







## UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

## BLACKBURN.

A meeting of the Chemists and Druggists of Blackburn was held at the Old Bull Hotel, on the 10th of May, to afford the chemists and druggists of that important town an opportunity to express their views upon the Amended Pharmacy Bill.

Mr. BUOTT, the Secretary of the United Society, congratulated the Meeting upon the good understanding now established between the United Society and the Pharmaceutical Society, and the prospect of the union of the trade. He clearly explained the object and provisions of the Bill in a short speech, and urged upon all present the necessity of combined action to secure the success of the Bill in Parliament.

Mr. THOMAS CRITCHLEY then moved, and Mr. DANIEL YATES seconded the following resolution:—"That the chemists and druggists of Blackburn approve of the Amended Pharmacy Bill as calculated to promote the union and prosperity of the trade, and pledge themselves, by all the means in their power, to aid in getting it passed by the legislature."

Mr. JAMES GILLIBRAND moved, and Mr. W. BUTTERFIELD seconded the resolution: "That this meeting recognizes the important service rendered by the United Society in bringing the incorporation of chemists and druggists to a practical issue, and will support that Society in its efforts to promote and protect the interests of the trade."

These resolutions having been passed unanimously, the gentlemen present expressed their grateful acknowledgement of Mr. Buott's visit, and regretted it had not been sooner, as such visits were calculated to bring the chemists and druggists of the town into more friendly relationship with one another. It was also understood that a deputation of Blackburn chemists would attend the festival of the United Society to be held at Manchester, on the 26th and 27th of June next.

J. R. PARKINSON, *Hon. Sec.*

## BURNLEY.

A MEETING of the chemists and druggists of Burnley and district was held at the Bull Hotel, Burnley, on Thursday evening, May 16th, Mr. George Stephenson in the chair. The object of the meeting was to consider the "Amended Pharmacy Bill" about to be introduced into Parliament. Mr. Buott, Secretary of the United Society, was present, and in an interesting speech of some length, explained the object of the Bill, and showed the benefits which might and which might not be expected from it. At the close of the address several questions were asked, and satisfactorily answered; the meeting expressed itself satisfied with the measure, rejoicing in the good understanding now existing between the two societies representing the trade, and hoped that the great aim of both the Pharmaceutical and United Societies may soon be realized, in the incorporation of the trade in one united whole.

The following resolutions were carried unanimously.

Proposed by Mr. GREENWOOD, seconded by Mr. HIRST:—

"That the chemists and druggists of Burnley approve of the Amended Pharmacy Bill, as calculated to promote the union and prosperity of the trade, and pledge themselves to use all the means in their power to get it passed by the legislature."

Proposed by Mr. HAY, of Nelson, seconded by Mr. FLETCHER:—

"That recognizing the important services rendered by the United Society, in bringing the incorporation of chemists and druggists to a practical issue, this meeting promises to support it in its efforts to promote and protect the interests of the trade."

Proposed by Mr. HIRST, seconded by Mr. FLETCHER:—

"That Burnley constitute itself an association of the United Society, and that Mr. Geo. Stephenson be the chairman, and Mr. Crawshaw the secretary for the current year."

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Proposed by Mr. GREENWOOD, seconded by Mr. HIRST:—

"That a deputation be sent from this meeting to the annual meeting of the United Society at Manchester, on June 27th, consisting of Mr. Stephenson, Mr. Hay, and Mr. Crawshaw."

Proposed by Mr. CRAWSHAW, seconded by Mr. HIRST:—

"That the most hearty thanks of this meeting be given to Mr. BUOTT for his instructive address, and also for his past exertions for the benefit of the trade."

Proposed by Mr. BUOTT, seconded by Mr. HAY:—

"That the best thanks of this meeting be given to Mr. Stephenson for his able conduct in the chair."

## DEWSBURY.

The chemists and druggists of Dewsbury and the neighbourhood were invited to meet Mr. Buott at the Man and Saddle Hotel, in that town, on Thursday, the 23rd of May, to hear his exposition of the proposed Pharmacy Bill, with a narrative of the circumstances which lead to the conference between the two Societies of the trade.

WILLIAM CONNON, Esq., M.D., who presided, expressed his gratification on learning that a measure had been mutually adopted, which was calculated to raise the trade from the degrading condition to which it had been reduced, by its most difficult and responsible duties being assumed by men utterly ignorant of the nature, quality, and doses of the dangerous drugs they compounded and sold. He could assure them that their elevation would excite no jealousy in medical men, but rather strengthen the confidence and friendly relation between the two branches of the profession. He had much pleasure in requesting Mr. Buott to make his statement to the meeting.

Mr. BUOTT proceeded to explain the clauses of the Bill, and forcibly urged the meeting to take such steps as were necessary to secure its enactment.

Mr. HUNTER then moved the following resolution, which, being seconded by Mr. FAWCETT, was unanimously adopted:

"That the chemists and druggists of Dewsbury rejoice in the good understanding now established between the Executive of the United Society and the Pharmaceutical Council, for the union of the trade; and specially thank the Executive Committee for their persevering and successful efforts to secure that desirable object."

Mr. PEELE moved, and Mr. PARRINGTON seconded the resolution:

"That Messrs. Hunter, Fawcett, and Croke be nominated a deputation to the annual meeting at Manchester, to be held on the 27th June next."

This resolution being also passed, Mr. Buott was warmly thanked for his visit to Dewsbury, and for his explanatory address. The gentlemen present expressed their opinion that such reunions were much calculated to bring chemists and druggists into friendly relation with one another, and their cordial vote of thanks to Dr. Connon for his kindness and ability in the chair, terminated the proceedings of a very pleasant meeting.

JAMES HUNTER, *Hon. Sec.*

## HALIFAX.

A meeting of the chemists and druggists of Halifax was held at the White Swan Hotel, on the 21st of May, to consider the provisions of a Bill to amend the Pharmacy Act, and to appoint delegates to the annual meeting at Manchester. Mr. J. Pollard in the chair.

Mr. BUOTT attended the meeting, and explained the various clauses of the Bill. He drew attention to the attitude of the two Societies during the closing month of the past year, when the antagonism was so great that it almost seemed hopeless to form a common union between them. He took credit to himself, acting on behalf of the Council of the United Society, in bridging the gulf that lay between them, and drawing the Societies into a closer bond of union. When the words "what hinders?" were asked by many leading men in the trade, he was delighted that his mission of peace to the country districts was likely to be crowned with success.

Several questions were asked; such as the amount of fees for registering the clause relating to widows, and would the Bill prevent grocers selling drugs, which were satisfactorily answered by Mr. Buott.



The following resolutions were unanimously agreed to.

Moved by Mr. POLLARD, seconded by Mr. FARR:—

“That the chemists and druggists of Halifax are gratified to learn that the Executives of the United Society and the Pharmaceutical Society have arrived at a mutual understanding for an amended Pharmacy Bill, which shall bring the trade into a common union; and they consider that the trade is under much obligation to the United Society for their unwearied efforts to bring about a result so desirable.”

Moved by Mr. BRIERLY, seconded by Mr. BREARLY:—

“That Messrs. Pollard, Brook, and Farr be appointed delegates to the annual meeting of the United Society, to take place at Manchester, on the 27th June next.”

Votes of thanks to Mr. Buott, and to the chairman, concluded the business of the evening.

#### LEEDS.

A meeting of the chemists and druggists of Leeds took place at the White Horse Hotel on Friday evening the 24th inst.

The immediate object of the meeting was to consider the proposed Pharmacy Bill, as happily agreed upon between the Pharmaceutical Council and the Executive Committee of the United Society of Chemists and Druggists.

There were present Mr. Stead (the chairman), also Messrs. Reynolds, Hirst, Beedle, Horsfield, and other gentlemen.

Mr. SPREAD, on opening the business of the meeting, said he had always felt that the union of the trade in one body was the most practical means by which the evils afflicting the trade could be remedied, and chemists and druggists elevated and benefitted. It was very gratifying to him to learn that the two societies had come to a good understanding for the accomplishment of this desirable object, and he should now call upon Mr. Buott, whom he was glad to see there, to explain the provisions of the contemplated Bill, and to state any matter of interest in relation to it.

Mr. BUOTT then addressed the meeting as follows:—

MR. CHAIRMAN AND GENTLEMEN: Our inquiry is—what does the proposed Pharmacy Bill profess, and what is it likely to perform? The object of the Bill, as stated in the preamble, is to secure the safety of the public by providing competent chemists and druggists. But this simple proposal involves an administrative institution with certain powers, privileges, and duties; therefore, the practical question arises—what are the powers, privileges, and duties provided by the clauses of the Bill? Before, however, we enter upon such inquiry, it is desirable to remove several misapprehensions.

1. The Bill now under consideration is not the Pharmacy Bill of 1864 and 1865, so strenuously opposed by the United Society.

2. This Bill does not interfere with any man in his business, except, as stated in the 24th clause, that he shall be required to affix a label with his name and address to all poisons he may sell.

3. If a chemist and druggist's name be put upon the Register, that does not make him a member of the Pharmaceutical Society.

4. If a registered chemist and druggist be elected a member of the Pharmaceutical Society, that does not constitute him a pharmaceutical chemist.

5. The fact of a person passing his examination does not constitute him a member of the Pharmaceutical Society.

6. This Bill does not give to any body a monopoly in the sale of drugs.

7. It does not exempt all assistants and apprentices from examination.

Having stated what the Bill will not do, I will now inform you what the Bill proposes to do.

1. It provides a Register for all existing chemists and druggists and all assistants twenty-one years of age, all apprentices who may have served two years at the time of the passing of the Act, and all persons who may hereafter become chemists and druggists.

2. It exempts all such registered chemists and druggists and assistants from jury service.

3. It saves the rights of wholesale dealers, and dealers in photographic chemicals.

4. It extends the benefit of the Benevolent Fund to all registered chemists and druggists.

5. It gives the right to all registered chemists and druggists to be elected members of the Pharmaceutical Society.

6. It gives the right to all members of the Pharmaceutical Society to elect and to be nominated for election upon the Council.

7. It places the government of the Institution in the hands of 21 members, 14 of whom must be pharmaceutical chemists; 7 of them may be chemists and druggists; and 14 out of the 21 members must be resident in or near London.

8. It secures to the widow of a deceased chemist and druggist an interest in her deceased husband's business.

9. Whilst protecting the public against incompetent druggists, it will elevate the trade, advance its material interests, unite chemists and druggists in a common brotherhood, and provide a college where the student in pharmacy may acquire the knowledge requisite for a successful business, and where talent may meet with encouragement and achieve distinction.

I come here, Mr. Chairman, not to criticise this Bill, but to explain its provisions; and I wish to guard this meeting against the assumption

that it is for the special benefit of the Pharmaceutical Society. It is not for the benefit of any society whatever. Parliament would not sanction such a Bill. But it is for the benefit of the public, and is a compromise between the incorporated and unincorporated chemists and druggists for a union of the trade and the better service of the public. The public will soon understand that this Bill guarantees a superior class of dispensing chemists and look out for such men; and whilst caring not to distinguish a pharmaceutical chemist from a chemist and druggist, it will single out and encourage men of superior skill. Diplomas are admirable stimulants to exertion, and may be the goal of laudable ambition; but they cannot secure the prize of public favour. There are hundreds of surgeons who have won for themselves fame and fortune, whilst there are as many physicians who, with the higher diploma of M.D., have had to toil through life for bread. You may have high sounding titles and many of them; you may have a head as bright as a comet's, and a tail as long and as brilliant to match, but neither the brightness of your head, nor the brilliancy of your tail, will ever be mistaken by the public for skill. Pharmaceutical chemists may succeed in shutting chemists and druggists, as clever as themselves, out of the Pharmaceutical Society upon the miserable plea that chemists and druggists called members of the Pharmaceutical Society may be mistaken for pharmaceutical chemists; but they may rest assured that they will never add one inch to their own intellectual stature, nor elevate themselves in public estimation by degrading chemists and druggists to a platform beneath their own. Can they not trust themselves to run the race for distinction in a fair field? But even supposing they may be called upon to make a little sacrifice individually, their Society will gain numbers, and popularity, and wealth, and power, and fame, beyond the expectation of its most sanguine promoters. They may deem that a sacrifice, but I call it a glorious gain. There are also members of the United Society who are dissatisfied because the Bill will not give them all they had a right to expect. What did they expect? Was it incorporation without the Pharmaceutical Society? They have got incorporation with the Pharmaceutical Society, and that is better still, because it brings the trade into a common union.

Such is the Bill for your adoption or rejection. I do not say it is a perfect Bill. On the contrary, I admit it has serious imperfections, but I hope those imperfections will be detected and rectified by the legislature. As a whole, it is a good Bill. If you could roll the two Chemists' and Druggists' Bills of 1865, without their objectionable clauses, into one, you might get just such a Bill as this Amended Pharmacy Bill; and the wisest thing you can do, is to secure its enactment.

The question has been frequently asked, who originated the circumstances which so unexpectedly led to the agreement of the two societies upon this Bill? It is, perhaps, fortunate that the authorities on neither side have any claim to the initiative in the matter. In October last the Pharmaceutical Council had not thought it expedient to submit their "suggestions" for a new Bill to the judgment of the trade; and the Executive Committee of the United Society did not only not anticipate such an event, but they officially declared "that after another year's fruitless effort to secure friendly co-operation they must turn away from the Pharmaceutical Council," and urged the United Society to prepare for independent action. Such was the relation in which the two administrative bodies stood to each other immediately preceding the Manchester meeting. There was a gulf between them. On the one side, was the Pharmaceutical Council—wishing to attract the unincorporated trade, but proudly disdaining to negotiate with the United Society; on the other side, was the Executive Committee—equally wishing for union, but repulsed by this Council, and reluctantly but bravely preparing for action. How was this gulf to be bridged over and the two societies brought together?

I will now truthfully narrate the circumstances as they transpired. In October last several of our Provincial Associations were visited under the authority of the Executive Committee. My instructions were to make my visit a mission of peace and good-will, and to cultivate the friendly feeling of the members of the Pharmaceutical Society. That I carried out my instructions to the satisfaction of the Committee, is testified by the thanks they accorded to me for my services. If I now allude to the great discouragement with which I commenced my journey, it is only to place in bright contrast with it the hope that six years of intimacy with the chemists and druggists of the country had secured for me some little personal esteem which might be turned to account. Considering that I had actually seen the majority of them face to face, that I had rejoiced with many of them in their prosperity, and sympathized with them in their adversity, that many of them had confided to me their family and business secrets, and had consulted me in their difficulties, seeing, in fact, that I had been in daily communication with them, it is no egotism in me to acknowledge my familiar acquaintance with their wants and wishes as a trade; but I must, with equal candour, declare my conviction that whatever esteem I may have won, whatever influence I may have gained, or whatever success I may have achieved for the Society, that esteem, that influence, that success is not attributable to any undue assumption of authority, as has been so unkindly affirmed, but to my deference to the judgment of others, and to my persevering efforts for the incorporation of the trade.

To bring the two Societies together became to me more than an object—it was a passionate desire; but so long as the Council of the one Society and the Executive of the other were at variance, there was not the slightest hope of co-operation, and it occurred to me that the trade had better bring a pressure upon both of them, and tell them to "move on." To act, therefore, upon the Council and the Executive through the trade, instead of, as heretofore, acting upon the trade through the Council and the Executive, became my policy. The first meeting, with this object in view, was held at Birmingham, where the resolutions embodied the principles and objects of the United Society. The second was held at Hanley, where the resolutions developed the spirit of independence which animated our members; and the third was held at Manchester, where the resolutions were so framed as to show to the members of the United Society that their principles and objects might be promoted, and their independence maintained by means of an Amended Pharmacy Bill, which should have the concurrence of the Pharmaceutical Society. Four weeks were devoted to visiting our members at Manchester and neighbouring towns. Then came the result. The meeting was a success. The resolutions were enthusiastically adopted. They were sent through the Executive Committee to the Pharmaceutical Council. The Council responded to the resolutions by



publishing their own "Suggestions." Then followed the London meeting—then the deputation—then the Conference; and, lastly, the friendly agreement.

It was a necessary part of my plan, as I told Mr. Slugg, of Manchester, a month before the meeting, to induce the Pharmaceutical Council to publish their "Suggestions" for the incorporation of the trade. This they did as soon as possible. The Manchester resolutions were published in the CHEMIST AND DRUGGIST on the 15th December, 1866, and on the 1st of January following the Council published their "Suggestions," accompanying them with the emphatic exclamation—*What hindlers?* The few weeks that preceded the Manchester meeting were remarkable for an ominous silence. The two Societies were at bay, and the chemists and druggists of the country asked despairingly what next? And only there was an opening in the dark cloud which had overhung the trade, and the words *what hindlers* came bright to view. "What hindlers?" the union of the trade—why may not chemists and druggists be brethren? That problem in which had called the United Society into existence, and had gratified the trade for seven years—that problem which had wrecked two Bills and probably £2,000 in the House of Commons—that problem the union of the trade, which the Legislature, the Council of the Pharmaceutical Society, and the Executive Committee of the United Society had almost abandoned in despair—that problem was solved by two or three resolutions, simple in their nature, but carefully drawn up, and wisely adopted by the chemist and druggists of Manchester.

I beg now to record my gratitude to Mr. Alerman Bowker, Mr. Slugg, and to the numerous friends who rendered the Manchester meeting a success. And now, after justly eulogising the Manchester meeting, shall I neglect the praise which is due to the United Society from which it sprang? I shall not forget Alerman Bowker's exclamation at that meeting—"we are proud of our United Society!" And well we may be! It is a power in the country. It was the United Society which first brought chemists and druggists into friendly organization, and made them feel that they had interests in common to protect and promote; it was the United Society which first excited attention to the danger of the public, and the degraded condition of the trade from ignorant and incompetent druggists crowding into it; it was the United Society that brought the incorporation of existing chemists, with power to enforce execution upon all future comers to the trade, as the remedy for that evil, under the notice of the Legislature; it was the United Society which claimed exemption from jury service for all chemists and druggists as a civil right; it was the United Society which saved the trade from the control of the Medical Council; and I think the Manchester meeting will remain as a memorable proof that the United Society—respected, ignored, and despised—persevered until, by a wise and conciliatory policy, it brought the trade to agree upon resolutions from which the Pharmaceutical Council could not dissuade.

All honour to the United Society of Chemists and Druggists! From a small beginning it has worked with unequalled economy and energy, and has brought its highest mission to a successful and glorious issue.

The union of the trade is now only a question of time—a few weeks, or months at most; and when it shall have been consummated—when pharmaceutical chemists and chemists and druggists shall meet as brethren,—when the Pharmaceutical Society shall extend its aims, its influence, and its charity over the trade—when its curriculum shall be studied, and its diploma shall be coveted by aspirants for fame, I trust it will never be forgotten that the Pharmaceutical Society acquired its crowning glory in the union of the trade, and that the trade is largely indebted for that union to the unselfish and untiring efforts of the United Society of Chemists and Druggists. A few words of advice and then I have done. There seems to be an idea in certain quarters that, as an arrangement has been made for an amalgamation with the Pharmaceutical Society, the United Society should now subside. What a mistake! When a man has bought an estate, his first idea is to secure possession. This transaction is a bargain to convert all existing chemists and druggists, registered as such, if they choose, into members of the Pharmaceutical Society, to exempt them from jury service, and to give them the right of nomination and election upon the council; and we must realize that gain for we relax our efforts. Further than that, we have not only our own interests to serve, but we have those of existing assistants and apprentices to protect, and those of future chemists and druggists to promote.

There is yet another danger to guard against, that is, too much confidence in the Bill passing the Legislature. Pray do not be deceived into false security. To be for wanted is to be overruled. Government may object to your jury exemption clause; Lords may object to your Bill as too democratic. Liberals may be apprehensive that so small a governing body may subside into an oligarchy; free-traders may object to a monopoly in physic; and even if the Bill shall pass through the House of Commons, it may be so mutilated and changed in the House of Lords as to be utterly worthless. I think I have said enough to suggest caution, and vigilance, and united action. Let members of Parliament be instructed as to the wishes of their constituents and their constituents; let petitions be in readiness; let our district associations—that powerful organization by which we have won every victory, and of which we are so justly proud—be called into action; and lastly, let our annual meeting at Manchester be a business-like session, memorable as a gathering of gentlemen in, who, retired of the post, are determined to vie with each other in acts of hospitality, charity, and good will, and, by wise council and zealous efforts, to secure a future pregnant with prosperity for the trade.

Mr. HORSFIELD then moved the following resolution:—

"That this meeting is much gratified to find that the persevering efforts of the United Society of Chemists and Druggists, for the incorporation of the trade, have resulted in an arrangement with the Pharmaceutical Society for a Bill to be brought into Parliament to secure that desirable object."

He said that he regretted the apathy of chemists and druggists in relation to this important matter. He thought some little blame was due to Mr. Buott for neglecting the Leeds association of the society, but was, however, glad to find that there was a revival of some interest amongst the

chemists and druggists in relation to the well-being of the trade. The United Society had worked assiduously for the benefit of the trade, and he had much pleasure in moving this resolution.

Mr. BEEDLE seconded the resolution, and congratulated the United Society upon the position it had attained, through the efforts of the Executive Committee, since the formation of this society.

Mr. HIRST moved, that the following gentlemen, Messrs. Stead, Horsfield, Greasley, Beedle, Hirst, and Yewdall, be appointed a deputation from Leeds to the annual meeting of the United Society, to be held at Manchester on the 27th of June next.

Mr. HORSFIELD had much pleasure in seconding this resolution.

Mr. GREASLEY then moved the following resolution:—

"That the thanks of this meeting be given to Mr. Buott for his lucid exposition of the contemplated Pharmacy Bill, and that the Editor of the CHEMIST AND DRUGGIST journal be respectfully requested to insert Mr. Buott's speech in that journal in extenso."

Mr. REYNOLDS had great pleasure in seconding the resolution, as Mr. Buott had given so good an explanation of the proposed Bill, and he was happy to think that the two societies had come to a mutual understanding and was likely to lead to so satisfactory a result as the union of the two societies, as he had no doubt it would benefit the trade generally.

Much regret was expressed that so brief a notice of the meeting had been given, as many more members of the trade would have then been present.

Deep interest was manifested in Mr. Buott's speech as he developed the leading features of the Bill, and narrated the circumstances which preceded the conference of the two societies.

Mr. STEAD was confirmed in the office of chairman of the Leeds district of the association of this society.

The meeting then closed with warmest thanks to the chairman.

OLDHAM.

On Tuesday evening, the 14th ult., a meeting of the chemists and druggists of Oldham took place at the Angel Hotel to hear an explanation of the Proposed Pharmacy Bill by Mr. C. Buott, Registrar of the United Society of Chemists and Druggists. Mr. Giddes was called to the Chair, and briefly introduced Mr. Buott.

After expressing the pleasure he felt in meeting his Oldham friends once more, Mr. Buott proceeded, in his usual clear and forcible manner, to explain the provisions of the new Pharmacy Bill, as proposed by the Pharmaceutical Society. He remarked it was neither the Bill No. 1 which had been introduced for the consideration of the Legislature in the session of 1865, nor the Bill of the United Society of the same year; but if it were possible to amalgamate the two thoroughly, and extract the good portions of each, he believed the result would be just such a Bill as the one he stood there to advocate and explain. He did not consider it by any means perfect, but did not doubt that Parliament in its wisdom would remedy any deficiencies which might be suggested. The Bill had been framed with a view to conciliate all parties, and would he did not doubt, increase the efficiency and strength of the Pharmaceutical Society, and give a status to dispensers and compounders of medicines commensurate with their high responsibilities.

After explaining the constitution of the proposed Council, Mr. Buott entered into a personal defence of conduct he had pursued, and explained in detail the means by which the present Pharmaceutical Council and the Executive of the United Society had been induced to sink party jealousy and cooperate for the general good of the trade. He concluded by urging the chemists and druggists present to support with their utmost exertions the proposals of the Pharmaceutical Council as contained in their recently suggested Bill, but strongly recommended that they should not allow the United Society to become defunct until the much-vexed question of Pharmaceutical legislation was satisfactorily settled.

The CHAIRMAN concurred generally in the opinions expressed by Mr. Buott, and especially so in respect to his recommendation to keep up the life of the United Society.



The following resolutions were unanimously agreed to:—  
 "That having heard Mr. Buott's exposition of the Proposed Amended Pharmacy Bill, as published in the *Pharmaceutical Journal* for this month (May), the chemists and druggists present hereby express their general approval of its provisions, and intimate their willingness to endeavour to secure its success in Parliament."

"That this meeting congratulates the Executive of the United Society of Chemists and Druggists on the success of their efforts to secure the co-operation of the Pharmaceutical Society and the union of the trade, and desires to place on record their appreciation of the services of the United Society in agitating the question of the incorporation of all chemists and druggists, with a view to the registration of those now in business, and the examination of all future dispensers of medicine."

After the re-appointment of the Chairman and Local Secretary, and the selection of a number of gentlemen to attend the Annual Meeting of the United Society to be held in Manchester on the 27th, a vote of thanks to Mr. Buott for his attendance, and a similar compliment to the Chairman, terminated the proceedings.

#### CHEMISTS' ASSISTANTS' ASSOCIATION.

THE recent proceedings of this admirable Association are described in the following report, moved and adopted at the General Meeting held June 6th, 1867:—

Gentlemen,—It is our pleasing duty to lay before you a statement of the transactions of the Association during the past half-year.

The following are the names of the officers who retire from the management this evening:—Mr. Lloyd (President), Mr. Haddock (Vice-President), Mr. Sands (Treasurer), Mr. Sleggs (Hon. Sec.), and Messrs. Dunkley, Kirkland, Palmer, Taylor, and Willmott.

At the commencement of the half-year our usual programme was issued to the members, and it is gratifying to observe, that, with one or two exceptions, the whole of the evenings placed at our disposal have been devoted to the discussion of appropriate and interesting subjects. An average weekly attendance of twenty-two members, as compared with a lower number during former half-years, speaks favourably for the continued and increasing success of the Association.

The Committee have much pleasure in directing your attention to the Treasurer's account, which (notwithstanding additional calls on the funds) shows a fair balance in hand.

During the half-year twenty-two gentlemen have been elected as members (making a total of 129 from the commencement of the Society), but a considerable number of those already on the list have, from various unavoidable causes, left the Association. Prominent amongst the latter is the name of our late honorary secretary, Mr. Wilson, a gentleman whose exertions and influence have borne no inconsiderable part in the attainment of our present favourable position. The hearty co-operation of the members in presenting him with a suitable testimonial, is a fact of a most pleasing and gratifying character.

The Committee observe with pleasure a marked improvement in the treatment of the subjects brought forward for discussion. Many of the papers read during the term have occupied much time and thought in their preparation, and are evidently the result of original inquiry, combined with a laudable desire to excel both in style and proficiency. It is hoped, therefore, that new members, as well as those who have not yet taken a prominent part in the proceedings, will emulate so good an example, and endeavour to assist the Society in the really useful work which it is its first object to undertake and perform. By so doing, they will not only confer a benefit upon others, but become themselves the recipients of an extended and profitable knowledge in matters appertaining to the trade or profession in which they are daily engaged. Let but the trial be made, and the result will scarcely fail to prove successful.

Our half-yearly supper took place on the 10th January last, and the Committee are much pleased to have to record a larger attendance than on any previous occasion. Fifty-two gentlemen joined our party, and contributed "with

heart and voice" to the attainment of a pleasant and successful evening.

An editorial article concerning the Society appeared in the January number of the *Pharmaceutical Journal*. The circumstances which led to the statements therein contained have already been laid before you. Though it cannot be said that this article in its entirety, is all that could be wished, yet it is pleasing to note that indications are not wanting of a more favourable interpretation of our procedure by those who, for the time being, are placed in authority over us. The Committee feel assured that as the object we have in view becomes better understood, the Society will receive (as, indeed, it will scarcely fail to command) an extended and justly increasing confidence.

A few weeks since a communication was received from Mr. Wade, inviting the Society to represent the chemists' assistants throughout the country at the Conference respecting the new Pharmacy Bill, held at Broom-bury-square on the 19th of February last. This invitation, though favourably entertained by the Pharmaceutical Council, was, nevertheless, after anxious consideration on the part of the Committee, declined by resolution submitted to the members in the ordinary manner.\* You are all aware how the Conference referred to terminated. It will be a most gratifying result if, in consequence thereof, the trade be united into one recognised body, with due reference to those essential principles which are, or may be necessary to its progressive elevation and success. In connection with this part of the report the Committee desire to acknowledge the courtesy of Mr. Wade in meeting them in this room; and also the very generous offer of the editor of the CHEMIST AND DRUGGIST to insert in the columns of his Journal the contributions and proceedings of the Society. To these gentlemen our best thanks are due, and we may state with confidence that the friendship they have manifested towards us will in no wise be forgotten. Copies of the above-mentioned Journal (kindly forwarded by the editor) have been laid on the table for your perusal.

The publication of the revised edition of the *British Pharmacopœia* cannot but be a source of satisfaction to the members of this Society. It is especially gratifying to find that the valuable services of Professor Redwood, of the Pharmaceutical Society, and Mr. Warrington, of Apothecaries' Hall, have been duly acknowledged by the Council. The complete overthrow of the former edition, and the unanimous acceptance and approval of this, its successor, fully demonstrates the necessity of practical talent in the compilation of so important a work. Now that the *British Pharmacopœia* of 1867 is fairly before us, it will be our first duty to become acquainted with its details, and, as far as possible, to adopt the "well attested" formulæ it so authoritatively contains.

The Committee cannot conclude their report without again reminding you of the desirability of sustained and continued exertion in the promotion of the cause we have at heart. Though no fear is entertained of a want of zeal in the welfare of the Association, yet it is only by the practical and individual assistance of those who have joined our ranks that a good result can be achieved. This, however, will be sufficiently apparent without further comment.

Whilst our financial position is satisfactory, the contents of our Minute-book afford us the highest encouragement to persevere with the work before us, in view of the good which cannot fail to result from every laudable effort in the direction of individual progress and improvement.

With these remarks the Officers and Committee beg leave to announce their retirement, and to thank you sincerely for the kind attention, patronage, and support, you have accorded to them during their term of management.

J. LLOYD, *Chairman*.  
G. R. SLEGGs, *Hon. Sec.*

Messrs. Southall, Son, and Dymond, of Birmingham, have published a most elaborate and useful Price List of the Preparations and Compounds of the new British Pharmacopœia. In it will be found notes on the main points of divergence between the present and previous Pharmacopœias, and on the medicinal strength and doses of the various preparations. A more convenient and concise conspectus cannot be imagined.

\* Vide *Pharmaceutical Journal*, March, 1867.



HALF AN HOUR WITH THE NEW PHARMACOPŒIA.

BY HARRY NAPIER DRAPER, F.C.S.\*

No two readers are, perhaps, attracted by just the same points in a new book, and individual criticism will always be more or less tinged with the colour of the critic's mind. If this be true of any book, it is so of the Pharmacopœia, for each reader of this book claims to have, to some extent, a special knowledge of its subject matter. It is, moreover, nearly certain that each has some pet theory or process, the introduction of which would, in the estimation of that particular critic, have made the book perfect, but wanting which it remains a standing monument to the incapacity of its framers. But if prejudice be not permitted to interfere with fairness, a practical critic is undoubtedly the best judge of a practical book. It is in this belief, and without any desire to cavil, that the following notes are submitted. Being literally nothing more or less than "notes" made *currente calamo*, during my first half hour with the British Pharmacopœia of 1867, on the points which first arrested my attention, I apologise even for this preface to them.

In size the Pharmacopœia is convenient—in arrangement excellent. It is a real comfort to be able to turn at once to the article or preparation required without the necessity of consulting the index; the index, too, is full to repletion.

**WEIGHTS.**—Grain, ounce, and pound, as in the Pharmacopœia of 1864; but here is a curious bit of inconsistency:—"Avoid," urges the preface upon the medical man, "the terms ounce and pound with reference to any but avoirdupois weights; but it will be optional with the physician in prescribing to use the symbols  $\mathcal{O}$  and  $\mathcal{Z}$ , the former representing 20 and the latter 60 grains, if such should be found to conduce to accuracy or convenience." Now,  $\mathcal{Z}$  has for many successive Pharmacopœias meant the eighth part of the ounce, whatever value may have been given to that; therefore, if the symbols  $\mathcal{O}$  and  $\mathcal{Z}$  must be used at all, this octoid division should be adhered to. Moreover, in Ireland, the weights of  $\mathcal{O}$ j (= 18.22 grains) and  $\mathcal{Z}$ j (= 54.68 grains) have actual brass existence, and were used for many years—used until the dictum of the British Pharmacopœia of 1864 made them useless. When England and Ireland had each a Pharmacopœia and each an ounce, the difference in the drachm and scruple of the two countries was inconvenient enough; but now that they have one guide-book in common, the anomaly should not be permitted to exist. Unless all Irish scale-drawers be emptied of their drachm and scruple weights, and the lessons of the Dublin Pharmacopœia of 1851 be forgotten (the very Pharmacopœia in which the avoirdupois pound was first made the standard of apothecaries' weight), or unless, indeed, physicians will be sensible enough to forego the permissive licence to use the  $\mathcal{O}$  and  $\mathcal{Z}$  at all, no little confusion will result.

**CARBOLIC ACID.**—"It does not affect the plane of polarisation of a ray of polarised light."

**CREASOTE.**—"It turns the plane of polarisation of a ray of polarised light to the right." The two sentences quoted are among the many instances in which pure physics seem to step in with aid just where chemistry is at fault, and I myself thought, too, as I read them, that a drop, as it were, of the admirable, but as yet unpublished researches of Professor Jellett, of Dublin, had fallen on the pages of the Pharmacopœia. It is very remarkable, as that gentleman has pointed out, that the line between organic and inorganic bodies is most sharply defined by their respective behaviour towards polarised light. In no case has it been found that a substance derived from an inorganic source affects the direction of a polarised ray. Here are two bodies which so closely resemble one another as to have many of their chemical properties in common, and to act on the senses in an almost identical manner, and yet it would almost seem that *because* one has been obtained from wood it turns the ray to the right, and *because* the other has been obtained from a mineral (even although this was once wood) it has no action on the ray. Let us hope that the polariscope may soon be found in all chemical laboratories.

**BENZOATED LARD.**—Lard with which gum benzoin in the proportion of 160 grains to a pound has been heated. It is to be used in making some of the suppositories and ointments, among the latter those of acetate of lead and oxide of zinc.

Gum benzoin has the property of retarding fatty oxidation, and ointments made with lard containing it keep very well. But, apart from this power, is the gum a desirable constituent of ointments? *Oil of Pimento*, as was pointed out some time since by a writer in the *Pharmaceutical Journal*, possesses the same power in a remarkable degree. I have used it now for a long time, 20 minims to a pound, in zinc ointment, which it perfectly preserves. It is inexpensive, gives no trouble, and little or no smell.

**CATAPLASMA SINAPIS.**—Why use *boiling* water in making this? True, the linseed meal, being first added, will lower the temperature, but will the constituents of mustard poultice be always mixed in this order?

**CHLOROFORM.**—"Burns, though not readily, with a green and smoky flame." Can a liquid be said to "burn," even with the qualification "not readily," which will not take fire in a red-hot spoon, cannot be ignited on cotton, and extinguishes live coals? And, writing of chloroform, I note that there is no attempt at a recognised formula for *Chlorodyne*, unless it be intended that the *Tinctura Chloroformi* co., a mixture of chloroform, alcohol, and tincture of cardamoms, shall do duty for it.

**COLLODIUM FLEXILE.**—Ordinary collodion, to which Canada balsam and castor-oil are added. Glycerine, two drops to an ounce, also makes collodion elastic. Why is *Bistering Collodion* omitted. It is largely used, quite as largely as the *Charta Epispastica* is likely to be.

**CONFECTIO SENNÆ.**—Are figs in this preparation of any use? The P.D. got on very well without them for some years, and unless the presence of their pulp really improves the preparation they should be discarded, in mercy to the pharmacist whose labour they so much increase.

**FERRI ET QUINÆ CITRAS.**—"The solution is precipitated blue by the yellow and red prussiates of potash." I have not yet made the Pharmacopœial preparation, and can only assume that this statement is correct. Being so, it is remarkable that the addition of citrate of quina to a persalt of iron should so modify its chemical properties as to cause it to precipitate blue with a ferricyanide.

**LINIMENTUM SINAPIS COMPOSITUM.**—This is practically a dilute solution of volatile oil of mustard in spirit, sufficient consistency being given to the liniment by castor oil. Castor oil is not soluble in the rectified spirit of the Pharmacopœia, but it is worthy of note that it is rendered completely so by the volatile oil and the camphor.

**LIQUOR AMMONIÆ ACETATIS.**—The good old formula with carbonate of ammonia restored. Theoretical chemistry is not always the best pharmacy.

**LIQUOR BISMUTHI ET AMMONIÆ CITRATIS.**—A really practical process, which cannot but succeed in the most moderately careful hands, and deserves all praise because it makes no attempt at that ultra-purity of product which is so rarely attained in practice. The solution contains a little nitrate of ammonia. Had crystalline nitrate of bismuth, which is now made on a commercial scale, been ordered, the formula would have been still better.

**LIQUOR FERRI PERNITRATIS.**—The formula for this preparation is so essentially bad that it is surprising how it can have been perpetuated. It is the old method of Mr. Ker and the P.D., except that to make up for the inferior strength of the nitric acid a larger quantity is used. There is no excuse for this, because the excellent process of Professor Procter stands ready printed in the pages of the U. S. Pharmacopœia.

**LIQUOR FERRI PERSULPHATIS.**—This solution is not itself used as a remedy, but is only employed in making other preparations. There is no reason, therefore, why the following formula should not be substituted for that of the Pharmacopœia. That it should be there is the excellent reason that it can thus be made with much greater certainty, and in less than half the time:—

Sulphate of Iron . . . . .	8 ounces.
Sulphuric Acid . . . . .	6 fluid drachms.
Chlorate of Potash . . . . .	320 grains.
Water . . . . .	q.s.

Dissolve the sulphate of iron by heat in ten ounces of water, to which the sulphuric acid has been added, and then add the chlorate of potash dissolved in three ounces of water. Cool and filter the solution.

**LIQUOR LITHIÆ EFFERVESCENS.**—It is well that there are

\* Extracted from *The Laboratory* of May 25.



now authoritative formula for this and the two other alkaline waters. The lithia water usually made has been far too weak to be even usefully antacid putting out of the question its reputed solvent action on the salts of uric acid.

**SODÆ CARBONAS EXSICCATA.**—I have elsewhere pointed out that this preparation could be most advantageously made by heating the bicarbonate to dull redness. Dried soda thus prepared is a soft, perfectly white powder, very much more elegant in appearance than the product of the P.B. process, and is much less troublesome to make.

**SODÆ CITRO-TARTRAS EFFERVESCENS.**—A formula for the popular "Citrato of Magnesia," containing no magnesia, nor the sugar which is found in the commercial article.

**SUPPOSITORIA.**—Cocoa butter which one scarcely recognises in its new dress of *Oil of Theobroma*, has very properly been ordered in the formulae for these preparations. Whether its special properties are improved by its being alloyed with lard and wax remains to be seen.

**SYRUPUS FERRI PHOSPHATIS.**—The author of the formula for this preparation has sacrificed the permanence of the product to the elegance of the chemical reaction in the process. In practice the whole of the acetic acid cannot be washed out of the moist magma of phosphate of iron; traces of paracetate of iron soon form, and the syrup becomes coloured without any apparent cause. Let us hope that in the next edition of the *Pharmacopœia carbonatæ* of soda, which answers all the purpose of the acetate, will be substituted for it.

**UNGUENTUM ANTIMONII TARTARATI.**—If the tartrate of antimony were directed to be rubbed with water or glycerine before being mixed with the ointment, the danger of gritty particles of the salt causing annoyance would be obviated.

**VINUM ARAUCII.**—Orange wine is of all vinous liquids the one most prone to further fermentative change, and 12 per cent. of alcohol (= 20.7 per cent. proof spirit) is not sufficient to prevent this. To ensure its preservation, it must contain at least 30 per cent. of proof spirit. This point is of importance, as two official wines—*Vinum Ferri Citratis* and *Vinum Quinæ*—are now to be made with orange wine.



*Medicus* writes: "I have been an assistant and dispenser to medical practitioners for 30 years and more, and think I ought to be allowed to register under Clause IV. of the proposed New Pharmacy Act; but, as it stands, I fear it will exclude me and many more. Could not the United Society of Chemists and Druggists, or the framers of the Bill get it altered so that it might apply to assistants of qualified registered medical practitioners?" We do not think it would be desirable to stretch the Bill so far for the sake of those assistants to medical practitioners who may wish to commence business as chemists and druggists.

*C. & D.* (Halifax). You will glean much information from the Appendix to *Cooley's "Toilet and Cosmetic Arts,"* published by Hardwicke, Piccadilly. This book was reviewed in our April number. A really practical book on the subject is much wanted.

*J. A. F.* (New Deer). Towle's Chlorodyne is based on a formula by Dr. Ogden. An article upon this and other formulae in our journal for March, 1865. We are unable to give you any information respecting the advertisement referred to.

*Hid. P.* writes: "I should be obliged if any of your correspondents could tell me of a perfume to cover the smell of petrolum."

"I have been in the habit of using a menstruum for making pills, which I have found of great service. It consists of equal parts of Castile soap and treacle. The soap has to be cut fine and allowed to dry until it is pulverizable. It is then to be beaten until it is in a pretty uniform state of coarse powder. The treacle is then to be added, and the whole rubbed together until it is of a uniform consistence. The same quantity of this is to be used as of the proper menstruum ordered in the *Pharmacopœia*. The stubborn *Pil. Ferri Co. P.L.* even will keep soft when made with this."



LONDON, JUNE 15, 1867.

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Everything intended for insertion in the current Month must be sent in before the 10th except Employers' and Assistants' Advertisements, which will be received until 9 A.M. on the morning previous to publication.

## PHARMACEUTICAL LEGISLATION.

The result of the Special General Meeting of the Pharmaceutical Society, called to discuss the proposed Amendment Pharmacy Act, was a hearty expression of approval by the Society of the enlightened policy adopted by the Council. The principal resolution which was moved by Mr. COLLINS, and carried by a large majority, ran thus:—

"That in the opinion of this meeting, the proposed amendment of the Pharmacy Act is both wise and expedient, as by enlisting the support of those members of the trade outside the pale of the Society, the way is cleared for carrying into effect the primary objects of the founders of the Society, viz., the consolidation of the whole trade, and legislative provision for the compulsory examination of all persons entering the same after a given time. This meeting would further express its entire approval of the action taken by the Council, and pledges itself to support by all possible means the passage of the Bill through Parliament."

## PARIS UNIVERSAL EXHIBITION.

CLASS XLIV.

## CHEMICAL AND PHARMACEUTICAL PRODUCTS.

(FROM OUR SPECIAL CORRESPONDENT.)

CONTINUING our pleasant journey round Class XLIV., we next meet with Messrs. Davy, Yates, and Rowledge's fine display. They, of course show all the mercury compounds for which they have so long been famous, in full perfection, as well as some very beautiful scale preparations. While on the subject of scale preparations we would suggest the desirability, when exhibiting such compounds, of giving the proportions of their constituents. In the case of the citrate of iron and quinine it would be interesting to know the amount of cinchona alkaloid contained in it, more especially as the researches of Mr. Braithwaite, communicated to the British Pharmaceutical Conference on two occasions, have shown the world that the proportion of alkaloid varies between 0 and 25 per cent. in a number of samples purchased haphazard. The above-mentioned firm also show



some good specimens of valerianates; but we are somewhat surprised to find that the fruit essences which they manufacture so largely are absent from their display.

Passing on to Messrs. Allen and Hanbury's case, we find them exhibiting nothing but cod liver oil and *extractum carnis*, and cannot help feeling somewhat disappointed that they did not put a better foot foremost. Remembering what this house did in 1862, we should have expected them to exhibit something more than a couple of compounds, which are not particularly interesting in character.

Messrs. Morson and Son's show is also small. They exhibit some fine specimens of meconine and other opium products—podophyllin, both in the pure and commercial states. Pure podophyllin seems to be more of a canary yellow than of the colour which is so familiar to most of our readers. An interesting specimen of physostigmine, the alkaloid found in the Calabar bean, is also shown. Pancreatized fat and oil, saccharized wheat phosphates, a few needles of methysticin—the compound discovered by Mr. Morson in the *piper methysticum*, and corresponding to piperine—will also be looked on with great interest by the Pharmaceutical visitor.

We next come to Messrs. Huskisson and Sons' case—one of the most interesting in the class. Mr. William Huskisson, who is mainly responsible for getting up this fine display, has spared no pains in making it something more than an exhibition of a certain number of salts; he has also endeavoured—and with a large amount of success, too—to show them in such a way as to command not only the attention of the commercial world, but that of the man of science also. Every salt that was capable of crystallization has been crystallised in the most perfect manner; in fact, Messrs. Huskisson's display is quite a crystallographic exhibition. In iodides and bromides, it is hardly necessary to say that they excel, and they will find that the fame they have acquired in this particular branch of manufacture is in no way diminished by the good work they have done for the Exhibition of 1867. It would be impossible in a short space to describe all the salts shown by this firm, but, perhaps, the iodides of potassium, sodium, and ammonium, the bromides of the same bases, a fine specimen of acetate of soda in beautiful crystals, iodine in perfect rhomboidal crystals a couple of inches long, a splendid crystallization of ammonia, sulphate of copper, perfect crystals of hyposulphite of soda, and Rochelle salt, and a beautiful sample of chloride of cobalt may be mentioned as amongst the best things in the display. The neutral iodide of potassium for photographic use shown by this firm is very fine. It forms yellowish, semi-transparent, four-sided prisms, with pyramidal summits. These singular crystals, on closer examination, appear to be made up at their bases of aggregations of cubes, while the faces of the pyramidal summits are rounded off in a very singular manner. A very interesting crystal of sulphur is also shown. A specimen, illustrating a new process for purifying and concentrating hydrochloric acid, has been looked upon by scientific visitors with great interest. The process, which is the invention of Mr. Isham Baggs, who is already well known as an electrician, consists in mixing together in a suitable retort two volumes of ordinary oil of vitriol, and one volume of common yellow hydrochloric acid. Sufficient heat is thus generated to cause the latter acid to distil over, quite free from iron and arsenic, and of so high a specific gravity as 1.210. We have omitted to mention a fine specimen of perchloride of iron made by the dry process, the only method which yields a salt perfectly free from peroxide. The salt, as manufactured by Messrs Huskisson, is dissolved readily in water and alcohol. In noticing Messrs. Howard's display in the last number of the CHEMIST AND DRUGGIST we forgot to mention a fine sample of benzoic acid, prepared from the gum by the ordinary method of sublimation. We are informed that there are at present large quantities of hippuric acid, prepared from horse and cow urine, imported into London from Germany, and sold as benzoic acid. Messrs. Howard also show ammoniacal compounds, prepared from the mother liquors of the crude boracic acid, imported by them from Italy. These ammoniacal salts, having a purely volcanic pedigree, are free from those nauseous sulphur compounds always more or less present in those prepared from gas liquor.

Messrs. McFarlane, of Edinburgh, show a fine collec-

tion of opium alkaloids. Their hydrochlorate and acetate of morphine are particularly good. A magnificent crystallization of codeine forms quite a crystallographic study. Some large and nearly perfect crystals of acetate of codeine are also very fine. Messrs. McFarlane also exhibit good samples of meconine in large needle-shaped crystals, thebaine, papaverine and its hydrochlorate, hydrochlorate and sulphate of codeine, narcotine, narcotinc, and cotarine. Some interesting specimens of some of the new opium compounds lately discovered by Dr. Matthiessen are also shown.

It is really a great pity that a little more common sense was not used in the arrangement of the cases in Class XLIV. For instance, Messrs. Smith and McFarlane, although exhibiting precisely the same compounds, are separated from each other by a long interval; it is, consequently, very tiring work when a visitor is obliged to keep running backwards and forwards between the two cases, in order to compare the products of the rival houses.

Messrs. Johnson and Matthey show a splendid mass of crystallised nitrate of silver, also the same salt cast in sticks of different sizes for medical use. They also exhibit a specimen of chemically pure hydrate of soda made from metallic sodium, which can be sold at a cheaper rate than that prepared in the ordinary manner. This can be readily understood when we consider that the metal can, we believe, be bought wholesale for 12s. per lb., or, indeed, even lower. They also show chloride of gold in fine crystals for photographic purposes, and a splendid series of uranium compounds. In Class XL, they make a most wonderful display of platinum apparatus of every description. We are sorely tempted to describe their show at length, but lack of space compels us to abandon the idea. The size of the platinum boilers exhibited is quite astonishing. One is large enough to distil eight tons of sulphuric acid in a day. They are joined on the autogenic principle—that is to say, the edges of the platinum plates are fused together by the oxyhydrogen blow-pipe, the metal thus, of course, forming a single piece.

Mr. Peter Squire exhibits specimens of all the preparations contained in the new edition of the Pharmacopœia. Some of his brother pharmacists have, we believe, protested against this use of private information; but these gentlemen should recollect that Mr. Squire exhibits, in some measure, as the representative of the Pharmacopœia Committee. The handsome case in which they are shown unfortunately comes in for a large amount of the darkness caused by the carpets hanging on the walls; and the labels on the bottles are so large as to interfere with the examination of their contents. The extracts, too, are shown in opaque china pots, which might just as well be empty for all the idea they convey to the spectator of the colour or appearance of their contents. Mr. Squire also shows his infusion apparatus. While on this subject, we may as well mention that there is not a single British exhibitor of apparatus used in chemistry or pharmacy besides Mr. Squire. Those who remember the interesting collection of apparatus shown at Nottingham last year will regret that some of the articles then exhibited have not made their way to the Champ de Mars. A collection, for instance, of all the percolators now in use would have been most valuable and interesting.

Messrs. Johnson and Sons show good specimens of nitrate of silver, both in crystals and in sticks. They also show chloride of gold for photographic use.

Mr. Ransom, of Hitchin, amongst other things, shows a fine collection of essential oils, including, of course, his famous oil of lavender. There is also a fine specimen of scammony root from the Southern districts of Asia Minor.

Messrs. Foot show a small set of samples of acetic acid and its salts.

Mr. Schweitzer shows pessaries, suppositories, and bougies made of cacao butter, and medicated with mercurial ointment, belladonna, perchloride of iron, etc. etc. He also shows cacao from which all the butter has been extracted. It is said to be particularly adapted for those whose weakness of digestion prevents the use of ordinary chocolate and cocoa.

Messrs. Twinberrow and Sons show various nitrated waters in a very large case. The Huslet and Campsie Company show some fine specimens of alum, yellow and red prussiate of potash, and several perfect crystals of the first-mentioned salt.

Mr. Usher, of Bodicott, near Banbury, exhibits some



good samples of English rhubarb, both in root and in powder; also some biennial henbane.

Carbolic acid, its derivatives and congeners, are finely shown by Messrs. Crace Calvert and Co., Charles Lowe and Co., and Lewis Demuth and Co. The first named firm show the acid in a great state of purity, in long white isolated crystals, quite free from any tarry taste or smell, and corresponding in every way with the artificial products made from hydride of salicyl. In fact, the artificial product seems less pure than that obtained from coal, seeing that it smells strongly of the hydride of salicyl. Messrs. Crace Calvert, and Co. may be looked upon as the fathers of this important manufacture, having commenced work so far back as 1848. The first samples made were very impure, but in 1859 they succeeded in obtaining a product free from colour, and crystallizing at ordinary temperatures, but which, however, was still contaminated with tarry matters. In 1861 another improvement was made, raising the crystallising point to 85° F., and two years after a fusing point of 93° F. was reached. This being the limit assigned by Laurent and other writers on the product, it was supposed that the pure acid had at last been obtained, but last year Dr. Crace Calvert discovered a method by which the crystallising point was again raised, this time reaching 106°—107° F. This acid, which is now being largely introduced into medicine, is of definite composition, having fixed boiling and crystallising points, and is quite free from all tarry matter. The solidity and dryness of the crystals at ordinary temperatures also seems to indicate its freedom from cresylic acid, or any other liquid homologue. The valuable properties of this substance as a disinfectant are so well known to our readers, that it would be useless for us to go into the matter very fully. Those, however, who are still in doubt as to its real value, should read the very able report presented to the Privy Council by Mr. Crookes, F.R.S., who was appointed to test its efficacy in cattle plague. Messrs. Calvert and Co. illustrate the numerous useful purposes to which it may be applied by several interesting examples. It appears not only to be capable of arresting the different forms of fermentation, but it also appears to be particularly inimical to the low forms of animal and vegetable life in the embryotic condition. Its powerful antiseptic properties are made apparent by the exhibition of three bottles containing starch paste, blood, and albumen, to each of which an infinitesimal portion of carbolic acid was added when they were first mixed. Although nearly three months have elapsed since that period, they are still perfectly sweet, and will no doubt remain so until the end of the Exhibition. They also show a wash for sheep, dogs, and other animals infested with parasites; a kind of salve, intended to replace the use of tar for sheep in wet weather; a wash for foot rot; a disinfecting powder, which parts with the acid combined with it very slowly, and several equally interesting examples. They also show coralline red, which is an impure form of rosolic acid. It is made by mixing two equivalents of carbolic acid with one equivalent of sulphuric acid, and heating. Oxalic acid is then added, and produces rosolic acid by oxidation. The washed and dried compound forms the coralline red of commerce.

Pieric acid is shown both in the pure form and as aurine paste. It is made by mixing together six parts of nitric acid with one of carbolic acid, care being taken to add the nitric acid very slowly; towards the end of the operation heat may be applied. When cool, cold water is added, and the yellow mass obtained is well washed and dried. This forms the aurine paste of commerce. The pure acid may be prepared by washing the mass resulting from the action of nitric acid on carbolic acid with water, acidulated with sulphuric acid, to render the resinous impurities present insoluble. The solution thus formed yields pieric acid on evaporation. It is likewise prepared by saturating a boiling solution of the impure pieric acid above-mentioned with a boiling solution of carbonate of soda, filtering from the resinous matter before alluded to, and crystallizing. The pierate of soda thus obtained is re-dissolved and decomposed with sulphuric acid. Pieric acid has a singular affinity for animal matter; hence its employment as a silk dye. It may, in fact, be used to detect the adulteration of silk or woollen fabrics with cotton. The suspected material is plunged into a strong solution of pieric acid, which dyes the wool or silk, and leaves the cotton untouched. Pieric acid

has at times been used for the production of a blue dye called azuline, but owing, possibly, to the greater ease with which these dyes are obtained from aniline and its congeners, its use for this purpose is extremely limited.

Messrs. C. Lowe and Co. also show carbolic acid of great excellence, as well as the crude acid, crude picramic acid, a beautiful block of crystalline carbolic acid, with the centre removed to show the mass of crystals in the interior, and a substance stated to be the bihydrate of phenyl, carbolic acid being the monohydrate.

Messrs. Lewis Demuth and Co. show a large series of coal tar products, including naphthalene, cumol, cymol, xylo, benzol, toluol, xylic acid, cresylic acid, and carbolic acid.

Mr. E. C. Stanford exhibits a large series of specimens illustrating his process for the extraction of iodine and other valuable products from seaweed. Instead of burning the seaweed on the open shore, Mr. Stanford compresses it into cakes at the spot where it is gathered. These are then dried and submitted to dry distillation, the ash remaining being afterwards lixiviated to extract the salts it contains. By this method, besides the usual number of saline compounds, are obtained hydrocarbons of various densities—naphtha, ammonia, acetic acid, and illuminating gas. The charcoal left after lixiviation is found to be of the greatest value for deodorizing and disinfecting purposes, for sugar refining, and for blacking making. The tar and pitch found are also useful, so that from one end of the operation to the other there does not appear to be one waste product. Mr. Stanford's process is calculated to produce double the ordinary yield of iodine from a given amount of dried weed. It is at present being carried on on a very extensive and profitable scale in one of the islands in the west of Scotland.

There is a very beautiful display of colours in Class XLIV. which we are tempted to linger over, but we must content ourselves with saying that Messrs. Hosegood and Co., Messrs. Wilkinson, Haywood and Co., and Messrs. Hare and Co., quite surpass themselves on the present occasion; in fact these products are amongst the strongest points of the present exhibition.

Mr. Holland, of Market Deeping, exhibits fine samples of the essential oils and other vegetable preparations for which he is so celebrated.

Mr. Parkins shows one of the finest specimens of yellow prussiate of potash in the exhibition.

Messrs. Twinberrow, who, by the way, have obtained two allotments of space in Class XLIV., show some good cod liver oil and extracts.

Messrs. Schlessinger show a large series of essential oils, but we were not aware that they were manufacturers of those products. A good deal of carelessness appears to have been shown by those who have had the control of these matters in allowing exhibitors who are not manufacturers to display articles made by other people.

Messrs. Fleet, who exhibit aerated waters, endeavour to render their exhibition interesting by showing specimens of all the substances found in natural springs and rivers. The number of different aerated waters shown on the present occasion is extremely large. It is to be hoped that the unhappy juror whose duty it was to decide on their merits, did not taste them all in one day. The amount of space bestowed on these articles by the English Commissioners, will, we fear, give foreigners an idea that soda water and ginger beer are staple manufactures in England, and that we attach more importance to them than to many of our most valuable chemical productions.

## THE CODEX.

### VI.

#### PHARMACY OF THE CODEX.

BY JOHN WATTS.

It is proposed in the following remarks to offer a complete analysis of the "Distinctive Pharmacy of the Codex," regarding the word "distinctive" as possessing two significations, the one referring to the nationality of the work, as French Pharmacy, the other as contradistinguished from our own Pharmacopœia. To effect this it will be necessary to examine each series somewhat in detail, and since the arrangement in the Codex is purely arbitrary, an alpha-



botical one has been partially adopted here, as considerably facilitating future reference.

Owing to the enormous amount of matter comprised in this division of the Codex it has been found requisite in some instances to include two or three chapters under one head.

**ALCOOLATS.**—An appellation very properly translated by our term "Spirits," which is always applied in the Codex to alcohol, when charged by distillation with the volatile principles of one or more medicinal substances. Note particularly, by distillation; direct solution of an essential oil in spirit will never afford an "alcoholat," since the peculiar flavour of the fresh plant, the bouquet, so to speak, is unavoidably wanting; such preparations as the formulæ of the Ph. Br. afford are undoubtedly equally efficacious in a medicinal point of view, but they are decidedly not so pleasing to the palate; and since some of the formulæ for alcoholats are sweetened with sugar and flavoured with vanilla, thus assuming the suspicious appearance of cordials, we find additional arguments for the necessity of keeping up a quality upon which the sale of the article depends, purchasers of this class of medicines having generally an acute appreciation of flavour and taste.

The Alcoholats *Vulnéraire, de Fioravanti, de Garus, etc.*, are of this latter class, the formulæ for which, moreover, contain an extraordinary accumulation of ingredients. It is scarcely time yet to comment upon this poly-pharmacy, which forces itself thus upon the notice at the very outset, but it will be found as we proceed that it is one of the characteristics of French pharmacy, and by no means fully developed in the alcoholats. The only preparation which calls for special notice here is the

*Alcoholat Aromatique Ammoniacal*, the equivalent of our own *Sal Volatile*. It is prepared by drawing over 500 parts of spirit from the following ingredients:—

Orange Peel	100	Vanilla	30	Cloves	10
Citron do.	100	Cinnamon.	15	Dist. Cinn. water	500
Ammon. Chlor.	500	Potas. Carb.	500	Alcohol	500

The old-fashioned mode of procuring the mono-carbonate is still adhered to, though the proportion of chloride of ammonium is by far too large; the strength of the product is not given, but it would certainly not be less than .870. The compilers have apparently still to learn that the omission of cloves in the formula would obviate that discolouration which this spirit undergoes by keeping, an objection which has altogether disappeared in this country.

Many other "Alcoholats," as *jasmine, tubérose, etc.*, are in great demand in perfumery. Their preparation differs considerably from that given above, but since they are not officinal, it cannot be entered upon now. From the consideration of the Spirits, we very naturally pass to the subject of Tinctures, which we find arranged under three heads, **ALCOOLÉS, ÉTHÉROLES, and ALCOOLATURES.** The first two designations, we think, fairly explain themselves, but since the last is not quite so evident, and is moreover of more than usual interest to the pharmacist, we shall give it the precedence. An alcoholature may be defined as the product obtained by the maceration of a fresh plant in alcohol of 90° per cent. It differs from the Alcoholat in not requiring di-tillation, and from the Alcoolé in necessitating the use of recently gathered material. Tinctures of *Henbane, Conium, Digitalis, etc.*, are prepared in this way, and it is when we view them in the light of certain experiments which have lately been made, for the purpose of ascertaining the therapeutic value of the same tinctures when prepared from the dried material, that the interest before mentioned attaches to them. Though these investigations are by no means complete, the experimental results go far to show that tinctures prepared from certain succulent plants, when dried, are almost, if not absolutely, inefficacious and worthless; and therefore that the propriety of giving a place to tinctures of this description is well founded. It is thirty years ago since they were first introduced into French practice by Béral, and a suitable place has been assigned to them in the Codex ever since. There is, however, some little inconsistency evinced here in the fact that these tinctures are again ordered to be prepared in another place from dried specimens; it behoves us carefully to distinguish between the two, since the Alcoholatures are far more active. The term *Alcoolés* originally proposed by Chereau is now synonymous with "Teintures Alcooliques" (Tinctures

proper), formerly the distinction between them consisted in the fact that while a Teinture was prepared by macerating a vegetable substance in spirit, with subsequent expression and filtration, an Alcoolé represented a colourless solution in alcohol, of some such body as quinine or camphor. This distinction, however, no longer exists.

Seeing that both maceration and displacement are employed by the Codex for the preparation of tinctures, and at the same time knowing the great care with which every subject has been elaborated by the Commission, we had naturally hoped to have been able to discover some general rule which should guide the choice of the method, when any tincture required to be prepared, and to state the reasons for the classification of the materials employed under either of these two heads. Unfortunately, these hopes have not been realized; the two processes are apparently very arbitrarily distributed among the formulæ, and the whole subject appears to remain in France as in England, in much the same condition as it existed fifteen to twenty years ago, soon after the first introduction of percolation into pharmacy.

All compound tinctures are prepared by maceration, and we notice that any mention of agitation while the extraction is proceeding is studiously avoided.

To exhaust the ingredients, alcohol of three different strengths is employed, according to the nature of the substance operated on. Of 60 per cent. for those containing a good deal of extractive matter; of 80 per cent. for bodies rich in resinous principles and volatile oils; and at 90 per cent. exclusively for the two tinctures of camphor and iodine.

Taking the tinctures as a whole, their strength is greater than those usually prepared in this country; a very general formula for most of the simple tinctures being 1 by weight of substance to 5 of alcohol.

<i>Teinture d'Extrait d'Opium.</i> (Teinture Thébaïque).		<i>Tinct. Opii Ph. Br.</i>
℞ Ext. Opii . . . . . 1		℞ Pulv. Opii . . . . . 1½ oz.
Alcohol at 60° . . . . . 12		Spirit Tenuior . . . . . 1 pint.

The *Laudanum par excellence* of the Codex, being prepared from ext. opii instead of crude opium, is perhaps less likely to produce those disagreeable effects which are generally ascribed to the presence of narcotine; moreover, uniformity of product is thus ensured. As seen above, its strength is 1 to 12, but since 1 gr. of the extract = 2 grs. of the crude, it is double the strength of *Tinct. Opii P. B.*

*Teinture d'Opium Camphrée.*—This formula is stated to be the same as that of the *Paregoric Elixir* of the Dublin Pharmacopœia, but is prepared with extract of opium, which doubles its strength. In other respects it resembles the British. It contains 2 grs. of ext. opii in the fluid oz.

<i>Laudanum de Sydenham.</i>		<i>Vinum Opii Ph. Br.</i>
℞ Opium . . . . . 200		℞ Extract Opium . . . . . 1oz.
Saffron . . . . . 100		Cinnamon . . . . . 75 gr.
Cinnamon . . . . . 15		Cloves . . . . . 75 gr.
Cloves . . . . . 15		Sherry wine . . . . . 1 pt.
Malaga wine . . . . . 1600		Contains 1 gr. of crude opium, or ½ gr. of extract in 10.

<i>Laudanum de Rousseau.</i>		
℞ Opium . . . . . 200	Honey . . . . . 600	Beer yeast . . . . . 40
Hot water. 3000	Alcohol at 60° . . . . .	200

The honey and opium being dissolved together in the water, fermentation is set up by the addition of the yeast; when the latter is complete, the whole is evaporated to 600 parts, and when cold the alcohol added. 1 gr. of opium is contained in 4, being exactly twice the strength of the *Laudanum de Sydenham.*

*Gouttes Noires Anglaises.*—The "Black Drop" of ancient celebrity finds a place and formula here, distilled vinegar being used to exhaust the opium instead of verjuice. Altogether, the *Laudanum de Rousseau* appears to correspond more nearly with the old Black Drop, as fermentation was always employed, which is not the case in the present formula. Prepared as directed, it represents half its weight of opium, one part being equal to two parts of *Laud. de Rousseau*, and to four parts of *Laud. de Sydenham.*

<i>Tinct. de Noir Vomique.</i> 1 part to 5		<i>Tinct. Nuc. Vomice, Ph. Br.</i> 1 part to 10

Ethereal tinctures, *Éthérolés*, are prepared, not with pure ether, but with a mixture of alcohol and ether, of sp. gr. .760, obtained by mixing 712 parts of ether with 288 parts of alcohol of 90 per cent. *Belladonna, Conium, Digitalis,*



and Henbane once more intrude themselves upon the notice under this head, having been already twice prepared as Alcoolés and Alcoolatures. It is impossible to assign any definite reason in thus extracting them again with ether, though these preparations have sometimes been employed in France for the purpose of external friction, an action in which the ether doubtless plays the most important part. Acetic ether is employed as the menstruum for Cantharides, upon the supposition that acetic acid is a good solvent for Cantharidin. Were this the case, no better agent could be employed; but Procter (*Am. Jour. of Pharm.*, xxiv. 299) and others have shown that acetic acid will only take up the active principle of the flies at a boiling temperature, and even then a considerable portion is deposited on cooling, so that possibly, in this case, ordinary ether would exhaust the flies quite as efficiently as the acetic compound.

**APŒZÈMES.**—Under this term are included a class of remedies, partaking of the nature both of the infusion and decoction, and occupying in the Codex that object and position which we have been generally accustomed to assign in a Pharmacopœia to these two preparations. They are in like manner prepared only when needed for immediate use, since water is the only vehicle employed; nevertheless, a slight distinction must be observed between the Apozème and our fresh infusions, inasmuch as the latter are seldom employed alone, which, on the contrary, is generally the case with the Apozèmes. They form a connecting link between the Tisanes and Potions, but differ from the Tisanes in being a more active preparation, and in never serving as an ordinary drink; the dose and time of administration being prescribed by the physician. The line of demarcation, however, between the Apozème and these two latter preparations is by no means accurately defined, for while the Apozème de Feltz is in every respect a Tisane, the Apozème Purgatif is equally a Potion. The following is a good example; as will be seen, it is very similar to Decoctum Sarsæ Co., P. B.:—

*Apozèmes Sudorifique*—

R.	Lig. Guaiaci, 60	Rad. Sarsæ cont., 30
	Rad. Sassafras, 10	„ Glycyrrhizæ, 20
	Aqua, 1,000	

Boil the guaiacum and sarsaparilla in the water for an hour, add the remainder, infuse for two hours, and strain. Let the decoction, when finished, measure one litre.

**BAINS MÉDICINAUX.** Medicated Baths.—These important and universally employed remedial agents receive in the pages of the Codex the recognition due to their importance. Formulæ are given for alkaline, sulphuretted, iodized, mercurial, and other baths, as also for the artificial preparation of the three hot springs of Vichy, Plombières, and Barèges. "Pédiluves," or foot baths, are also included, though such formulæ as that of mustard and warm water scarcely deserves a place.

It is rather surprising that no mention is made of the Douche bath, nor yet of Bains de Vapeur; however, since the latter term is nearly synonymous with "Fumigations," to which a special chapter is devoted, they cannot be said to have been entirely omitted; a list is there given of the substances capable of administration in the state of vapour, but no special directions for their application to the skin.

The capacity of the bath is given at about sixty gallons; the proportion of organic and inorganic material dissolved in it, in other words its strength, being so adjusted as to suit the special remedial object in view in each case.

**BIÈRES MÉDICINALES** have now almost disappeared from French practice. They were formerly in great repute in this country, Quincey's Dispensatory for 1739 containing no less than thirty "ceresivæ;" but they fell into disuse about the end of the eighteenth century. The Codex retains but one formula, that for "Bière Antiscorbutique." This can scarcely be said to be an imitation of our "Spruce Beer," though the therapeutic effect is doubtless the same.

**COLLYRES.**—The term "Collyria" is to be understood as applying in the Codex to any medicament which is employed to act directly upon the eye, whether it be in the state of *fine powder*, liquid, or otherwise.

**EAUX DISTILLÉES** or **HYDROLATS.**—Distilled waters, the manufacture of which has ever been a fertile source for differences of opinion, are in all cases to be prepared by distillation, either with water in the ordinary way, or through

the agency of steam, so that from one part by weight of substance, a quantity, varying from one, one and a half to two or four parts, may be drawn over. Extemporaneous preparations from the essential oil, by rubbing with sugar or carbonate of magnesia, and subsequent agitation with water, is in no case allowed; neither is our latest method of distilling with the oil, instead of the fresh plant any more favourably regarded.

Upon the latter point, however, a fairly unanimous decision has been given on this side the Channel, it having been shown that some waters, especially the "mints," as regards their flavour and keeping qualities, are preferably prepared by this latter method; nevertheless, the Codex, in adhering to one uniform method of manufacture, and directing that the waters be very frequently renewed, is more likely to ensure uniformity of product than if two or three different methods were at the disposal of the pharmacist. There is, we believe, a very general opinion among French chemists that the essential oil in a hydrolat is not merely a simple solution of the oil in water, but that it is in chemical combination with it as a hydrate; and this assertion is not a random supposition, but is to a great extent proved by the fact that it is impossible to remove the odour of a distilled water by agitation with a fixed oil; while, on the contrary, if the oil be prepared in any other way its odour is very considerably carried off by the above-mentioned proceeding; as a natural consequence, therefore, when distillation is ordered for the preparation of the waters of the Codex, it is supposed that the only available method has been given which can produce a veritable hydrolat.

As a rule, all plants are to be employed in a fresh state; but an exception is made in the case of Lime Flowers, Camomiles, Melilot, and Elder, which are to be used when dry. The propriety of this is doubtful in the case of Elder flowers (unless they be salted); but the other three are known to acquire a certain suavity of odour which is not to be found in the more recent flower.

This mellowness is also an important desideratum in the distilled product; since all waters, when freshly drawn, especially from green plants, possess, at first, a peculiar smoky flavour. To remedy this, they are directed to be kept at least one month before using, and, when matured, to be preserved in stoppered bottles, perfectly filled, and removed from the influence of light.

The care evinced in obtaining uniform and definite preparations is well shown in the following water.

*Eau de Laurier Cerise.* Aqua Laurocerasi. Take of fresh leaves of Cherry Laurel, gathered between May and September, 1,000 grammes; water, 4,000 grammes. Bruise the leaves, and distil with a moderate heat, till the product amounts to 1,500 grammes. When the operation is finished, agitate the distilled water strongly to effect the complete solution of the volatile oil, and filter through paper to remove any oil that may chance to be held in suspension. Aqua Laurocerasi, prepared in this manner, contains, generally, from fifty-five to seventy milligrammes of hydrocyanic acid in the 100 grammes; but for medicinal purposes, this proportion must be lowered by the addition of distilled water to 50 milligrammes.

To estimate the proportion of Hydrocyanic Acid which it contains, prepare a volumetric solution of sulphate of copper by dissolving 23.09 grammes of the salt in a litre of water, and having measured 100 cc. of the aqua, and 100 cc. of solution of ammonia into a beaker, run in the volumetric solution from a burette, till it ceases to be entirely decolorized by the acid. The number of cc. of solution used, represent exactly the number of milligrammes of Hydrocyanic Acid contained in the 100 grammes of the cherry laurel water. If, therefore, 60 cc. of the volumetric solution have been used, 100 grammes of the water contain 60 milligrammes of Hydrocyanic Acid; and, therefore, the distilled product requires dilution, so as to reduce the proportion to 50 milligrammes. This is, of course, easily done by a rule-of-three sum—50 : 100 :: 60 : 120. Every 100 grammes of the water must, consequently, have 20 grammes of distilled water added to it, in order to reduce it to the normal standard.

**ELECTUAIRES, CONFÉCTIONS, OPIATS**—In this chapter, that extraordinary and multitudinous grouping of ingredients, briefly mentioned before under Alcoolats, reaches its culminating point. In one case no less than a tenth of the whole



Materia Medica, apparently chosen by lot, being dried, ground, sifted, and beaten together into a mass, in imitation of that inflexible and exhaustive panacea which was once considered as the *summum* of the art of pharmacy. Moreover, the generic names with which this class of compounds were adorned bear ample testimony to the light in which they were regarded; thus, *Electuary*, signifying a medicamentum, prepared from picked ingredients; *Confection*, a finished work, requiring no revision; *Catharticum*, curing all diseases, are terms which, having been handed down from time immemorial, still continue to be applied in Pharmacy to the same style of preparations, though in many cases shorn of all their pristine grandeur.

This, the last edition of the Codex, contains five of these preparations, among which the Theriaca stands chief, a *rudis indigestaque mæles* of sixty ingredients. It would be wasting time and space to enumerate its components singly, but if it be remembered that it is composed of opium, combined with aromatics and antispasmodics, it is, perhaps, all that is required. It has been considerably curtailed from former editions, and reduced in strength. Eighty grains of the Theriaca now contain one grain of opium.

*Diascordium* (from *Teucrium Scordium*, Labiatae) is another of these ancient remedies which still maintains its ground, somewhat altered, however, from the original formula of Frascator; it is essentially an astringent electuary, extract of opium, bistort, and tormentil being found among its constituents. 116½ grains contain 1 gr. of ext. opii.

*Electuaire de Séné Co.* Lenitive Electuary differs from the English preparation chiefly in containing Pearl Barley, the rhizome (not *racine* as given) of *Polypodium Vulgare*, and the fresh leaves of *Scolopendrium Vulg.* and *Mercurialis Annu.* It has no relationship with *Elect. Catharticum* (Comp. Rhubarb do.), though many of the same ingredients are found in both.

Although the term "Opiat" was originally intended to signify a confection containing opium, it has now almost entirely lost this significance; and at present any preparation much simpler in composition, yet of about the same consistence as the electuary, comes under this head. The Codex contains only one formula, "Opiat de Copahu Co.," composed of equal parts of Copaiba, Cubebs, and Catechu.

EMPLÂTRES, SPARADRAPS AND PAPIERS EMPLASTIQUES.

The plasters of the Codex fall under two subdivisions. 1. *Emplâtres Résineux*, in composition closely resembling the ointments—i.e., the ointments of the Codex as distinguished from Pomades—but differing in containing more solid ingredients, and consequently in possessing a higher melting point. The *Emp. Lyttæ* and *Emp. Picis* are the only representatives in the P. B. of this class, of which perhaps the former is the better example as regards consistence since the *Emp. Picis* contains rather less wax than is generally found in plasters of this description. 2. *Emplâtres proprement dits*, the basis of which is either entirely or partially lead plaster. Under this latter head are also included *Emp. Erûlés*, in like manner prepared with oxide of lead, but without the intervention of water; consequently the boiling point rises considerably, and the product becomes brown from the partial decomposition of the fats. In the solitary instance in which this latter process is employed in the Codex, it is not easy to explain the object intended in thus burning the plaster; but some pharmacologists are of opinion that if the water used in their preparation be allowed to run short towards the end of the operation, a product is obtained which, though rather darker in colour, is less brittle, and spreads more easily.

When a plaster is extended upon any material, such as linen, silk, or cotton, it is called a Sparadrap, the term being generally confined to such as are prepared by the yard. *Ecusson* is the name applied to the small plaster ordered by prescription. Among the list of Sparadraps we find Collodion, the formula for which has been very wisely imitated, in sense if not in identity, by the *Collodium Flexile* of the Ph. Br. The improvement, due to Dr. Lebour, consists in the addition of a twelfth part of Castor Oil to the solution of pyroxalin in ether, for the purpose of imparting to it a certain amount of elasticity and suppleness, and thus overcoming that strong contractile power which is so objectionable when Collodion is used for medical purposes.

Collodion (Codex).

℞ Pyroxalin . . .	7 parts
Ether Absolut . . .	64 "
Alcohol . . . . .	22 "
Ol. Ricini . . . . .	7 m.

Collodium Flexile Ph. Br.

℞ Collodion . . .	5 fl. oz.
Canada Bals. . .	120 grains
Castor Oil . . . .	1 fl. drachm, m.

The *Papier Emplastique* is only a modification of the sparadrap, in which thin tissue paper is used as the material upon which the plaster is spread. Beside the well-known Blistering Tissues and Poor Man's Plaster, the Codex includes the "Papier Fayard et Blayn," which, since the patent has now expired, is inserted under the name of "Papier dit Chimique (Charta Chemica)."

*Espèces* is a term which, if translated by "Ingredients," may render evident a signification otherwise exceedingly vague and indefinite, for by *Espèces* are designated certain mixtures of dried leaves, roots, etc., which, when coarsely comminuted, are kept in stock for the immediate preparation of an infusion or decoction. These latter are generally prepared by the patient himself, the pharmacist forwarding the necessary materials and directions. As a type of formula the following may be taken, though in all other cases save the present the proportions of ingredients are *part. eq.* :—

<i>Espèces Purgatives.</i>	<i>St. Germain's Tea.</i>
℞ Fol. Sennæ . . .	120 grms. = 4¼ ozs.
„ Sambuci . . . .	40 „ „ 1¾ „
Fruct. Anisi . . .	40 „ „ 1¾ „
„ Fœnic. . . . .	30 „ „ 1 oz. 25 grs.
Potass. Bitart. . .	30 „ „ 1 „ 25 „

Mix carefully, and divide into packets of 5 grms. (75 grains), each of which serve to make about half a pint of infusion. An aperient remedy very popular in Prussia.

EXTRACTS.—The extracts of the Codex are divided into five classes. 1. Those prepared by evaporation of the expressed juice of fruits, sometimes termed *Robs.* 2. By the evaporation of the expressed juice of part or of the entire plant. 3. Aqueous extracts. 4. Alcoholic extracts. 5. Etherial extracts. In all cases the solution intended to furnish the extract is to be obtained in as concentrated a form as possible, and subsequently to be evaporated *in vacuo*, so that the heat applied may never reach 100° C.

Only two unimportant extracts, Buckhorn and Elder, are prepared by the first process, but the second contains a more extensive catalogue. Since all these are prepared in the same manner, that of *Ext. Conii* is given in the Codex as the type. "Take of leaves of Conium gathered when the plant is in flower, q. s. Bruise in a stone mortar, express the juice, heat so as to coagulate the albumen and chlorophyll, strain and evaporate the liquor till reduced to one-third of its volume. Cool, and allow it to deposit for twelve hours; separate the fæculence, and evaporate to the consistence of a soft extract." We notice here that the leaves only are employed, to the exclusion of the young green stalks, that the albumen and chlorophyll are separated together, and the chlorophyll not subsequently returned; from this latter circumstance, the term "green extracts" can scarcely be applied to them. Partial clarification also is adopted, which gives the extract more transparency than we are accustomed to see in our own preparation.

The total rejection of the chlorophyll cannot be considered otherwise than as an error; for though it is well known to possess no activity in itself, it has been shown by Störck to be closely allied to the vegetable alkaloids in its chemical properties, which renders it exceedingly probable that it is capable of entering into combination with them; certain it is, that when coagulated, it carries down with it a considerable portion of the active principle, thus rendering its subsequent incorporation with the extract almost imperative. Extracts of Aconite, Belladonna, Henbane, Taraxacum, etc., are made in this way.

As regards the Aqueous Extracts, maceration or displacement with cold, warm, or hot water is employed to exhaust the material, ebullition never, save in the case of Guaiacum wood. The recent researches of M. Blondein have been recognised in the preparation of *Ext. of Calisaya Bark*. An alcoholic extract is to be first prepared, and this afterwards taken up by cold water; after twelve hours' contact, the whole is to be filtered, and evaporated *in vacuo* to the proper consistence. By this means a very soluble extract is obtained, much richer in alkaloids than when water alone is used; it is decidedly in advance of the P. B. preparation.



Extract of Gr y Bark is also to be prepared dry, by sealing upon porcelain plates.

Extract of Calabar Bean, of growing importance, is included among the alcoholic list, prepared by percolation with boiling alcohol. Under this head, also, Conium and the Atropaceous extracts again appear, this time prepared from dried material, including an extract of the seeds. The French seem to be remarkably fond of this natural order, no less than fifty-four preparations from it occurring in the Codex. We do not doubt their medicinal activity, but the utility of three different tinctures, and three different extracts from each, is, to say the least, doubtful.

An extract of Colebitum is found only from the seeds, while Ext. Aloes, Jalap, Hops, Lo wood, Elaterium, and Cannabis India are entirely omitted. The Codex also contains no fluid extracts properly so called.

FUMIGATIONS.—We alluded briefly to this chapter when discussing the class "Bains Médicinaux;" it only remains to mention here that the official administration of such substances as Conium, Belladonna, etc., is effected in the Codex by means of *cigarettes*, the volatile principles being inhaled in the usual way, without the intervention of warm water. Nevertheless, it must not be supposed that this is meant to supersede the old-fashioned method of inhalation, as employed in the "Vapor" of the Ph. Br., but only as one convenient mode of obtaining the medicinal effects of these substances. Arsenious Acid, Iodine and Mercury, are often thus administered.

HUILES MÉDICINALES AND LINIMENTS.—Although a distinction is made between these two classes in the Codex, they are nevertheless practically identical, since the medicated oils are intended solely for external use. Some of these oils are prepared by digesting the leaves, etc., of one or more plants in olive oil till they become crisp, that is, till the water of vegetation has been volatilized, after the manner of the Ung. Conii of P. L. 1851. Others are simple solutions in olive oil of such substances as camphor and phosphorus.

Two complex *Baume Tranquille*, much patronised as an anodyne in rheumatism and other local pains, belongs to the former class, its efficacy depending principally upon the presence of the four favourite narcotic plants. Like the Ong. Populeum it possesses a fine green colour (chlorophyll), which appears red when viewed by transmitted light.

The Liniments proper differ from our own preparations in no other respect save in the construction of the formulæ. It is important to notice that the imitation of Opodeldœ contains ammonia, and is decolourized with animal charcoal.

<i>Baume Opodeldœch.</i>		<i>Lint. Saponis Co. Ph. Br.</i>	
R Hard soap ..	300	R Hard soap ..	24 oz.
Camphor ..	240	Camphor ..	1½ oz.
Liqui Ammonia ..	100	Oil of Rosemary ..	3 fl. dr.
Oil of Rosemary ..	60	Distilled Water ..	2 oz.
Oil of Thyme ..	20	Rectified Spirit ..	18 fl. oz. M
Alcohol of 90° ..	2500 M.		

GLYCÈRES have been inserted in the Codex simultaneously with "Glycerina" in the Ph. Br., and though the two classes are precisely similar in their general style and application, they differ slightly upon two points. The Codex prepares its Glycéré d'Amidon (Glycerinum Amyli) in the proportion of 1 of starch to 15 of glycerine; the Ph. Br. 1 to 9 by weight. The former uses the above Glycerate of Starch as the basis of all its official preparations; the latter does not employ it in a single instance.

In neither of these formulæ is the proportion of starch so large as originally suggested by Mr. Schacht, who employs 70 grs. to the fluid oz. of glycerine. It has been found necessary to confer upon these preparations a certain amount of consistence, since, like all compounds of glycerine, they have a great tendency to absorb moisture from the atmosphere.

The application of these Glycerates in pharmacy has been at present but slightly developed; there is no doubt, however, that ere long they will supersede in many cases the use of ointments.

OLIOSACCHARURES, ET C.—The "saccharuro" was first proposed by Béral, who was of opinion that it would prove a convenient mode of administering a tincture in those cases in which the stimulant effect of the alcohol was inadmissible, and he prepared them by saturating sugar, in small fragments, with an alcoholic or ethereal tincture, and then exposing it to the air or a gentle heat to volatilize the

spirituous menstruum. However, they were probably found not to answer so well as was anticipated, and at the present day they have almost disappeared from practice. The Codex retains but two, Iceland Moss and Carrageen, from which a Saccharure is prepared by evaporating the decoction to dryness after mixing with a proportion of sugar. They are sometimes used in the preparation of chocolates. The term *Oliosaccharure* is applied to an admixture of an essential oil with sugar, and made either by triturating them directly together, or by rasping the rind of certain hesperidaceous fruits with lump sugar and mixing afterwards in a mortar—the object intended being to facilitate the solution of the oil in water.

PILULES, GRANULES, AND DRAGÉES. The French pharmacist classifies the "pill" under either of these three heads, according as it varies in composition, weight, or external appearance. The *Pilule*, or pill proper, is composed of ordinary metallic or vegetable substances, and weighs about three grains. The *Granule* weighs only three-quarters of a grain, and exhibits more potent medicines, such as strychnine, etc., the dose of which is proportionately small, while the *Dragée* is a pilule covered externally with sugar, by rolling it in powdered sugar while moist, and drying rapidly in a stove—an operation which must be repeated several times till the coating is of the proper consistence. A great many of the official formulæ are prepared from what were originally private recipes, but which experience has shown to be eminently adapted to the end in view, among which those of Blancard, Anderson, and Vallet stand prominently forward.

The Socotrine variety of Aloes is never employed in the Codex, Barbadoes being generally ordered in aperient and Cape in dinner Pill masses, the objection to the Socotrine being, apparently, that it is too strong; for we find in the list of *Materia Medica* a note to the effect that "the Cape aloes, being the less active variety of any, is always to be employed unless it be specially ordered to the contrary." Two formulæ for *Pil. Ferri Protocarb.* are given, one retaining the alkaline sulphate, the other not. The excellence of M. Vallet's method cannot be doubted, and it receives recognition in the United State's Pharm. as well as in the present instance; its superiority consists in dissolving the reacting salts in weak syrup, in washing the precipitate with the same, and then expressing it in a cloth likewise impregnated with sugar, and subsequently in bringing it to the pilular consistence by evaporation with honey and sugar of milk, which are found to act much more efficiently than Confection of Roses, in preventing the oxidation of the iron.

Granules, introduced by M.M. Homolle and Quevonne, are prepared containing Digitaline, Arsenious Acid, Atropine and Strychnine. Each granule contains  $\frac{1}{3}$  grain of the alkaloid, etc.

It is not possible in every case to calculate the proportion of active ingredient in a pill mass, since the quantity of excipient is often left to the discretion of the dispenser; but as the mass produced by each formula is directed to be immediately rolled off into a certain number of pills, the proportion in each pill is consequently accurately known. The weights of the following pills is therefore calculated as nearly as it is possible to do so:—

*Pilules Asiaticques, ou Arsénicales.*

1 gram contains  $\frac{1}{15}$  gr. of  $As_2O_3$ .

*Pilules de Cynoglosse Opiacées.*

3 grains contains  $\frac{2}{15}$  gr. of ext. opii and the same of pulv. sem. Hyosey.

*Pilules de Dupuytren.*

1 gr. contains about  $\frac{1}{2}$  gr. of Hyd. Bichlor. and about  $\frac{1}{3}$  gr. of ext. opii.

*Pil. Hydrarg.* is of the same strength, and prepared in the same way as the Ph. Br., but there is no such formula as *Pil. Saponis Co.*, by which opium may be administered alone.

(To be continued)

We have received samples of Möller's Norwegian Cod Liver Oil, Beckett's Syrup of Orange and Quinine, and Morson and Son's Saccharated Wheat Phosphates. These articles will be reported on in an early number.

On Wednesday last, Messrs. Daniel Hanbury and Joseph Ince were elected Fellows of the Microscopical Society.





## THE PHARMACEUTICAL SOCIETY'S MEETING.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—The executive of the United Society could not but feel an anxious interest in the decision which the Special General Meeting of the Pharmaceutical Society, held on the 15th ultimo, was convened to pronounce, as we were quite aware that the votes passed, and the Council elected for the ensuing year would either check our present efforts, or tend to crown them with success.

The final decision has filled with the utmost gratification the hearts of many both within and without the pale of the Pharmaceutical Society, as Mr. Collins' amendment, embodying the fullest approval of the Council's policy, taken together with the re-election of the old members of Council almost *en masse*, proves that unity of opinion existed on this important subject of trade legislation between the representatives and the represented in the Pharmaceutical Society.

The late discussions have been ample and exhaustive; and we doubt not that frank and friendly explanations have placed the whole question in a brighter light even to those who had deemed their interests disregarded.

We would give expression to the views and sentiments of the outsiders at this stage of the movement; and now the discussion is, for practical purposes, closed by the debate of the 15th ult. We would express to pharmaceutical chemists that we should have been grieved had we created, however unconsciously, any difficulty within their Society, by causing an interruption, though even temporary, in that confidence hitherto so freely given to the Council. We were prepared in the present juncture of affairs for this appeal to the supreme tribunal of the Society, for the action of the Council has been decided and bold. This year will probably witness the turning point in its career, such a one as will follow from a bold and patriotic policy—a policy that aims to marshal the great body of chemists and druggists in England and Scotland as a compact phalanx, securing by this organisation to each member a higher social position, and a guardianship for his interests.

To attain this result no pusillanimous action would avail. This new era for our trade could only be inaugurated by boldly setting different opinions and interests face to face, and demanding from them those mutual concessions which the attainment of a grand object so imperatively asked for, and which have been so unselfishly conceded.

The whole history of our negotiations proves that, fully conscious of the position we were entitled to fill in the Pharmaceutical Society, we have felt sensitive that in making our proposals they should be such as could be complied with, without a sacrifice of justice, for greatly though we value success, we would abandon our project could it be attained only by a wrong. We do not for a moment deny to the examined members their first claim to the consideration of their Council. If, as it appears from the present confusion of terms, the distinction is insufficiently marked between Pharmaceutical Council and member of the Pharmaceutical Society, the blame is not ours, neither should be the penalty; but let us be practical, and henceforth give the appellations a more distinctive character.

We assure pharmaceutical chemists we are actuated by the belief that the operation of the Pharmacy Act will benefit those to succeed us more than ourselves. We look forward to see our members conscious of the higher standing of their pursuits; to see their labour rewarded by protection from unfair competition; at least we hope to see the elimination from our body of the ambitious huckster, the enterprising pawnbroker, the dilapidated schoolmaster. Our relative commercial advantages cannot be upset, should any one use the title of member of the Pharmaceutical Society merely to cloak ignorance in his business.

The public is not so obtuse as we may sometimes give it credit for being, of which here is a practical illustration coming home to most of us. In engaging our assistants, we are eager to secure the services of a cheap "young man."

We know too many chemists have lessened their connection by such a parsimonious step. We have learnt how shrewd the public is at summing up the business aptitude of our assistants; we look carefully into their qualifications, and to competent men give a higher remuneration than formerly. In other establishments and in my own I have noticed the searching eyes of a customer, for whom, perhaps, some favourite formula was being dispensed, and I have heard certain pertinent little questions asked, in the answers to which is quickly discerned a more or less intimate knowledge of our business, and the result is a greater or lesser confidence placed in the respondent. Move onwards a step, the assistant of to-day is the master of to-morrow, and in either capacity the amount of his business qualifications will determine the measure of his success. The examinations of the Pharmaceutical Society we hold in high esteem and believe so stamp a man, that (*ceteris paribus*) such proof of competency must display itself on every available occasion to the general body of his patrons, and to the members of the medical profession. We, the outsiders, are not jealous of such advantage. We feel proud of the influence already exercised in our trade by the young energetic and examined men. The Society that boasts to be their "Alma Mater," is worthy of all our support to urge its action to the utmost limit; and we have claimed to be participators together with them in this good work.

Of examinations as a body we would say, "Before the Pharmaceutical Society was, the public had examined us." We offer you our credentials, such as were those of your founders and of two-thirds of your members, as men whose business attainments have stood the test of practice, and been matured by experience. If it be possible for an unworthy postulant to be admitted to the Pharmaceutical Society, his membership can be merely the outward badge, the lion's skin will fail to conceal his true nature; and most assuredly such a man will not find it his interest to continue money payments to a Society, membership of which merely exposes him to ridicule.

It remains for the United Society, and for all to place upon record with what courtesy, frankness, and liberality they have been met by the Pharmaceutical Council.

We heartily wish that the Society may receive active and permanent support from many who hold an honourable position in our trade. Feelings of the highest confidence and respect now take the place of former diffidence; for in addressing my parting words to pharmaceutical chemists, I will tell them what they have not done. To the level of unworthy members of our trade, your feelings and judgment have recoiled from degrading the great body of your fellow-pharmaceuticalists. You have not disfigured the portals of your noble institution by asking us to enter the Pharmaceutical Society only through another "Caudine Forks," stamping us with a badge of inferiority to foster only feelings of injustice and enmity.

Believe me,

Truly yours,

S. C. BETTY,

Member of the London Executive  
of Chemists and Druggists.

1, Park-street, Gloucester-gate, Regent's-park, London.

## LEGISLATION FOR CHEMISTS.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

DEAR SIR.—In a leading article in your journal for the month of November last, referring to a letter of mine in the same issue, advocating conciliation and unity, you regretted you could not concur with me that the "halcyon" days of the United Society were so near. The proceedings, however, of the past few months have materially altered your opinion; thanks to the liberality and good sense of the two executives. I must admit I could not have hoped for so speedy and satisfactory an arrangement when I penned my last. I regret I have not been able to attend the meetings which have brought about so desirable a termination. And now a word, Mr. Editor, about the New Bill. So far as my humble ideas extend, it seems to be a very sensible and well-framed measure, but there is one clause, the 17th, to which I much object, so far as it relates to "Opium and Laudanum" in Schedule A. I will give my reasons. In







spot oil is now 39s. 6d., Hull 38s. 9d. to 39s., and last six months 36s. 9d. to 37s. Brown Rape has closed rather lower, buyers at 35s. for English. Turpentine is again lower, the nearest prices are 34s. to 34s. 6d. Petroleum has also further declined, and is dull at 1s. 1d. to 1s. 1½d. for fine American; 12d. for English; and 8½d. to 9d. for Petroleum Spirit. Nothing reported in Crude.

In the Drug market, Gum Arabic becoming in better supply, has given way a few shillings, and business very quiet. Camphor has advanced to 137s. 6d. to 140s. for China, but was not so active at the close. A good business has been done in Galls at late prices. Large sales made in Siam Sticklae at from 52s. 6d. to 62s. 6d., closing firm at the latter price. Oil Aniseed is steady at 12s., and thirty to forty cases sold. Tonquin Musk at the late sale went 1s. to 2s. cheaper. Cape Aloes were about 1s. lower, and some Barbados sold at rather easier prices. The few parcels of Bark offered were chiefly taken in at firm prices. Castor Oil is 0½d. dearer, and in better demand. Citronelle is 0½d. cheaper, fifty cases selling at 2½d. to 3d. Several parcels of China Rhubarb have been offered, but being held for firm prices, they were chiefly taken in. Cardamoms are without change. Balsam Capivi is steady, last sales made at 1s. 9½d. to 1s. 10d. Jalap is without change, except the very low kinds, which sell at easier prices. Turkey Opium was chiefly taken in at 15s. 6d. for good, up to 18s. for fine. Turmeric is rather cheaper. Rough Saltpetre is a shade better, both on the spot and for arrival. Cochineal is steady at about 1d. advance. Safflower more in demand, and 2s. 6d. to 5s. dearer. Shellac is quiet, and the finer kinds scarcely supported. Beeswax is a trifle easier. In other goods no change worth notice.

PRICE CURRENT.

These quotations are the latest for ACTUAL SALES in Mincing Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the CASH PRICES IN BULK. They will, however, be able to form a tolerably correct idea of what they ought to pay.

	1867. s. d.	1867. s. d.	1866. s. d.	1866. s. d.
ARGOL, Cape, per cwt.	65 0	78 0	70 0	85 0
French	53 0	75 0	58 0	70 0
Oporto, red	30 0	0 0	40 0	43 0
Sicily	60 0	65 0	70 6	72 6
Naples, white	66 0	71 0	68 0	73 0
Florence, white	80 0	85 0	87 6	92 6
red	70 0	75 0	78 0	80 0
Bologna, white	80 0	82 0	87 6	90 0
ARROWROOT. (duty 4½ per cwt.)				
Bermuda, per lb.	1 0	1 2	1 3	1 5
St. Vincent	0 2	0 4½	0 2½	0 6
Jamaica	0 2½	0 3½	0 3	0 5
Other West India	0 0	0 0	0 2½	0 3½
Brazil	0 0	0 0	0 2½	0 3
East India	0 1½	0 3	0 2½	0 3½
Natal	0 3	0 7½	0 3½	0 8
Sierra Leone	0 4	0 4½	0 3½	0 4
ASHES, per cwt.				
Pot, Canada, 1st sort	36 0	36 6	35 6	0 0
Pearl, ditto, 1st sort	46 0	46 6	38 6	39 0
BRIMSTONE,				
rough, per ton	132 6	0 0	135 0	0 0
roll	200 0	205 0	200 0	0 0
flour	270 0	0 0	240 0	250 0
CHEMICALS,				
Acid—Acetic, per lb.	0 4	0 0	0 4	0 0
Citric	1 10½	1 11	1 11	2 0
Nitric	0 5	0 5½	0 5	0 5½
Oxalic	0 9½	0 9½	1 0	0 0
Sulphuric	0 0½	0 1	0 0½	0 1
Tartaric crystal	1 2	1 2½	1 4½	1 4½
powdered	1 2½	1 3	1 5½	0 0
Alum, per ton	150 0	155 0	150 0	160 0
powder	170 0	0 0	170 0	0 0
Ammonia, Carbonate, per lb.	0 5	0 5½	0 5	0 5½
Sulphate, per ton	210 0	250 0	230 0	250 0
Antimony, ore	0 0	220 0	180 0	190 0
crude, per cwt.	22 0	23 0	24 0	25 0
regulus	33 6	34 0	0 0	35 0
French star	34 0	35 0	34 6	35 0
Arsenic, lump	16 0	16 6	15 0	15 6
powder	7 3	7 0	7 6	0 0
Bleaching powder	14 6	0 0	16 6	17 0
Borax, East India refined	0 0	0 0	0 0	0 0
British	70 0	0 0	65 0	0 0
Calomel, per lb.	2 5	0 0	2 5	0 0
Camphor, refined	1 11	0 0	1 6	1 6½
Castor Oil, green, per ton	55 0	57 6	56 0	60 0
Crude Sublimate, per lb.	1 11	0 0	1 11	0 0
Col. Emerald	0 0	0 0	0 0	0 0
unawick, per cwt.	0 0	0 0	0 0	0 0

	1867. s. d.	1867. s. d.	1866. s. d.	1866. s. d.
CHEMICALS,				
Iodine, dry, per oz.	0 9½	0 9½	0 7½	0 7½
Magnesia, Carbon, per cwt.	42 6	0 0	42 6	45 0
Calcined, per lb.	1 6	1 8	1 6	1 8
Minum, red, per cwt.	21 6	22 6	22 0	22 3
orange	33 6	0 0	32 6	0 0
Potash, Bichromate, per lb.	0 5	0 0	0 5½	0 6
Chlorate	1 0	1 0½	1 1½	1 2
Hydriodate, per lb.	12 6	0 0	0 0	8 6
Prussiate, per lb.	1 0½	1 1	1 0½	1 1½
red	1 9½	1 10	1 9½	1 10
Precipitate, red, per lb.	2 5	2 6	0 0	2 6
white	0 0	2 5	2 5	0 0
Prussian Blue	1 0	1 10	1 0	1 10
Rose Pink	29 0	0 0	29 0	0 0
Sal-Acetos, per lb.	0 11½	0 0	0 0	1 2
Sal-Ammoniac, per cwt.				
British	34 0	36 0	35 6	37 6
Salts, Epsom	8 6	9 0	8 6	9 6
Glauber	5 6	0 0	5 0	6 0
Soda, Ash, per deg.	0 2½	0 2½	0 2½	0 0
Bicarbonate, per cwt.	17 6	0 0	18 6	19 0
Crystals, per ton	107 6	0 0	110 0	0 0
Sugar Lead, white, per cwt.	0 0	0 0	31 0	39 0
brown	27 0	27 6	27 0	0 0
Sulphate Quinine, per oz.				
British, in bottle	4 9	0 0	5 1	0 0
Foreign	4 4	0 0	4 8	0 0
Sulphate Zinc, per cwt.	0 0	0 0	0 0	0 0
Verdigris, per lb.	0 11	1 0	0 11	1 0
Vermilion, English	2 9	3 2	2 9	3 0
China	2 6	2 7	0 0	0 0
Vitriol, blue or Rom. per ct.	25 0	26 6	25 0	26 0

	1867. s. d.	1867. s. d.	1866. s. d.	1866. s. d.
COCHINEAL, per lb.				
Honduras, black	3 0	4 4	3 2	4 6
silver	2 8	3 10	2 0	3 7
Mexican, black	3 4	3 9	3 2	3 5
silver	3 4	3 5	3 0	3 2
Lima	0 0	0 0	0 0	0 0
Teneriffe, black	3 0	4 2	3 4	4 2
silver	3 1	3 6	3 0	3 4

	1867. s. d.	1867. s. d.	1866. s. d.	1866. s. d.
DRUGS,				
Aloes, Hepatic, per cwt.	80 0	180 0	100 0	170 0
Socotrine	180 0	290 0	140 0	290 0
Cape, good	30 0	31 0	36 0	39 0
inferior	17 0	30 0	20 0	35 0
Barbados	80 0	280 0	50 0	280 0
Ambergris, grey, per oz.	40 0	44 0	24 0	30 0
Angelica Root, per cwt.	0 0	0 0	20 0	35 0
Aniseed, China star	120 0	0 0	90 0	100 0
Germau, &c.	30 0	42 0	25 0	40 0
Balsam, Canada, per lb.	1 3	1 5	1 4	1 5
Capivi	1 10½	1 11	1 10	2 0
Peru	6 3	0 0	5 3	5 6
Tolu	2 3	3 0	2 8	2 9
Bark, Cascarella, per cwt.	16 0	28 0	20 0	29 0
Peru, crown & grey, per lb.	1 4	2 0	1 2	2 2
Calisaya, flat	2 6	2 9	2 6	2 9
quill	2 2	2 6	1 10	2 8
Cartbagenia	0 10	1 4	1 0	1 4
Pitayo	0 9	1 8	0 9	2 0
Red	2 6	12 0	2 6	13 0
Bay Berries, per cwt.	0 0	0 0	0 0	0 0
Bucca Leaves, per lb.	0 3	0 9	0 5	0 11
Camomile Flowers	50 0	95 0	30 0	105 0
Campbor, China	137 6	140 0	117 6	120 0
Canella alba	22 0	33 0	0 0	0 0
Cantharides, per lb.	2 4	2 5	2 4	0 0
Cardamoms, Malabar, good	5 6	6 6	5 8	6 6
inferior	3 9	5 3	3 6	5 6
Madras	3 9	5 9	2 9	5 8
Ceylon	2 6	3 0	3 0	3 9
Cassia Fistula, per cwt.	18 0	32 0	15 0	38 0
Castor Oil, 1st pale, per lb.	0 6½	0 7½	0 6½	0 8
2nd	0 6	0 6½	0 6	0 6½
inferior and dark	0 5½	0 6	0 5½	0 5½
Bombay, in casks	0 5½	0 0	0 5½	0 6
Castorum	1 0	20 0	1 0	20 0
China Root, per cwt.	20 0	30 0	20 0	35 0
Cocculus Indicus	30 0	35 0	30 0	40 0
Cod Liver Oil, per gal.	4 6	5 6	3 6	6 3
Colocynth, apple, per lb.	0 7	0 11	0 7½	1 2
Colombo Root, per cwt.	30 0	40 0	160 0	220 0
Cream Tartar				
French	83 0	84 0	90 0	0 0
Venetian	0 0	0 0	95 0	0 0
grey	75 0	0 0	85 0	87 6
brown	70 0	72 6	87 6	0 0
Croton Seed	100 0	125 0	300 0	420 0
Cubebs	50 6	52 0	77 0	85 0
Cummin Seed	14 0	18 0	16 0	32 0
Dragon's blood reed	210 0	220 0	300 0	400 0
lump	85 0	280 0	105 0	280 0
Galangal Root	11 6	13 0	9 6	10 6
Gentlan Root	16 0	0 0	16 0	18 0
Guinea Grains, per cwt.	56 0	58 0	85 0	87 6
Honey, Narbonne	50 0	70 0	50 0	70 0
Cuba	26 0	41 0	26 0	35 0
Jamaica	23 0	55 0	32 0	61 0
Ipecacuanha, per lb.	9 3	9 6	13 6	14 0
Isinglass, Brazil	2 0	3 10	2 2	5 4
East India	1 10	4 2	1 6	4 4
West India	3 8	3 11	3 9	4 2
Russian	9 6	10 6	7 6	10 0
Jalap	0 9	5 0	0 9	5 3



DRUGS—continued.	1807.	1867.	1866.	1866.
	s. d.	s. d.	s. d.	s. d.
Juniper Berries . . . per cwt.	8 0	10 0	8 6	19 0
Gorman and French . . .	9 0	10 0	9 0	10 0
Italian . . . . .	0 0 1/2	0 0 1/2	0 0 1/2	0 0 1/2
Lemon Juice . . . per deg.	65 0	75 0	75 0	80 0
Liquorice . . . . . per cwt.	50 0	70 0	55 0	75 0
Spanish . . . . .	3 9	4 3	2 6	3 0
Italian . . . . .	1 10	2 0	1 2	1 8
Manna, flaky . . . . .	18 0	32 0	18 0	36 0
small . . . . .	10 0	11 6	20 0	22 6
Musk . . . . . per oz.	15 0	16 6	13 6	14 0
Nux Vomica . . . . .	3 0	7 0	5 0	7 0
Opium, Turkey . . . . .	34 0	45 0	24 0	36 0
Egyptian . . . . .	10 0	11 0	0 0	0 0
Orris Root . . . . . per cwt.	110 0	120 0	135 0	145 0
Pink Root . . . . . per lb.	0 7	1 0	0 4	1 2
Quassia (bitter wood) per ton	8 6	10 0	2 6	12 6
Rhatany Root . . . . . per lb.	3 0	7 6	2 6	10 0
Rhubarb, China, round . . . . .	9 6	12 0	12 0	14 0
flat . . . . .	9 0	10 0	15 0	16 0
Dutch, trimmed . . . . .	32 0	34 0	36 0	38 0
Russian . . . . .	110 0	120 0	110 0	120 0
Saffron, Spanish . . . . .	1 0	1 4	1 0	1 4
Salop . . . . . per cwt.	0 11	1 1	0 11	1 1
Sarsaparilla, Lima . . . . .	0 10	1 5	0 9	1 7
Para . . . . .	1 0	2 1	1 1	2 3
Honduras . . . . .	8 0	9 0	10 6	11 0
Jamaica . . . . .	30 0	40 0	30 0	44 0
Sassafras . . . . . per cwt.	12 0	23 0	14 0	23 0
Scammony, virgin . . . . . per lb.	1 9	1 10	3 6	3 9
second . . . . .	0 0	0 0	0 4	0 0
Seneca Root . . . . .	0 2 1/2	0 4 1/2	0 4	0 5 1/2
Scenna, Calcutta . . . . .	0 5	0 10	0 3	0 9
Bombay . . . . .	3 0	0 0	0 0	0 0
Tinnevely . . . . .	1 4	0 0	0 0	1 2
Alexandria . . . . .	0 2 1/2	0 3	0 2 1/2	0 4
Snake Root . . . . .	27 0	27 6	40 0	50 0
Spermaceti, refined . . . . .	20 0	27 0	16 0	32 0
Squills . . . . .	17 9	25 0	21 0	28 6
Tamarinds, E. India, per cwt.	30 0	45 0	26 0	30 0
West India . . . . .	20 0	29 0	20 0	29 0
Terra Japonica—	4 0	16 0	4 0	18 0
Gambior . . . . . per cwt.	5 6	6 0	0 0	0 0
Cutch . . . . .	180 0	220 0	120 0	170 0
Valerian Root, English . . . . .	100 0	165 0	40 0	85 0
Vanilla, Mexican . . . . . per lb.	210 0	230 0	210 0	220 0
Wormseed . . . . . per cwt.	190 0	200 0	190 0	220 0
GUM—Ammoniac, drop, per cwt.	160 0	200 0	160 0	180 0
lump . . . . .	100 0	150 0	100 0	150 0
Animi, fino pale . . . . .	70 0	105 0	40 0	97 0
bold amber . . . . .	90 0	95 0	85 0	95 0
medium . . . . .	73 0	88 0	70 0	80 0
small and dark . . . . .	35 0	45 0	25 0	45 0
ordinary dark . . . . .	190 0	220 0	170 0	215 0
Arabic, E. I., fino pale picked	85 0	160 0	95 0	160 0
unsorted, good to fino	70 0	90 0	46 0	70 0
red and mixed . . . . .	55 0	0 0	52 0	55 0
siftings . . . . .	80 0	82 6	85 0	90 0
Turkey, picked, good to fine	85 0	0 0	70 0	80 0
second and inferior . . . . .	70 0	73 0	50 0	56 0
in sorts . . . . .	35 0	95 0	40 0	85 0
Gedda . . . . .	300 0	700 0	340 0	990 0
Babary, white . . . . .	240 0	350 0	240 0	300 0
brown . . . . .	50 0	240 0	50 0	240 0
Australian . . . . .	66 0	70 0	80 0	90 0
Assafetida, fair to good . . . . .	0 0	0 0	85 0	95 0
Benjamin, 1st quality . . . . .	62 6	75 0	57 6	90 0
2nd . . . . .	0 4 1/2	0 11 1/2	0 4	0 11 1/2
3rd . . . . .	22 6	45 0	26 0	50 0
Copal, Augola, red . . . . .	67 6	77 6	52 6	60 0
pale . . . . .	240 0	250 0	200 0	210 0
Benguela . . . . .	320 0	400 0	400 0	460 0
Sierra Leone . . . . . per lb.	240 0	300 0	280 0	400 0
Manilla . . . . . per cwt.	0 9	2 6	0 9	2 0
Dammar, pale . . . . .	100 0	150 0	300 0	500 0
Galbanum . . . . .	25 0	70 0	80 0	75 0
Gamboge, picked, pipe . . . . .	5 0	6 0	13 0	0 0
in sorts . . . . .	150 0	180 0	130 0	160 0
Guaicum . . . . . per lb.	80 0	140 0	70 0	110 0
Kino . . . . . per cwt.	73 0	78 0	70 0	77 6
Kowrie . . . . .	59 0	72 0	55 0	70 0
Mastic, picked . . . . . per lb.	24 0	46 0	23 0	43 0
Myrrh, gd. and fine, per cwt.	95 0	100 0	87 6	100 0
sorts . . . . .	85 0	95 0	90 0	110 0
Olibanum, pale drop . . . . .	220 0	320 0	200 0	280 0
amber and yellow . . . . .	80 0	200 0	70 0	180 0
mixed and dark . . . . .	35 0	39 0	46 0	52 0
Sonegal . . . . .	110 0	112 0	122 0	123 0
Sandrac . . . . .	40 0	0 0	46 0	0 0
Tragacanth, leaf . . . . .	0 0	0 0	0 0	0 0
in sorts . . . . .	40 0	0 0	46 0	48 0
Oils . . . . . per tun	35 0	0 0	35 0	37 0
Seal . . . . .	0 0	0 0	59 0	0 0
Sperm, body . . . . .	0 0	0 0	0 0	0 0
Cod . . . . .	0 0	0 0	0 0	0 0
Whale, Greenland . . . . .	0 0	0 0	0 0	0 0
South Sea, pale . . . . .	0 0	0 0	0 0	0 0
East India Fish . . . . .	0 0	0 0	0 0	0 0
Olive, Galpoll . . . . . per tun	0 0	0 0	0 0	0 0
Florence, half-chest . . . . .	0 0	0 0	0 0	0 0
Cocanut, Cochin . . . . . per cwt.	55 0	57 0	53 0	0 0
Ceylon . . . . .	49 0	0 0	44 0	0 0
Sydney . . . . .	43 0	40 0	40 0	49 6
Ground Nut an Gin . . . . .	50 0	0 0	50 0	0 0
Bombay . . . . .				

OILS—continued.	1867.	1867.	1866.	1866.
	s. d.	s. d.	s. d.	s. d.
Madras . . . . . per cwt.	54 0	55 0	53 0	54 0
Palm, fine . . . . .	40 0	0 0	39 0	40 0
Linseed . . . . .	39 6	0 0	36 0	30 6
Rapeseed, English, pale . . . . .	37 0	0 0	43 0	0 0
brown . . . . .	35 0	25 6	40 6	0 0
Foreign pale . . . . .	38 0	39 0	43 0	0 0
brown . . . . .	36 6	0 0	40 6	0 0
Lard . . . . .	60 0	61 0	73 0	75 0
Tallow . . . . .	36 0	33 0	36 0	0 0
Rock Crude . . . . . per ton	£10 0	0 0	£17 0	£ 0 0
OILS, Essential—				
Almond, essential . . . . . per lb.	25 0	0 0	30 0	0 0
expressed . . . . .	1 12	0 0	1 8	0 0
Aniseed . . . . .	12 0	0 0	9 8	0 0
Bay . . . . . per cwt.	80 0	90 0	90 0	0 0
Bergamot . . . . . per lb.	11 3	19 0	9 0	13 6 1/2
Cajeputa, (in bond) . . . . . per oz.	0 2	0 2 1/2	0 2 1/2	0 3 1/2
Caraway . . . . . per lb.	5 0	6 6	5 0	6 6
Cassia . . . . .	0 6	0 9	7 0	7 3
Cinnamon (in bond) . . . . . per oz.	1 3	3 5	1 6	2 9
Cinnamon Leaf . . . . .	0 4	0 0	0 4	0 6
Citronel . . . . .	0 2	0 4 1/2	0 3 1/2	0 5
Clove . . . . .	2 7	0 0	2 8	0 0
Croton . . . . .	1 2	1 6	1 2	1 4
Juniper . . . . . per lb.	1 0	1 9	1 9	2 0
Lavender . . . . .	2 9	3 9	2 0	3 3
Lemon . . . . .	5 0	8 0	6 6	8 0
Lemongrass . . . . . per oz.	0 7	0 8	1 4	1 6
Mace, ex. . . . .	0 0	0 7	0 1	0 2 1/2
Neroli . . . . .	3 6	4 6	3 6	4 6
Nutmeg . . . . .	0 0	0 7	0 3	0 8
Orange . . . . . per lb.	5 0	7 6	5 0	8 0
Otto of Roses . . . . . per oz.	17 0	21 0	19 0	22 0
Peppermint, per lb.				
American . . . . .	22 6	23 0	15 6	16 0
English . . . . .	33 0	34 0	30 0	39 0
Rhoedum . . . . . per oz.	0 0	0 0	0 0	0 0
Rosemary . . . . . per lb.	1 9	2 0	1 9	2 0
Sassafras . . . . .	3 0	8 6	5 0	6 0
Spearmint . . . . .	16 0	25 0	26 0	28 0
Spike . . . . .	0 0	0 0	0 0	0 3
Thymo . . . . .	2 0	4 0	1 10	2 0
PITCH, British . . . . . per cwt.	8 6	0 0	12 0	0 0
Swedish . . . . .	0 0	0 0	0 0	0 0
SALTPETRE, per cwt.				
English, 6 per cent. or under	18 0	19 0	23 6	24 0
over 6 per cent. . . . .	17 6	18 0	22 0	23 1/2
Madras . . . . .	15 0	16 6	20 6	22 0
Bombay . . . . .	14 0	17 0	17 0	20 0
British-refined . . . . .	22 6	23 0	27 0	27 6
Nitrate of soda . . . . .	12 0	13 0	12 6	14 0
SEED, Canary . . . . . per qr.	0 0	0 0	40 0	48 9
Caraway, English . . . . . per cwt.	0 0	0 0	32 0	34 0
German, &c. . . . .	40 0	44 0	33 0	34 0
Coriander . . . . .	18 0	20 0	20 0	23 0
East India . . . . .	0 0	0 0	0 0	0 0
Hemp . . . . .	44 0	46 0	44 0	46 0
Linseed, Black Sea . . . . .	63 0	64 0	67 0	0 0
Calcutta . . . . .	66 0	67 0	65 0	66 0
Bombay . . . . .	68 6	69 0	67 0	0 0
Egyptian . . . . .	0 0	0 0	60 0	64 0
Mustard, brown . . . . . per bush.	0 0	0 0	0 0	0 0
white . . . . .	0 0	0 0	0 0	0 6
Poppy, East India . . . . . per qr.	60 0	0 0	50 0	0 0
Rape, English . . . . .	0 0	0 0	0 0	0 0
Banubc . . . . .	47 6	48 0	0 0	0 0
Calcutta fine . . . . .	48 0	0 0	55 0	56 6
Bombay . . . . .	50 0	57 0	66 0	67 0
Teel, Sesmy or Gngy . . . . .	60 0	64 0	65 0	68 0
Cotton . . . . . per ton	185 0	190 0	150 0	160 0
Ground Nut Kernels per ton	360 0	0 0	360 0	370 0
SOAP, London yel. . . . . per cwt.	28 0	32 0	23 0	32 0
mottled . . . . .	32 0	36 0	32 0	36 0
curd . . . . .	46 0	50 0	46 0	50 0
Castile . . . . .	40 0	42 0	40 0	42 0
Marsailles . . . . .	40 0	42 0	40 0	42 0
Soy, China . . . . . per gal.	2 9	8 0	3 0	8 2
Japan . . . . .	0 0	0 0	0 0	0 0
Sponge, Turkey, fine picked	12 0	14 0	14 0	18 0
fair to good . . . . .	5 0	11 0	6 0	12 0
ordinary . . . . .	2 0	4 0	1 6	4 0
Bahama . . . . .	0 8	1 9	0 8	2 6
TURPENTINE, Rough, per ct.	0 0	0 0	10 0	0 0
Spirits, French . . . . .	34 0	0 0	44 0	45 0
American, in casks . . . . .	34 6	0 0	46 0	47 0
WAX, Bees, English . . . . .	180 0	190 0	180 0	185 0
German . . . . .	180 0	190 0	195 0	200 0
American . . . . .	150 0	170 0	185 0	190 0
white fine . . . . .	0 0	0 0	0 0	







