**The record of pharmacy and therapeutics (part second) : being an account of improved pharmaceutical preparations, recently-introduced remedies, and a catalogue of unadulterated drugs and chemicals of the General Apothecaries' Company, (Limited), 49, Berners Street, Oxford Street, London.**

No. II.] [Feb., 1857

# THE RECORD

OF

# PHARMACY AND THERAPEUTICS:

## (PART SECOND)

BEING AN ACCOUNT OF

IMPROVED PHARMACEUTICAL PREPARATIONS,

RECENTLY-INTRODUCED REMEDIES,

AND A CATALOGUE OF

UNADULTERATED DRUGS AND CHEMICALS

OF THE

General Apothecaries' Company,

*(LIMITED),*

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# PREFACE.

THE Directors of the "General Apothecaries' Company" *(Limited)* again respectfully remind their brethren of the Medical Profession, that the efforts of the Press and the popular outcry on the prevailing adulteration of Drugs and Chemicals having, in a great measure, ceased, it becomes their duty to continue and increase their vigilance and efforts to obviate the consequences so injurious to themselves, which must necessarily flow from a continuance of the practice of sophistication, substitution, and adulteration of the agents upon which their success in the treatment of diseases directly depends. It cannot be hoped that any very permanent change for the better will result, unless the Profession are true to themselves, and conscientiously determine, so far as they can help it, to give no support, or countenance to the unfair and dangerous practices which have been introduced into the drug trade.

It is the fundamental principle of this Company to admit no deception in the articles demanded for medicinal use; no secrecy, or quackery; never to sell an adulterated or inferior article, or to substitute one thing for another, but to pursue a strictly plain and honorable course in their commercial transactions.

The policy of wholesale chemists and druggists has been, since the establishment of this Company, to represent it as originating the charge of unfair dealing against them, and vaunting its own professions of acting upon totally different principles; and its first publication, namely, "The Abstract of the Evidence given before the Committee of the House of Commons on Adulteration of Drugs," has been much misrepresented.

It may, therefore, be observed, that the Parliamentary Committee, whilst it collected and published evidence of the general prevalence of fraud in the sale of Drugs and Chemicals for the most part derived from persons connected with the trade, attached no stigma to individuals. Every druggist

or druggist's traveller, was left free to say, "Whatever may be done by other houses, *we* sell none but pure drugs." To render the enquiry of any real value or efficiency, the Committee should have followed the example of the *Lancet*, and have stated fairly the names of the guilty parties. It is questionable whether a single house has received any check, or diminished its practice of adulteration in consequence of the Parliamentary Reports; but that the Profession has received a deep and abiding injury, there can be no doubt.

It was to the *Public*, not to the *Profession*, that the Reports were addressed, and a prominent feature in them was the fact that the principal purchasers of spurious articles are Medical Men themselves, so that the public was instructed to draw the pleasant inference that, whenever medicine is prescribed or administered, the prescriber, and equally so the practitioner who dispenses his own prescriptions, are wholly unaware of the nature of the ingredients their patients swallow. That this had produced its natural fruits of diverting many a sufferer from the Profession to take refuge in Homœopathy or other forms of quackery, most Medical Men in large towns can testify.

The publication of the "Abstract" was, therefore, intended as a warning to the *Profession*; it was addressed exclusively to medical men; and, rightly considered, must have led every reflecting person to the conclusion that there is no security for them, except by the interposition of a Company like the present:—that the operations of such a Company must and will tend to raise the art of healing, and the gentlemen who practice it to their proper place in the public estimation.

In the Preface to the first number of "The Record of Pharmacy and Therapeutics" it was observed, that "by the constitution of the Company every Medical Man may himself become a Shareholder, and have a voice in the management and conduct of this Company, and thus be satisfied of the good faith which actuates its Directors," and it may be, a bond of union may be thus effected of great importance to every member of the Profession.

JOHN JAMES RIDGE, M.D., J.P., CHAIRMAN.

JOHN GARDNER, M.D.

March, 1857.

## TRUE AND FALSE ECONOMY IN THE PURCHASE OF DRUGS AND MEDICINAL PREPARATIONS.

In the correspondence which has arisen with a very great number of Medical Men from the publication of "The Record," there is one subject upon which considerable misunderstanding exists, and which demands a full and candid explanation, namely, the prices charged to the Profession for Drugs and Preparations.

The Directors were most anxious to assist the observance of a judicious economy in the purchase of medicines, and they pointed out a few articles which can be employed with great advantage, not as substitutes for, but as the best as well as the cheapest method of administering, certain drugs which bear necessarily a very high price.

Thus, on very high authorities, they recommended the SULPHATE OF QUINOIDINE (properly selected and prepared) as even superior to Di-Sulphate of Quinine in remedial efficacy, as embracing more completely the whole virtues of Peruvian Bark as an antiperiodic and prophylactic against fever, and as a general tonic. On this recommendation, it has been employed by many practitioners, who are satisfied of its value, and hence it is again urged upon the attention of the Profession.

Again, English Rhubarb, when carefully selected, although scarcely one-fourth of the price, was noticed as being little, if at all, less useful than the foreign varieties of that root.

They also adduced evidence in favor of *Sulphate of Cinchonine* as an antiperiodic, and pointed out the propriety of replacing a third, or a half of the usual doses of *Sulphate of Quinine*, by this more abundant, and therefore more economical, alcaloid.

Similar remarks are applicable to many other agents; but it is equally important to observe that when purchasers are anxious to obtain only the *cheapest* Drugs and Preparations, they are exposed to great and serious errors, and are, in fact, made the dupes of a false economy. In no articles of consumption is it less possible to judge of the true nature and value of the substance purchased, by the eye, or by mere physical appearances, than in medicinal agents; and consequently, when price merely is regarded, the purchaser can always be deceived. Against this spurious and false economy, Medical Men ought to be on their guard.

Thus, if a Compound Extract of Colocynth is sold by one maker at half the price charged by another, it is very possible that the seller of the cheaper article obtains more profit than the one who demands the highest price. The one uses an inferior colocynth, does not separate the seeds, which yield a large proportion of inert extract, adds scammony of the cheapest kind (and this article varies in the market from 4s. to 36s. per pound), a common aloes, and by a little art dresses the resulting compound to please the eye, or, perhaps, uses only a very minute quantity of colocynth; whilst the other selects the best and most expensive materials, and conscientiously follows the prescribed proportion of ingredients.

But, it may be asked, what does it matter if the compound produced effects its object as a purgative? To this the answer is, first, that the prescriber is obliged to give larger doses, and this at once destroys all his intended economy; secondly, that the annoyance to the patient soon induces the abandonment of its use, and he resorts to some of the many forms of patent pills for himself and his family.

In like manner, if Powdered Jalap is half inert from the admixture of powder of Jalap tops, or some other valueless substance, the dose has to be doubled.

There are some curious consequences resulting from the desire of Medical Men to obtain their drugs cheap. Thus, in the case of Oil of Amber, there are few practitioners who do not use what they think is Oil of Amber, but in fact scarcely anybody has ever seen real Oil of Amber. In the following Price List it will be observed that 1s. 6d. per ounce is charged for it, the ordinary price paid being from 2s. to 3s. 6d. per pound. What is usually sold as Ol. Succinatus Ver. is an oil distilled from certain cheap gum resins, either alone, when the price is higher, or dissolved in turpentine, the latter being called Ol. Succin. Rect., and sold at a very low price. Real Oil of Amber has consequently almost disappeared from commerce, and the spurious counterfeit has come to be regarded as the true.

Is this of no moment? Let the reader remember the extensive reputation and sale of a secret remedy for whooping cough, having Oil of Amber for its basis, and observe how little benefit he has found from the use of such an application of the Ol. Succin. of his dispensary.

It is a great mistake to suppose that turpentine, or any other of the volatile hydrocarbons, can be substituted for such an one as Oil of Amber for remedial purposes: however similar they may be in physical appearance and properties,

the relations they severally bear to the animal economy may be entirely different. An eminent continental physician prescribed Oil of Amber in chronic bronchitis with remarkable advantage; on its being recommended in London, no good effects whatever could be observed, and the strange discrepancy found a satisfactory explanation in these facts.

In speaking of scammony, Dr. Pereira observes, "as the greater part of the commercial drug is largely adulterated, practitioners are, I suspect, scarcely acquainted with the operation of the genuine article, which appears to me to possess nearly double the activity of that usually found in commerce."

If, therefore, purchasers are content to have 50 per cent. of dross, with jalap-resin, or other even more objectionable drastics mixed with the scammony, of course they can obtain a cheaper article than can be supplied by a Company which furnishes the best and purest drug.

Pure scammony, although an active purgative, if given in proper doses, rarely, if ever, gripes, besides being efficacious in half or a third the quantity required of the spurious admixture.

In all Preparations, Powders, Extracts, compound Pills, Confections, Tinctures, and Wines, practitioners who think only of cheapness, are of course always imposed on. They obtain articles really less economical than the superior, even if the price of the latter be double. Besides, they are too often entirely misled in their experience of the therapeutic value of the remedies they prescribe. To dress up such articles by means of artificial colors and scents, is the common custom, and in many cases so universal is the practice, that the true and properly compounded preparation is scarcely, or not at all, recognised.

If the medicated wines of the Pharmacopœia are made of real sherry, which is worth from 16s. to 20s. per gallon, how can they be offered for sale at the price of those where cape at 7s., or raisin wine at 4s. per gallon, is substituted?

The Colleges order proof spirit, specific gravity ·920, made by adding three parts of water to five parts of Rectified Spirits. The common practice being to mix spirits, and often that of a lower quality, with an equal amount of water for tinctures, it follows that larger doses come to be prescribed habitually than are necessary when the spirit is of the proper strength. Besides, the drugs infused in the weaker spirit, or the poorer wines, are of the lowest quality

and the cheapest in the market. Where, then, is the economy of purchasing cheap tinctures or medicated wines? If they do not altogether fail in producing their desired effects, 30 to 50 per cent. more are consumed, whereas probably 10 per cent. is all the saving effected in the purchase.

In some cases, common sense must be sufficient to convince the purchaser that he is duped. Thus, it requires 4 lb. of Sarsaparilla to produce 1 lb. of Extract. The price of Sarsaparilla, when purchased by the bale, is 3s. to 3s. 6d. per lb., and yet there are houses which offer the Extract at 8s., 6s., or even 4s. 6d. per lb.: of course, such articles must be spurious.

Another illustration of the consequences of the desire to cheapen medicines is afforded by the Carbonates of Soda of the shops. Every one knows that soda combines with carbonic acid in three proportions, forming what are designated as carbonate, sesqui-carbonate, and bi-carbonate of soda. The first, or carbonate, consists of one equivalent of soda, and one of carbonic acid, its formula is $Na\,O,\,CO_2$. The second, or sesqui-carbonate, contains two equivalents of soda, and three of carbonic-acid—$2\,Na\,O,\,3\,CO_2$. The third, or bi-carbonate, is composed of one equivalent of soda, and two of carbonic acid—$Na\,O,\,2\,CO_2$. Much confusion has arisen from the compilers of the Pharmacopœia having designated one and the same salt, in three successive issues of that work, *carbonate*, *sesqui-carbonate*, and, lastly, *bi-carbonate*.

*Carbonate of Soda* is manufactured in very large quantities for various uses in the arts, from common salt, and is consequently a very cheap substance. Moreover it combines in crystallizing with one, five, six, eight, or ten equivalents of water. Commonly, of course, it is the largest amount of water that is found in the article as sold; that is, of 100 grains, nearly 63 are water.

It is seldom the intention of the prescriber of Carbonate of Soda that this salt should be given.

*Sesqui-carbonate of Soda* is the natural soda, or trona. Some doubt exists as to whether a true sesqui-carbonate can be made artificially. Those chemists who allege they have so prepared it, are said by others to have only obtained a mixture of carbonate and bi-carbonate.

*Bi-carbonate of Soda.* As this salt is prepared, for the most part, if not altogether, for use in medicine, it is made in far smaller quantities; for this and other reasons, it is much higher in price. Its composition is—

Soda, one equivalent;
Carbonic Acid, two equivalents;
Water, one equivalent.

The taste of a pure bi-carbonate is more agreeable and less alkaline than the carbonate. When an acid, such, for instance, as lemon juice, is added, it gives off much more carbonic acid, and this is often most desirable in practice. As found in the shops, it is very seldom pure. The confusion of terms noticed above is perhaps held to justify the admixture of various proportions of carbonate with the bi-carbonate, and, excepting the less amount of carbonic acid extricated, there is little difference in its therapeutic effect.

It must be borne in mind that, by mixing large proportions of carbonate with bi-carbonate, a specious salt may be prepared, and sold at a very low price; the purchaser, however, pays 3d. and 4d. per lb. for the associated water. It is, therefore, not the most economical to purchase the cheapest article. Some persons may prefer adding the water themselves. Moreover, when prescribed, as it often is, with sulphate of magnesia, the carbonate produces a precipitate which bi-carbonate does not.

Again, the preparation known as Hofmans's anodyne liquor, the *spirit æther sulph. comp.* of the Pharmacopœias, ought to contain oil of wine, or *etherial oil.* Upon this ingredient depends its peculiar property as an anodyne, upon which we rely in the restlessness which accompanies low typhoid fevers and other critical conditions of disease, when opium, henbane, or other narcotics are inadmissible.

Now the *spirit æther sulph. comp.* of the great majority of druggists is destitute of this all-important constituent. It requires a person to be himself a practitioner, and to have witnessed a few such cases, to understand the distressing disappointment arising from the failure of his prescription to produce the slightest effect such as he looked for, and was entitled to expect, had the medicine been what it professsed to be.

As the General Apothecaries' Company proceeds, such instances are continually arising, and the conviction is daily strengthening in the minds of its Directors, that in the course they are pursuing they will be enabled to render services to practical medicine which will bear comparison with those of the most honored Corporations and Colleges; but the Profession must be true to themselves, alive to their own obvious interests, and afford the Company their cordial support.

# IMPROVED AND NEW PREPARATIONS.

## Amylene.

This is a new anæsthetic agent, lately introduced into the Profession by Dr. Snow. The following account of it is abridged from two interesting papers by Dr. Snow, published in the *Medical Times and Gazette*.

Amylene is a colourless, very mobile fluid. Its specific gravity at 56° is 0·659; it is very volatile, boiling at 102°; the specific gravity of its vapour is 2·45. Its composition is,

Carbon, ten equivalents.
Hydrogen, ten equivalents.

It is a derivative from fusel oil, or amylic alcohol, to which it bears the same relation as olefiant gas does to alcohol. one part of amylene is soluble in about 10 to 11 parts of water. Its odour resembles naphtha, is not disagreeable, and is not so strong or permanent as that of ether.

The quantity of *amylene* which the patient requires to inhale to cause insensibility, is intermediate between that of chloroform and that of ether, except in cases of long protracted operations. In Dr. Snow's inhaler, the amylene is consumed at the rate of rather more than a fluid drachm in a minute, and in this way insensibility is caused in three minutes, or less.

The amount of the vapour of amylene that the air will take up at ordinary temperatures is far more than enough to cause insensibility, even when but partially saturated.

"It is my opinion," says Dr. Snow, "that the cold produced during its evaporation would, in all the ordinary methods of inhalation, prevent the air from taking up a quantity of the vapour, which would be dangerous.

"In the use of amylene absence of pain has been obtained with less profound coma than usually accompanies the employment of chloroform and ether. There are some cases, indeed, in which the minor parts of an operation, under these latter agents, may be performed without pain while the patient is in a semi-conscious state, or even altogether con-

scious, but they form an exception; while in the use of amylene the patient has very often been half-conscious during the operation. In operations under chloroform the patients usually indicate the necessity of repeating the inhalation by a tendency to flinch or cry, without showing any signs of consciousness; but in the use of amylene they have more frequently begun to look about and to speak before showing any sign of pain. There are some patients who will not lie still under the surgeon's knife while chloroform is being used, unless its effects are carried so far that the breathing is on the borders of being stertorous, but I have not yet met with any such case in using amylene.

"The pulse is generally increased in frequency and force during the inhalation of amylene to a greater extent than happens with chloroform. There has generally been an increased redness of the face during the first part of the inhalation, and in one case there was profuse sweating—a phenomenon also met with, now and then, under the influence of chloroform.

"The respiration is very often accelerated during the inhalation of amylene, about as often, I think, as with ether, and more frequently than with chloroform.

"There has not been much increase of saliva from the use of amylene, and I have not yet met with the profuse salivation which is often troublesome in the employment of chloroform and ether. What is of most importance of all, however, if it should continue, is, that there has been no sickness in any case, nor any of the depression which so often precedes and accompanies the sickness from chloroform, and ether.

"There has been hardly any struggling or rigidity in any of the patients; although several of them, being robust men, a good deal of both might have been expected before complete insensibility, if chloroform had been the agent employed.

"The relative advantages and disadvantages of amylene may, as nearly as I can judge, be summed up as follow:—In regard to its odour, it is more objectionable than chloroform, but much less so than sulphuric ether. The odour of any volatile substance is, however, no longer perceived after a patient begins to inhale. In respect to its pungency, it has a great advantage over both ether and chloroform, being much less pungent than either of them. Thus, whilst the patient, especially if a female, often complains of a choking feeling

and want of breath in commencing to inhale chloroform, and two or three minutes are lost before the vapour can be inhaled in any useful quantity, she can begin to inhale the amylene of full strength within half a minute from commencing, and the operation may generally be begun within three minutes. In the amount which suffices to induce insensibility, it is intermediate between chloroform and ether, chloroform having the advantage. Amylene has an advantage in preventing pain with a less profound stupor than that occasioned by the other agents, and in the ready waking and recovery of the patient it has an advantage over chloroform, and a still greater advantage over ether. Its probable safety I have spoken of; and the greatest advantage of all, if it should continue to be met with in all cases, is the absence of sickness from its use. The almost entire absence of struggling and rigidity may also be mentioned as an advantage of amylene over ether and chloroform."

*** The preparation of *Amylene* requires considerable chemical practice and great care. On the appearance of Dr. Snow's papers, several houses on being applied to for amylene supplied fluids resembling it, but essentially different. Mr. Medlock, of Great Marlborough Street, a gentlemen well known for his valuable researches in organic chemistry, as for his success in other branches of the science, and who has practically worked upon the amyl series, has very kindly assisted the Company's chemist, Mr. Sicherer, in preparing the amylene perfectly pure, as used by Dr. Snow.

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## Quillai Bark,

4d. per oz., 6d. in powder.

This bark, a production of South America, is very rich in saponine. It is known in Chili, Peru, and other countries on the Pacific, as *soap* bark, where it is used as a detergent, particularly by the ladies, for washing their hair; and the brilliancy of this female ornament is remarked by all travellers in those countries. It seems to be well worthy of experiment in cases of tendency to baldness, scurfiness of the scalp, &c.; being stimulant as well as detergent, will probably be found valuable in other diseases. The powder is valuable as a dentifrice, being perfectly inocuous to the enamel of the teeth.

Saponine, commonly derived from the *saponaria officinalis* has been commended in disorders of the liver, but no evidence has been found of the quillai being used internally.

## PREPARATIONS OF TARAXACUM.

### Liquor Taraxaci,
6s. 8d. per lb.

### Succus Taraxaci,
5s. 4d. per lb.

### Extract Taraxaci,
6s. 8d. per lb.

### Succus Inspissatus Taraxaci,
5s. 4d. per lb.

Taraxacum is a very popular remedy. Considerable differences of opinion, however, are held by Medical Men on the question of its remedial value, and great uncertainty exists respecting the preparations found in commerce. Every maker, pursuing his own method, produces a preparation differing from every other. Hence, as there are several houses which supply surgeons and retail shops, there are as many varieties as makers.

The following facts will, it is hoped, serve partly to elucidate this matter, and be found interesting to practitioners who are anxious to have a precise knowledge of the remedies they prescribe or administer.

Under the designation Liquor Taraxici, several kinds of fluids are sold.

1. The expressed juice of the root, or of the whole plant, simply filtered and mixed with spirits of wine to preserve it. Sometimes the spirit is added before filtration, sometimes after. Samples of such have been examined and found to be of a light straw color, sweetish, without aroma, and on careful evaporation to yield about 3½ per cent. of solid extract.

2. The juice expressed, after the crushed plant, has been left for some time with addition of spirit to undergo a kind of fermentation. This fluid exhibits a peculiar aroma, the result of the fermentation, very different to that of the fresh plant; it has a peculiar taste, is very slightly bitter, and on evaporation various samples have yielded 5, 6½, and 8½ per cent. of solid matter.

These differences have been attributed, but probably erroneously, to the season when the root was gathered.

3. The liquor taraxaci of other makers is prepared from the dried root, treated with hot or cold water, and the solution evaporated to various degrees of consistence, spirits being added to preserve it. Such solutions possess very little aroma, but are far more bitter, and have mixed, with a sweet taste, the flavor of the fresh plant more perfectly.

If there be any ground for confidence in the assertions of Dr. Pereira and other writers, that the active principle of taraxacum depends upon its bitter extractive matter, or *taraxacine*, liquors thus prepared should exhibit the highest remedial efficacy.

The amount of solid extract left on evaporating these liquors is far greater than the former. In the experiments made by the General Apothecaries' Company, it has been found that 30 per cent. is about the average, and that proportion (attained by evaporating the cold infusion) is most convenient for preserving, and prescribing.

Under the designation extract, or succus inspissatus, a similar variety of preparations are met with, depending upon the nature of the fluid evaporated to produce them.

1. One will be of a pale greenish brown color, with very little taste, nearly soluble in water.

2. Another will present the same color, but having a large proportion insoluble in water.

3. A third will be black, with a sweetish bitter taste, forming a clear solution with water.

It would appear that when taraxacum root is subjected to the process of fermentation alluded to, the sugar, and perhaps the inulin, which we know by analysis it contains in its natural state, becomes converted into mannite, which is insoluble in water; accordingly, when many of the samples of succus taraxaci of the shops are tested, they will be found to contain no sugar, which exists abundantly in the liquor

prepared by watery infusion of the dried root, and very little, or none of the bitter principle of the plant.

When these fluids are evaporated for extract, or succus inspissatus, the product will be more or less soluble in water, as the mannite is left in or separated by filtration.

Upon the whole, it may be observed, that, without deciding whether the juice, either with or without fermentation, or the extracts formed by evaporating these, may or may not be useful remedies, it appears most probable that the liquor taraxaci prepared from the dried root without fermentation, and the extract obtained by evaporating the same, will be found the most energetic, if not the only really efficient preparations.

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## Nitrate of Uranium,

8d. per drachm.

This salt was introduced into practice by M. Maisonneuve, in Paris, and by Mr. Spencer Wells, in London, principally in weak solution, as an injection in gonorrhœa. After numerous trials, both these surgeons speak highly of its efficacy in this disease, and prefer it to the solutions of nitrate of silver, or of the salts of zinc, copper, alumina, &c., in common use.

Mr. Spencer Wells has also used it in cases of muco-purulent discharges from other parts of the body, with excellent effect.

The ordinary strength of the solution is four grains of the salt to the ounce of distilled water.

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## Liq. Cinchonæ Saccharatus,

14s. per pound.

*Saccharated Solution of Bark.*

This is a most elegant and beautiful preparation of the finest calasaya bark. It contains, in a condensed form, all the constituents of the fresh bark, soluble in spirits or water, and is combined with sugar, which is the most conservative medium for delicate medicinal principles, whilst it masks, in a remarkable degree, the bitter taste of the bark.

This preparation is far superior, in every way, to the ordinary *concentrated decoction or infusion of bark*, and may more properly be employed to replace the fresh decoction or infusion.

A measured drachm, or a teaspoonful, contains all the virtues of a drachm of the powdered bark.

Hence, it is an economical preparation, notwithstanding its apparently high price.

## Concentrated Syrup of Hemidesmus; or, Indian Sarsaparilla.

4s. per lb.

Hemidesmus Indicus, or Indian Sarsaparilla, has been introduced into the last Dublin Pharmacopœia; from which it must be inferred that among the compilers of that work, some have had experience of its remedial powers, although they may not have published on the subject. Dr. Pereira says "Hemidesmus Indicus has been employed as a cheap and efficacious substitute for sarsaparilla in cachectic diseases. It has been used with benefit in venereal diseases. In some cases it has appeared to succeed where sarsaparilla had failed, and, *vice versa*, it has failed when sarsaparilla succeeds."

It would appear that in some of the many diseased conditions to which the general term cachexia is applied, this root must be a valuable remedy; but we need some clearer account, or diagnosis, of the cases in which it is applicable. Dr. Ashburner observes, "it increases the appetite, acts as a diuretic, and improves the general health; plumpness, clearness, and strength, succeeding to emaciation, muddiness, and debility."

Hemidesmus merits a far more extended and careful investigation than it has hitherto received.

## Sulphate of Manganese,

We have been favored with the following communication on the therapeutic uses of this salt, by John Mann, Esq., Surgeon, of Charter House Square:—

"About the year 1849, I was laid up with gouty dyspepsia, attended with a perverted biliary secretion, which was of a dark green color. I had put myself under the medical care of my late friend, Dr. Pereira, who, after observing that my health would not bear the action of mercury, advised a trial of the sulphate of manganese. He stated that he had tried this salt, in from forty to fifty cases, at the London Hospital, so as to satisfy himself of its special action on the liver. His advice was adopted in my case, and was followed by very beneficial results.

"He also lent me a small work, published at Cransac, where are mineral springs, containing manganese as their most active ingredient. These have been in use from the time of the ancient Romans. They are used principally in chronic gout, chronic rheumatism, and in other cases where the constitution has been impaired from long-continued disease, or from other causes.

"It has, therefore, been in this class of cases that I have principally employed the sulphate of manganese. Also, in three cases of hypochondriasis, in which the bile is secreted of a very dark color—(the *melancholia* of the ancient Greeks.) And in all those cases of anemia, debility, and delicacy of constitution, where, notwithstanding the presence of derangements of the biliary secretion, we should hesitate about giving mercury; and, probably, be disappointed by the inertness, or uncertainty of taraxacum.

"The doses I have employed have been such as Dr. Pereira considered very small—namely, 5 grains once, twice, or thrice daily, with ½ a drachm of sulphate of magnesia and 5 to 10 minims of acid sulph. dilut. This is continued until the characteristic effect is produced on the biliary secretion. Sulphate of manganese has sometimes been given in doses of from 20 to 30 grains.

"The effect produced is the appearance of a secretion of orange-colored bile, remarkably different from the green secretion produced by mercury.

"If the doses be too large, or if continued too long, manganese produces irritation of the colon and rectum. The effects produced are occasionlly very violent, from the incautious or excessive use of the mineral waters of Cransac."

*** *All the Salts of Manganese are kept.*

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## Chromic Acid.

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### Solution of Chromic Acid.

Mr. Marshall, of University College, has recently recommended this acid in solution as an escharotic, alleging that it is better than any in use hitherto, for warts of the genital organs, whether syphilitic, gonorrhœal, or other; and he suggests a trial of it in other cases where the use of a powerful caustic is indicated.

The strength of the solution is 100 grains of the crystallized acid to one ounce of distilled water.

The solution is best applied by aid of a pointed glass rod, or, where a large quantity is needed, by means of a small glass tube drawn to a point. Only so much should be applied as will saturate the diseased growth, avoiding the surrounding healthy mucous membrane; for although the solution is not sufficiently powerful as an escharotic to destroy or even vesicate the mucous membrane, it may give rise to an unnecessary amount of subsequent inflammatory action, which of course it is well to avoid, but from which no serious consequences have been found to ensue. Any superfluous acid may be removed by a piece of wet lint. The first effect of its application to the warts is to produce a slight smarting pain. If, however, any ulcerated surface be touched, the pain is of a burning character, more lasting, but not so acute and intolerable as that caused by the nitrate of silver, or by nitric acid, with or without arsenious acid. After a short time the pain passes off, but there is gradually established a certain aching and soreness, dependent on the excitement of more or less inflammation in the parts. This inflammatory action is accompanied by a purulent discharge, and under its influence the morbid growths rapidly waste, in some cases being thrown off altogether, and in others undergoing a partial though evident diminution in size. The best immediate dressing to the parts is dry lint, as that does not dilute the strength of the chromic acid solution, and is at the same time clean. Afterwards the lint should be changed twice daily, or, what appears to be bettter as a check to any inflammation, the parts may be washed with a solution of lead, and dressed with lint moistened in the same.

In most cases of warts, one application suffices, the cure being completed in from four to eight days. The extreme period to which the inflammation set up by the chromic acid has been found to continue active is about four days. In severe cases, where the warts are large, repeated applications are necessary, each being followed by less inconvenience and less of the characteristic inflammatory action. In but one instance, so far as hitherto observed, have more than three applications been required, in that there was great neglect as to proper cleanliness and dressing.

The treatment of these troublesome and painful growths by chromic acid appears more certain and speedy than that by the caustics usually employed; whilst the pain caused by it

is not so severe, and the subsequent soreness, under proper management, is, after all, a comparative small inconvenience.

## Iodoform.

This substance, discovered by Sérullas, made known more fully by the labours of M.M. Dumas and Bouchardat, has been further investigated chemically, physiologically, and therapeutically by M.M. Moretin and Humbot. It is solid, in pearly scales, of a sulphur yellow color, friable, soft to the touch, of a persistent aromatic odour, taste mild and uncorrosive.

Animals die after smaller doses than of iodine, after suffering greater or less depression, but seldom any vomiting. The depression is followed by a period of excitement, convulsions, contractions, &c. The drug has no irritative local action, producing not the least vascular irritation of stomach or intestine.

M.M. Moretin and Humbot state its therapeutic qualities thus :—1st, from the great quantity of iodine it contains, it may replace the latter and the iodurets wherever these are indicated. 2nd, its absorption is easy and rapid. The iodine, being combined with hydrogen and carbon, is, so to speak, an organic compound. 3rd, it has therapeutically the advantage of producing none of the local irritation of other iodine compounds. 4th, It has some peculiar or special properties, *e.g.* it soothes pain in certain neuralgic disorders, produces a local partial anæsthesia of the rectum when deposited there. 5th, the dose is from half a grain to eight grains per diem. Bouchardat has given as much as nine grains. 6th, The diseases hitherto principally benefitted have been —endemic Goitre, Scrofula, Rickets, Syphilis, some affections of the bladder and prostrate, and some neuralgias. 7th, iodoform is most convenient for the preparation of most important pharmaceutical compounds.

Dr. Joseph Anderson.

## Alloxan.

This substance is a product of the transformation of uric acid by the agency of nitric acid.

It is crystalline, being soluble in water and alcohol. Its solutions stain the skin of a pink color. Its taste is peculiar saline, and slightly acid. It reddens litmus, but is not an acid. It combines with 6 eq. of water.

The formula of hydrated alloxan is

$$C_8\ N_2\ H_2\ O_{10} + 10\ aq.$$

It is very remarkable, from the ready and numerous transformations it undergoes, under the influence of various agents. Leibig, who studied this substance, observes in a note at page 156 of his Animal Chemistry, "It would be most interesting to investigate the action of *Alloxan* on the human body. Two or three drachms, in crystals, had no injurious action on rabbits to which it was given. In man, a large dose appeared to act only on the kidneys. In certain diseases of the liver, alloxan would very probably be found a most valuable remedy."

"Proceeding upon this hint" says Dr. Gardner, in his "Papers on Disorders of the Liver," "I had a large quantity of alloxan prepared for experiment. The first case in which I exhibited it was that of a middle-aged lady, very stout, particularly about the abdomen, and deeply jaundiced. The stools exhibited a total absence of bile. A variety of remedies had been tried without effect. I commenced the alloxan in 5 grain doses, repeated 4 times in the 24 hours, simply dissolved in cinnamon water. The first effect was an increase in the flow of urine. On the fourth day, a slight amount of green bile was seen in the stools, which, under the use of the alloxan, gradually increased day by day until the passage of the bile into the duodenum was completely restored. The recovery of this patient was complete; she regained her natural color, lost all the accumulated fat, and remained in perfect health for years."

He proceeds to say, that, in jaundice, in obstruction of the biliary ducts, and in morbid obesity, this remedy is extremely valuable, effecting what no other agent will in such cases. The action of alloxan is explained by its passing into the circulation and undergoing decomposition, parting with 10 atoms of oxygen, which in a nascent state completes the transformation of the elements of respiration into their ultimate forms.

Dr. Gardner observes that he did not find it of much value as a diuretic, having used it in many cases of dropsy without more benefit than nitrate, or chlorate of potash.

## Iodurettted Glycerine,

10s. 8d. per lb.

This preparation contains the same amount of iodine and iodide of potassium as is ordered in the tincture. The employment of glycerine as a vehicle for iodine, was suggested by Dr. Gage, of the United States, and for external application it possesses great advantages. Smeared over the part in the usual manner by means of a camel's-hair brush, and covered by oil-skin or flannel, it remains moist and in a state suitable for absorption much longer than the tincture, and it will probably be found much more efficient as well as more convenient.

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## Glycerine Solution of Iodide of Iron,

1s. per oz.

Prepared of the same strength as the syrup of iodide of iron; it is far less prone to decomposition, and appears to be a valuable preparation. Its use, however, requires to be tested by experience.

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## Liquor Menyanth Trifol.,

4s. per lb.

The menyanthes trifoliata or buckbean has been said by several writers to be worthy of more careful trial than has been given to it. Its action upon the secretion of the liver is unquestionable, and it appears probable that it would prove far more active than taraxacum in all such cases as the latter is employed in. Dr. Gardner in "Papers on Disorders of the Liver," states that he has found it especially valuable in hepatalgia, or painful conditions of that organ with or without marked disturbance of the secretion; and also in constipation and weakness of the chylopœietic organs when the hepatic secretion is feeble.

No good preparation has hitherto been made from this plant. There are objections to the infusion, decoction, and extract. This liquor represents the virtues of the plant, and is recommended particularly to practitioners who doubt the efficacy of taraxacum in hepatic disorders.

### Liq. Ferri Acet. c Quina,

6d. per oz.

The solution of per acetate of iron having come into very general use, and having been found a very valuable iron preparation, it has been thought that a combination of it with quinine would also be acceptable. No very accurate distinction has been established between the actions of the several salts of quinine, except the general superiority of the salts of the vegetable acids in certain cases. The acetate of quinine in this preparation is probably equal at least to the citrate, and consequently the combination with iron is in every way desirable.

## VARIOUS MINOR PREPARATIONS.

The following Preparations, although to be found in some of the Pharmacopœias, or works on therapeutics, are believed not to be universally known; they would appear to be very useful, and at least some of our readers may be glad to become acquainted with them.

### 1. Syr. Ipecacuanha. (P. E.)

A far more eligible form than the wine, especially when ipecacuanha is given as an expectorant. Dr. Neligan says it is an excellent preparation for children; 40 minims are equal to one grain of the powder. As an emetic, 2 ounces for adults, 20 minims to 1 drachm for children, are the proper doses.

### 2. Prunum Preparatum.

### 3. Cassia Preparata.

### 4. Tamarindus Preparatus

These simple pulps are ordered by the London Pharmacopœia. They are excellent vehicles for administering medicines in to children. The prepared tamarind is a pleasant article for the sick chamber.

### 5. Sapo Crotonis.

Dose 1 to 3 grains. Dr. Neligan.

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### 6. Sapo Jalapinus.

The Resin of Jalap Saponified.

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### 7. Acid Sulphuricum Aromaticum. (P. D. and E.)

When elixir of vitriol is asked for or prescribed, it is usual for dilute sulphuric acid merely colored to be given, and this elegant and extremely agreeable form for administering sulphuric acid as a tonic and stomachic, is far less known in England than it deserves. It is more prescribed in Ireland and Scotland.

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### 8. Pagliari's Hemostatic Solution.

This styptic fluid, which enjoys considerable reputation, is prepared by boiling gum benzoin in a solution of sulphate of alumina and potash. Dr. Neligan observes—"It possesses the property of instantaneously coagulating the blood and converting it into a thick, homogeneous, and consistent clot; it is therefore a most powerful styptic, and, when applied locally, constitutes one of the most certain means of checking hœmorrhage."

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## PILLS.

The following pills are prepared for Medical Men, and sold either in mass, or rolled and divided into 5 grain pills, except the last, which are made smaller.

The materials selected, of the best quality and finely powdered, are incorporated thoroughly by machinery; and hence such will be found far preferable to those made by hand in a mortar, as well as a great saving of time and labor.

The formulæ are selected as being the most approved by practitioners of great experience for efficiency and general usefulness. For obvious reasons, the composition of these pills is not published, but will be given to purchasers, since no secresy is admissible in the medicines sold by the Company.

*** *Gentlemen having formula of their own can have them made up in like manner, with strict exactness, and the composition considered confidential.*

## 1. Pil Aperiens.

*(sine Hydrarg.)*

16s. per lb.

This is a mild aperient pill, suited for general use—efficacious without griping.

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## 2. Pil Aperiens.

*(cum Hydrarg.)*

16s. per lb.

Also, a mild pill, containing blue pill.

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## 3. Pil Catharticæ.

*(sine Hydrarg.)*

16s. per lb.

A more powerful purgative.

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## 4. Pil Catharticæ Comp.

*(cum Hydrarg.)*

16s. per lb.

A mass weighing 10 drachms 40 grains is divided into 180 pills.

From the United States' Pharmacopœia, of which Dr. Neligan observes, "An excellent purgative, combining efficiency of action and comparative mildness, with smallness of bulk." Dr. Wood also speaks very highly of the formula, "A single pill will generally be found to operate as a mild laxative. In a full dose (3), the preparation acts vigorously on the bowels, producing bilious stools, generally without pain; when they fail it is owing to their being badly prepared, or with inferior drugs." When made into pills, each pill contains 1 grain of calomel.

Any other pills may also be had, rolled and divided, such as pil rhei. co.—pil hydrarg—pil ferri co.—pil saponis c opio. pil galb. co.—pil colocynth co.—pil aloes c myrrha (Rufus' pill).

## Pepsine.

*Boudault's Preparation (so called).* 8s. per oz.

Under the designation *Pepsine* a preparation has been introduced from France and has met with some demand. As prepared by M. Boudault, it consists principally of starch with a very small amount of real pepsine, sufficient, however, it is alleged, for fifteen grains of the mixture to digest one drachm of dried fibrine.

Already imitations of this preparation are sold, said to be wholly worthless. What the value of M. Boudault's pepsine may be, remains to be determined. Its character is in fact that of an inert solid, containing a certain proportion of rennet, dried upon it.

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## Arseniate and Arsenite of Quinine.

These salts have been used in France, and it is said with much success in intermittent fever. The dose is one-tenth of a grain. There is no evidence as to the comparative advantages of the two salts probably; either may be employed indifferently.

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## Arseniate of Soda.

This is a more stable, constant, and manageable preparation than the Liq. Arsenicalis and should always be preferred.

Carbonate of Soda in large crystals is often sold for it. Practitioners must be on their guard against this source of error. If no effects are perceived from the ordinary dose, one-forty-eighth to one-twenty-fourth of a grain, three times a day, the possibility of this substitution should be remembered before the dose is ordered to be increased, as it might happen that the prescription made up at one house would contain the true salt, and at another the carbonate.

# SUMMARY

OF

# IMPROVED PREPARATIONS,

&c.,

DESCRIBED IN THE FIRST NUMBER OF "THE RECORD OF PHARMACY AND THERAPEUTICS," OF THE

## GENERAL APOTHECARIES' COMPANY,

(LIMITED)

WITH ADDITIONAL NOTES.

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## A. PREPARATIONS OF QUININE AND BARKS.

### 1. Neutral Sulphate of Quinine, 8s. 3d. per ounce.

*Recommended for being perfectly neutral, and soluble in water without the addition of acid.*

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### 2. Ammoniated Solution of Quinine, 9d. per ounce.

*Pure quinine, combined with sp. ammon. co.*

The addition of ammonia precipitates the quinine and other alcaloids of the bark from the decoction, infusion, or tincture, and yet they are often prescribed together.

This preparation effects the desired combination in a most elegant and grateful form.

---

### 3. Sulphate of Quinoidine, 4s. per ounce.

*Liq. quinoidinæ sulph.*

*This preparation is believed, on good evidence, to be superior to sulphate of quinine as an antiperiodic, against fevers as a tonic, and as a prophylactic, effectually preventing the access of fever and other effects of malaria, when taken by persons exposed to miasmata. It contains all the constituents of the quinine barks in a concentrated form.*

Practitioners, particularly those residing in agueish districts, are strongly recommended to give this preparation a trial.

---

**4. Citrate of Quinine and Iron,** 4s. 6d. per ounce.

4 *grains equal to* 1 *grain of disulphate of quinine.*

As commonly sold, it contains less than half that amount of quinine.

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**5. Valerianate of Quinine.** 28s. per oz.

*A very valuable remedy in nervous affections, accompanied by debility.*

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**7. Sulphate of Quinidin,** 6s. 6d. per ounce.

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## B. PREPARATIONS OF IRON.

**1. Potassio-tartrate of Iron.**

In pseudo-crystalline scales, 4s. per pound.

*Particularly recommended by M. Mialhe, as the best iron preparation.*

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**2. Ammonio-citrate of Iron,** 5s. 4d. per pound.

*Beral's preparation.*

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**3. Citrate of Peroxide of Iron.**

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**4. Citrate of Protoxide of Iron.**

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**5. Citrate of Magnetic Oxide of Iron.**

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**6. Citrate of Protoxide and Peroxide of Iron.**

*Ferro-citrate of iron.*

*The bibasic acid, with an equivalent of each of the two oxides of iron. An active and valuable iron salt.* 1s. per oz.

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**7. Saccharated Carbonate of Iron,** 3s. 6d. per pound.

*The simplest and best method of giving a protosalt of iron.*

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**8. Solution of Per-acetate of Iron,** 1s. 8d. per pound.

*Liq. ferri peracetat.*

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**9. Lactate of Iron.**

10. Phosphates of Iron.

a. *Ferri phosphas. Blue phosphate.*
*Dr. Prout's favorite iron salt.*

b. *Ferri Perphosphas. White Phosphate.*

c. *Syrup of Superphosphate of Iron.*

Recommended by Dr. Routh. It is an agreeable form for giving iron in combination with phosphoric acid.

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11. Pernitrate of Iron, 1s. 8d. per pound.
*Liq. ferri pernitrat.*

*A valuable remedy in chronic diarrhœa, choleraic diarrhœa, hæmorrhage from the stomach, bowels, and uterus, and as a general chalybeate.*

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12. Arseniate of Iron, 1s. per ounce.

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## C. PREPARATIONS OF ZINC.

1. Citrate of Iron and Zinc. 4s. per oz.
In pseudo-crystalline scales, 5s. 4d. per lb.

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2. Valerianate of Zinc.
*Very much employed and highly recommended in neuralgic affections, hysteria, &c.*

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3. Pure Oxide of Zinc, 2s. 8d. per pound.

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## D. PREPARATIONS OF SARSAPARILLA.

1. Compound Fluid Extract of Sarzæ, 12s. per pound.

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2. Hydro-alcoholic Compound Fluid Extract of Sarzæ, 20s. per pound.

*These preparations as described in the former Record, and prepared by the Company, have been highly approved, and are in considerable demand by the Profession.*

## E. PREPARATIONS OF MAGNESIA.

### 1. Fluid Carbonate of Magnesia.

In bottles containing eight ounces, 8s. per dozen.

*This preparation contains the largest amount of carbonate of magnesia, soluble in water, with excess of carbonic acid.*

The Company's preparation does not, like all others, precipitate—hence it remains uniform in strength. A suggestion of Professor Fresenius, relative to the method of preparing it, has accomplished this important desideratum.

### 2. Calcined Magnesia. 3. Carbonate of Magnesia.

*Light, Semi-ponderous, and Ponderous.*

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### 4. Pure Sulphate of Magnesia, per pound.

*Ditto, in large crystals,* 4d. *per lb.*

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## F. PREPARATIONS OF COD-LIVER OIL.

### 1. Pure Cod-Liver Oil, New Pale, 10s. per gallon. 1s. 2d. per lb.

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### 2. Cod-Liver Oil, with Quinine and other Active Agents.

Ol. Morrhuæ cum Quinæ Iodid.
" Quinæ Valer.
" Ferri Iodid.
" Ferri Bromid.
" Ferri Lactat.
" Hydrarg. Bichlorid.
" " Biniod.
" Arsenici et Iodin.
" Plumbi Acetat.

To which may be added the Vegeto-alkaloids, such as Morphia, Strychnia, Veratria, Atropia, Aconitina, &c.

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## G. MISCELLANEOUS PREPARATIONS.

### 1. Powdered English Rhubarb, 3s. per pound.

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### 2. Compound Tincture of English Rhubarb, 2s. 8d. per pound.

Since the former publication of "The Record," very many practitioners have employed these preparations, and have found that the therapeutic effects of the several varieties of rhubarb present scarcely any appreciable difference.

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**2. Lupulin.** 2s. 6d. per oz.

*Watery and alcoholic extracts of lupulin are kept.*

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**3. Tannic Acid,** 1s. 6d. per ounce.

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**4. Collodion,** 5s. to 8s. per pound.

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**5. Napthaline,** 1s. 6d. per ounce.

Employed with great advantage in chronic bronchitis or pulmonary catarrh. As long ago as the year 1848, Dr. Atkinson introduced napthaline to the notice of the Profession. "In certain forms of dyspepsia, accompanied by diarrhœa," he observes, "its value is very great, in half-grain or grain doses, mixed with aromotic confection, or extract of lettuce; it quickly relieves the tympanetic symptoms; and old chronic cases of distension after meals are materially benefitted by its use."

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**6. Oil of Ergot,** 7s. per oz. **7. Liquor Ergotœ,** 1s. per oz.

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**8. Tinct. Sumbul,** 4s. per pound.

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**9. Liquor Opii Sedat,** 18s. per pound.

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**10. Liquor Sennæ Dulc,** 3s. 4d. per pound.

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**11. Ulmus Fulva—Slippery Elm Bark,** 2s. per pound.

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**12. Chloride of Potassium,** 1s. per pound.

# ON THE ACTION OF CERTAIN WATERS UPON LEAD.

By Dr. Medlock, Ph.D., F.C.S., &c.

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The remarkable power which some waters possess of attacking leaden pipes and cisterns, is a subject which has more or less attracted the attention of almost every chemist who devotes himself to applied science. It has been observed that certain waters, when allowed to remain in contact with lead for several days, dissolve an appreciable quantity of that metal—in some instances as much as 5 or 6 grains in a gallon of water—a quantity that would be highly prejudicial if not fatal to health. Other waters have *no* solvent action on lead, and it not unfrequently happens that a water which at one season of the year acts vigourously upon lead, has no action upon it at other seasons.

Numerous attempts have been made, by some of the most able chemists, to arrive at a correct solution of this important question; but it will be admitted that all their attempts have hitherto failed, and that the conclusions arrived at are unsatisfactory in the extreme. Dr. Noad examined three waters which were known to act strongly upon lead. The first was taken from a deep well in the neighbourhood of Highgate Church-yard, and was found to contain 100 grains of solid matter in a gallon, of which 57 grains consisted of the *nitrates of lime and magnesia*.

The second water, from a spring at Clapham, contained 77.74 grains of solid matter in a gallon, consisting of salts of lime, magnesia, potash, and soda, with 4.10 *grains of organic matter*.

The third water which was found to act upon lead was that from the deep wells of London. This water contains about 68 grains of solid matter in a gallon, consisting chiefly of the salts of potash and soda, with very little carbonate of lime or organic matter.

These waters differ widely in their chemical composition. In the first *nitrates* prevail, in the second *organic matter*, and in the third *alkaline carbonates*. The action of the first on lead he attributes to *nitrates*, that of the second to *organic matter*, and that of the third to *free alkali!*

Dr. Smith, who investigated the action of the waters of the Dee and Don on lead, found that the quantity of lead dissolved increased with the time the water remained in contact with

the metal. He considers the action of these waters on lead to be due to the quantity of *air* dissolved in them.

More recently, at the request of the Government, Professors Graham, Hofmann, and Miller undertook the investigation of the action of waters on lead, and in reply to the question—"whether any comparative inconvenience would arise from a "supply of soft water to the Metropolis," they allude to the supposed danger and liability of soft waters acting upon and dissolving lead; but in opposition to the prevailing opinion that soft waters always act upon lead, they mention that, with one exception, neither the soft waters of the Surrey Hills, which have a hardness of only 2 degrees, nor spring water artificially softened to 3 degrees of hardness, have any perceptible action on lead. The idea that soft waters invariably act upon lead, seems to have its origin in the fact that certain specimens of distilled water, placed in contact with a large surface of bright sheet lead, dissolve as much as 6 or 8 grains of the metal to the gallon.

From certain observations made while conducting researches on the nature of the organic matters contained in the waters supplied to the Metropolis, I was induced to institute some experiments on the action of certain constituents of waters on leaden pipes, with the view of setting the question at rest. A gallon of the distilled water used in my laboratory, placed in contact with 560 square inches of sheet lead, dissolved, in 48 hours, 6.5 grains of lead, which was found at the bottom of the bottle in the shape of white insoluble carbonate, not more than one-sixtieth of a grain remaining in solution. Numerous experiments on the waters of London have enabled me to establish the important and interesting fact that the nitrogen of sewage and other organic matter is, under certain influences, readily converted, first into *ammonia* and, by the same influences, part of the ammonia is oxidised and converted into *nitrous acid*, which combines with ammonia and is found in the water as *nitrite of ammonia*. The presence of *nitrite* of ammonia in water I have clearly established by the most conclusive experiments, and it is to the presence of this substance, both in distilled waters and waters selected for domestic use, that the action of such waters on lead is due. The nitrous acid attacks the lead and forms the soluble *nitrite* of lead, which by exposure to air combines with carbonic acid and precipitates the oxide of lead in the form of insoluble carbonate of lead, setting free the nitrous acid again to attack and dissolve a fresh portion of lead.

On testing ordinary distilled water (distilled from Thames

water, or any water contaminated with sewage matter) with delicate blue litmus paper, it is found to possess a decided *acid* re-action. When neutralised with potash and evaporated to dryness, the residue is found to contain *nitrite of potash*. Mixed with a few drops of hydro-chloric acid and evaporated to dryness, a residue is obtained of *chloride of ammonium*. With the view of ascertaining whether or not it is to the presence of *nitrite of ammonia* that the action of distilled water on lead is due, I added to the still, containing twenty gallons of Thames water, two sticks of caustic potassa, and continued the distillation; the water distilling over immediately became *alkaline* to test-paper, shewing that the nitrite of ammonia in the water had been decomposed, the nitrous acid retained, and the ammonia liberated. After continuing the distillation a short time, all the ammonia was expelled and the water came over *perfectly neutral and pure*. A gallon of this water was placed in contact with 560 square inches of sheet lead, and allowed to stand for 48 hours. At the end of that time, the water contained *not the slightest trace of lead*.

From the above and numerous other experiments, the details of which will shortly be published, I have arrived at the following conclusions:—

1. That distilled water, obtained from river waters which contain nitrogenous organic matters, is invariably contaminated with *nitrite of ammonia*.

2. That such water is quite unfit for medicinal purposes, and that distilled water used in the preparation of medicines should be distilled from caustic potash, in order to avoid the presence of nitrous acid.

3. That distilled and other waters act upon lead *solely in consequence of the nitrous acid and ammonia they contain*.

4. That waters containing these substances should never be conveyed through leaden pipes, as such waters will infallibly dissolve the metal in poisonous quantities.

LABORATORY AND SCHOOL OF CHEMISTRY,
20, Great Marlboro' Street, London.

*** Since writing the above, I have detected *nitrous acid* in rain water. From this I infer its existence in the atmosphere. This acid, as is well known, is a powerful oxidizer, and it is probable that it plays an important part in destroying organic contagious matter in the atmosphere. It eadily evolves in the presence of oxidizable bodies one equivalent of oxygen in the nascent state (*ozone*), whilst the binoxide of nitrogen combines with more oxygen and forms again the teroxide or nitrous acid. Thus a small quantity of nitrous acid in the atmosphere, by alternately giving up one equivalent of oxygen as *ozone*, and combining with another atom of common oxygen, may go on destroying organic and contagious matter *ad infinitum*.

*The following is a List of Prices*

OF

# Drugs, Chemicals, and Preparations

AS SOLD BY THE

## GENERAL APOTHECARIES' COMPANY,

**(Limited.)**

*N.B. With respect to a few items, the prices will vary according to the markets.*

## CHEMICALS.

| | s. | d. |
|---|---|---|
| ACID, ACET. P. L. .....lb. | 1 | 4 |
| ——— AROM .....oz. | 2 | 0 |
| —— BENZOIC ..... ,, | 1 | 8 |
| —— CITRIC .....lb. | 4 | 0 |
| —— GALLIC .....oz. | 1 | 0 |
| —— HYDROCH. PUR. ....lb. | 1 | 0 |
| —HYDROCYAN.(SCHEELE'S)oz. | 0 | 9 |
| ——————— (P. L.).. ... ,, | 0 | 6 |
| —— NITRIC, PUR.....lb. | 1 | 4 |
| —— PHOSPHORIC (P. L.).. ,, | 2 | 6 |
| —— SULPHURIC, PUR..... ,, | 0 | 9 |
| —— TANNIC .....oz. | 1 | 6 |
| —— TARTARIC .....lb. | 2 | 4 |
| ACONITINA.....grain | 0 | 6 |
| ÆTHER, ACET. .....lb. | 6 | 8 |
| ——— CHLORIC ..... ,, | 5 | 4 |
| ——— SULPH. RECT..... ,, | 6 | 8 |
| ——————— METHYLATED ,, | 3 | 4 |
| AMMON. HYDROCHLOR. PUR. ,, | 0 | 8 |
| ——— HYDROSULPH. SOL. ,, | 1 | 8 |
| ——— SESQUICARB. PUR. .. ,, | 1 | 4 |
| ANTIM. POT. TART. ..... ,, | 3 | 6 |
| ——— PULV. COMP. ..... ,, | 3 | 6 |
| ARGENT, NIT.....oz. | 4 | 6 |
| ——————— CRYST. .... ,, | 4 | 8 |
| ——— OXYD..... ,, | 8 | 6 |
| ATROPINA .....grain | 0 | 6 |
| ——— SULPHATE.... ,, | 1 | 0 |
| BEBEERIN, SULPH. .....oz. | 5 | 6 |
| BISMUTH, TRISNIT. .....lb. | 8 | 0 |
| CHLOROFORM ..... ,, | 8 | 0 |
| DIGITALINE .....gr. | 1 | 0 |
| COLLODION.....lb. | 8 | 0 |
| ——————— METHYLATED ,, | 5 | 0 |
| CREOSOTE .....oz. | 0 | 8 |
| CUPRI, SULPH. PUR. .....lb. | 1 | 0 |
| FER. AMMON. CHLOR. ....oz. | 0 | 4 |
| ——————— CIT. ..... ,, | 0 | 4 |
| ——————— C. ZINC..... ,, | 0 | 4 |

| | s. | d. |
|---|---|---|
| FER. AMMON. TART. .....oz. | 0 | 4 |
| —— CARB. SACCH. .....lb. | 3 | 6 |
| —— CIT. cum QUINA ....oz. | 4 | 6 |
| —— PER-ACET. LIQ.....lb. | 1 | 8 |
| —— PER-NIT. LIQ. ..... ,, | 1 | 8 |
| —— IODIDUM ..... .oz. | 1 | 8 |
| —— POTAS. TART. .....lb. | 4 | 0 |
| —— SESQUIXOD. PUR. .... ,, | 1 | 8 |
| —— SULPH. PUR. ..... ,, | 0 | 8 |
| —— VALERIANAS .....oz. | 3 | 6 |
| GLYCERINE, PUR. .....lb. | 6 | 0 |
| HYD. AM. CHLOR. ..... ,, | 4 | 8 |
| —— BICHLORIDUM ..... ,, | 3 | 0 |
| —— BINIODIDUM.....oz. | 1 | 8 |
| —— CHLORIDUM .....lb. | 4 | 0 |
| —— CUM CRETÆ ..... ,, | 3 | 4 |
| —— IODIDUM .....oz. | 2 | 0 |
| —— NIT. OXYDUM .....lb. | 5 | 4 |
| IODINE, RE-SUBLIMED ....oz. | 2 | 0 |
| JALAPINA ... .....dr. | 1 | 6 |
| LIQ. AMMON. P. L. .....lb. | 0 | 8 |
| ——————— FORT. 880 .. ,, | 1 | 8 |
| ——————— ACET.(1 TO 7),, | 1 | 8 |
| —— HYD. ARSEN C HYDR..oz. | 1 | 4 |
| —— POTASSÆ, P. L.....lb. | 0 | 8 |
| ——————— BRANDISH .. ,, | 1 | 4 |
| ——————— ARSENITIS.. ,, | 2 | 8 |
| LUPULINE .....oz. | 2 | 6 |
| MAGNES. BICARB. SOLUT. doz. | 8 | 0 |
| ——— CALCINAT. .....lb. | 3 | 6 |
| ——————— SEMI-POND. ,, | 3 | 0 |
| ——————— POND..... ,, | 2 | 8 |
| ——— CARB..... ,, | 0 | 10 |
| ——————— SEMI-POND. ,, | 1 | 4 |
| ——————— POND..... ,, | 2 | 8 |
| —— SULPHAS, PUR..... ,, | 0 | 4 |
| ——————— COMLL. ..cwt. | 10 | 6 |
| MORPHIÆ, ACETAS .....oz. | 14 | 0 |
| ——————— HYDROCHLOR .. ,, | 14 | 0 |

| | s. | d. |
|---|---|---|
| MORPHIA SULPHAS.....oz. | 15 | 0 |
| NAPTHALINE ..... ,, | 1 | 6 |
| PLUMB. ACETAS, PUR. ....lb. | 1 | 0 |
| ——— IODIDUM ..... .oz. | 1 | 8 |
| POT. ACETAS .....lb. | 3 | 4 |
| —— BICARBONAS. PULV. .. ,, | 1 | 4 |
| —— CARBON. ..... ,, | 0 | 10 |
| —— CHLORAS. ..... ,, | 1 | 8 |
| —— HYDRAS. ALB. ..... ,, | 3 | 6 |
| —— NITRAS. PUR..... ,, | 1 | 0 |
| —— SULPHAS. ..... ,, | 0 | 8 |
| —— TART..... ,, | 2 | 8 |
| —— BITART. PUR..... ,, | 2 | 0 |
| POTASSII, CYANID-FUSED..oz. | 0 | 6 |
| ——— CYANURET. CRYS. ,, | 1 | 8 |
| ——— IODIDUM. ..... ,, | 1 | 3 |
| ——— SULPHURETUM. lb. | 1 | 8 |
| QUINÆ, DISULPH. PURE ..oz. | 8 | 6 |
| ——— SULPH. NEUT. .... ,, | 8 | 3 |
| ——— VALERIAN ..... ,, | 28 | 0 |
| QUINIDIN. SULPH. ..... ,, | 6 | 6 |
| ——— QUINOIDIN, SULPH. LIQ. .....bot. | 4 | 0 |
| SALACINE .....oz. | 3 | 0 |
| SANTONINE ..... ,, | 8 | 0 |
| SCAMMONINE ..... ,, | 8 | 0 |
| SODÆ, BIBORAS. PULV. ....lb. | 1 | 4 |
| —— CARB. EXSICCAT. .... ,, | 1 | 0 |
| —— POTASSIO TART. .... ,, | 1 | 8 |
| —— SESQUICARB. PULV. .. ,, | 0 | 8 |
| —— TARTRAS. ..... ,, | 2 | 0 |
| SP. ÆTHER, NIT. 2*s.* 8*d.* lb., 3*s.* 4*d.* lb. | | |
| ——— SULPH. .....lb. | 3 | 4 |
| ——————— CO. ..... ,, | 4 | 0 |
| — AMMON. AROMAT, ..... ,, | 3 | 4 |
| ——— FŒTID ..... ,, | 3 | 4 |
| STRYCHNIA CRYSTALS ....dr. | 2 | 6 |
| SULPHUR IODIDUM .....oz. | 2 | 6 |
| ——— SUBLIMATUM....lb. | 0 | 3 |
| ——— PRÆCIPITAT. PUR ,, | 1 | 4 |
| VERATRIA .....dr. | 2 | 0 |
| ZINCI, ACETAS .....lb. | 5 | 4 |
| —— CHLORID. CRYST.....oz. | 0 | 8 |
| —— IODIDUM .....oz. | 2 | 0 |
| —— OXYDUM PUR. ..... lb. | 2 | 8 |
| —— SULPHAS. PURIF. .... ,, | 0 | 8 |
| —— VALERIAN.....oz. | 4 | 0 |
| ALOES, BARB. OPT.....lb. | 3 | 6 |
| ——— CAPE, FINE..... ,, | 1 | 0 |
| ——— SOCOT. VER. ..... ,, | 4 | 0 |
| AQ. FLOR. SAMB. .....gal. | 3 | 6 |
| — ROSÆ, ANG..... ,, | 4 | 6 |
| BALS. COPAIB.....lb. | 2 | 8 |
| ——— SOLUBLE.... ,, | 3 | 4 |

| | s. | d. |
|---|---|---|
| BALS PERUV.....lb. | 8 | 0 |
| —— TOLUT. ..... ,, | 4 | 8 |
| CAMPHORA ..... ,, | 2 | 0 |
| CERA. ALB. ..... ,, | 2 | 8 |
| ——— FLAV. ..... ,, | 2 | 0 |
| CERAT. CETAC. ..... ,, | 1 | 10 |
| ——— CALAM. ..... ,, | 1 | 6 |
| ——— PLUMB. CO. ..... ,, | 1 | 6 |
| ——— RESIN..... ,, | 1 | 6 |
| ——— SABINA ..... ,, | 2 | 8 |
| ——— SAPONIS..... ,, | 2 | 6 |
| CETACEUM ..... ,, | 2 | 6 |
| CHIRAYTA ..... ,, | 1 | 4 |
| COCCINELLA .....oz. | 0 | 6 |
| CONF. AROMAT. SPECIES ..lb. | 6 | 8 |
| —— OPII..... ,, | 4 | 8 |
| —— ROSÆ, GAL. ..... ,, | 1 | 8 |
| ——————— CANIN. ..... ,, | 1 | 4 |
| —— PIPER NIGR. ..... ,, | 3 | 4 |
| —— SENNÆ, P. L..... ,, | 2 | 4 |
| CORT. AURANT. ANG..... ,, | 3 | 4 |
| —— CASCARILLÆ..... ,, | 1 | 0 |
| —— CINCHON. CORDIF. .. ,, | 5 | 6 |
| ——————— LANCIF. .. ,, | 3 | 0 |
| ——————— OBLONG... ,, | 5 | 6 |
| —— CINNAM. ..... ,, | 5 | 0 |
| —— LIMON. ANG..... ,, | 2 | 0 |
| —— SIMAROUB. ..... ,, | 2 | 0 |
| —— ULM. FULV. ..... ,, | 2 | 6 |
| CROCI, IN FŒNO .....oz. | 2 | 0 |
| EMP. AMMONIAC. cum HYD. lb. | 4 | 8 |
| —— BELLADONNÆ ..... ,, | 3 | 4 |
| —— CANTHARID..... ,, | 4 | 0 |
| —— GALBANI CO..... ,, | 1 | 8 |
| —— HYDRARG..... ,, | 2 | 8 |
| —— OPII (P. L.) ..... ,, | 6 | 0 |
| —— PLUMBI..... ,, | 0 | 10 |
| —— RESINÆ..... ,, | 0 | 10 |
| —— ROBORANS ..... ,, | 1 | 4 |
| —— SAPONIS ..... ,, | 1 | 8 |
| ERGOT. PULV..... ,, | 4 | 0 |
| ——— FIXED OIL OF 7*s.* oz. 1*s.* dr. | | |
| ——— LIQUOR .....oz. | 1 | 0 |
| ESS. BERGAMOT ..... ,, | 1 | 3 |
| — LIMONIS ..... ,, | 0 | 9 |
| EXT. ALOES, SOCOT. AQUOS. ,, | 0 | 6 |
| —— ANTHEMID. ..... ,, | 0 | 8 |
| —— BELLADONNÆ ..... ,, | 0 | 6 |
| —— CANNAB. IND. RES. .. ,, | 5 | 6 |
| —— COLCHICI ACETIC .... ,, | 1 | 0 |
| —— COLOCYNTH CO.(P. L.) ,, | 1 | 0 |
| ——————— CO. PULV. ,, | 1 | 3 |
| —— CONII ..... ,, | 0 | 4 |
| —— FEL-BOV. ..... ,, | 0 | 8 |
| —— GENTIANÆ..... ,, | 0 | 3 |

| | s. | d. |
|---|---|---|
| EXT. GLYCYRRHIZÆ, MOL. lb. | 6 | 8 |
| —— HUMULI.....oz. | 0 | 9 |
| —— HYOSCYAM.....lb. | 8 | 0 |
| —— IGNAT. AMAR. .....oz. | 5 | 6 |
| —— JALAP..... ,, | 1 | 0 |
| —— NUCIS VOMIC (alcohol) ,, | 5 | 6 |
| —— OPII PURIF. ..... ,, | 3 | 6 |
| —— PAPAVERIS.....lb. | 4 | 8 |
| —— PAREIRÆ BRAVA ....oz. | 2 | 0 |
| —— RHEI ..... ,, | 1 | 6 |
| ———— ANG. ..... ,, | 1 | 0 |
| —— SARSÆ, (JAM.) .....lb. | 18 | 0 |
| ———— COMPOS. (JAM.).. ,, | 16 | 0 |
| ———————— HYDRO. ALC. ,, | 20 | 0 |
| —— STRAMONII .....oz. | 1 | 0 |
| —— TARAXACI .....lb. | 6 | 8 |
| —— FLOR. ANTHEM..... ,, | 6 | 8 |
| FOL. BUCHU. ..... ,, | 2 | 6 |
| —— CONII ..... ,, | 1 | 3 |
| —— DIGITALIS ..... ,, | 1 | 3 |
| —— HYOSCYAMI ..... ,, | 2 | 0 |
| —— ROSÆ ..... ,, | 8 | 6 |
| —— LOBEL. INFLAT..... ,, | 3 | 4 |
| —— SENNÆ, ALEX. ELECT. ,, | 2 | 0 |
| ———————— PARV.. ,, | 0 | 10 |
| ————————IND..... ,, | 1 | 0 |
| ————————TINN. ..... ,, | 1 | 6 |
| —— UVÆ URSI ..... ,, | 1 | 3 |
| GUM ACAC. TURC. ..... ,, | 1 | 6 |
| ———————— ELECT.. ,, | 2 | 6 |
| ————————IND.....lb. | 1 | 0 |
| ————————PULV. ..... ,, | 3 | 4 |
| —— AMMON. GUTT. ..... ,, | 2 | 6 |
| —— ASSAFŒTID. ..... ,, | 1 | 3 |
| —— BENZOIN OPT. ..... ,, | 4 | 6 |
| —— GALBAN. ..... ,, | 4 | 6 |
| —— GAMBOGIÆ ..... ,, | 2 | 6 |
| ———————— PULV. .... ,, | 3 | 4 |
| —— GUAIACI..... ,, | 2 | 6 |
| ———————— PULV..... ,, | 3 | 4 |
| —— KINO ..... ,, | 2 | 0 |
| —— MYRRH ..... ,, | 3 | 0 |
| ————————PULV. ..... ,, | 4 | 8 |
| —— SCAMMON. PURE .... ,, | 48 | 0 |
| ————————PULV. ....oz. | 3 | 6 |
| —— TRAGACANTH, ELECT. lb. | 4 | 0 |
| ———————— PULV. ,, | 4 | 6 |
| KOUSSO, PULV. .....oz. | 1 | 0 |
| LICHEN, ISLAND.....lb. | 0 | 8 |
| ———— HIBERN. ..... ,, | 0 | 8 |
| ———— CEYLON ..... ,, | 1 | 0 |
| LIG. QUASSIÆ, INCIS..... ,, | 0 | 8 |
| —— SASSAFRAS, INCIS. .. ,, | 0 | 8 |
| LIN. SAPON. ..... ,, | 3 | 0 |
| —— CAMPH. CO. (P. L.) .. ,, | 3 | 4 |

| | s. | d. |
|---|---|---|
| LINT, per lb. 2s. 0d., 3s., 3s. 6d., and 4s. | | |
| PATENT FLAX, at 1s. 9d., 2s. 6d and 3s. 6d. lb. | | |
| LIQUOR PLUMB. DIACET. ..lb. | 0 | 8 |
| ———— TARAXACI ..... ,, | 6 | 8 |
| ———————— SUCCUS .. ,, | 5 | 4 |
| MACIS OPT. ..... ,, | 6 | 0 |
| MANNA, OPT. NOV..... ,, | 5 | 6 |
| MARANT. BERMUDA OPT. .. ,, | 2 | 8 |
| ———— ST. VINCENTS.... ,, | 1 | 10 |
| MATICO ..... ,, | 1 | 8 |
| MIST SENNÆ CO ..... ,, | 0 | 10 |
| OL. AMYGD. DULC. .....lb. | 1 | 6 |
| — AMYGD. ESS. .....oz. | 2 | 6 |
| — ANETHI..... ,, | 1 | 0 |
| — ANISI. IND. ..... ,, | 1 | 9 |
| — ANTHEM. ANG. ..... ,, | 6 | 0 |
| — CAJEPUTÆ ..... ,, | 1 | 6 |
| — CARUI, ANG..... ,, | 1 | 0 |
| — CARYOPH. ANG. ..... ,, | 1 | 0 |
| — CASSIÆ..... ..... ,, | 1 | 3 |
| — CINNAM. ..... ,, | 6 | 0 |
| — COPAIB. ESS.....lb. | 5 | 6 |
| — CROTONIS..... ,, | 1 | 6 |
| — CUBEBÆ ..... ,, | 1 | 6 |
| — JECORIS ASEL. (NEWFD.) 1s. 2d. lb., 10s. gal. | | |
| — JUNIP. ANG.....oz. | 2 | 6 |
| — LAVAND. (MITCHAM) .. ,, | 4 | 6 |
| — MENTH. PIP. ANG. .... ,, | 3 | 6 |
| ———— VIRID. ..... ,, | 1 | 6 |
| — MYRISTICÆ ..... ,, | 1 | 6 |
| — OLIVÆ, OPT. .....gal. | 8 | 0 |
| ———— SEC. ..... ,, | 7 | 0 |
| — ORIGANI .....oz. | 0 | 6 |
| — PIMENTÆ ..... ,, | 2 | 6 |
| — PULEGII, ANG..... ,, | 2 | 0 |
| — RICINI, OPT.....lb. | 1 | 0 |
| ———— SEC. ..... ,, | 0 | 9 |
| — ROSMARINI ..... ,, | 4 | 0 |
| — SASSAFRAS ..... ,, | 16 | 0 |
| OPIUM, TURC. OPT..... ,, | 22 | 0 |
| ———————— PULV. ..... ,, | 26 | 0 |
| OXYMEL SCILLÆ..... ,, | 1 | 2 |
| ————————SIMP. ..... ,, | 1 | 2 |
| PIP. CAYENNE. ..... ,, | 3 | 0 |
| — CUBEBÆ, PULV. ..... ,, | 2 | 0 |
| PIL. ALOES cum MYRRH .. ,, | 8 | 0 |
| — COLOC. CO. .....oz. | 1 | 0 |
| — FERRI CO. .....lb. | 5 | 4 |
| — GALBAN CO. ..... ,, | 8 | 0 |
| — HYDRARGYRI ..... ,, | 3 | 4 |
| — HYDRARGYRI CHL. CO. ,, | 6 | 0 |
| ——IPECAC. CO..... ,, | 8 | 0 |

| | s. | d. |
|---|---|---|
| PIL RHEI CO. ..... lb. | 8 | 0 |
| —— SAPON CO. ..... ,, | 8 | 0 |
| —— SCILLÆ CO. ..... ,, | 4 | 0 |
| PIX. BURGUND. ..... ,, | 0 | 8 |
| PULV. ALOES CO. ..... ,, | 2 | 8 |
| —— CINNAM. CO. ..... oz. | 0 | 6 |
| —— CRETÆ CO. ..... lb. | 4 | 0 |
| —— JALAP CO. ..... ,, | 3 | 4 |
| —— IPECAC. CO. ..... ,, | 8 | 0 |
| —— PRO MIST. CRETÆ CO. ,, | 1 | 4 |
| —— TRAGACANTH CO. .. ,, | 2 | 8 |
| RAD. ACONITI ..... ,, | 3 | 6 |
| —— CALUMB. ELECT. .... ,, | 1 | 0 |
| —— COLCH. SIC. ..... ,, | 1 | 2 |
| —— CURCUM PULV. ..... ,, | 1 | 0 |
| —— GENTIAN. ..... ,, | 0 | 8 |
| —— GLYCYRRH. ..... ,, | 0 | 10 |
| —— PULV. .... ,, | 1 | 4 |
| —— DECORT ,, | 4 | 6 |
| —— IPECAC. ..... ,, | 7 | 0 |
| —— PULV. ..... ,, | 8 | 0 |
| —— IRIDIS. ..... ,, | 0 | 8 |
| —— PULV. ..... ,, | 1 | 4 |
| —— JALAP. PULV. ..... ,, | 5 | 0 |
| —— RHEI, ANG. PULV. .. ,, | 3 | 0 |
| —— IND. PULV. .. ,, | 8 | 0 |
| —— TURC. PULV. .. ,, | 16 | 0 |
| —— SARSÆ. HOND. INCIS. ,, | 4 | 0 |
| —— JAM. INCIS. ... ,, | 4 | 6 |
| —— SCILLÆ, SIC. ..... lb. | 0 | 8 |
| —— ZINGIB. (JAM.) ..... ,, | 2 | 0 |
| SAGO PERLAT ..... ,, | 0 | 6 |
| SAPO, CASTIL. ..... ,, | 0 | 8 |
| —— DUR. PULV. .. ,, | 1 | 8 |
| SEM. CARD. MIN. ..... ,, | 4 | 4 |
| —— CARUI. ..... ,, | 0 | 8 |
| —— LINI ..... ,, | 0 | 3 |
| —— PULV. C. OLEO. .. ,, | 0 | 4 |
| SINAPIS, OPT. ..... ,, | 2 | 0 |
| SPONGES, per doz. 3s. and 4s. | | |
| SYR. AURANT ..... lb. | 1 | 4 |
| —— CROCI ..... ,, | 1 | 8 |
| —— FERRI, CIT. ..... ,, | 5 | 6 |
| —— cum QUIN. ℥ | 5 | 6 |
| —— IODID. P. L. .... ,, | 2 | 8 |
| —— PAPAV. ALB. ..... ,, | 1 | 0 |
| —— RHAMNI. ..... ,, | 1 | 0 |
| —— RHŒADOS. ..... ,, | 1 | 0 |
| —— SCILLÆ ..... ,, | 1 | 0 |
| —— TOLUT. ..... ,, | 1 | 4 |

| | s. | d. |
|---|---|---|
| TAMARIND ..... ,, | 1 | 0 |
| TR. ACONITI ..... ,, | 3 | 4 |
| — ACONITE (FLEMINGS) .. ,, | 6 | 6 |
| — ARNICÆ, MONT. ..... ,, | 4 | 0 |
| — AURANT. ..... ,, | 2 | 8 |
| — BENZOIN. CO. ..... ,, | 4 | 0 |
| — CALUMBÆ ..... ,, | 2 | 8 |
| — CAMPH. CO. ..... ,, | 2 | 8 |
| — CANTHARID. ..... ,, | 2 | 8 |
| — CANNAB. INDIC. ..... ,, | 3 | 4 |
| — CAPSICI ..... ,, | 2 | 8 |
| — CARDAM. CO. ..... ,, | 3 | 4 |
| — CASCARILLÆ ..... ,, | 2 | 8 |
| — CASTOR ..... ,, | 8 | 0 |
| — CATECHU ..... ,, | 3 | 4 |
| — CINCHON ..... ,, | 3 | 4 |
| —— CO. ..... ,, | 4 | 0 |
| — CONII ..... ,, | 2 | 8 |
| —DIGITALIS ..... ,, | 2 | 8 |
| — FERRI AMMON. CHLOR. ,, | 3 | 4 |
| —— SESQUICHLOR. .. ,, | 3 | 4 |
| — GENTIAN. CO. ..... ,, | 2 | 8 |
| — GUAIAC CO. ..... ,, | 3 | 4 |
| — HYOSCYAM. ..... ,, | 2 | 8 |
| — IODINII CO. ..... ,, | 5 | 4 |
| — JALAPÆ ..... ,, | 2 | 8 |
| — KINO ..... ,, | 4 | 0 |
| — LAVAND CO. ..... ,, | 3 | 4 |
| — LOBEL. INF. ..... ,, | 3 | 4 |
| —— ÆTHER .... ,, | 6 | 8 |
| — LUPULI ..... ,, | 2 | 8 |
| — MYRRH. ..... ,, | 4 | 0 |
| — OPII ..... ,, | 4 | 8 |
| — RHEI CO. ..... ,, | 4 | 0 |
| — SCILLÆ ..... ,, | 2 | 8 |
| — SENNÆ CO. ..... ,, | 3 | 4 |
| — TOLUT. ..... ,, | 4 | 0 |
| — VALERIAN. ..... ,, | 2 | 8 |
| —— CO. ..... ,, | 3 | 4 |
| — ZINGIB. ..... ,, | 3 | 4 |
| UNG. HYDRARG. FORT. .... ,, | 3 | 4 |
| —— NIT. ..... ,, | 2 | 8 |
| —— SAMB. FLOR. ..... ,, | 1 | 4 |
| —— VIR. ..... ,, | 1 | 0 |
| VIN. ANT. POT. TART. .... ,, | 3 | 4 |
| —— COLCHICI ..... ,, | 3 | 4 |
| —— FERRI ..... ,, | 3 | 4 |
| —— IPECAC. ..... ,, | 3 | 4 |
| —— OPII ..... ,, | 6 | 8 |

ETC. ETC. ETC.

**Every Article of Materia Medica and Preparation of the Pharmacopœias of London, Edinburgh, and Dublin.**

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MEDICAL APPLIANCES—FOR INJECTIONS, BANDAGES, MEDICINE CHESTS, ETC.

| | | s. | d. |
|---|---|---|---|
| **Concentrated Infusion of** | | | |
| BROOM | lb. | 3 | 4 |
| BUCHU | ,, | 5 | 4 |
| CALUMBA | ,, | 2 | 8 |
| CASCARILLA | ,, | 2 | 8 |
| CHAMOMILE | ,, | 2 | 8 |
| CHIRAYTA | ,, | 3 | 4 |
| CLOVES | ,, | 3 | 4 |
| CUSPARIA | ,, | 4 | 0 |
| FOXGLOVE | ,, | 4 | 8 |
| GENTIAN | ,, | 2 | 8 |
| HOPS | ,, | 5 | 4 |
| PAREIRA | ,, | 6 | 0 |
| ORANGE PEEL | ,, | 3 | 4 |
| QUASSIA | ,, | 2 | 0 |
| RHATANY | ,, | 5 | 4 |
| RHUBARB (TURKEY) | ,, | 7 | 4 |
| ——— (EAST INDIA) | ,, | 5 | 4 |
| ROSES | ,, | 4 | 0 |
| SENNA (ESSENCE) | lb. | 4 | 0 |
| SERPENTARY | ,, | 3 | 4 |
| SIMAROUBA | ,, | 4 | 0 |
| VALERIAN | ,, | 3 | 4 |
| **Concentrated Decoction of** | | | |
| ALOES, COMP. | lb. | 8 | 0 |
| BROOM, —— | ,, | 5 | 4 |
| PAREIRA | ,, | 6 | 0 |
| SARSAPARILLA, COMP. (1 to 15) | | 12 | 0 |
| ——— ——— SIMP. | ,, | 14 | 0 |
| SENEGA | ,, | 10 | 8 |
| WHORTLEBERRY | ,, | 5 | 4 |
| **Liquors** | | | |
| POPPY | ,, | 4 | 8 |
| OPII. SED. | ,, | 18 | 0 |
| AROMATIC SYRUP OF SENNE | ,, | 3 | 4 |
| CONCENTRATED SYRUP OF ORANGE PEEL | ,, | 4 | 0 |
| CINCHONA SACCHAR | ,, | 14 | 0 |

*N.B.—The Company is not responsible for anything in the Advertisement Sheet.*

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## THE VICHY WATERS COMPANY,

Having the grant from the French Government for the exclusive sale of these waters, bottle them at the Springs, and consign them direct in their genuine state to their ENGLISH DEPÔT, 27, MARGARET STREET, CAVENDISH SQUARE. The efficacy of these Waters in Stomach, Liver, and Renal Diseases, Gout, Rheumatism, Diabetes, &c., are to well known to need comment.

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