Raffles: That is my feeling.

The defendant was fined 20s. and costs.

George Thomas, confectioner, 61 Ranelagh Street, was summoned for a similar offence. Mr. Bartlett appeared for the defence. Sugar oranges, labelled "pure sugar," were purchased at the defendant's shop and analysed by Dr. Brown, who found that they were coloured with chromate of lead amounting to about one grain on each orange.

Mr. Bartlett contended that these oranges were not for eating but for ornament, but His Worship said he should decide against him on that point.

Mr. Bartlett said the defendant simply retailed this confectionery, and had no knowledge there was anything deleterious in it.

Mr. Raffles: But I say he ought to have known it.

Mr. Bartlett produced the account of the manufacturer with whom the defendant deals, for this and other confectionery, in which it was stated that the colours were harmless.

The defendant was fined 20s. and costs.

Mr. Raffles: If these prosecutions should prevent the sale of these things in future, they will have done a great deal of good.

LONDON BANKRUPTCY COURT.

WM. PLUMM, Chemist and Druggist, 53 Commercial Road East.

This case came before the Court last month upon the hearing of an application by Mr. Lucas on behalf of the debtor for leave to hold a new first meeting of creditors under the following circumstances:—The debtor filed his petition for liquidation on March 8, and at the first meeting, held on April 5, the whole of the creditors present resolved to accept a composition of 1s. in the pound in satisfaction of their debts. The resolutions and other documents were duly filed, but in consequence of the illness of the debtor's solicitor the notices of the second meeting had not been issued. Mr. Registrar Hazlitt, after consulting the chief officer in the liquidation department, allowed a new first meeting to be convened. The debts are about 200l., the following being the principal creditors:—

	£	s.	d.
C. Vahlborough, King David's Lane, Shadwell	35	4	10
Langton & Co., Upper Whitecross Street	32	0	0
— Bührer, Compton Street, E.C.	15	5	10
F. Frank, 7 Plumber's Row, E.	13	10	3
Maw & Son, Aldersgate Street	10	3	0
— Hogg, 187 Cannon Street Road	10	0	0
Hewlett & Sons, Leadenhall Street	9	10	0

W. J. COOPER, Analytical Chemist, 117 Charlotte Street, Fitzroy Square.

The adjudication in this case was made by Mr. Registrar Hazlitt on February 27, upon the petition, of Mr. Benjamin H. Paul, of 106 Fenchurch Street, consulting chemist and com-

mercial analyst, in respect of a debt of 163l. 4s. 1d. The bankrupt appealed against the adjudication, but the order of the Registrar was affirmed by the Lords Justices, and the first meeting under the bankruptcy was held on April 25 before Mr. Registrar Pepsys. No statement of affairs was rendered, but several proofs of debt were admitted, and the creditors appointed Mr. R. D. Grindley, of Upper North Street, Poplar, manufacturing chemist, to the office of trustee, with a committee of inspection, consisting of Mr. B. H. Paul, of 106 Fenchurch Street, and Mr. R. B. Barrett, of 2 John Street, Bedford Row.



LAYING UP TREASURE.—An original thinker, says the *Student's Journal*, wants to know whether it would not be possible to get up a limited liability company for the purpose of buying the corpses of recently deceased habitual drinkers and subjecting them to distillation. He believes that the alcohol-saturated tissues would yield sufficient spirit to make the process highly remunerative.

GERMAN LINGUISTIC SKILL.—A German medicine on sale in Philadelphia is thus labelled:—"Warning. Only that above mentioned packet up is the very pure salt of Sprudel, because it is produced by the inspection of the town officers, but that salt packed up in wooden boxes and also trading with that is false and counterfeit, and is our duty to let this be a warning to the gentlemen and ladies to buy it."

NON-POISONOUS VEGETABLE FLY-PAPER.—Powdered black pepper is mixed with syrup to a thick paste, which is spread by means of a broad brush upon coarse blotting paper. Common brown syrup will answer, but syrup made from sugar is preferable, as it dries quicker. For use, a piece of this paper is laid upon a plate and damped with water. The paper may also be made directly at the mill by adding sugar to the pulp and afterwards $\frac{1}{4}$ to $\frac{1}{2}$ of powdered black pepper, and rapidly working it into a porous absorbent paper.—*New Remedies*.

CHEMICAL WARFARE.—A French chemist intends proceeding to Constantinople with the object of obtaining the Sultan's permission to try a scientific experiment on the Russians in Roumania. He proposes to arrange a system of land torpedoes beneath the ground over which the invaders must march as they advance towards Turkish territory. These torpedoes will all be connected together by wires, and will be exploded simultaneously at the proper moment by means of an underground wire carried to a convenient distance. He offers to destroy the Russians in Roumania gratis, those in Asia Minor, however, to be paid for at per head.

FLAVOURING EXTRACTS.—

STRAWBERRY EXTRACT (ARTIFICIAL).		Parts
Nitrous ether .. .. .	.. .. .	1
Oil of wintergreen .. .. .	.. .. .	1
Acetic ether .. .. .	.. .. .	5
Butyric ether .. .. .	.. .. .	5
Glycerine .. .. .	.. .. .	2
Mix.		
PINEAPPLE EXTRACT (ARTIFICIAL).		Parts
Butyrate of ethyl .. .. .	.. .. .	5
Butyrate of amyl .. .. .	.. .. .	10
Aldehyde .. .. .	.. .. .	1
Chloroform .. .. .	.. .. .	1
Glycerine .. .. .	.. .. .	3
Alcohol .. .. .	.. .. .	100
Mix.		

ROSE EXTRACT.
 Red rose leaves 2 ex.
 Oil of rose 1 dra. in
 Alcohol, deodorised 2 pints
 Macerate the rose leaves in the alcohol for eight days, strain and express; then dissolve in it the oil, and filter.—*New Remedies*.

THE VICAR OF WAKEFIELD AND THE BONES.—Mr. J. H. Wice, a chemist and druggist, of Wakefield, recently purchased at a sale by auction a plot of land near a church in the town, and in erecting a new fence on one side of it he set it back several feet from the limits of the grave-yard, so as to be safe as to his boundary. In digging a hole for one of the posts of the fence, a workman turned up some bones, whereupon the vicar (the Rev. W. R. Bowditch) wrote to the Secretary of State saying that a body interred in the churchyard had been removed—an offence punishable with three months' imprisonment—and asking for some action to be taken in the matter. Accordingly the Mayor of Wakefield was requested to make an inquiry on the spot, and on Saturday morning, accompanied by the Town Clerk and the Borough Surveyor, he proceeded to St. Andrew's Church. A workman began to dig deeper and wider at the spot where the bones were originally turned up, and a crowd of people who had gathered viewed the proceeding with no little interest. At last some bones of an extraordinary size for the genus *homo* were unearthed, and along with them two or three small horse-shoes. The truth now began to dawn on the knowing ones, and all doubt was removed when Dr. Wade, the medical officer of health, amid laughter and expressions of derision, declared that the jaw-bones and vertebrae once constituted the framework of a jackass! The donkey's bones were then unceremoniously re-interred, and the company separated.

NEURALGIC REMEDIES.—Dr. Vanderbeck gives these formulæ in the *Philadelphia Medical Reporter* :—

NEURALGIA.			
Veratris	.. .. .	grs. x-xx.	
Adipis..	.. .. .	3j.	

Mix. Ft. unguentum. Sig.—Apply to part.

Also—

Aconitæ	.. .. .	gr. ss.
Veratris	.. .. .	grs. x.
Adipis..	.. .. .	3j.

Mix. Sig.—Apply to part.

NEURALGIC HEADACHE.

Quinic sulph.	.. .. .	grs. xij.
Morph. sulph.	.. .. .	gr. j.

Mix. Triturate in a mortar, and divide into twelve powders. Sig.—One powder every four or five hours.

CHRONIC HiccOUGH, FROM NO ASSIGNABLE CAUSE.

Tinet. Calabar bean	.. .. .	℥x.
Pot. carb.	.. .. .	gr. x.
Mist. acacia	.. .. .	3j.

Mix. Sig.—One dose, ter die. No vegetables should enter into the diet. The food should be non-stimulant, making use of milk, eggs, &c. In some cases, tinct. of Calabar bean alone answers very well. Sometimes a hypodermic injection of morphia cures or relieves.

ANODYNE PILLS.

These have the advantage of not affecting the bowels :—

Morph. acet.	.. .. .	grs. ij.
Hyoseyan. ext.	.. .. .	grs. viij.

Mix. Ft. pil. No. xvj. Sig. —One pill at bedtime.

SIMPLE HAIR RESTORATIVES.

HALL'S Journal of Health (U.S.) says the best remedy for baldness is the following wash :—Pour three pints of hot water on four handfuls of the stems and leaves of the garden "box," boil it for fifteen minutes in a closed vessel, then pour it in an earthen jar, and let it stand ten hours; next strain the liquid and add three tablespoonfuls of Cologne water; wash the head with this every morning: it is cleansing and tonic, and if the root bulbs of the hair are not destroyed (which is the case where the scalp looks smooth and shiny, and then there is no remedy), the hair will begin to grow with vigour. If this wash fails after a few weeks' perseverance, the baldness may be considered incurable, because the structure of hair-growth is destroyed.

But a more certain and more easily understood method of restoring the hair, when such a thing is possible, is to strive to secure a larger share of general health: keeping the scalp clean in the meanwhile, by the judicious application of a moderately stiff brush and a basin of plain old-fashioned soap-suds: for, as a general rule, baldness arises from one of three things: inattention, which brought on a decline of health, dirt, or stupidity.

And if at times any falling off is observed, and it is desirable to arrest it sooner than mere cleanliness and improved health would do it, one of the most accessible washes is boiling water poured on tea-leaves which have already been used, and allowed to stand twelve hours, then put in a bottle. It should be of moderate strength.

Trade Notes.

MESSRS. NEWBERRY have bought Mr. Berdoe's business as a manufacturing perfumer. Mr. Berdoe has gone into the medical profession.

* * *

MR. W. T. SANDERS, formerly of Stratford-on-Avon, has succeeded to the business of Mr. J. Hibberd, of North Street, Exeter.

* * *

THE Chesebrough Manufacturing Co., of New York, makers of "Vaseline," have established a depôt at 7 Snow Hill, London, for the sale of their product.

* * *

MESSRS. LAWRENCE & Co., of 485 Oxford Street, proprietors of "Brodie's Remedy for Corns," have purchased of Messrs Walters & Co. their proprietary article, "Jenner's Neuralgia Pills."

* * *

THE National Chemical Company, whose imperviously wrapped packets of chloride of lime we noticed in our February number, have removed from Glasgow to 223 Hoxton Street, London, N.

* * *

MESSRS. MACNIVEN & CAMERON now send out shilling sample boxes of their pens, of various patterns assorted. We fear our Foreign Office had been buying a shilling's worth of their easy writing implements when the Protocol was schemed.

* * *

In a recent mention of the Analysed Tea Association we stated that the tea was packed in 1-lb. tins only. We have been asked to correct this statement, as it is packed in stoppered bottles as well, and also in 8 and 10 lb. tins.

* * *

In stating last month that Mr. F. W. Fletcher, F.C.S., had joined the firm of Lorimer & Milne, chemical manufacturers, our remark conveyed an incorrect impression. Mr. Fletcher takes the place of Mr. Milne, who has retired from the firm.

* * *

We have to congratulate Henri Nestle on being compelled to remove to larger premises—from No. 3 to No. 7 Barbican, &c. This is due we learn to the very large demand for the "Milk Food" by the export trade. Foreign importers have discovered that if they want the food fresh and in a marketable condition they must order it through their London house.

* * *

DECLINING TRADE.—A striking evidence of the decline of trade is given in the fact that four of the large Anglo-American steamship companies have resolved to despatch their steamers only once a fortnight, instead of once a week as formerly. These companies are the Inman, the White Star, the National, and the Guion. The arrangement is made for three months.

* * *

We have received samples of a new disinfecting powder brought out by Mr. Bollmann Condy, under the title of "Condy's Aromatic Powder." It has a very fragrant smell, resembling aromatic vinegar, and it is certainly a cheap method of diffusing that very agreeable perfume. Dr. Day, of Geelong, has shown how effective these aromatic odours are in the development of peroxide of hydrogen, and on that theory this powder ought to be a very useful disinfectant.

Mr. FRANK WILTON, for some years an active worker in the firm of Messrs. Burgoyne, Burbidges & Co., has commenced business for himself as general and commission merchant, at Milner's Buildings, Finsbury.

* *

The glass wool or spun glass to which attention has more than once been directed in these columns, as being suitable for the filtration of acids and for such-like laboratory purposes, is now offered by Messrs. Edward Rohdo & Co., of 2 Fowler's Buildings, Great Tower Street. It is a beautiful article, lighter than cotton wool and finer than the finest hair. It is said that the ex-Empress Eugenie has had a dress made of it, and it is quite possible that its non-inflammability might render it very useful for theatrical dresses if it could ever be produced at a suitable price.

* *

Mr. GEORGE SALTER, the brush manufacturer, claims to have accomplished the impossible by registering an improvement on his "Perfect Pattern" tooth brushes. The "perfect pattern," however, refers to the shape of the brush, the "improvement" applies to the arrangement of the bristles. The cross rows of bristles are alternately hard and moderately soft, the latter being longer than the unbleached ones; and thus it is claimed the brush is a soft one when applied with but light pressure, while a little increase of power brings the hard bristles into action.

* *

MESSRS. BOURNE & TAYLOR of Castle Street, Holborn, have introduced a neat little stoppered smelling bottle, about the size of a lady's small watch, and of similar shape. Each bottle is filled with sponge saturated with ammonia, and packed into a small box, six of them being included in a box for counter display. Neat and cheap smelling bottles at prices varying from 6d. to 2s. 6d., with a little artistic skill about them, are *desiderata*.



LIQUIDATIONS BY ARRANGEMENT OR COMPOSITION.

Notices of first meetings of creditors have been issued in re the following estates. The dates are those of the "London Gazette" in which the notices first appeared.

- BROWN, THOMAS JOHN EAMES, Llantister, Radnor, late Morlaad, surgeon. April 12.
- CAMINARE, JEAN BAPTISTE, trading as R. H. Watts, 40 Mill Street, Hanley, vendor of patent medicines. April 14.
- COCKAYNE, JAMES, Stapleford, Nottinghamshire, chemist, printer, and ale merchant. April 20.
- COCKBURN, GEORGE, 147 High Street West, Sunderland, chemist. April 13.
- FISHER, FREDERICK, Evelyn Street, Deptford, surgeon. April 20.
- FRAZER, JOHN, WILLIAM, and BENJAMIN, trading as Robert Frazer & Sons, Newcastle, and Jarrow, Durham, manufacturers of soda ash bleaching powder and grease, and dealers in colliery stores. April 17.
- HORNE, BENJAMIN, Windhill, Shipley, grocer and druggist. April 10.
- HUTCHINSON, JOHN CLEMENT, 5 Queen Street, Hall, chemist. April 17.
- KITCHEN, GEORGE SEATON, Carlton Street, Nottingham, chemist. April 9.
- MEACIAM, JAMES EDWIN, 128 Steelhouse Lane, Birmingham, chemist. April 30.
- SHEPHERD EDWARD MATTHEW, Bromley Street, Manchester, manufacturing chemist. April 13.
- WALKER, ALFRED, Waters Green, Macclesfield, druggist. April 26.
- WOLSTENHOLME, JOHN, sen., trading as Wolstenholme, Sons & Co., Knowsley Street, Bury, druggist and drysalter. April 25.

BANKRUPTCY ANNULLED.

- BUTLER, JOD (May 30, 1876), King Street, Darlaston, chemist. April 10.

DIVIDENDS.

- HEALD, BENJAMIN (Liq.), New Stenford, Lincolnshire, chemist. First div. 10s., G. Jay, 8 Bank Street, Lincoln.
- MARTIN, FREDERICK R. (Liq.), Bath, late Torquay, chemist. First and final div. 1s.; M. H. Clark, 1 Bristol Chambers, Bristol.
- MCCULLOCH, FREDERICK, McDONALD, ARCHIBALD A., and HAIR, SIDNEY G., trading as Butler, McCulloch & Co. (Liq.), South Row, Covent Garden, and Southampton Row, High Holborn, seedsmen. First and final div., 1s. 11d.; J. J. Saffery, 14 Old Jewry Chambers.
- WALLICH, GEORGE C. (Liq.), Horne Bay, Kent, doctor of medicine. First and final div. 13d.; W. Maile, Plantation House, Faversham.

SCOTCH SEQUESTRATION.

- SINCLAIR, VEITCH, 48 Albany Street, Edinburgh, physician and surgeon. May 2.

PARTNERSHIPS DISSOLVED.

- BROWN & LAWTON, Kennington Park Road, surgeons.
- DOUGLAS & POLLARD, Portsea, chemical manufacturers.
- GARSDIE & BALL, Southport, chemists.
- HEPWORTH & SAUNDERS, Cleckheaton, manufacturing chemists.
- MACARTHUR & LINCHE, Berwick-upon-Tweed, chemical manufacturers.
- NEBITT & LANSDELL, Gracechurch Street, analysts.
- PARKER, Sen., PARKER, Jun., & Co., Wardour Street, Oxford Street, manufacturing chemists (so far as regards John Adolphus Edington, Eliza Edington, and Katharine Rea).
- PEARCE & ARKINSTALL, Wellington, chemists.
- SINGLETON & WINDER, Birmingham, chemists.
- TENNANT, HEILMAN, & WENSLOK, Manchester, chemists (so far as regards Rodolf Heilman).
- TINSON & STONE, Crew's Hole, chemical manufacturers.
- WATSON & HAWKINS, Newbury, surgeons.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine, moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Provisional Protection for six months has been granted for the following:—

- 818. J. Hargreaves, of Widnes, Lancashire. Improvements in the manufacture of sulphates of soda and potassa, and in the apparatus employed therein. Dated February 28, 1877.
- 874. A. E. Harris, of Mile End Road, London. An improved compound and mode of employing the same for dental and other purposes. Dated March 5, 1877.
- 946. F. Bresson, of Junas, France. Improvements in stoppers for bottles, and in the means of securing them. Dated March 9, 1877.
- 1022. G. Gould, of Linfield, Sussex. An improved liquid composition to be used for embalming, deodorising, and disinfecting purposes. Dated March 14, 1877.
- 1048. J. Scholes, F. Chadwick, and H. McCraith, all of Roehdale, Lancashire. Improvements in bottles, particularly applicable for stoppering, filling, and drawing off the contents of the same, and in stoppers to be used therewith. Dated March 15, 1877.
- 1171. J. Coquillon, of Paris. An improved carurometer for making qualitative analysis of fire-damp in mines and for regulating combustion in industrial furnaces. Dated March 26, 1877.
- 1181. T. F. Lynch, of Aldersgate Street, London. Improvements in the construction of certain parts of the apparatus known as infants' feeding bottles. Dated March 26, 1877.
- 1203. M. Chapman, of Knox Road, Clapham Junction, Surrey. An improved method of and apparatus for preparing and treating flour for invalids, infants' food, and other useful purposes. Dated March 27, 1877.

1218. H. Aylesbury, of Gloucestershire. Improvements in bottles for containing aerated, fermented, and other liquids. Dated March 27, 1877.
1226. G. F. Redfern, of 4 South Street, Finsbury, London. Improvements in refrigerators and refrigerating apparatus. Dated March 28, 1877.
1228. H. Codd, of Grove Lane, Camberwell, Surrey. Improvements in apparatus for filling aerated liquids into bottles which have internal stoppers. Dated March 28, 1877.
1246. W. Young, of Chippens, North Britain. Improvements in the destructive distillation of coal and other bituminous substances, the same being in part applicable to the manufacture of oil and gas. Dated March 29, 1877.
1300. J. C. Martin, of Upper Hill Street, Richmond, Surrey. Improvements in the manufacture of white lead, and apparatus employed therein. Dated April 4, 1877.
1301. F. Y. Henderson, of Glasgow. A new or improved receptacle for containing and imparting or giving off moisture, vapour, or odour. Dated April 4, 1877.
1327. P. A. E. Brémond, of Paris, France. Improvements in medicated-bath apparatus. Dated April 5, 1877.
1336. W. Townsend and S. Casson, both of Dewsbury, Yorkshire. Improvements in bottles and in stoppers for the same. Dated April 5, 1877.
1374. F. Lecourt and A. Guillemare, chemists, of Paris. Improvements in the manufacture of chlorophyll, and in its application for imparting a green colour to preserved vegetables and fruits. Dated April 9, 1877.
1402. R. S. Best, of Goole, Yorkshire, and R. Morris, of Doncaster, Yorkshire. Improvements in the production of sulphates of sodium and potassium. Dated April 10, 1877.
1405. J. Jackson and T. R. Mellor, both of King William Street, London. Improved means and apparatus for evaporating liquids, applicable to the concentration of saccharine or saline solutions, distillation, and such-like operations. Dated April 11, 1877.
1414. J. Eckart, of Munich, Bavaria. Improvements in the method of preserving meat, fish, game, and other like articles of food, and in the apparatus for that purpose. Dated April 11, 1877.
1465. J. Hollway, of Jeffreys Square, London. Certain improvements in the production of silicides of metals, and silicides of metallic alloys, and in the process employed therefor. Dated April 14, 1877.
1474. J. Jeyes, of Plaistow, Essex. An improved process for preserving meat or other decomposable or putrescible substances. Dated April 14, 1877.
1563. E. L. Mayer, of Glasgow. Improvements in treating cupreous solutions for the purpose of separating silver. Dated April 21, 1877.
1565. A. Fryer, of Manchester, and J. B. Alliot, of Radford, Nottinghamshire. Improvements in the methods of and apparatus for dealing with the refuse of towns, and preventing nuisance from the same, part of the method and apparatus being applicable also for general disinfecting purposes. Dated April 21, 1877.
1591. T. Cockerroft, of Birkenhead, Cheshire. Improvements in bottling and corking aerated, gaseous, and other liquids, and in apparatus employed therefor. Dated April 24, 1877.
1619. M. H. Syngé, of Pall Mall, London. Improved apparatus for filtering and purifying sewage. Dated April 25, 1877.
- Letters Patent have been issued for the following :—
3946. A. E. A. Detiaque, of Chateau Thierry, France. Improvements in the means of and machinery for making Italian paste covers for the purpose of enclosing medicinal substances. Dated October 12, 1876.
3994. C. Grüneberg, of London. New or improved means or chemical composition for extinguishing fire. Dated October 16, 1876.
4006. N. B. Downing and J. E. Hughes, of Lambeth Hill, London. Improvements in means or apparatus for use in evaporating alkaline solutions. Dated October 17, 1876.
4189. J. B. Lindsay, of Irvine, North Britain. Improvements in vessels for conveying or storing corrosive liquids. Dated October 30, 1876.
4203. J. Watson, of Seaham, Durham. Improvements in the treatment and utilisation of sewage. Dated October 30, 1876.
4204. G. D. Mearns, of South Shields. Improvements in furnaces for decomposing chlorides of sodium and potassium, manufacturing alkalies, and for other such-like purposes. Dated October 31, 1876.
4222. G. Zanol, of Highbury, London. Improvements relating to the application of magneto-electricity or magnetism, or natural electricity to swimming and other baths for curative and anæsthetic purposes. Dated November 1, 1876.
4362. R. Powell and W. Atkins, both of Liverpool. Improvements in and relating to the manufacture of hyposulphite of soda. Dated November 11, 1876.
4377. J. B. Moore, of Old Kent Road, Surrey. Improvements in machinery or apparatus for expressing and moulding plastic substances for confectionery and other like purposes. Dated November 11, 1876.
4411. T. Kernahan, of Kilmarnock, North Britain. Improvements in the manufacture of lozenges and in the machinery or apparatus employed therefor. Dated November 14, 1876.
4726. L. W. Day, of North Tawton, Devonshire. A new or improved stopper for bottles and other vessels, and in appliances relating thereto. Dated December 7, 1876.
4912. W. V. Wilson, of Cottage Grove, Bow, and H. Cant, of Coborn Street, Bow. Improvements in the manufacture of milline dyes. Dated December 20, 1876.
391. W. Brooke, jun., W. King, and R. Nunns, all of Leeds. Improvements in the manufacture of bottles, and in the construction of tools used in such manufacture, and in stoppers for bottles. Dated January 30, 1877.
398. H. Lange and C. Mohr, of Berlin, Prussia. Improvements in bottles, jars, and other hollow vessels, and in stoppers for the same, and in machinery or apparatus for the manufacture of such stoppers. Dated January 30, 1877.
444. W. Weldon, of Abbey Lodge, Merton, Surrey. Improvements in the manufacture of sulphide of sodium and of sulphide of potassium. Dated February 2nd, 1877.
445. W. Weldon, of Abbey Lodge, Merton, Surrey. Improvements in lining furnaces or other apparatus to be used for manufacturing, and for treating after their manufacture, sulphide of sodium and sulphide of potassium. Dated February 2, 1877.
751. J. Newbam, of Welbeck Street, Cavendish Square, London. Improvements in invalid beds or couches, and appliances therefor. Dated February 23, 1877.
757. J. Howison, of Hurlet, North Britain. Improvements in treating luminous substances, and in apparatus employed therefor, the same being in part applicable for the manufacture of sulphate of iron. Dated February 24, 1877.

Specifications published during the month :—

Postage 1d. each extra.

1876.

2929. H. H. Dohleday. Stoppers for bottles, cans, &c. 6d.
3125. A. Fryer. Treating refuse, &c. 6d.
3232. H. G. Cardoza. Stopping bottles. 8d.
3345. H. M. Whitehead. Preserving meat. 2d.
3383. W. Weldon. Furnaces for the manufacture of sulphides of sodium and potassium, &c. 4d.
3390. W. Weldon. Manufacture of soda and potash, &c. 6d.
3395. G. Lockie. Preparing farinaceous and other food. 2d.
3461. S. Danischewski. Invalid beds and bedsteads. 8d.
3467. C. Baylis. Bottles, &c., for aerated liquids. 2d.
3479. J. Lockey. Evaporating brine. 6d.
3494. J. Harper. Invalid or bed tables. 6d.
3517. E. Remy and J. Denis. Extracting starch from rice, &c. 6d.
3520. H. W. Walker and T. L. Patterson. Treating residual liquids obtained in refining sugar. 6d.
3535. J. Murgottli. Stoppers for bottles and jars. 2d.
3576. W. White. Disinfecting sewage, &c. 4d.
3605. C. M. Jacob. Capsuling or sealing bottles and jars. 2d.
3640. C. E. H. Rogers. Disinfecting clothing, &c. 6d.
3679. W. B. Nulton and W. Symington. Treating paraffin. 2d.
3719. G. D. Mearns. Steam power furnaces for the manufacture of sulphate of soda and potash, &c. 4d.
3734. L. Henry. Substitute for white lead. 4d.
3756. F. Wirth. Treating spent oxide of iron to obtain sulphur and Prussian blue. 4d.
3759. W. and J. Garraway. Refining mineral and other oils. 2d.
3844. W. P. Tilton. Preparing matters for purifying syrups, oils, &c. 4d.
4553. E. Schering. Manufacture of salicylic acid. 8d.

Obituary.

- ATKINS.—April 10, 1877, Mr. Francis Thomas Atkins, pharmaceutical chemist, Lewisham High Road. Aged 87 years.
- AYLESBURY.—March 29, 1877, Mr. William Thomas Aylesbury, pharmaceutical chemist, Edwardes Terrace, Kensington. Aged 31 years.
- BISHOP.—April 2, 1877, Mr. Charles Edward Bishop, chemist and druggist, Oxford Street, London. Aged 23 years.

BOOTH.—April 13, 1877, Mr. Thomas Buckley Booth, pharmaceutical chemist, Eccles. Aged 59 years.

FLOWER.—April 17, 1877, Mr. John Jerrard Flower, chemist and druggist, Fulham Road. Aged 55 years.

LASLETT.—April 9, 1877, Mr. Alfred Kent Laslett, chemist and druggist, Hadleigh. Aged 38 years.

MURPHY.—April 23, 1877, at Old Swan, near Liverpool, Mr. Martin Murphy, Principal of the Liverpool College of Chemistry. Aged 48 years.

NICHOLS.—March 16, 1877, Mr. James Nichols, chemist and druggist, Tideswell. Aged 76 years.

STOCKLES.—April 10, 1877, Mr. Thomas Brand Stockles, chemist and druggist, Newcastle-on-Tyne. Aged 39 years.

SUTCLIFFE.—April 10, 1877, Mr. John Clarkson Sutcliffe, chemist and druggist, Barnsley. Aged 33 years.

SANGER.—April 20, 1877, at his residence, 25 Palace Gardens Terrace, Mr. John Sanger, senior partner in the firm of Sanger & Sons.

Two new 12-gallon copper soda-water cylinders, having disposed of marble machine; will take 12*l.*, cost 20*l.* Lea, Folkestone.

15 parts of Bentley & Trimen's "Medicinal Plants," equal to new, price 3*s.* 6*d.* each part. Apply to "Zoophyte," 1 Tho Prairie, Lowestoft.

Ramsbotham's "Obstetric Surgery and Medicine," 1,844 plates, Ryan's "Philosophy of Marriage," "National Encyclopædia," 13 vols., cloth. What cash offers? 24*l.* 4*s.*

Bell-metal mortar and pestle, weight 97 lbs., cost 8*l.*, as good as new; will exchange for a good working microscope, new or second-hand. D. S. Anderson, Forfar.

Two curved glass cases, one 8 feet, one 6 feet long, cheap; Alcock's plasters, genuine, 8*s.* 6*d.* doz. Harrop, Chemist, Middleton, Manchester.

Six doz. white hampers, 18 inches by 13 inches by 10 inches; 9*s.* 6*d.* doz., carriage paid; sample 1*s.* Nicholson, Lindley, Huddersfield.

Will send *Pharmaceutical Journal* weekly in exchange for *The Chemist and Druggist* monthly. Mathew, Chemist, Saltash.

Du Barry's Food, at 1*s.* 10*d.*; Lipscombe's small filter, 8*s.*; *The Chemist and Druggist* for 1873-4-5-6. B., Mr. Golding's, Minster Street, Reading.

20 choice recipes for horse and cattle medicines, result of long veterinary practice, 5*s.* "Chemist," care of Mr. Filtness, Rotherfield.

Powerful magneto-electric machine, in excellent condition, in strong mahogany case (with extra medical appliances) cost new 63*s.*, price 32*s.* "Alpha," Brooks, 25A Friar Gate, Derby.

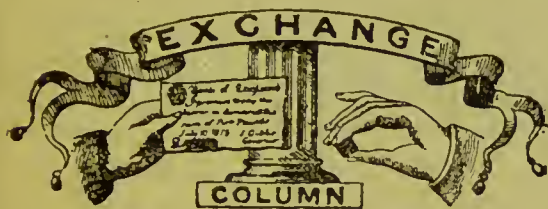
What offers for *Pharmaceutical Journals*, 1869, 1870, 1871 (two missing), 1872, 1873 (3 missing), 1874 (2 missing), 1875, 1876 (1 missing); *The Chemist and Druggist*, 1876, complete. Connor, Alresford, Hants.

For sale or exchange.—A very fine Pindar's rotary pill machine, with extra set of brass rollers; little used; makes two different sized pills; also piping press, with two plates; cost 14*l.* State offers to Dr. Cooper, Bandon, Co. Cork.

Statham's chemical laboratory, with other chemicals and appliances; Bidlake's "Chemistry," 3*l.* 10*s.*; Attfield's "Chemistry," 9*s.* 6*d.*; Lindley's "Botany," 3*s.* 6*d.*; Muter's "Materia Medica," with notes, 5*s.*; Muter's "Chemistry," 12*s.* H. W., 59 Sandgate Road, Folkestone.

32 odd Nos. *Chemist and Druggist*, from 1860 to 1864; 1871 and 1872; 4 vols. complete, 1873, 1874, 1875, 1876; *Pharmaceutical Journal*, 7 odd Nos., 1871 and 1872; 4 vols., 1873, 1874, 1875, 1876, complete, less 2 or 3 Nos. each vol. Offers wanted. J. T. Williams, Chemist, Coleford, Gloucestershire.

Handsome mahogany wall cases, with and without cupboards under, 4 ft. long, 6 ft. long, 6 ft. 6 long, 8 ft. long, 9 and 12 ft. long, as Maw's 198, 199, 200, 202, 204, 205; superior, nearly new, air-tight mahogany plate-glass wall case, with mirror back, plate-glass shelves, with polished edges, on movable bronzed brackets, and plate-glass cupboard under, one end of case with circular plate glass end, 20 ft. long 8 ft. 6 high, price 130*l.*, cost nearly double; 30 mahogany-top counters, every size and description, equal to new; 4 handsome plate-glass window enclosures and screens; 5 nests gold-labelled shop drawers, 2 ft. long, 3 ft. 9 long, 6 ft. long, 12 ft. long; 7 ft. 3 in. long; nest 33 large gold labelled shop drawers, 3 ft. 6 high, 14 in. deep; 2 6-ft. long large mahogany nest shop drawers, 14 in. deep, 2 ft. 10 high; two handsome shop fittings, complete, similar to Maw's figs. 195 and 197, each 10 ft. and 13 ft. long and 8 ft. 10 high; nest counter drawers, 4 ft. 6 long, 2 ft. 8 high, with label drawers, &c. Lloyd Rayner, 333 Kingsland Road, London, N.



TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Large iron mortar; seed mill; will exchange for window carboy. R. C. Mason, Bromsgrove.

Oertling's chemical balance, small size, with several additions, glass shade, &c. 37/40.

Sutton's "Volumetric Analysis," 8*s.*, post free. Piper, Bank Plain, Norwich.

Pharmaceutical Journal, third series, bound half-cloth. For cash; what offers? G. B. S., Portland House, Battersea.

Sheep ointment machine, by Gibson, large size, with pulley and fly-wheel, for steam or hand power, price 10*l.* 10*s.* 23/42.

One of Evans' 4*l.* 4*s.* Materia Medica cabinets, excellent condition, 3*l.* 3*s.*, or best offer. "Chemist," Longfleet, Poole.

A No. 3 Burnett's machine, new last year, without gasometer and generator, price 35*l.* Ruston & Co., Chemists, Exeter.

Six gross 4-oz. short Eau de Cologne bottles, at 8*s.* Metcalfe, Hull.

Twenty-one doz. feeding bottles, earthenware tops; 2*s.* 9*d.* doz., or 52*s.* 6*d.* the lot. H., Post Office, Hereford.

An upright case, as Trehle's 74, cheap, or will exchange for show stand. 9 Church Gate, Loughborough.

Herbarium of plants, useful for minor students, 3*s.* Tully, Tunbridge Wells.

Pharmaceutical Journal from 1874 to 1876, in monthly parts; what offers? "Alpha," Post Office, Castelnaud, Barnes.

For cash or exchange.—A nest of mahogany-fronted drawers, with shelving, glass knobs, and glass labels, complete, new within twelve months, a quantity of blue shop jars, stoppered rounds, carboys, &c., cheap. Cavell, Long Sutton, Lincolnshire.

3 nests mahogany fronted drawers, 15 ft. run, with lockers under, in good condition, labelled, 82 drawers, each, 1s. 9d.; 10 doz. shop bottles; 8 feet mahogany top counter; 28 3-lb. blue jars, 2s.; white ointment jars; stock bottles; pink jars, 1-lb. and $\frac{1}{2}$ -lb.; jujube jars; specie jars, glass, gold covers, from 55s.; pair equal to new carboys, from 5s.; 3 cylinder shape ditto, 4-gall., 7s. 6d. each; fancy specie jars, as Maw's fig. D, glass gold covers, 6s. 6d.; and 14 in. high, 9s.; mortars; scales; small nests of drawers; a 6-ft. plate-glass counter case, as Maw's 105, 7l. 10s.; a 6 ft. 2 in. ditto, as fig. 99; 1 sheet of plate glass, 7l. 10s.; soda-water stands, as 62 and 63, 50s.; desk with case in front, as fig. 21, 65s.; a 4 ft. 8 in. long glass counter case, as fig. 16, 3l. 10s.; sponge case, 92, 5l.; a 5-ft. dispensing screen, as fig. 164, 6l. 10s.; a 3 ft. 6 ditto, 70s.; a 6 ft. 6 in. ditto, very elaborate glass case at each end, looking-glass centre, with marble slab in front of looking-glass, the case surmounted by handsome tablets inside case, looking-glass backs and shifting shelves, 9l.—a bargain; a 9-ft. counter case, bent glass, 7l. 10s.—a good, cheap case; 2 bent plate-glass counter cases, as fig. 101, 9l. the two; a 2 ft. 9 in. ditto ditto, 70s.; a 5 ft., as fig. 96, 4l. 10s.; a 10 ft., as fig. 104, 9l.; tooth brush case, fig. 52, 25s.; a bent plate-glass ditto, 30s.; a 4 ft. 6, as fig. 100, 80s.; a 4 ft. 6 glass case to stand on floor in front of counter, marble top, glass front and sides, 5l.; a dental case, for outside show, very elaborate, 9l.; a 5 ft. glass case, for counter, as fig. 105, 6l. Natali, 213 Old Street, E.C.

One 8 ft. long, one 6 ft. long, bent plate-glass counter cases, as fig. 99 Maw's; one 2 ft. 9 long, 15 in. wide, 11 in. high, bent plate-glass case, with plate-glass shelves and mirror back to open as fig. 8 Maw's; mahogany plate-glass tooth brush case, as 72 Maw's; handsome toilet stand, as fig. 56 Maw's; handsome show stand, with mirror back, as fig. 19 Maw's; 2 ft. 6 long bent glass counter case, as Maw's 16; mahogany upright case, with bent glass case in front, as fig. 43 Maw's; 2 sponge cases, as 90 and 92 Maw's; 2 soda water stands, as 62 and 63 Maw's; upright mahogany case, with desk, as 39 Maw's; mahogany desks, 18 in. 2 ft. 3, 4 ft. 6 long; one 2 ft. long, one 2 ft. 6 long, one 3 ft. long, one 4 ft. long, upright mahogany counter cases, as Maw's 38, 39, 40; handsome mahogany dispensing screen, similar to 136 Treble's, with mirror in centre, and a case at each end, with mirror backs and glass shelves fitted at back, as 132 Treble's; 50 flat mahogany counter cases from 1 ft. to 6 ft. long; 3 ft. 6 long sloping front plate-glass counter case, as Treble's 109; mahogany enclosed chemists' wash-up sink, similar to 168 Treble's; 50 plate-glass shelves with polished edges for window, quantity bronzed window fittings, &c.; 2 shop lamps and brackets, as figs. 5 and 6 Maw's; handsome large pillar lamp and bracket; 20 handsome gold-labelled specie jars, with gilt glass covers, height from 18 to 30 in.; one 14-gall. carboy, with pair handsome specie jars, royal arms, &c.; two 10-gall. pear-shape carboys, cut stoppers; twelve 6 and 8-gall. carboys; fifteen 4, 3, 2, 1-gall. pear-shape carboys; 10 circular show bottles, with handsome cut-glass stoppers, nearly new, 22 in. high; five hundred 4, 8, 20, 32, 40, 60-oz. gold-labelled shop bottles, equal to new; thirty-six 4-lb. blue gold-labelled shop jars; 8 doz. $\frac{1}{2}$ -lb. $\frac{1}{2}$ -lb., 1-lb., 2-lb. gold-labelled shop jars; 3 doz. $\frac{1}{2}$ -lb. and 4-lb. lilac gold-labelled shop jars; 4 doz. black glass 1-gall. stock bottles, with gold labels and japan caps; 3 pair counter and dispensing scales, as figs. 1 and 7 Maw's; three 2-doz. and one 3-doz. 5 and 2-grain pill machines; 20 handsome gold-labelled show jars, as fig. D Maw's, with gilt glass covers; 3 doz. lozenge jars, as figs. 1 and 2 Maw's; 24 glass show jars, as fig. A Maw's; 60 books on chemistry, materia medica, pharmacopœia, surgery, &c.; Southall's materia medica cabinet. Lloyd Rayner, 333 Kingsland Road, London, N.

A splendid musical box, by Nichol Frere, playing twelve tunes, with piano accompaniment, beautifully inlaid on top and sides, cost 20l., almost new; would take in exchange a good microscope and the balance in cash; prepared to make a sacrifice. Apply to R. W. Clark, 9 Walter Street, Jarrow.

"Dictionary Materia Medica and Therapeutics," published 25s. 6d.; Christison's "Dispensatory," published 20s.; Thomson's "London Dispensatory," published 21s.; "Practical Surgery," by Farquerson, published 12s. 6d.; "Squire's Companion," published 8s. 6d.; offers requested. Graves, Chemist, Stanstead, Essex.

Will sell a great bargain, 65 30-oz. wide mouth shop rounds, 60 30-oz. narrow mouth, 52 20-oz. ditto, all gold-labelled, and nearly equal to new; dispensing screen, 5 feet 6 inches long, 2 feet 4 inches high, fitted with two movable shelves, 3 glass doors, and glass tablet, handsomely labelled "Dispensing Department." "Extension," 110 Cheltenham Road, Bristol.

Thomas's "Practice," 2 vols., 5s. 6d.; "Treatise on Worms," by Cobbold, 1s. 6d.; Mayhew's "Illustrated Horse Doctor: Diseases, Treatment and Prescriptions," 10s. 6d., all good as new. Quantity genuine Russia leather portemonnaies, 18s. 6d. and 21s. 6d. dozen, two sizes, retailed at 3s. 6d. to 5s. 6d.; sample free, 1s. 11d. and 2s. 2d. R., 5 Hawkeley Road, Stoke Newington, N.

WANTED.

Three 2-gallon show carboys, 18 inch to top of stopper. B., 25 Queen Street, Ramsgate.

Oil drum, with tap, about 40 gallons; 1-gallon iron mortar. 4/41.

Pair of iron scales, with brass pans, as Maw's fig. 6, to weigh up to 28 lbs. Brown, Chemist, Swaffham.

2 window carboys, about 4 gallons each, specie jar to match. Field, Chemist, Wigan.

Bell-metal mortar and pestle, capacity about two pints; also Liebig's condenser. State size and price. 14/43.

Twenty-five or 50 ozs. Howard's quinine; state lowest price. Metcalfe, Pharmacist, Hull.

A quantity of Apollinaris bottles: say quantity and lowest price. Floyd & Hicks, Bury St. Edmunds.

Small outside dental show case. Haffenden, High Street, Ramsgate.

Good sized iron or bell-metal mortar. Chemist, 26 High Street, Elgin.

B. P. 67; Fownes', Atfield's or Fresenius' "Chemistry," and Mohr's "Pharmacy." B., Mr. Golding's, Minster Street, Reading.

Beasley's "Receipt Book," pillar dispensing scale, *The Chemist and Druggist*, week old. Jones, Chemist, Pennydarran, Glamorganshire.

A dispensing screen, between 6 and 7 feet long. State particulars and lowest price. A. Weeks, Chemist, Stapleton Road, Bristol.

Gray's "Supplement," Beasley's "Receipt Book," also "Formulary," late editions, cheap. Address Williamson, 300 Bute Street, Cardiff.

A French doctor recently sent to press a pamphlet on the causes, &c., of insanity. At the end of the last sheet he wrote as a memorandum to the printer, "Il faut guillemeter les alineas" (put the paragraphs in inverted commas), which the unfortunate printer changed into "Il faut guillotiner les alineas" (mad people should be guillotined); and the doctor's work went forth with this astounding recommendation.



THE declaration of war by Russia against Turkey on the 24th of last month is, of course, a matter of the most serious moment commercially, as well as politically and socially. Terrible as it is, it comes almost as a relief after the long period of anxiety through which all Europe has passed. It is not for us to guess at prospects and probabilities, but the fearfully destructive character of modern warfare is itself almost an assurance of the comparative brevity of any struggle, no matter on what scale.

The immediate effect of a war on the markets is, of course, to call forth the speculators, and their purchases and policy as a rule run up the prices of the staples they touch to a higher figure than the actual situation justifies. Hence follows a reaction, to be succeeded, it may be, by another advance, but generally only on condition that the events which suggest the speculation continue to operate. We make this very elementary remark because we have reason to know that a good many druggists throughout the country are disposed occasionally to make speculative purchases on a small scale of the substances in which they deal. To a great extent this is of course most legitimate and wise; but we desire to point out that those who speculate merely for speculation's sake are very often tempted to follow the market, and consequently, for reasons we have just given, frequently "get in" at the top quotation, to be left high and dry with their purchases to watch the receding wave.

The British export trade of April amounted to 15,296,577*l.*, or only 133,580*l.* less than in the corresponding period last year, but it must not be forgotten that the latter was, as a rule, an unusually small amount, and it may be as well to mention that the average monthly falling off this year has exceeded 930,000*l.* as compared with last, and 2,681,000*l.* as compared with 1875. The tendency towards improvement is, however, encouraging as far as it goes, and it is needless to point out that it is actually greater than the statistics of value only would make it appear, as almost all round it requires a larger bulk of merchandise to reach the same figure than a year ago.

The undermentioned figures show the results of the past four months, and compare them with the same periods of 1875-6:—

	1877	1876	1875
	£	£	£
January	15,946,080	16,654,512	16,986,760
February	14,393,745	16,482,505	17,467,256
March	16,920,930	17,759,101	18,696,223
April	15,296,577	15,430,177	20,221,830
Totals	62,557,332	66,306,295	73,282,069

The chemical export trade of the year up to April 30 is exhibited below:—

	1877	1876	1875	1877	1876	1875
	Cwts.	Cwts.	Cwts.	£	£	£
Alkali	1,583,158	1,505,314	1,501,332	625,852	619,963	701,841
Chemical Products	—	—	—	603,340	592,917	718,424

Although the demand for heavy chemicals appears to be slightly on the increase, prices still manifest a tendency to decline. After the experience of the past three years, buyers may perhaps be excused for declining to accept off-hand makers' continual assurances that they have at last reached the lowest possible prices. Thus, bleaching powder has declined from 6*s.* 9*d.* to 6*s.* 6*d.* during the month; bicarbonate of soda from 11*s.* 9*d.* to 10*s.* 6*d.*; soda crystals from 4*l.* to 3*l.* 17*s.* 6*d.*; cream of tartar from 10*s.* 6*d.* to 9*s.*; and citric acid from 2*s.* 7*d.* to 2*s.* 5*d.*

Saltpetre has naturally advanced considerably, as a consequence of its "villainous" capabilities. Bengal was at 20*s.* 6*d.* a month ago, and great excitement was occasioned when it became clear that war was inevitable. The arrivals this year have been considerably below the average, and much was bought and sold on speculation. The price of 27*s.* was reached about a week ago, but, through a lull in the demand, it has now declined to about 25*s.* British refined is quoted at 29*s.* to 30*s.*, according to packages.

Iodine has kept its price of 10*d.* to 10½*d.*, but there is no special demand.

Magnesia carbonate and calcined have advanced steadily during the past year, and it is probable that another step forward may be taken.

Quicksilver has sold at 7*l.* 2*s.* 6*d.* per bottle, but is now 7*l.* 5*s.*

Bromine and bromides, it is said, are likely to be again higher.

Quinine is now quoted at 16*s.*, and is difficult to buy from makers at that price. There is, however, no doubt a large quantity in second hands, and as there seems a probability of a renewal of the South American supply an early reduction is not improbable. At the latest bark sales the excited competition of recent times was not exhibited, and prices were considerably lowered.

What drugs are likely to be affected by the war will depend of course upon its continuance and on the direction it may take. It is not improbable that opium and scammony, especially the former, may become scarce through some of the crop being destroyed or neglected: this is perhaps more likely, however, to be a subsequent result, as holders in Asia Minor may at this time prefer to transfer their present stocks to London. We hear from New York that speculators there have been buying up the greater part of the stock of opium in anticipation of a rise through the war.

The war has also occasioned a large demand for ipecacuanha, which has thereby caused a considerable advance in price.

Russian aniseed and Russian isinglass have naturally a tendency to advance: we should anticipate also, before long, an upward movement in otto of rose, rhubarb, and other drugs which depend for production or transit on the Turkish or Russian Empires.

Camphor has again been in demand, and has run up 10*s.* within the past fortnight, more than 1,000 packages having changed hands. For Japan 100*s.* is now asked, and for China 92*s.* 6*d.*

Early this month a sudden demand for cantharides set in, arising partly from short supplies of Russian, and also from orders for export. Sales were made beginning at 2*s.* 4*d.*, rising to 3*s.*; afterwards a lull took place, and 18 cases in auction were withdrawn. The demand has since revived, and 3*s.* 2*d.* to 3*s.* 3*d.* has been paid for good hold.

Castor oil is stronger at Calcutta, and a corresponding firmness exists in this market.

It is reported that the catch of cod fish on the Norwegian coasts this year has been unusually plentiful, and it is estimated that the yield of medicinal steam-boiled cod liver oil is 600 tuns, against 200 tuns last year, and the production of yellow or brown oil for currying purposes is 6,000 tuns, against 4,000 tuns.

There has been a very excited market for linseed, rape seed, and hemp seed. All have advanced considerably, though the present quotations are not the highest that have been reached.

Shellac has steadily declined, and this has led to a very unusual pressure to sell, resulting in heavy public sales without reserve, the total quantity offered last Friday reaching 2,410 chests, but, with more demand than expected, nearly the whole was disposed of—viz., 2,200 chests fine orange—though at a further reduction.

OILS.—The outbreak of war has occasioned a considerable advance both in linseed and rape seed oils. There has been much speculation, and the price of the former has gone up within the month from 26*l.* to 31*l.* per tun, but at the latest it has receded somewhat, and is now procurable at 30*l.*; an analogous history pertains to the transactions in rape and cotton seed oils. All are about an average of 2*l.* per tun higher than last month, though present quotations are not the highest. The business in olive has been very quiet, and the tendency is slightly in buyers' favour. Newfoundland cod is ensior. Fine Lagos palm is held firmly at an advance of 10*s.* over last month. Petroleum has drooped a shade or two, and the market has been quiet but steady. Turpentine, though a trifle lower than last month, is now firm.

The following, referring to olive oil, is from a Naples circular dated April 30:—"As the season advances it is evident that the blossoming of the olive trees is scantier than was at first anticipated, and under ordinary circumstances an upward movement would have been probable, but the facts of the late decline not having tempted foreign buyers, our heavy stocks and the threatening state of political affairs are not calculated to encourage speculators, and our market continues in a very depressed and uncertain state."

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1877.		1876.	
	s. d.	s. d.	s. d.	s. d.
ACIDS—				
Acetic	per lb. 0 3½ to	0 0	0 3½ to	0 0
Citric	2 5 ..	0 0	2 7 ..	0 0
Hydrochloric	per cwt. 5 0 ..	7 0	4 0 ..	7 0
Nitric	per lb. 0 4½ ..	0 0	0 5 ..	0 5½
Oxalic	0 5 ..	0 3	0 5 ..	0 0
Sulphuric	0 0½ ..	0 0	0 0½ ..	0 1
Tartaric crystal ..	1 5½ ..	0 0	1 6 ..	0 0
powdered ..	1 5½ ..	0 0	1 6 ..	0 0
ANTIMONY ore	per ton 240 0 ..	300 0	280 0 ..	330 0
crude .. per cwt.	0 0 ..	0 0	40 0 ..	42 0
star	47 0 ..	48 0	63 0 ..	65 0
ARSENIC, lump	26 0 ..	26 6	27 0 ..	23 0
powder	9 3 ..	10 0	12 0 ..	12 3
BRIMSTONE, rough	per ton 115 0 ..	120 0	140 0 ..	0 0
roll .. per cwt.	9 6 ..	10 6	10 0 ..	10 3
flour	11 9 ..	14 0	14 0 ..	0 0
IODINE, dry	per oz. 0 10 ..	0 10½	0 5½ ..	0 0
IVORY BLACK, dry ..	per cwt. 8 6 ..	0 0	8 6 ..	0 0
MAGNESIA, calcined ..	per lb. 1 10 ..	0 0	1 6 ..	0 0
MERCURY	per bottle 145 0 ..	0 0	200 0 ..	0 0
MINIUM, red	per cwt. 23 3 ..	0 0	24 6 ..	25 0
orange ..	35 6 ..	0 0	37 0 ..	0 0
PRECIPITATE, red ..	per lb. 3 9 ..	0 0	4 6 ..	0 0
white ..	3 8 ..	0 0	4 5 ..	0 0
PRUSSIAN BLUE ..	0 0 ..	0 0	0 0 ..	0 0
SALTS—				
Alum	per ton 145 0 ..	150 0	150 0 ..	155 0
powder	157 6 ..	160 0	160 0 ..	165 0
Ammonia :				
Carbonate	per lb. 0 5 ..	0 5½	0 5 ..	0 5½
Hydrochlorate, crude,				
white	per ton 560 0 ..	670 0	700 0 ..	0 0
British (see Sal Am.)				
Sulphate	per ton 375 0 ..	380 0	370 0 ..	380 0
Argol, Cape	per cwt. 73 6 ..	80 0	80 0 ..	87 0
Red	57 0 ..	70 0	70 0 ..	75 0
Oporto, red ..	0 0 ..	0 0	33 6 ..	34 0
Sicily	0 0 ..	0 0	0 0 ..	0 0
Ashes (see Potash and Soda)				
Bleaching powd. ..	per cwt. 6 6 ..	0 0	7 9 ..	0 0
Borax, crude	26 0 ..	40 0	32 0 ..	50 0
British refined ..	40 0 ..	0 0	53 0 ..	0 0
Calomel	per lb. 3 4 ..	0 0	4 0 ..	0 0
Copper :				
Sulphate	per cwt. 21 9 ..	22 0	24 0 ..	24 6
Coppers, green ..	per ton 60 0 ..	65 0	65 0 ..	70 0
Corrosive Sublimate p. lb.	2 9 ..	0 0	3 5 ..	0 0
Cr. Tartar, French, p. cwt.	97 0 ..	0 0	106 0 ..	106 6
brown ..	90 0 ..	0 0	82 6 ..	90 0
Epsom Salts	per cwt. 4 9 ..	5 6	5 3 ..	6 6
Glauber Salts	3 6 ..	4 6	4 6 ..	5 6
Lime :				
Acetate, white, per cwt.	11 0 ..	20 0	11 0 ..	20 0
Magnesia : Carbonate ..	47 6 ..	0 0	42 6 ..	0 0
Potash :				
Bichromate	per lb. 0 4½ ..	0 4½	0 4½ ..	0 5
Carbonate :				
Potashes, Canada, 1st				
sort	per cwt. 24 0 ..	0 0	26 0 ..	26 7
Pearlshashes, Canada, 1st				
sort	per cwt. 37 6 ..	0 0	30 0 ..	0 0
Chlorate	per lb. 0 9 ..	0 9½	0 9½ ..	0 9½
Prussiate	0 11½ ..	1 0	1 0½ ..	0 0
red	2 1 ..	2 2	3 2 ..	3 3
Tartrate (see Argol and Cream of Tartar)				
Potassium :				
Chloride	per cwt. 0 0 ..	0 0	7 0 ..	0 0
Iodide	per lb. 13 6 ..	0 0	8 0 ..	0 0
Quinine :				
Sulphate, British, in				
bottles	per oz. 16 0 ..	0 0	7 2 ..	7 3
Sulphate, French ..	16 0 ..	0 0	6 4 ..	0 0
Sal Acetos	per lb. 0 7½ ..	0 8	0 8 ..	0 8½
Sal Ammoniac, Brit. cwt.	44 0 ..	45 0	44 0 ..	45 0
Saltpetre :				
Bengal, 6 per cent. or				
under	per cwt. 24 6 ..	25 6	18 0 ..	18 6
Bengal, over 6 per cent.				
per cwt. 23 0 ..	24 0	17 6 ..	18 0	
British, refined ..	28 6 ..	30 0	21 9 ..	22 9
Soda Bicarbonate, p. cwt.	10 6 ..	10 9	11 0 ..	0 0
Carbonate :				
Soda Ash	per deg. 0 1½ ..	0 1½	0 1½ ..	0 2
Soda Crystals per ton	77 6 ..	0 0	80 0 ..	82 6
Hyposulphite, per cwt.	0 0 ..	0 0	0 0 ..	0 0
Nitrate	per cwt. 18 0 ..	13 6	11 3 ..	11 6
SUGAR OF LEAD, White cwt.	37 0 ..	38 0	40 0 ..	0 0
SUGAR OF LEAD, Brown, cwt.	27 0 ..	0 0	27 0 ..	0 0
SULPHUR (see Brimstone)				

DRUGS.	1877.		1876.	
	s. d.	s. d.	s. d.	s. d.
VERDIGRIS	per lb. 1 1 to	1 5	1 1 to	1 5
VERMILION, English ..	3 0 ..	0 0	3 2 ..	0 0
China ..	2 9 ..	0 0	0 0 ..	0 0
ALOE, Hepatic	per cwt. 70 0 ..	160 0	60 0 ..	160 0
Socotrine ..	65 0 ..	170 0	65 0 ..	200 0
Cape, good ..	46 0 ..	48 0	86 0 ..	39 0
Inferior	44 0 ..	45 0	22 0 ..	35 0
Barbadoes ..	47 6 ..	191 0	45 0 ..	181 0
AMBERGRISS, grey	oz. 60 0 ..	75 0	55 0 ..	60 0
BALSAM—				
Canada	per lb. 1 1 ..	1 2	1 3 ..	0 0
Capivi	1 9 ..	1 10	2 3 ..	2 6
Peru	5 0 ..	5 3	4 10 ..	5 3
Tolu	7 0 ..	8 0	6 0 ..	6 6
BARKS—				
Canella alba	per cwt. 21 0 ..	28 6	0 0 ..	0 0
Cascarilla	17 0 ..	29 0	19 0 ..	25 0
Peru, crown & grey per lb.	1 8 ..	3 0	1 5 ..	2 11
Calsaya, flat ..	2 6 ..	6 6	2 0 ..	4 5
quill ..	2 6 ..	9 6	2 0 ..	4 5
Carthagenia ..	4 0 ..	6 0	1 5 ..	2 2
Columbian ..	1 6 ..	6 0	1 2 ..	3 3
E. I.	1 6 ..	13 0	2 0 ..	6 0
Pitayo	0 0 ..	0 0	0 7 ..	1 9
Red	2 3 ..	3 8	1 9 ..	4 6
Buchu Leaves	0 3 ..	2 0	0 1 ..	1 1
CAMPHOR, China	per cwt. 90 0 ..	92 6	64 0 ..	72 6
Japan ..	57 6 ..	160 0	64 0 ..	0 0
Refin. Eng. per lb.	1 3 ..	1 4	1 0 ..	1 1
CANTHARIDES	3 2 ..	6 0	3 6 ..	3 9
CHAMOMILE FLOWERS p. cwt.	75 0 ..	250 0	35 0 ..	60 0
CASTOREUM	9 0 ..	30 0	6 0 ..	26 0
DRAGON'S BLOOD, lp. p. cwt.	100 0 ..	260 0	110 0 ..	200 0
FRUITS AND SEEDS (see also Seeds and Spices).				
Anise, China Star per cwt.	92 0 ..	100 0	105 0 ..	112 6
Spanish, &c. ..	30 0 ..	35 0	26 0 ..	40 0
Beans, Tonquin	per lb. 1 9 ..	2 7	1 6 ..	4 0
Cardamoms, Malabar				
good	3 7 ..	4 3	4 0 ..	4 8
inferior ..	0 10 ..	3 6	1 0 ..	3 0
Madras ..	2 0 ..	3 5	2 0 ..	3 6
Ceylon ..	3 6 ..	4 6	5 0 ..	5 6
Cassia Fistula	per cwt. 10 0 ..	32 0	8 0 ..	14 0
Castor Seeds ..	5 0 ..	10 6	5 0 ..	10 6
Cocculus Indicus ..	9 0 ..	11 0	13 0 ..	15 0
Colocynth, apple ..	per lb. 0 0 ..	0 0	0 6 ..	0 11
Crotal Seeds	per cwt. 30 0 ..	0 0	33 0 ..	40 0
Cubebs	27 0 ..	28 0	30 0 ..	0 0
Cumin	11 0 ..	23 0	19 0 ..	23 0
Dividivi	12 0 ..	18 0	15 0 ..	17 0
Feuargreek	8 0 ..	13 0	18 0 ..	22 0
Guinea Grains ..	20 0 ..	0 0	21 0 ..	0 0
Juniper Berries ..	8 0 ..	10 0	10 0 ..	0 0
Nux Vomica ..	8 9 ..	13 3	13 0 ..	15 6
Tamarinds, East India,	10 0 ..	15 6	14 0 ..	16 0
West India ..	10 0 ..	25 6	8 6 ..	29 0
Vanilla, large	per lb. 20 0 ..	30 0	40 0 ..	51 0
inferior ..	12 0 ..	19 0	13 0 ..	28 0
GINGER, Preserved, per lb.	0 5 ..	0 6½	0 5½ ..	0 10
HONEY, Chili	per cwt. 0 0 ..	0 0	35 0 ..	54 0
Jamaica ..	0 0 ..	0 0	44 0 ..	53 0
Australian ..	0 0 ..	0 0	43 0 ..	55 0
IPECACUANHA	per lb. 5 3 ..	5 9	3 6 ..	4 0
ISINGLASS, Brazil ..	2 8 ..	4 9	2 0 ..	4 7
Tongue sort ..	3 3 ..	5 7	2 3 ..	5 2
East India ..	2 0 ..	6 1	0 10 ..	4 10
West India ..	3 10 ..	4 6	3 9 ..	4 3
Russ, long staple	9 0 ..	16 0	9 0 ..	12 6
inferior ..	0 0 ..	0 0	0 0 ..	0 0
Simovia ..	2 2 ..	3 3	8 0 ..	3 6
JALAP, good	0 10 ..	0 11½	0 7 ..	0 9
infer. & stems ..	0 9 ..	0 9½	0 6 ..	0 8½
LEMON JUICE	per degree 0 1 ..	0 1½	0 1½ ..	0 2
LIME JUICE	per gall. 1 3 ..	1 8	1 6 ..	2 0
LIQUORICE, Spanish per cwt.	34 0 ..	39 0	0 0 ..	0 0
Liquorice Root ..	12 0 ..	30 0	16 0 ..	30 0
MANNA, flaky	per lb. 0 0 ..	0 0	5 6 ..	6 0
small	0 0 ..	0 0	1 6 ..	1 9
MUSK, Pod	per oz. 15 6 ..	50 0	15 0 ..	50 0
Grain	35 0 ..	60 0	37 0 ..	61 0
OILS (see also separate list)				
Almond, expressed per lb.	1 4 ..	0 0	1 3 ..	0 0
Castor, 1st pale ..	0 4½ ..	0 4½	0 8½ ..	0 0
second ..	0 3½ ..	0 4½	0 3 ..	0 3½
Cod Liver	per gall. 4 6 ..	7 6	4 0 ..	7 0
Croton	per oz. 0 2½ ..	0 0	0 2½ ..	0 0
Essential Oils :				
Almond	per lb. 20 0 ..	0 0	24 0 ..	25 0
Anise-seed	6 3 ..	6 6	6 9 ..	0 0
Bay	0 0 ..	0 0	65 0 ..	70 0
Bergamot	per lb. 10 0 ..	15 0	10 0 ..	15 0
Cajeput	per bottle 3 0 ..	3 6	2 9 ..	3 0
Caraway	per lb. 9 0 ..	9 3	9 0 ..	9 3
Cassia	3 10 ..	0 0	3 10 ..	4 0
Cinnamon,	per oz. 2 6 ..	6 6	2 6 ..	6 6
Cinnamon-leaf ..	0 2½ ..	0 3	0 2 ..	0 3
Citronelle	0 2 ..	0 0	0 1½ ..	0 2
Clove	per lb. 8 9 ..	0 0	9 3 ..	9 6
Juniper	0 0 ..	0 0	0 0 ..	0 0
Lavender	per lb. 1 8 ..	0 0	1 8 ..	7 0
Leuon	7 0 ..	9 6	7 0 ..	9 6
Lemongrass	per oz. 0 2½ ..	0 2½	0 2½ ..	0 2

1877.		1878.	
s. d.	s. d.	s. d.	s. d.
Essential Oils, continued:—			
Neroli	3 0	6 6	3 0
Nutmeg	0 6½	0 7	0 7
Orange.....per lb.	6 0	9 0	6 0
Oil of Roses.....per oz.	13 0	23 0	13 0
Patchouli	2 0	3 6	2 0
Peppermint:			
American.....per lb.	13 0	14 3	16 0
English	34 0	35 0	32 0
Rosemary	2 0	2 6	2 0
Sassafras	2 3	2 6	0 0
Spearmint	12 0	15 0	14 0
Thyme.....	0 0	0 0	0 0
Mace, expressed.....per oz.	0 6	0 10	0 6
OPIMUM, Turkey.....per lb.	21 0	23 0	19 6
inferior.....	10 0	18 0	13 0
QUASSIA (bitter wood) per ton	100 0	140 0	100 0
RHUBARB, China, good and fine			
Good, mid. to ord.	0 8	1 4	0 9
Dutch Trimmed.....	0 0	0 0	0 0
ROOTS—Calumba.....percwt.			
China	32 0	32 6	25 0
Chiretta	30 0	32 0	19 0
Galangal.....	0 2½	0 3	0 3½
Gentian.....	24 0	26 0	19 0
Hellebore.....	23 0	24 0	23 0
Orris.....	0 0	0 0	0 0
Pellitory.....	26 0	75 0	26 0
Pink.....per lb.	70 0	76 0	0 0
Rhatany.....	0 0	0 0	0 0
Seneca.....	0 4	1 0	0 4
Snake.....	3 6	3 9	4 0
SAFFRON, Spanish.....	0 6	0 6½	0 7
SALEP.....percwt.	33 0	37 0	31 0
SARSAPARILLA, Lima per lb.	0 0	0 0	0 0
Guayaquil.....	0 5	1 7	0 0
Honduras.....	1 0	2 6	0 0
Jamaica.....	1 1	1 6	1 3
SASSAFRAS.....percwt.	2 6	3 2	2 0
SCAMMONY, Virgin.....per lb.	0 0	0 0	0 0
second & ordinary.....	24 0	30 0	30 0
SENNA, Bombay.....	6 0	22 0	8 0
Tinnivelly.....	0 1	0 4	0 1
Alexandria.....	0 2½	2 0	0 2
SPERMACETI, refined.....	0 5	2 5	0 5
American.....	1 4	0 0	1 6
SQUILLS.....	1 0	1 2	1 2
0 1½	0 3½	0 3	0 4
GUMS.			
AMMONIACI drop.....per cwt.	£ 2 2	£ 2 10	£ 1 10
lump.....	0 15	1 14	1 0
ANIMI, fine washed.....	11 0	12 15	10 0
bold scraped.....	9 15	10 15	8 15
sorts.....	6 15	9 10	6 0
dark.....	4 0	6 19	3 5
ARABIC, E.I., fine			
pale picked.....	2 15	3 0	3 5
srts., md. to fin.....	2 3	2 14	1 8
garblings.....	1 5	2 0	1 2
TURKEY, pick. gd. to fin.....	6 0	9 15	6 0
second & Inf.....	3 0	5 15	2 10
in sorts.....	2 0	3 5	1 10
Gedda.....	1 12	1 19	1 2
BARBARY, white.....	0 0	0 0	0 0
brown.....	1 15	1 16	1 9
AUSTRALIAN.....	2 10	3 0	1 17
ASSAFOETIDA, cm. to fin.....	0 18	2 11	0 18
BENJAMIN, 1st & 2nd.....	27 0	45 0	8 0
Sumatra 1st & 2nd.....	6 5	12 0	7 10
3rd.....	3 10	5 5	3 10
COPAL, Angola red.....	6 0	6 15	6 0
Benguela.....	4 0	5 0	4 0
Sicra Leone, per lb.....	0 5	0 11	0 7½
Manilla.....per cwt.	15 0	27 0	15 0
DAMMAR, pale.....	66 0	75 0	57 0
Singapore.....	65 0	74 0	57 0
EUPHORBUM.....	9 0	15 0	12 0
GALBANUM.....per lb.	0 5	1 3	1 0
GAMBAGE, pkd. pipe per cwt.	200 0	240 0	180 0
GUALACUM.....per lb.	1 3	3 0	0 6
KINO.....per cwt.	40 0	50 0	50 0
KOWAL, rough.....	29 0	45 0	22 0
scraped sorts.....	47 0	60 0	50 0
MASTIC, picked.....per lb.	4 0	5 0	4 0
MYRRH, gd. & fine.....per cwt.	155 0	220 0	172 6
ord. to fair.....	90 0	150 0	61 0
OLIBANUM, p. drop.....	53 0	53 0	53 0
amber & ylw.....	50 0	55 0	45 0
garblings.....	20 0	30 0	22 0
SENEGAL.....	65 0	67 6	59 0
SAFEDARAC.....	35 0	110 0	85 0
SEKELLAC, Orange.....	72 0	92 0	95 0
Liver.....	65 0	75 0	99 0
THUS.....	20 0	21 6	20 0
TRACACANTH, leaf.....	240 0	400 0	240 0
in sorts.....	25 0	175 0	25 0
OILS.			
SEAL, pale.....per tun	35 0	0 0	34 10
yellow to tinged.....	32 0	34 10	30 0
brown.....	31 0	31 10	29 0
SPERM.....	83 0	0 0	90 0
BODY.....	0 0	0 0	0 0
GOD.....	38 0	39 0	43 10

1877.		1878.	
£ s.	£ s.	£ s.	£ s.
Oils, continued:—			
WHALE, South Sea, pale, per tun			
yellow.....	35 10	35 0	31 10
brown.....	33 0	0 0	32 0
East India, Fish.....	25 0	26 0	24 10
OLIVE, Gallpoll.....per ton	48 0	0 0	45 0
Gloja.....	43 0	0 0	0 0
Lavant.....	45 19	46 0	0 0
Mogador.....	0 0	0 0	0 0
Spanish.....	0 0	0 0	0 0
Sicily.....	48 0	0 0	0 0
COCOANUT, Cochla.....	41 10	42 0	40 0
Ceylon.....	37 10	0 0	38 0
Sydney.....	32 0	37 10	31 0
GROUND NUT AND GINOLELLY:			
Bombay.....	0 0	0 0	0 0
Madras.....	45 0	0 0	34 0
PALM, fine.....	38 10	39 0	37 0
LINSEED.....	29 15	30 0	22 0
RAPESEED, English, pale.....	38 10	0 0	34 15
brown.....	36 10	0 0	32 10
Foreign, pale.....	39 0	0 0	36 0
brown.....	0 0	0 0	0 0
COTTONSEED.....	32 0	0 0	23 0
LARD.....	55 0	0 0	45 0
TALLOW.....	30 0	54 0	30 0
TURPENTINE, American, cks.			
French.....	23 3	23 6	22 3
PETROLEUM, Crude.....	0 0	0 0	0 0
refined, per gall.....	0 11½	0 0	0 10½
Spirit.....	0 9½	0 0	0 8
SEEDS.			
CANARY.....per qr.	70 0	80 0	110 0
CARAWAY, English per cwt.	0 0	0 0	0 0
German, &c.....	0 0	0 0	0 0
CORIANDER.....	0 0	0 0	15 0
HEMP.....per qr.	33 3	35 0	40 0
LINSEED, English per qr.....	65 0	69 0	0 0
Black Sea & Azof.....	0 0	0 0	0 0
Calcutta.....	59 0	60 0	47 3
Bombay.....	51 0	0 0	49 0
St. Petersburg.....	56 0	57 6	0 0
Mustard, brown.....per bshl.	12 0	15 0	0 0
white.....	13 0	16 0	10 0
POPPY, East India, per qr.	54 0	0 0	46 0
SPICES.			
CASSIA LIGNEA.....per cwt.	52 0	65 0	48 0
Vera.....	22 0	45 0	22 0
Buds.....	73 0	76 0	75 0
CINNAMON, Ceylon:			
1st quality.....per lb.	1 9	3 7	2 3
2nd do.....	1 6	2 8	1 10
3rd do.....	1 2	2 3	1 7
Tellicherry.....	0 0	0 0	0 0
CLOVES, Penang.....	2 0	2 7	1 10
Amboyna.....	1 4	1 7	1 4
Zanzibar.....	1 0	1 1½	1 2
GINGER, Jam., fine per cwt.	91 0	202 6	100 0
Ord. to good.....	52 0	90 0	58 0
African.....	23 0	39 0	35 6
Bengal.....	23 0	0 0	35 0
Malabar.....	30 0	30 6	0 0
Cochin.....	50 0	115 0	53 0
PEPPER, Bk., Malabar, per lb.	0 4½	0 5½	0 4½
Singapore.....	0 4	0 0	0 4
White Tellicherry.....	0 10	1 4	0 10
Cayenne.....	2 0	3 0	2 0
MAICE, 1st quality.....	0 11	2 0	0 11
2nd and inferior.....	0 11	2 0	0 11
NUTMEGS, 73 to 60 to lb.	3 8	4 6	3 4
90 to 80.....	3 0	3 6	2 11
132 to 95.....	2 2	3 0	2 6
PIMENTA.....	0 4½	0 4½	0 3½
VARIOUS PRODUCTS.			
COCHINEAL—			
Honduras, black.....per lb.	2 6	2 9	1 9
silver.....	2 4	2 6	1 7
pasty.....	2 3	0 0	1 6
Mexican, black.....	2 5	2 8	1 8
silver.....	2 3	2 4	1 7
Tencriffe, black.....	2 6	3 3	1 8
silver.....	2 5	2 7	1 7
SOAP, Castle.....per cwt.	25 0	33 0	33 0
SOY, China....., gal.	1 7	1 8	1 11
SPONGE, Turk. fin. pkd pr lb.	0 0	0 0	12 0
Fair to good.....	0 0	0 0	4 0
Ordinary.....	0 0	0 0	1 0
Bahama.....	0 0	0 0	0 6
TERRA JAPONICA—			
Gambier.....per cwt.	20 6	20 9	25 0
Free cubes.....	34 0	36 0	34 0
Cutch.....	26 6	27 6	25 6
WOOD, DYE, Bar.....per ton	£ 5 0	£ 3 10	£ 3 0
Brazil.....	0 0	0 0	0 0
Cum.....	13 0	35 0	0 0
Fustic, Cuba.....	8 10	9 0	8 10
Jamaica.....	5 10	6 0	6 5
Loowood, Campeachy.....	9 0	9 10	9 0
Honduras.....	6 10	6 15	7 0
St. Domingo.....	5 10	6 5	5 10
Jamaica.....	5 10	6 5	6 0
LIMA, first pile.....	8 15	9 5	9 10
RED SANDERS.....	6 5	6 10	7 0



In reference to an article quoted from the *Student's Journal* in your last, "Inquirer" would like to ask a few questions. 1. Must chemists refrain from administering antidotes, from all attempts at resuscitation in wounds, hangings, and drownings? 2. May chemists recommend disinfection or isolation? 3. Has a chemist the right of prosecuting those who obtain medicine under false pretences, or who may conspire to compel him to commit a breach of the law?

G. N. M. writes to us with regard to the dispensing of prescriptions containing chloral. He thinks no chemist ought to make up such medicine a second time unless countersigned and re-dated by a local or other known practitioner, and this should even be carried out to the dispensing of each bottle required. He also remarks that there is no provision in the Act of Parliament to prevent poison being supplied to children. With reference to his suggestion that a document should be drawn up showing exactly what is to be done in regard to the sale of poisons, we may mention that such a paper was printed some years ago by the Pharmaceutical Council and circulated gratuitously to the trade through this and their own journal. G. N. M. also directs our attention to some recent blunders in the *Daily Telegraph* on the subject of the sale of poisons. Accuracy is not a prominent feature in the *Telegraph* articles.

Powder for Producing Ozone.—The following form was proposed in an American medical journal:—Take equal parts of peroxide of manganese permanganate of potassium and oxalic acid. When this mixture is placed in contact with water ozone is quickly generated. For a room of medium size, two teaspoonfuls of this powder placed in a dish and occasionally diluted with water would be sufficient. The ozone develops itself; it disinfects the surrounding air, without producing cough. Respecting this suggestion, Mr. J. L. Davis, in the *American Journal of Pharmacy*, September, 1876, wrote to warn the compounder that the powder requires to be mixed with extreme caution. He mentioned an apothecary who inadvertently used a mortar, with the result of an immediate explosion. Both the form and the caution were copied by us in a note in our issue of November, 1876. Now Mr. A. J. Owen, of Geelong (Victoria) writes us thus:—"I find that these substances may be perfectly mixed without any danger, as follows:—Rub together the oxalic acid and the manganese, and add the permanganate. In this way they may be mixed briskly without any risk of explosion."

Cheap Collodion.—A cheap way to obtain collodion is to steep white printing or machine paper in concentrated sulphuric acid from five to eight minutes; wash, and dry it. It is now stiff as parchment, and should be cut small and digested in ether.

A West End Chemist would call the attention of assistants to the fact that certain pharmaceutical chemists and others are selling 1s. 1½d. patent medicines at 10½d., 2s. 9d. ditto at 2s. 3d., and so on. He thinks if any respectable young men who hope one day to be in business for themselves, were to note this and mentally resolve never to offer their services to such persons, and further, if assistants now engaged in such establishments should feel it incumbent on themselves to leave places where business is so conducted, they would have no difficulty in finding situations elsewhere.

Sigma (South Shields) writes us a long letter apparently for publication, and sends us an enclosure a second "donation" of 10s., which he does not do. He gives us no name other than the one we have quoted.

Furniture Cream.—We have already given details of the proceedings necessary for registering a trade mark. You can obtain the necessary information from one or other of the following sources: *THE CHEMIST AND DRUGGIST*, February 1876, "Chemists' and Druggists' Diary," 1877, "Pharmaceutical Calendar," 1877, or the regulations published at the Trade Marks Registration Office, Chancery Lane, price 1s.

Chemists.—It is illegal for any person other than a registered pharmaceutical chemist to "assume or use the title pharmaceutical chemist or pharmacist in any part of Great Britain, or to assume, use or exhibit any name, title, or sign implying that he is registered under this Act or that he is a member of the said society" (extract from section 12 of the Pharmacy Act of 1852). You are, however, free to use the title "analytical and dispensing chemist" (if you are on the register). The first of these adjectives does not appear to imply much in these latter days.

A Pharmaceutical Chemist writes to us on the subject of the Journal of the Pharmaceutical Society refusing insertion to letters in support of counter-prescribing. The matter is one which, it seems to us, should be settled between the members and the council of that society. We are quite willing to arbitrate when both sides seek our assistance. The policy of the council, however, in this matter can hardly be in accord with the views of the majority of its members.

J. B. (Newent).—You would do well to put yourself through a course of postal instruction, particulars of which you will find advertised in this journal. For the rest study the Pharmacopœia carefully, and compare the substances around you with the descriptions given there and in other works on materia medica.

London.—The "bill" certainly is not liable to patent medicine duty. The medicine, we think, would be, according to law, if the Inland Revenue officers chose to prosecute.

Lac.—Please send us your name and address.

Brutus.—A candidate for the Minor must have attained the age of 21 years.

Logwood Ink.—Böttger gives the following formula:—20 parts of extract of logwood are dissolved in 250 parts of water; 8 parts of crystallised carbonate of soda and 30 parts of glycerine of density 1.25 are added; and lastly, 1 part of yellow chromate of potassium and 8 parts of gum arabic, reduced to a powder and dissolved in several parts of water. This ink does not attack pens, does not mould, and is very black. It is, however, a little liable to decomposition on exposure to the air. The addition of carbonate of soda, as in the formula given above, is found to check this tendency.

With alum instead of chrome a purple shaded ink, turning to black, is produced. The objection to this ink is, that being necessarily acid, it attacks steel pens. This is the best formula:—20 parts, by weight, of extract of logwood are dissolved in 200 parts of water, and the solution clarified by subsidence and decantation. A yellowish-brown liquid is thus obtained. In another vessel, 10 parts of ammonia alum are dissolved in 20 parts of boiling water; the two solutions are mixed, there being also added ½ part of sulphuric acid, and finally 1½ parts of sulphate of copper. The ink should be exposed to the air for a few days to give a good colour, after which it should be stored in well corked bottles.

Vegetable Leather from Sea Weed.—Sheets of carded wadding are placed on hot polished metal plates, and coated with a concentrated decoction of sea weed, lichen, pearl moss, or other mucilaginous vegetation. The sheet is then dried quickly, thus giving to the surface applied to the metal plate a gloss like that of leather. Rolling and compressing between heated cylinders follows, and then a coating of boiled linseed oil is applied. Afterwards a thin coating of vegetable wax is given, and another rolling to soften the sheet finishes its preparation, when it is ready for bronzing, or any other treatment.—*American Druggists' Circular*.

THE PHARMACEUTICAL ELECTION. [FROM AN OUTSIDER'S POINT OF VIEW.]—Royal Hotel, Colney Hatch, May 1, 1877. DEAR SIR,—Below you will find our opinions on the forthcoming election. Your old friend, M. P. S. To the Editor of *THE CHEMIST AND DRUGGIST*. P.S.—We are fitting up a padded room for the meetings of the Society of Public Analysts.

Wnk up, walk up, my noble friends, and see the gallant show,
Here's three-and-twenty candidates nll standing in a row,
They're got together nnyhow, but we'll trot them round a bit,
And you'll then be able to select the fourteen least unfit.
John Henry, perhaps we wrong you, but indeed we cannot see
That you've done all you should have done for your neighbour Shepperley;
You failed to stir the Council up (an awkward job, no doubt),
So Nottingham now, Nottin' anger, but in sorrow, turns you out.
Heury of Edinburgh steps forth again onr votes to claim,
Again the P. S. of G. B. tells him to "hide at home;"
And is there one, except himself, will weep if Samuel's store
Of classical quotations be in Bloomsbury heard no more.
Dover still sends A. Bottle, and pharmacentists ain't
The men to turn back any such till it is fairly drained.
Mancasteria's sweet William Brown has been but once this year,
Who keeps away won't do much harm, so choose him without fear.
But now ye pharmaceutic souls who only seek repose,
In Bulgin, Churchill, Cubley, see your most alarming foes;
They come to plant right in your midst the banner of the trade,
That pirate flag which Barelyny and his friends at Birmingham displayed.
Charles Cracknell has been in before, that's his exclusive claim,
And Denne of Clapham Common trusts the magic of his name.
Gostliug's the country druggist's friend (his ancestors saved Rome);
And Greenish isn't greenish when he keeps himself at home;
But his business at the Council seems to us to be
To see to British interests, not Dutch nor Portuguese.
And James B. Gnyer won't B. Gnyer us into such a fix
As voting for a man who don't declare his politics;
But we'll raise a loud and hearty cheer for Hmmpson and his cause,
The rights of women and a curse on Civil Service Stores!
Cornelius Hanbury comes in, his name's a guarantee,
And John George Frederick Richardson, there's nunny a worse than he.
Infelix Felix, would'st thou then escape thy doom severe.
'Tis written on our porticoes, "No analyst enters here."
Robbins don't mind being in the cold, but Shaw a-shinw-redly,
Won't come too shaw-t of votes to risk his work of shinw-rity.
Stacey stays in, but Vizer's hope is but a bright'n' gone,
A Vizer and a sadder man he'll wake on Friday morn.
To Obbletain John, who munny years has rendered service true,
Our cordial gratitude and votes are now most justly due.
George Sampson Valentine comes last on the alphabetic roll,
But his postal victories can't ensure the top end of the poll.