CARPENTER

MATERIA MEDICA

ANNEX

7072

13-5

CARPENTER'S CHEMICAL WAREHOUS

PHILADELPHIA

POPULAR

Quinine
Carpenter's compound fluid ext. of Sarsaparilla for extemporaneously making Lisbon diet drk.

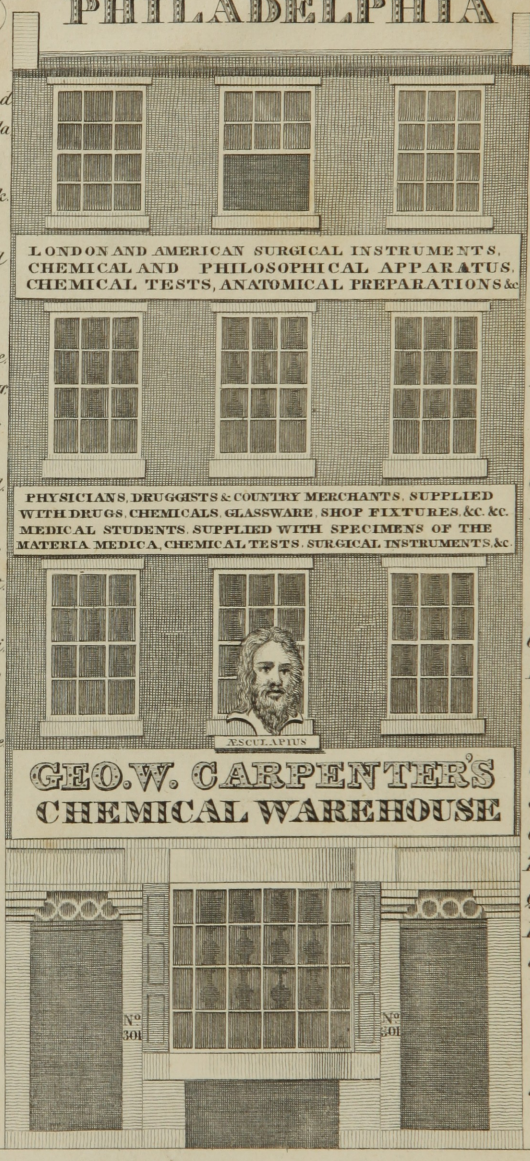
Piperine.
Carpenter's compound fluid Ext. of Buchu, Diosma Crenata, a valuable medicine for diseases of the bladder, Chronic Gonnorrhea &c.

Iodine.
Carpenters ol. Cantharid. for producing speedy & certain vesication by simply rubbing the part.

Cornine.
Carpenters citrated Kali for extemporaneously making the saline draught or neutral mixture

Brucine.
Veratrine, Croton oil, Oil of Copaiva, Carpenter's Chalybeate Ginger Powders a valuable remedy in Dispepsia & Indigestion. Oil of Euphorbia, Ioduret of Mercury, Chloride of Soda, Blk. oxide of Mercury.

Prussic Acid.



MEDICINES

Morphine.
Carpenter's Sara... Powders, for mak... Congress Spring ... Saratoga Wat...

Emetine.
Carpenter's comp... Syrup of Liverwo... Hepatica Tritob... a safe & valuable r... edy in hepatic an... Pulmonary affect...

Hydriod. Pota...
Carpenters precipit... Ext. of Bark, equal... Quinine, in the sam... doses, at ½ the pric...

Cinchonine
Carpenter's selectio... Peruvian barks, put... lb & oz. sealed Pack...

Salicine.
Oil of black Pepper ... of Cubebs Ext. Quin... Carpenter's compou... Tonic ext. composed ... Quinine, Cinchonin... Piperine, Capsicine ... a more active prepara... than Quinine in ... Intermittents.

Lupuline.
an extensive assort... of

Chemicals.

No. 301 Market Street the first house belo... the north east Corner of Market & Eighth St...

An assortment of Medical Books.

Carpenter's Essay's on the Materia Medica *comprising a full account of the New & Popular medicines their doses uses mode of administration &c.*

Dr J. Irwin

ESSAYS

ON SOME OF THE MOST IMPORTANT ARTICLES

7072

OF THE

MATERIA MEDICA,

COMPRISING

A FULL ACCOUNT OF ALL THE NEW PROXIMATE PRINCIPLES, AND THE POPULAR MEDICINES LATELY INTRODUCED IN PRACTICE, DETAILING THE FORMULAS FOR THEIR PREPARATION, THEIR HABITUDES AND PECULIARITIES, DOSES AND MODES OF ADMINISTRATION; WITH

REMARKS

ON THE

MOST ELIGIBLE FORM OF THEIR EXHIBITION:

TO WHICH IS ADDED,

A CATALOGUE OF MEDICINES,

SURGICAL INSTRUMENTS, &c. &c.,

ADAPTED FOR

A Physician at the Outset of his Practice,

WITH THE

DOSES AND EFFECTS ATTACHED TO EACH MEDICINE, &c. &c.

——:o:——

BY G. W. CARPENTER.

——:o:——

SECOND EDITION,

REVISED AND ENLARGED.

7072

Philadelphia:

Geo. W. Carpenter's Chemical Warehouse, 301 Market St.

1834.

QV
C295e
1834

Entered according to the Act of Congress, in the year 1834,

BY GEORGE W. CARPENTER,

In the Clerk's Office of the District Court of the United States in and for the Eastern District of Pennsylvania.

SAMUEL W. NEALL, PRINTER; PHILAD'A.

TO THE

MEDICAL CLASS

OF THE

UNIVERSITY OF PENNSYLVANIA,

THIS WORK IS HUMBLY SUBMITTED,

BY THE AUTHOR.

PREFACE

TO THE FIRST EDITION.

——:o:——

In submitting the following pages to the Medical community, it will be necessary for me first to apologise for their imperfections, and I feel satisfied they will indulge me under the circumstances of the case. They were penned during the short intervals of suspense amidst the bustle and toil of an active business, and my object was more for the purpose of keeping up strict habits of industry and close application, than for any benefit which I could anticipate to result from their publication. The former I am certain to have attained, and should the latter result, I shall be doubly rewarded. I have at various times contributed essays on the different articles of the materia medica to our medical journals, particularly to the Philadelphia Journal of Medical and Physical Sciences, and to the recent highly valuable periodical the American Journal of Medical Sciences; also the interesting Journal of Science and Arts, edited by Professor Silliman of New Haven. My Medical friends have frequently called upon me for copies of these essays, until I had distributed several thousand of each, when I was earnestly solicited for some time (having exhausted all the loose copies I had printed) to publish them together, and in compliance with these requests I have introduced this work to public attention. I rely upon my Medical friends for its support; and I purpose, if sufficiently encouraged, to publish a more enlarged view of the articles of the materia medica generally, under the title of *Pharmacologia*. In the present work I have added considerably to the essays above alluded to, by introducing a full description of the new and popular medicines

which I have lately brought into notice, and which I now extensively manufacture, and which have found their way into every town in the United States. I have also embraced in the present work, a concise account of some of the new and valuable medicines introduced to public attention by the excellent treatise of Majendie, and have quoted the formulas which he has laid down for their preparation, because I consider them a standard which all the apothecaries and physicians should invariably adhere to, in order that we may have uniform preparations. I repeat again, that these formulas are from Majendie; for not having adverted to it in the places where they have been given, I wish it here particularly understood, for there will be, no doubt, some of my competitors seeking every little avenue of this publication to hunt out and magnify any little weak points (more or less of which may be culled out of the most valuable productions,) particularly if sought after by an over-scrutinizing or envious investigation; while the brilliant light of truth and information which they contain, generally drives them in despair before they have fully completed their unworthy intentions. Hence it is we find men of the most depraved talents undervaluing erudite compositions, because they do not fully understand them, or because there is an exciting spirit of envy or prejudice. And how often, in our daily walks in life, and in our intercourse with the world, do we find these circumstances manifested. How many able speeches and orations do we see mutilated and defamed, by persons unable to speak, or with capacity to understand. But what does it effect? And what is its influence? They are generally, ere long, defeated by their own imbecilities or defective stratagems. The orator stands the same, and the oration has lost no more by their condemnation than it would have gained by their applause.

I do not, by any means, wish to condemn criticism; it is the very life and essence of writing, and when it is done impartially, and without prejudice, should always be invited by the author.

There is no circumstance which evinces more strongly the progress of Medical Sciences, than the general and increasing spirit of emulation, and the ardour with which many of its votaries apply in developing and substantiating new facts, as the fruitful result of their researches and discoveries. Chemistry and Pharmacy have contributed more largely to the grand fund of solid and substantial information, than any other branches of the Medical Sciences. It is to this department we are indebted for the valuable acquisition of Quinine, Morphine, Piperine, and other proximate principles; and a number of highly valuable improved and concentrated preparations, as the Compound Fluid Extract of Sarsaparilla, &c. &c.; all of which have become perfectly established in Medical practice, and their particular effects can now be relied upon with as much certainty as Calomel and Opium. While speaking of Sarsaparilla, I cannot refrain from expressing, in this place, the valuable properties of the Fluid Extract, which possesses so many advantages over the syrup, decoction, and solid extract, as proved in the subsequent pages of this work. Physicians can now rely upon an uniform preparation, and can conveniently prescribe it; and the patient will now be relieved from the trouble and difficulties of preparing the decoction, which was seldom sufficiently boiled, and otherwise improperly made by those unacquainted with pharmaceutical preparations. I have seen very silly objections made to this preparation by one of my competitors in trade, who is ever ready to *speculate* on the analysis of articles which he is unacquainted with, and thus frequently makes excessive blunders; this is to be pitied, since he might at once strike upon a much more successful effort in quoting the analysis and composition of his *improved* water colours, which he must necessarily be more acquainted with, and which, in fact, might be an interesting disclosure. We must, however, expect to meet with the collision of opposite opinion, and, at the present epoch, we cannot expect that we should all agree upon any one

subject, though it were as manifest as the unobscured sun at noonday. We must, therefore, expect to meet with opposition in the most useful discoveries. Hence we frequently find a person opposing articles, their usefulness and superiority, although fully established by well-attested facts, and by the experience of some of the most distinguished men ; yet, notwithstanding all this, and without advancing arguments or producing facts to support a premises, he disputes or denies the authenticity. I say we object to an individual less able to judge, than perhaps any one of those he is opposing, to advance his own opinion against a host of men eminent in the profession, and to offer his own opinions as a pattern to be followed, when, in truth, they ought to be represented as an obstacle to be shunned ; but such is the blindness of human nature, that men are too apt to set themselves up as guides, when they should be satisfied to serve as beacons. There is no doubt they may now and then meet with a follower or disciple who will catch at their opinions, and support them as an expedient, but they generally in a short time die away for want of support ; while articles they have expended themselves upon, appear to have taken fresh roots from the nourishment, and the branches to have extended themselves in all directions, far and wide. Thus we find the Saratoga powders described in the following pages to have become every year more and more popular, and their usefulness to be more and more appreciated, and the demand for them co-extensive with their increased reputation. They have been introduced in every section of the United States, and have given in all cases the most decided and unequivocal satisfaction, and produced the most salutary and beneficial effects ; and have elicited from the faculty and highly distinguished individuals, in various places, voluntary acknowledgments of satisfaction, and expressions of high commendation on their character and properties ; while the miserable objections and defective analysis of an apothecary have long since slumbered in forgetfulness.

Thus it was with Quinine; the same objections were made to it when first introduced, and much clamour and opposition raised; one said it was too acrid, another too uncertain, and a third too costly—that it would never be used. But these objections, one by one, gradually subsided, while Quinine raised its aspiring head, and its extensive usefulness soon became manifest, to the total obscuration and entire oblivion of the foolish objections which had been started; and we may venture to say, there is not a single practitioner of medicine who will not admit its value and superiority to the bark.

Thus it is with the Fluid Extract of Sarsaparilla, the clamours which was raised against it by competition of interest, as clearly growing out of envy and prejudice as any fact which could possibly be proven by circumstantial evidence, has already been annihilated, while this preparation is rapidly increasing in reputation, and is now prescribed by the most distinguished physicians in the United States, and with the most decided satisfaction: it is certainly an article which should receive their support and approbation, as it would have a tendency of putting down, in a great measure, the various nostrums which are sold under different names, and which are in fact nothing but Compound Syrup of Sarsaparilla, which is most frequently improperly made, as the venders and manufacturers of them, in most cases, never been brought up in the profession, are ignorant of pharmacy, and their preparations will, therefore, be very defective. There is nothing concealed in the composition of the Compound Fluid Extract of Sarsaparilla, being made from the articles composing the Lisbon Diet; its value and superiority over other preparations is owing entirely to the peculiar manner in which it is made, by which all the medical virtues are extracted from the roots by the most efficient process, based on chemical principles, obtained from the result of numerous experiments made exclusively for the purpose of ascertaining the same. There will be found in this work a

description of a number of new medicines prepared and introduced by me, which have all been sufficiently tested and proved, by ample experience by some of our most eminent physicians, to possess fully the virtues and properties which have been assigned to them. The Compound Extract of Buchu, Oil of Cantharidin, Compound Tonic Extract, Citrated Kali, Extract Spigelia, Compound Cubebs, Sarsaparilla and Copaiva, Precipitated Extract of Bark, &c. &c. &c., will all be found on trial to be valuable medicines, and I feel satisfied will prove useful to the practitioner, and meet with the decided approbation of the faculty, as they have been wherever yet introduced.

☞ I would beg leave particularly to inform the faculty, that there has been various imitations of my Compound Extract of Sarsaparilla, Saratoga powders, and several other preparations, and that sales of them have been effected on the reputation of mine. They are put up in the same form, the name borrowed, also part of the description and directions, so as to imitate externally as closely as possible my preparations. The faculty, therefore, in making out their orders, who wish those prepared by me, should express it decidedly in their directions, or they might perhaps get another article. I have heard frequent complaints from physicians in the country who had ordered my preparations, and received, instead of them, spurious and inferior imitations, which was the cause of so much displeasure, that they immediately sent their orders direct to me. I think the original inventor should receive the benefit of his improvements, and that spurious imitations of every kind should not receive encouragement, but the disapprobation and censure of the community. And I hope, therefore, the faculty will do me the justice, when they wish any of the new articles which have been introduced by me, if they do not send direct to me, to mention my preparation; being persuaded they are disposed rather to encourage the inventor or proprietor, in preference to those who imitate or counterfeit the original.

PREFACE

TO THE SECOND EDITION.

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In the second edition of this work, which I now have the pleasure of offering, will be found considerable additions, and more enlarged views of several articles previously treated, including a considerable number of additional articles of the Materia Medica. These articles are not taken up in regular succession or classical order, as they appear in complete works on the subject, but such only selected which the author could give views from actual knowledge and experience of their properties from careful personal investigation; and additions will thus be made from time to time, as knowledge and experience ripens, so as at length to embrace a complete work on the Materia Medica, embracing all the articles, and dwelling on them in detail. I have thus far been as brief as possible in the description of the articles, so as to present in a condensed form all that is essentially important and useful to the medical student, leaving the Historical or Commercial description of the articles to more copious works, and would refer them to Professor Coxe's Dispensatory, or to the recently highly valuable Dispensatory of Drs. Wood and Bache, or to the more comprehensive treatise, the Cyclopædia of practical medicine, edited by Dr. Hays.

I must again beg the indulgence of my medical friends and readers, for any errors and imperfections which may occur, and I feel certain those who are personally acquainted with me, and know the manner in which I conduct my business will readily grant it. I am compelled, however, to illustrate to those remotely situated, that my time is constantly required and actively engaged in business, from an early hour in the morning to a late one at night;

and the time consequently devoted to writing these Essays, must be a moment here and there seized, at no definite intervals or prescribed periods. On this account, from the extreme haste and irregularity with which the materials have been collected, I consider it justice to myself to make these remarks, and to offer these circumstances, as grounds of defence for any small errors or inadvertencies which may occur.

It cannot be expected I should offer any thing particularly new, or essentially differing in the general properties or principles of those articles which have been so repeatedly and copiously described by various authors. I can aver, however, what I have asserted, (whether agreeing or differing with them,) I know to be facts, as resulting from my own personal observation and experience of the subjects I have treated, except when I have particularly stated or inferred to the contrary, and cannot omit acknowledging the value and assistance (as a reference) of Drs. Wood and Bache's valuable dispensatory.

In the investigation of truth and knowledge of any description, particularly where judgment and experience are required to determine the facts, I consider the increase of authority, even if there is nothing else essentially important in their treatises from what has already been established, if given as the result of experience and practical knowledge, is obviously highly valuable and important, as it establishes the truth, and confirms the authenticity, by an increased superiority of evidence; and will at all times prevent an inexperienced or speculative author to outweigh facts thus decidedly proved by the concurring weight of numerous authorities, whose judgment and experience is entitled to full confidence.

In order to give my distant friends a view of my establishment, and the manner I conduct the business—I have introduced a plate of the exterior of my chemical warehouse, and a short description of its interior construction and arrangements.

DESCRIPTION OF

CARPENTER'S

CHEMICAL WAREHOUSE,

PHILADELPHIA.

——:o:——

It is an object of the highest possible consideration with a physician, to obtain medicines which he can always rely upon for genuineness and purity, and which are uninjured by age or exposure.

It is unnecessary to point out the serious disadvantages which practitioners of medicine labour under in the administration of feeble or inert preparations. All their skill and judgment are sacrificed, and talent and experience, if of the highest order, are made level to the least intelligent of the profession, and rendered ineffectual in the treatment of cases which, otherwise, would have speedily yielded to the salutary influences of pure medicines.

Philadelphia has long very justly claimed and maintained a superiority of standing, and a conspicuous elevation for the brilliant talents of her medical men, and for the scientific knowledge of her Druggists and Apothecaries. The numerous valuable standard works produced by the distinguished professors of her medical colleges, and private medical gentlemen of sterling merit, together with the valuable and ably-conducted periodicals, are striking characteristics of the correctness of these remarks, and reflect credit upon the country.

With these premises I would beg leave to depart from the usual course pursued, in remarking upon my own establishment.

I hope my medical friends will indulge me, and I cannot think I will incur the disapprobation or censure of any one in thus departing from the prescribed and arbitrary law of custom, by which much information and valuable knowledge are frequently sacrificed or concealed, to exhibit a true and correct description of my establishment, and the facilities with which I am enabled to supply the orders from medical men in all sections of the Union.

I have erected on the ruins of my old stand, (lately destroyed by fire,) a large and commodious four-story warehouse and store, as represented in the annexed plate; and also, in the rear of the same lot, a laboratory for the manufacture of the vegetable extracts, proximate principles, and finer chemical products. The buildings have been erected exclusively for the object of the Drug and Chemical business, and every convenience has been studiously observed and faithfully executed in their construction, for this object alone.

The retail department of the store is separately constructed, in order that the wholesale business may not interfere at all with it, but that both can be conducted on the most extensive scale, without one interfering with the other. Thirteen persons are employed inside the store in preparing, compounding, and packing up medicines. The retail part of the store is conducted by six, most experienced of the number, who give their entire attention to this department in weekly rotation, by which they easily acquire an intimate knowledge of both branches. The one thus devoted attends to receiving all goods, the examination of bills when presented, and acts as treasurer in receiving monies and the payment of bills, &c.—the transactions of which he daily files an account of.

The first floor of the store is appropriated in part for the retail business, and contains two hundred mahogany drawers; five hundred bottles, from two gallon down to quart; one hundred porce-

lain jars; thirty show cases, mahogany, with plate-glass, all of which are neatly labelled in gold, and appropriated exclusively to the retail department. The depth of this part of the store is thirty feet, and contains four counters, on which are two silver and two brass pair of scales. The ceiling is thirteen feet six inches high, for the distance of thirty feet in depth; it then falls to nine feet, showing an opening, near the centre of the store, of four feet six inches, finished with facie and railings, in the centre of which is one of Lukens' superior regulated time-pieces, decorated with two dolphins on each side, with a wreath of flowers in the centre, on which is the Hive of Industry, all of which is tastefully carved in wood, and bronzed with gold, combining the valuable and instructive demonstration of "*Tempus Fugit*," with a rich and ornamental finish, to correspond with the general effect and arrangement of the store. From this point, still on the first floor, commences the wholesale department, which extends further in depth thirty-five feet, making the whole depth in one view of sixty-five feet in the clear. In this department are a further continuation of drawers of large size, a hatchway, stairs, hydrant, &c.—Also, a large counter, twenty feet long and four feet wide, on which are a large pair of brass scales: these scales, as well as those previously described, are manufactured by Mr. John Wilbank of this city. The workmanship and construction of them are very superior; they should be in the possession of every druggist and physician who wishes a superior, neat, and durable article, which will weigh with rigid nicety and exactitude, are easily kept in order, and with little care will always present a beautiful polished surface, and cannot fail, in a short time, to supersede the worthless articles which have for so long a period, worried and perplexed those who were exact and discriminating for correct weighing, as every man should be under all circumstances, but especially in a business where its requisition is so very important. On the west

side of the wall commences the anatomical cases, containing specimens of the various preparations for the use of the student; as, wired skeletons; loose bones; arterial, venous, and lymphatic preparations; articulated heads, female pelvis, and fœtal heads; and various isolated preparations of the human body, &c.; all neatly arranged for exhibition. This is followed by cases of the various kinds of surgical instruments, London and American. The American instruments are now made of very superior quality, and I think may be depended upon as equal to the London, with the exception of the celebrated manufacture of Evans, which I believe are unequalled anywhere. Immediately following this range of cases, is an inscription of rules and regulations of the establishment, in which the most important and striking requisitions are conspicuously presented to constant view by gold letters on black ground. This is a valuable expedient in all stores or places of any kind where a number of persons are engaged, and where the duties and requisitions are of a diversified character, to present to constant view, that which is most important to be impressed upon the memory. The next in succession is a medical library, for the use of the store, which is followed by a set of tubes or speaking-trumpets, which communicate with each story of the building, by which sound is regularly conveyed, and a corresponding number of bells follows to call attention to the trumpets when required. In this way, where a large business is done, an exceeding great time is saved, and a facility given to the transaction of business, to a far greater valuation than quadruple the cost of construction; any question can be made to those in the fourth story without any great exertion of voice, and an answer conveyed with corresponding facility. Then follows in rotation a fire-proof of large size and new construction, which sad experience has demonstrated the utility of. No man should build a store without the most scrupulous attention to a fire-proof for the

safety and security of his books and valuable papers, in case of a calamity. The draft of the fire-proof was furnished by Mr. Wilbank, and is of a new construction, and possesses several advantages which are not possessed by any other I have yet seen. It has two sets of double doors, and opens four feet wide and six feet high, presenting a broad and full view, at one glance, of the contents. It is lined around with iron. The weight of the iron work is about fifteen hundred pounds. Counting-house desks, grates, &c. &c. finish the first floor of the building.

The second story is a continuation of drawers and bottles, alphabetically arranged like the first floor, and contains four hundred drawers and eight hundred bottles of various sizes, labelled in gold; also counters, scales, &c.

The third story contains packages of goods, opened and placed in bins holding each one a half barrel, and arranged in regular rows, six rows in number, and each row extending in depth forty-five feet; also counter and scales, as in the other stories. In this story is also partitioned off, a mineralogical room, containing a cabinet of near four thousand specimens, neatly arranged in drawers; also a duplicate collection of considerable size, for exchanging.

The fourth story contains glass-ware of various descriptions, unpacked, on shelves, running on both sides the whole depth of the store sixty-five feet; also packages of goods, unopened, arranged in regular rows, with sufficient space between each to admit a person to walk; also a loft of hay, packing boxes, &c.; and an improved hoisting machine, by which all the orders put up on the first, second, and third floors, are raised and packed, and again let down when ready to ship or send away. In consequence of a still scarcity of room, it is intended shortly to add another story to the building.

This finishes a brief outline of the construction and arrangement of my store; and I hope I will be indulged to say, in conclu-

sion, that I give my close personal attention to business, and no article is received into the store without my particular examination, and also those which are sent away; and no article of an inferior quality is either received or sold. I have adopted and laid out all my plans and arrangements of business for supplying the orders of physicians and medical men, and keep no paints, oils, varnishes, dye-stuffs, &c. (which occupy a large proportion of room, and are injurious to the sale of the finer quality of medicines, and should never be kept with them, but made a distinct and separate branch of business;) and therefore can attend more especially to the calls and wants of practitioners of medicine: and as all my pharmaceutical and finer chemical preparations are made in my own laboratory and store, I can, of course, vouch for their purity, and the processes by which they are made. Under these circumstances I feel full confidence in inviting the attention of the faculty; also country druggists and merchants, who are particular about the quality of their medicines. Any orders which are sent to me from merchants or druggists at a distance, in which paints, oils, dye-stuffs, &c. are included, I can have the latter portion of their order furnished as low as any house in this city or elsewhere; for although I do not keep them on hand, or suffer them at all to interfere with my business, where they are included in orders with other articles, I can furnish them through an agent here at the lowest market prices.

It is my intention to keep a very extensive variety and assortment of articles, embracing every thing connected with the profession, so that orders for any articles can be readily furnished.

Goods can be forwarded with facility to any part of the United States, and I hope no one will hesitate to send their orders in consideration of the distance, or any apprehension of the safety of their arrival. Insurance will at all times be effected to any part of the United States at a moderate premium.

I have now on my order-books the names of more than twenty-one hundred physicians in various parts of the United States; and I am pleased thus publicly to state, that from nearly every one I have received commendations of satisfaction with the articles sent them, and found in most of them a cordial familiarity and friendship in introducing and recommending their medical friends and acquaintance to me; and have on my part used increased efforts to support and merit the confidence and friendship thus exerted; and for these signal and disinterested services I shall ever feel a warmth of gratitude, and will seek every opportunity to reciprocate their favours.

GEORGE W. CARPENTER.

☞A Catalogue and description of all the new Medicines and improvements in Chemistry and Pharmacy will be published annually, and distributed gratuitously. Physicians in the country who will forward their address, *post paid*, will be regularly supplied.

Observations and Experiments

ON OPIUM.

——:o:——

Its varieties and appearance in Commerce, &c. &c.

This important article, from its extensive usefulness in modifying and alleviating the most afflicting and painful diseases incident to human nature, merits perhaps the most conspicuous place in the *materia medica;* yet, from being injudiciously administered, and more particularly from its pharmaceutical preparations being improperly made, it frequently produces injurious and distressing consequences. With the hope of remedying some of these inconveniences, I have made a series of experiments, the results of which are contained in the following pages. Before, however, entering upon the pharmaceutical preparations, it may not, perhaps, be improper to offer a very concise view of the natural history and physical characters of this article, as it occurs at the present day in our commerce. Opium is the product of the Papaver Somniferum, and is the inspissated juice of the capsules of that plant. It has been improperly termed a gum by many authors, and the error prevails to the present day. It is a native of the southern parts of Asia. It may, however, be raised in our gardens, and is now cultivated in England on an imposing scale, which has been increasing for several years. It possesses the same properties as the Turkey or East India Opium, and is more pure, containing a larger portion of soluble matter. The Turkey Opium has hitherto possessed the best reputation, and has been

considered superior to any other. Dr. Thomson* informs us, that he obtained from Turkey opium nearly three times more morphia than was yielded by the same quantity of East India. I have treated equal quantities of Turkey and English opium by the same process, and obtained twenty per cent. more morphia from the latter than the former; this would sanction the belief of the superiority of the English; which superiority, I think, is to be attributed to the careful manner in which it is prepared. The following are the prominent characters of the several varieties of opium, and by which they may easily be distinguished.

Turkey opium is of a reddish brown colour, possessing a strong narcotic odour, of a solid and compact consistence when dry; has a shining and uniform fracture of a dark brown colour, producing a reddish brown powder; the best kind is generally in flat pieces. I cannot tell why it occurs, but I have generally observed, that the large round pieces contain a large proportion of leaves, and sometimes portions of the capsules, stems, and other impurities.

East India opium is of thin consistence, sometimes almost like that of honey; when dry, it is more friable, its colour nearly black, and possesses less bitter and a more nauseous taste than the *Turkey;* it has a strong empyreumatic odour, and not the narcotic heavy one which is so sensible in the Turkey; it is considerably cheaper and much inferior in strength to the latter, and, according to Dr. Thompson, contains but one-third the quantity of morphia, and a larger portion of narcotine, which renders it a far less desirable article. Dr. Coxe, in his valuable American Dispensatory, remarks, that one-eighth the cakes is allowed for the enormous quantity of leaves with which they are enveloped. This opium is little used in this country, and is seldom, if ever, to be found in the shops of our druggists.

English opium is generally in smaller cakes, frequently thin and flat, of a more permanent consistence, of a clear smooth fracture,

* London Dispensatory.

and is destitute of leaves, stalks, and impurities which generally accompany opium. It has the accredited reputation of being superior in quality to the Turkey, which *chemical analysis** has confirmed. The quality of opium differs very materially, even that from the same country, climate, soil, &c.; which arises, no doubt in many instances, from the manner in which it is prepared and cultivated. It is frequently found in our market mixed with leaves, stalks, seeds, &c., and from the great proportion of these admixtures in some opium, it would lead to a conjecture, that the leaves were worked in when the opium was in a very soft and recent state, for the purpose of increasing the weight and consistence. I have even seen opium whose external characters possessed all the features of superior quality, and when broken, exposed a large proportion of the leaves and capsules of the poppy, which, although it does not alter the particular effects, must diminish the activity of the opium in direct proportion to the quantity and weight of these extraneous and insoluble matters; and I have ascertained by careful experiments that the quantity of soluble or extractive matter, by the same menstrua and process, yielded by

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* It is to chemistry that we are indebted for many important facts in relation to opium, and for the knowledge of morphia and narcotine, the two active principles of opium—two principles of a directly opposite nature existing in the same substance, and exercising individually their particular effects on the constitution. Many are opposed to chemical analysis as a means of discovering the virtues of medicines, and among others Dr. Young,† who states as an argument, that Geoffroy discovered by chemical analysis that the soporific quality of opium depended upon its sulphur. We might agree with Dr. Young, if the science of chemistry had not advanced since the period alluded to, and did experiments upon opium now lead to similar conclusions. We might as well reject as useless the analysis of cinchona bark, because a chemist has asserted that the comparative quantity of the active principles (quinine and cinchonine) yielded by the Carthagena bark, was in proportion to the quantity yielded by the Calisaya as 1 to 70. If errors so palpable would have retarded the inquiries and labours, or diminished the zeal of the scrutinizing chemist, the science, instead of holding the elevated rank it now possesses, would long since have dwindled into obscurity. Errors and absurdities will naturally creep into every department of science.

† Young on Opium.

different parcels of opium, varies from four and a half and five to six drachms in the ounce.

The consumption of opium is almost incredible. In the year 1800, 46,808 lbs. were consumed in Europe. In the year 1809, the revenue which the Bengal Government derived from the sale of opium, was 594, 978*l.*, and the exports of opium from Calcutta to China alone, in 1811–12, amounted to 4,542,968 sicca rupees —567,871*l.** The supply for Calcutta for 1827 is rated at 13,700 chests. The supply for 1826 was 10,300 chests, making an increase of 3,400 chests in the last year.

Although opium is prohibited by the Chinese government, yet about 2000 chests are annually imported into Canton, the average sale price being 1200 dollars per chest, making the amount annually expended by Canton for this drug, the enormous sum of 24,000,000 dollars. About 40,000 pounds are annually imported into London.

In the provinces of Bahar and Banares, among the most productive of the East Indies, the common product of opium is twenty-four pounds to an acre, besides which the cultivator reaps about forty pounds of seed. The preparation of the raw opium is under the immediate superintendence of the company's agent, who adopts the following method to prepare it. It consists in evaporating, by exposure to the sun, the watery particles, which are replaced by oil of poppy seeds, to prevent the drying of the resin. The opium is then formed into cakes, and covered with the petals of the poppy, and, when sufficiently dried, it is packed in chests with the fragments of the capsules from which poppy seeds have been threshed out. It is said opium is sometimes vitiated with an extract from the leaves and stalks of the poppy, and with the gum of the mimosa.

* Hamilton's East India Gazetteer.

The cultivation of opium in England, if extensive, will no doubt influence the price of this article in our market.*

It has lately been more successfully cultivated by a Mr. Young, than any other person who has yet attempted its culture in Great Britain,† and from which more flattering expectations are entertained of its success. Dr. Coxe, however, in his standard work, the American Dispensatory, observes, "It is apprehended, the climate of Great Britain is an insuperable obstacle to its becoming a profitable branch of agriculture. It has been obtained in the United States, where this objection will not prevail."‡ I think the southern states, particularly the Carolinas and Georgia, are admirably adapted, from climate and soil, for the cultivation of the poppy, and if properly managed, would no doubt yield a source of considerable profit to the cultivator, if not an immense revenue to the states, and a most important addition to the productions of our country.

The opium raised in England, has been used for several years, by physicians and surgeons, who pronounce it superior to the best Turkey and East India opium. One thing is very certain; it is

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* Messrs. Cowley and Stains, of Winslow, in the season of 1822, raised 143 pounds of excellent opium from eleven acres and five poles of land, for which they received a premium from the society instituted at London for the encouragement of arts, manufactures and commerce. A medal has been given by the society to J. W. Jeston, Esq., Surgeon, for an improvement in collecting the juice of the poppy, which consists in collecting it immediately after it exudes from the capsules, instead of allowing it to be inspissated on the capsule. The capsule is scarified with a sharp instrument, gauged to a proper depth, when the juice is scraped off with a kind of funnel-form scoop, fixed into the mouth of a vial; when one vial is filled, the scoop is removed to another, and the juice is evaporated in shallow pans: some varieties are much more productive than others. (See Transactions of the Society for the encouragement of Arts, Man. and Com. Vol. 41.

Mr. Ball, in 1796, received a premium from the Society for the encouragement of Arts, for a specimen of British opium, little inferior to the oriental. (Transactions of the Society of Arts, vol. xiv. pages 260—270.)

† Edinburgh Philosophical Journal, No. ii. page 262.

‡ Philadelphia Medical Musuem, Vol. ii. page 428.

prepared with more care and attention, and is more free from leaves and other impurities: the fracture of English opium, when dry, is as smooth and uniform as liquorice; what I have seen has been put up in small flat cakes, and of a good consistence. Opium is frequently put up in a soft state, and packed with a large proportion of leaves to prevent the lumps adhering; these leaves, adhering to the sides, are gradually taken into the body of the opium, which, with that previously incorporated with it, is the cause of seeing opium in the condition of impurity as already described.

Extract of Opium.—Among the advantages which the extract of opium possesses over the crude opium of commerce, is, that all the fæculencies and impurities having been separated, you obtain the soluble and active portion of the opium in a pure state; and as the insoluble and impure parts exercise no effect, and constitute a considerable portion of bulk and weight, the opium of commerce must differ in proportion to the amount of these impurities, and consequently cannot be depended upon so well as the extract for activity or uniformity of strength. The extract of opium, as it is generally made, is very objectionable, not being more active than crude opium, and, consequently, is seldom or never employed by our physicians. From various modes and different menstrua which I have tried, I find the following to make the most eligible preparation, possessing most advantages, both in the activity and persistency of the extract, as well as having the decided superiority over crude opium, by affording all its desirable effects, without any of its inconveniences or disadvantages.

Denarcotised acidulous Extract of Opium.—Digest ʒi. coarsely powdered opium in ℔i. sulphuric æther of the specific gravity .735 for ten days,* occasionally submitting to a moderate heat in a

* When it is necessary to prepare it in haste, less time may be employed by submitting it more frequently to the temperature of ebullition.

water-bath; distil off the æther, and add fresh portions until it ceases to take up narcotine, or act at all upon the opium, which may be readily known by dropping a little on a clean pane of glass, which will leave no trace when the opium is completely exhausted. The second or third distillation will prove sufficient: most of the æther may be saved, if prepared with care and in a proper apparatus. Professor HARE* recommends the digestion of the opium in æther to be performed in the Papin's digester; submit the opium thus treated to the action of spt. vin. rect. ʒviii., acetic. acid. fort. ʒj.,† aqua ʒvii., and digest for seven days; filter and evaporate in a water-bath to the consistence of an extract. This in fact will be an impure acetate of morphia, possessing most of the advantages of that valuable medicine. One ounce of the best Turkey opium yielded by this process ʒvi. of extract. Laudanum and other preparations may be made of the usual standard, calculating ʒvi. of the extract equivalent to ʒi. of opium.

Denarcotised acidulous Tincture of Opium.—Digest ℥i. of coarsely powdered opium in one pint of sulph. æther, s. g. .735 for ten days, occasionally submitting it to the influence of a moderate heat, until it ceases to act upon the opium; separate the opium and dry it, then digest in spt. vin. rect. ℥viii., acetic. acid. fort. ℥ii., aqua. ℔vi., for seven days, and filter. This preparation will be found to possess great advantages over laudanum and the black drop of the shops, to which it will be much preferable, inasmuch as it will be destitute of the stimulating principle, which produces such distressing effects, and frequently forbids the administration of opium, where it might otherwise be extremely useful: the addition of acetic acid will contribute much to increase the calming or sedative effects, which are most generally desired, and for which opium is particularly given. By its union

* See Philadelphia Journal of the Med. and Phys. Sciences, No. ix. New Series, p. 78.

† Acid pyroligneous, pure (concentrated.)

with the morphia, it forms in solution the active sedative salt of opium, (acetate of morphia,) and differs only from the solution of the acetate of morphia of the shops; in its state of purity and as the extraneous matter with which it is associated, has no effect on the animal system, it may be considered as good an article, and should be preferred for general use, in consequence of being much less expensive. As this preparation will always possess uniform strength, and a like proportion of opium, it certainly deserves a conspicuous place among our pharmaceutical preparations, and justly merits to supersede entirely the common black drop of our shops, which is a very uncertain preparation, differing everywhere in activity, from the indefinite and vague manner it is directed to be made, to say nothing of the worse than useless articles which enter into its composition, such as yeast, nutmeg, and saffron.*

* It is a singular circumstance, that so imperfect and unscientific a preparation should so long have maintained a place in our materia medica. I believe there is no formula, not even for the most innocent compound, so extremely indefinite, and allowing so great a scope to the judgment of the operator. In the first place, the vinegar containing the opium, nutmeg, and saffron, is directed to be boiled to a proper consistence. The activity of the preparation will consequently be subject to as much variation as the ideas of persons may differ in relation to what is termed a proper consistence; and while one person, after evaporating perhaps one-eighth of the menstrua, would consider it of proper consistence, another might think it necessary to reduce it one-fourth, a third might conceive that even one-half was the right consistence, and the strength of the preparation would consequently be subject to a like enormous variation. In the second place we are directed to digest for seven weeks, and then place in the open air until it becomes a syrup; we cannot see the propriety of digesting so long a time, if at all, when the menstrua, if not saturated by the previous boiling, has, at least, taken up all its soluble matter. Exposing it to the air until it becomes a syrup, is subject to as many objections as boiling to a proper consistence, and is almost as indefinite, as the consistence of a syrup is of no fixed standard, but varies from a thin fluid to the density of honey. It is lastly directed to be bottled, and to add a little sugar to each bottle; what quantity is meant by a little sugar, and what size the bottles are, to which it is to be added, we are left to conjecture, independent of the useless addition of sugar to what is already a syrup; the strength of the article must be diminished in proportion to the size of the bottles, and quantity of sugar to be added. We think an article so active as the black drop should be prepared with more care, and particular and specific directions given for the mode of its preparation. An ingenious essay upon this subject is given by Mr. THOMAS EVANS, in the Journal of the Philadelphia College of Pharmacy.

The black drop owes its superiority over laudanum to the acetic acid of its composition, and to that *alone;* and it will be admitted, by those conversant with the articles in question, that acetic acid exercises a most powerful influence in modifying the effects of opium. This I can account for in no other way than by its uniting with the morphia, thereby rendering it much more soluble, and consequently facilitating its effects on the constitution, which are directly sedative, while the effects of opium in its natural state are stimulating.*

It has been recommended by Mr. Robiquet to make a watery infusion of the opium, and evaporate the aqueous solution to the consistence of thin honey, which is to be digested in æther, instead of the powdered or shaved opium (as described in the above, and Dr. Hare's formula, given in the Philadelphia Journal of the Medical and Physical Sciences, No. IX. New Series.) I consider this a worse than useless expenditure, for the æther will act fully as well, if not more readily, upon opium in powder than upon an extract containing water; and it is generally admitted, at least by the best authorities, Coxe, Thomson, and Paris, that the narcotic powers of opium are impaired by boiling in water, under exposure to air; hence it is, that the officinal preparation, opium purificatum, which formerly was highly recommended, is found to be no better, if not less active, than crude opium, from which circumstance it has become almost obsolete, and rarely to be found in our shops. Under this article, Dr. Coxe, in his American Dispensatory, very

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* Dr. JOSEPH HARTSHORNE, in consequence of the uncertainty of the strength of the black drop of the shops, has adopted the following preparation, which has been extensively employed, and found to possess all the advantages of that article:

Turkey Opium - - - - -	℥j.
Strong Vinegar - - - - -	℥vj.
Alcohol - - - - - -	℥iv.

Triturate the opium with vinegar, add the alcohol, and digest for ten days.

justly observes, that in consequence of the changes which opium undergoes by solution and subsequent evaporation, (alluding to the opium purificatum,) well-selected pieces are to be preferred to this preparation. I cannot see the object of, or the advantage that can result from, making a watery extract, as the opium deprived of narcotine, will be quite as subject to the action of proof spirits, or any other menstrua, with its fæculencies, as the crude opium. We do not make a watery extract of opium in the preparation of laudanum, and it would be quite as necessary in this case as in the former. Besides, water is not the most eligible menstrua for the solution of the active matter of opium. Morphia is sparingly soluble in water, and the moconiate nearly the same; you therefore obtain but a portion of the sedative principle, as a part of the morphia will remain with the fæculencies undissolved, consequently, with an increased labour and expense, a less active preparation is obtained, than if the crude opium were at once submitted to the action of æther, and the residue to proof-spirits, as in the above formula, to which the addition of acetic acid is an admirable improvement, rendering the morphia more soluble, and consequently more active, in the same manner, and nearly the same ratio, as sulphuric acid united with quinine, (by increasing its solubility,) renders it much more active and efficient. Dr. Thomson, speaking of morphia, observes, that it being scarcely soluble in water, or in the fluids of the stomach, in its uncombined state, does not display in a striking manner its properties when exhibited alone, but these are very striking when combined with an acid, particularly the acetic. I would here remark, that the acetate of morphia* of the shops is a sub-acetate, and is less

* I found, in one instance, the morphia under the name of acetate of morphia perfectly uncombined with acid. This is a less active medicine, and it is, therefore, highly important to test this salt where you wish to administer it in substance. When in solution it must be united with acid, as morphia is insoluble in water.

active than the acetate or super-acetate, which, being a deliquescent salt, must necessarily be kept in solution; it is, therefore, requisite, in making the solution from the sub-acetate, to add acetic acid rather in excess than under neutralization. The following is the formula I have adopted, which will make a handsome solution, and is a preparation that will keep:

Sub-acetate of morphia	grs. xii.
Alcohol, acidulated with twelve drops of acetic acid (pure *concentrated pyroligneous acid*) .	ʒi.
Distilled water	ʒi.

Dissolve the morphia in the acidulated alcohol, and add by degrees the water, and filter. Dose of the solution, from fifteen to twenty drops.

This preparation has been very successfully used by the late Dr. Holcombe, of Allentown, and Dr. Canfield, of Arneytown, New Jersey, in cases where other preparations of opium could not be administered, in consequence of producing those unpleasant and distressing sensations which frequently result from their use. This preparation is now extensively employed, and is attended with the most desirable consequences.

Narcotine.—By the following process I obtained narcotine in a perfectly pure state.

Digest ʒi. of coarsely powdered opium in one pint of æther, for ten days, frequently submitting it to ebullition in a water-bath; separate the æther, and add fresh portions until the opium is exhausted; evaporate at the common temperature of the atmosphere, by placing the ætherial solution in a salt-mouth bottle, remove the stopper, and cover the mouth with bibulous paper, to prevent impurities falling in, and protract the evaporation. As the æther recedes, it leaves the sides of the bottle coated with crystals of narcotine; as the solution becomes more dense, the crystals enlarge and accumulate, and the bottom of the vessel is covered

with large transparent crystals, accompanied with a brown viscid liquor and extract, which contains an acid, resin, caoutchouc, &c. Separate these substances from the crystalline mass, and wash the salt in cold æther, to separate more effectually the extract or colouring matter. After the crystals have been sufficiently washed, dissolve them in warm æther, evaporate as before, when most beautiful snow-white crystals of perfectly pure narcotine will adhere to the sides of the vessel. Those on the sides of the bottle assume plumose and arborescent forms, which, being made up of delicate acicular crystals of a somewhat silky lustre, exhibit a most beautiful appearance. As the ætherial solution becomes more dense by evaporation, the crystals enlarge, and the bottom of the vessel, as before is covered with pure narcotine, assuming the rhomboidal prismatic form, with some beautiful modifications of macled crystals. By picking out the largest and most regular crystals, and again dissolving them and evaporating and repeating the same process, each time selecting the largest and best crystals, I obtained crystals one-eighth of an inch in diameter, and I believe by continuing in the same manner, much larger might be obtained, as they increase in size by every crystallization.

Resin, Caoutchouc, Oil, and Acid.—These substances are the constituents of the extractive matter which covers the crystals, and is separated in the manner above described; on evaporation it forms an extract, without signs of crystallization. This substance appears to possess all the heavy narcotic odour of the opium. The narcotine, when perfectly separated from this substance, has very little odour, and the denarcotised extract and laudanum possess less; in fact, so little, that it could hardly be detected as a preparation of opium by the odour: the strong odour of the extract arises from the oil of opium which it contains. The activity of Baume's celebrated extract is considered by Neumann to re-

side in the oil and resin. The acid which exists in this compound has not been sufficiently examined to say any thing definite in relation to it. The characters of the caoutchouc are very prominent. I have not yet tried the effects of this combination upon animals, nor have I seen any description of it, but, judging merely from its sensible characters, it would appear more active than the narcotine.

Morphia.—This substance exists in opium, united with meconic acid; its action on the human body is that of a direct sedative, and possesses all the advantages which we may expect to find in opium, without any of its inconveniences. Different modes for the preparation of this article have been described by Robiquet, Derosne, Choulant, Stertuerner, and others: Dr. Thomson gives an easy method to obtain it in a state of purity. He employs ammonia, instead of magnesia, to decompose the natural meconiate, &c. (See Annals of Philosophy for June, 1820.) The sedative powers of morphia becomes more manifest when combined with an acid, particularly the acetic and sulphuric, which arises from increasing its solubility. Morphia is very soluble in olive oil, and, according to the experiments of Mr. Majendie, the compound acts with great intensity. The following is a brief history of the crystalline forms of its saline compounds.

The *carbonate* crystallizes in short prisms.

Acetate in soft silky prisms, is very soluble, and extremely active; and preferred by many to any of its combinations.

Sulphate in arborescent crystals, soluble in water, also very active.

Muriate in plumose crystals, less soluble, and when evaporated it concentrates into a shining white plumose mass on cooling.

Nitrate in prisms grouped together.

Meconiate in oblique prisms, sparingly soluble.

Tartrate in prisms.

From either of the above combinations, morphia may be separated by ammonia.

The acetate of morphia is considered the most active preparation, and as it is a very deliquescent salt, is extremely difficult to obtain in crystals; under these circumstances, the following process has been recommended to convert the morphia into the acetate. Take morphia, four parts; distilled water, eight parts: dilute the morphia in a porcelain vessel, afterwards add acetic acid, sp. gr. 1.075, or pure concentrated pyroligneous acid, until turnsole paper becomes scarcely converted red; evaporate the solution to the consistence of syrup; continue the evaporation slowly, either in the sun or in a stove; collect the salt, and reduce it to powder.*

The sulphate is the next most active salt of morphia, and is employed where patients have been accustomed to the use of the acetate, for generally, by varying the salts of alkaline medicines, their action may be kept up longer without increasing the dose too considerably. Formulas for the preparation of the acetate and sulphate in solution, syrup, pills, &c. are given in "Hayden's Formulary" and "Formulaire de Montpellier." The other combinations of morphia, with the exception of the citrate, tartrate, and meconiate, have not yet been employed in medicine.

Meconic acid exists in combination with morphia in crude opium, forming a meconiate of morphia: it is to this salt that laudanum owes its narcotic effects. Our distinguished chemist, Dr. Hare, has given, in the Philadelphia Journal of the Medical and Physical Sciences, No. ix. New Series, an easy process for obtaining this acid, and also a very delicate test and easy mode of detecting minute quantities of opium in solution: his observations on this subject are well worthy the attention of the chemist and pharmaceutist.

Fæculencies, &c.—Fæculencies and insoluble matter consist chiefly of the leaves, capsules, and stems of the poppy; besides

* Pharmacopœia Gallica, 1818, page 387.

these, however, extraneous matters are frequently found, having been fraudulently introduced to increase its weight. The insoluble matter in different parcels of opium varies from one and a half to near three drachms in the ounce.

The effects of opium are generally so well known, that it is unnecessary to give a description;* it sometimes, however, exer-

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* The followiug particular account of the effects of opium on the Turks, by Baron de Tott, may be interesting to many readers. Speaking of those who give themselves up to its immoderate use, he says:—Destined to live agreeably only when in a sort of drunkenness, these men present above all a curious spectacle, when they are assembled in a part of Constantinople called *Teriaky Tcharchissy*, the market of opium-eaters. It is there that, towards evening, one sees the lovers of opium arrive by the different streets which terminate at the Solymania, whose pale and melancholy countenances would inspire only compassion, did not their stretched necks, their heads twisted to the right and left, their back bones crooked, one shoulder up to the ears, and a number of other whimsical attitudes which are the consequences of the disorder, present the most ludicrous and the most laughable picture. A long row of little shops is built against one of the walls of the place where the mosque stands. These shops are shaded by an arbour, which communicates from one to the other, and under which every merchant takes care to place a small sofa for his customers to sit on, without hindering the passage, who place themselves in succession to receive a dose proportioned to the degree of habit and want they have contracted. The pills are soon distributed; the most experienced swallow four of these, larger than olives, and every one drinking a large glass of cold water upon it, waits in some particular attitude for an agreeable reverie, which at the end of three quarters of an hour, or an hour at most, never fails to animate these machines, and make them gesticulate in a hundred different manners, but they are always very extraordinary and very gay. This is the moment when the scene becomes most interesting; all the actors are happy; each of them returns home in a state of total ebriety, but in the full and perfect possession of a happiness which reason is not able to procure him. Deaf to the hootings of the passengers they meet with, who divert themselves by making them talk nonsense, every one of them firmly believes himself in possession of what he wishes; they have the appearance and the feeling of it; the reality frequently does not produce so much pleasure. The same thing happens in private houses, where the master sets the example of this strange debauch. The men of the law are most subject to it; and all the dervises used to get drunk with opium, before they learned to prefer the excess of wine. There are instances of persons getting drunk indifferently with opium or with brandy. There is a decoction which is made of the shells and seeds of the poppy; this the Persians call *loquenor*, they sell it publicly in all their cities, as they do coffee. The Persians say it entertains their fancies with pleasant visions, and a kind of rapture; they very soon grow merry, then burst into a laugh, which continues till they die away in a swoon. It is found by those who have a disposition for jesting to increase that extremely. After the operation of this remedy, the body grows cold, pensive, and

cises very remarkable and singular effects on the constitution, differing materially in its action on different individuals. A case is mentioned in the Archives Générales de Medicine, for Dec. 1826, of a lady of nervous temperament, who, on taking a draught in which there was half a grain of acetate of morphia, suddenly sunk into a state of syncope, which continued for two or three hours; it was several times repeated, at several intervals of an hour or two, and attended with the same results. Dr. DEWEES met with an instance in which the opium invariably purged, and was in the habit of employing it as a purgative in this case, in doses of two grains, purgatives not producing their usual effects; he has also met with one instance in which opium excited violent coughing, even when administered in enema.* Dr. Rousseau informed me he had a case somewhat similar to the former (an unmarried lady of thirty-four years,) where opium universally acted as a purgative; the denarcotised laudanum administered by Dr. Rousseau to the same patient, did not produce this singular effect, although continued for several days.† This same gentleman also informs me that it is not unfrequent in his practice to meet with cases in which opium acts as a purgative, and has discovered that the addition of tartaric acid increases considerably its purgative effects.

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heavy; and in this dull and indolent situation it remains till the dose is repeated. It is curious to observe the countenances of those who use this decoction, before its operation, and when its effects have taken place.—When they come into the decoction-house, they are dull, pale, and languid; but as soon as the remedy begins to operate they are quite changed, they run into all the extravagances of mirth and laughter, and such an uproar is produced, that it would be more proper to give it the name of the mad-house than the decoction-shop.—[CRUMPE *on Opium.*]

* See the Philadelphia Journal of the Medical and Physical Sciences, No. ix. New Series, page 147.

† Dr. Rousseau has since informed me, that on further continuing the use of the denarcotised tincture, the purgative effects recurred, and he was consequently obliged to suspend its administration.

The several preparations of opium as above described, may be procured at Carpenter's Chemical Warehouse, No. 301 Market street, Philadelphia.

It is stated that highly rectified æther is the only menstrua for the solution of narcotine. If this is a fact, I cannot understand how laudanum contains this principle, when its menstrua is nothing stronger than proof-spirits, and that nearly saturated with the gummy, resinous, and other soluble matters of the opium.

I am about instituting some experiments upon the residue of opium, after laudanum has been made, and also upon the matter precipitated from laudanum after long standing, the results of which I hope to submit in a subsequent number of the Philadelphia Journal of the Medical and Physical Sciences.

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Additional Remarks on the Denarcotised Acidulous Tincture of Opium.

Subsequent experiments have decidedly given preference to the acidulous tincture of denarcotised opium; it is certainly one of the most valuable preparations of this article, and is a highly valuable substitute for the black drop, which is preferred to laudanum on account of its small dose, and not producing nausea or the unpleasant stimulating effects of opium; it is, however, objectionable as before stated, for the uncertainty of its strength, resulting from the vague and indefinite mode of its preparation. My friend, Dr. Samuel Jackson, of Northumberland, has corroborated this statement in his valuable paper in the American Journal of Medical Sciences, No. xi. for August, 1830, page 319; speaking of the use of Dr. Hartshorne's acetated tincture of opium, which is the same as my acidulated denarcotised tincture, with the exception

of using common opium instead of denarcotised. He there states, "This is a substitute for the uncertain preparation, black drop, and is supposed to be suitable to those constitutions on which laudanum and common opium act in a well-known unfriendly manner; this proposition is true in part only, for while it comforts some of those excitable persons, it distresses others in the usual way of common laudanum. Here, then, we have the most happy resource in the denarcotised opium, which we confidently believe, from much experience, brings comfort to all. But 'nil omni parte beatum,' it occasions costiveness like common laudanum. Whether this evil, with all the rest, is avoided by Carpenter's acidified tincture of denarcotised opium, we have not satisfactorily ascertained; *but from experience we are ready to believe that it is the best preparation of opium now before the public.*" Numerous testimonies of like import to Dr. Jackson's just given, might be cited in favour of this preparation, but its increasing popularity and extensive use among the faculty, will go farther to support its character, than any thing which can be written in relation to it.

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On the Cultivation of the Poppy, and the Manufacture of Opium.

The southern section of the United States is adapted in every point of view for the cultivation of the poppy, and the manufacture of opium; climate, soil and slave population are in every respect favourable, and it is a matter of great surprise that the United States, ere this, has not been conspicuous for supplying her own territories as well as foreign markets with this expensive, highly valuable, and indispensable article of the materia medica. The intimation which I threw out in a former paper, published in our valuable periodical, the American Journal of Medical Sci-

ences, induced several of my medical friends in the south to undertake the experiment, and for this purpose I furnished them with the seed of the papaver somniferum, obtained from Messrs. Landreth, and I was pleased to hear the first experiment resulted by no means discouraging, and I have not the least doubt but by persevering they will prove successful, and compensate for labour more than any product now yielded by their soil. Having had frequent applications for an account of the natural history of the papaver, its mode of cultivation, and the manner of preparing the opium, I will give the following succinct statement, for which I am partly indebted to Dr. Crump's treatise on opium. Opium, like Peruvian bark, has been the subject of considerable controversy; various authors have differed essentially in their views of this article, differing not only in the investigation of its constituent principles and modus operandi, but in the most obvious facts of its natural history. These controversies have now been settled by careful experiments, and the manner of its production and preparation is now perfectly understood, so as to remove difference of opinion on these points.

Opium is produced in various parts of the world. That of our shops is generally imported from Smyrna, and is commonly called Turkey opium; it comes in cakes, from four ounces to a pound in weight, and generally in cases of about one hundred pounds, or more. There is considerable difference in the quality of this opium, as regards its purity; some of it appears to be full of the capsules of the poppy, and other vegetable impurities, leaves, &c., in some instances amounting to as much as twenty-five per cent.; indeed I have seen it in some instances with only sufficient of the inspissated juice to make these impurities in a mass, by giving adhesion and consistence to them. There is also another fraud practised, by introducing foreign substances to increase its weight, such as stones, pieces of lead, bullets, &c., which in some in-

stances amount to a considerable per centage. I recollect once having sent to a physician a few pounds of opium, which, externally, had the appearance of the best quality, which it was, with the exception of small pebbles which had been introduced in it when prepared, as its external parts were entire, and of a hard consistence. The physician was highly incensed, and at the spur of the moment he inclosed the rocks, as he called them, to me in a letter, which would have amounted to several dollars postage. He, however, sent them entirely to the wrong place, and I returned them to him through the same channel, requesting him to send them to the Turks, where they had been introduced. I have invariably found the flat pieces of opium to be the best, much more free from impurities; and I have frequently found in the same case of opium the flat pieces to break with a short clear fracture, while the thick round pieces were full of leaves and impurities; and I am thus always particular, in selecting opium, to reject the nodular pieces. Opium is prepared and consumed in considerable quantity over all the warmer regions of Asia, in Egypt, and other parts of Africa where the Mahometan religion prevails; being deprived by the tenets of their religion from the use of wine and ardent spirits, they have recourse to the use of opium. Egypt, and especially the Thebes, was long famous for the quantity and excellence of its opium, and hence the term Thebaic is still given to some of its preparations. Wherever opium is manufactured, large fields are tilled for the cultivation of the poppy, and the sale of opium constitutes no inconsiderable branch of commerce. The pieces of opium are generally covered with the dried leaves of the poppy, and sometimes with the husks and seeds of some of the lapatha, or dock kind—an observation long since made by Dr. Alston. Those also enter into the mass of the nodular pieces, which constitute part of the fæculencies and impurities.—That opium is the product of the poppy, appears the only fact which writers

do not more or less differ in. There are no less than nine species of the papaver, but that from which opium is principally obtained is the seventh, or "papaver somniferum;" although this species is preferable to the others in consequence of yielding a larger quantity of opium, yet they all afford opium of equal quality, but the smallness of their heads must yield it in much less quantity. Dr. Crumpe states that he obtained from the papaver rheas opium perfectly similar to that got from the somniferum.

Much difference of opinion prevails as to the manner in which the opium that is imported into Europe is obtained from the poppy; some state that it is obtained from the heads, stalks, and leaves, by boiling and inspissation; some that it is merely the expressed juice inspissated by heat; and others, that it was obtained from the milky juice by wounding the heads. In those countries where opium is manufactured, that an extract is obtained from the poppy plant by boiling cannot be denied. Dioscorides* takes particular notice of it, and distinguishes it from the juice obtained by wounding the heads of the poppy, which he says is the true opium, by the name of meconium. Pliny† makes a similar distinction, as does Kæmpfer in his Amœnitate Exotica, and Bontius in his Medicina Indorum. Many have concluded, from the large quantities of opium which is consumed, and from its generally moderate price, that our opium is merely an extract. Of this opinion are Prosper Alpinus,‡ Lemery,§ Savory,‖ Condamine,¶ and others. I cannot, however, for various reasons, accede to it; the only one of its advocates who could determine, from actual ex-

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* De Materia Medica, lib. 4. c. 25.

† Naturali Historia, lib. 20, c. 18.

‡ Medicina Egyptiorum, lib. 4. c. 2.

§ Dictionnaire des Drogues, art. opium.

‖ Dictionnaire de Commerce.

¶ Mem. de l'Academie des Sciences pour l'an. 1732, page 421.

perience, was Prosper Alpinus, and he probably was led into a mistake, from Egyptians adulterating the real opium with meconium. I lately received from my friend, Mr. J. H. Parmele, of Zanesville, Ohio, an extract from the heads of the white poppy after the opium had been separated in the usual way by incisions. Mr. Parmele sent me rather more than half a pound of this extract, by which I had amply sufficient for full experiments with it, and I found it possessed little or none of the effects of opium; in small doses it had no effect, and taken in large doses, it rather nauseated than produced any anodyne effects, which proves their opium, if at all judiciously managed, must be obtained by incision, as the additional quantity which would be obtained by boiling or expression would only increase the weight, without adding strength, and consequently much reduce the activity of the opium, as also to make it very uncertain, varying according to the quantity of extractive matter which might be mixed with the opium, which would never be uniform, but differ more or less whenever it was prepared. Kæmpfer, who lived two years in Persia, asserts positively, that the opium is obtained from the heads by incision, and particularly describes the operation. The incisions, he says, are made with a fine-edged knife in the evening, and the juice being collected next day, is inspissated to the consistence of opium.* A similar account is given by Garcias.† But that opium is obtained by incision, is placed beyond a doubt by Mr. Ker, who has given a very accurate description of the manner in which the poppy is cultivated, and the opium obtained from it by incision, in the province of Bahar, in the East Indies. The seeds, according to him, are sown in quadrangular areas, the intervals of which are formed into acqueducts for conveying water to each area. The plants are allowed to grow six or eight inches from

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* Amanitates Exotica, Fasc. lib. 15.

† Historia aramantum and simplicium lib. 1. c. 4.

each other, and are plentifully supplied with water till they are six or eight inches high, when a nutrient compost of dung, ashes, and nitrous earth, is laid over the areas. A short time previous to the appearance of the flowers, they are again well watered, till the capsules are half grown, when the watering is stopped, and they begin to collect the opium. The process by which it is effected, is simply by making, at sun-set, two longitudinal incisions from below, upwards, without penetrating the cavity, with an instrument which has two points, which should be as sharp as a lancet; the incisions should be repeated every evening until each capsule has received six or eight wounds, and they are then allowed to ripen their seeds. The juice which exudes is collected in the morning, and being inspissated to a proper consistence by working it in an earthen pot in the sun's heat, is formed into cakes for sale. (See Medical Observations and Inquiries, vol. v. article 28; also, in support of the same opinion, Chardin's Travels into Persia.)

In addition to this very particular account given by an ocular witness, of the manner in which opium is extracted by incision in the East Indies, we have further proof that the whole quantity produced in Persia, Natolia, and other countries, is obtained in a similar way, from considering that opium may be extracted by incision from the poppies of our own climate, perfectly similar to that imported from these countries; while neither the extract of the poppies produced by boiling, nor the inspissated expressed juice, bears any resemblance to it. These facts, it appears, were first ascertained by Dr. Alston.* I have myself, says Dr. Crumpe, extracted from our own poppies a pretty considerable quantity of opium, which differs from that of the shops only in smelling stronger, and being to the taste more bitter and pungent; its predominence, however, in these respects, seemed gradually to diminish.

* Medical Essays, Vol. v.

In obtaining it I followed sometimes the method mentioned by Kæmpfer, making five incisions at a time, sometimes that described by Mr. Ker, making but two; and think the one answers in the end just as well as the other. Opium is frequently of a very dark colour, which arises sometimes from the iron instruments employed in collecting it; the chalybeate striking a black colour with the astringent matter of the juice. For when opium (as has been proved by experiment) was prepared by making the incisions with a sharp piece of glass, and a shell to collect the juice, it produced that of a clearer reddish brown than is usually observable.

Notwithstanding that pure opium is obtained by incision alone, it must be admitted that opium is almost always more or less adulterated, and sometimes mixed with the expressed juice, extract of the plant, and other foreign substances. In twelve parts of opium officinarum there will be generally found from three to three and a half of fæculencies, insoluble in water or alcohol; and Dr. Crumpe states, that in the opium which he collected, there were but two parts insoluble, which seemed principally composed of the external cuticle of the capsule, which was separated in scraping off the juice. I have no doubt it might be collected perfectly pure by a little more care in its preparation, or the juice might be strained when liquid, or rendered more limpid by the addition of a little spt. of wine, by which it could be filtered and inspissated in the sun, as usual; and I would particularly suggest to those who may think proper to cultivate the poppy and prepare the opium, to be very particular in getting it as free from fæculencies as possible, and thus let the American opium be distinguished for its purity. I have remarked that the English opium was much superior to the Turkey, being much purer, and more active in the same doses, and producing more morphia, and commanding a higher price in the market, which arose entirely in consequence

of the particular care in its preparation. Mr. Ker supposes that the poppy may be cultivated to advantage on ground of little value. An acre, he says, yields, in the East Indies, sixty pounds of opium, which; at the usual price, would be between two and three hundred dollars. I have no doubt it might be made to yield nearly the same amount in this country; the experiment, at all events, may be easily made, and seems worthy of attention. If any overplus remained after our own demands, a ready market would be found for it in the East Indies, where its consumption is very considerable, and price generally high. Several of my medical friends have successfully prepared the opium from seeds which I sent them. Dr. Charles S. Lucas, of Mount Meigs, Alabama, cultivated the poppy and prepared opium fully equal to the Turkey, and if the price of labour was less expensive, he informs me he could advantageously cultivate it in preference to cotton, which is the staple commodity of that country. My friend Dr. A. Jones, of Lexington, Georgia, to whom I sent some of Messrs. Landreth's seeds, has also been successful in his experiments. I am indebted to him for the following interesting facts in relation to the same, as extracted from his letter to me of July 12th, 1830:—

"The seed came to hand about the middle of March; about the end of the same month I sowed on a square of my garden, about half of the seeds you sent me, reserving the balance till later in the spring. The piece of ground I sowed the first seed on, was of a light, loose, and rather sandy soil, which was well manured for the purpose, and comprehended a space of about twenty-five feet long by ten or twelve feet wide. They were sown and covered shallow, and came up very thick; so much so that I had to thin them out more than one half; they were drilled in rows about eighteen inches or two feet apart. By working them they grew up very finely, and flowered by the first of June; by the fifteenth of the same month, the capsules were sufficiently matured to allow in-

cision. I made my incisions diagonally, up and down the heads; I found if I made them longitudinally, a great deal of juice would fall from their heads to the ground. I repeated the incisions until six or eight were inflicted; I then left them to go to seed. I also left a large number of heads for seed, without interrupting them. Soon after I began my incisions a severe drought set in in this part of the state, which parched up the leaves of my plants, and caused the further growth of the heads to cease; many of them withered and died while young and tender, so that I do not think, upon the whole, that I gathered half the opium which I could have done under favourable circumstances. The other half of the seed I planted in the same kind of soil, and not one of them came up; I distributed a few of them among my friends, but none of their seed came up.* From the first seed I planted I procured one fourth of a pound of good hard opium, and one and three quarters of a pound of seed. I would send you a specimen of my opium if I had a good opportunity. Many of the capsules attained the size of a common man's fist. I am sure one hand could cultivate as much ground in poppies as he could in cotton. My experiments have not been sufficiently extensive to say how profitable may be its culture in the south; they have, however, been thus far very flattering and encouraging. It will be some time, however, before it will be extensively raised, as people change very slowly from one object of cultivation to another. Since I gathered my seeds, I have placed parcels in several physicians' hands, who have promised to make very careful experiments with them; so that the success of their profitable culture will be fully tested in a short time."

My ingenious friend, Mr. J. H. Parmele, of Zanesville, Ohio, has also successfully experimented upon the poppy, and prepared

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*This has resulted in consequence of the seeds having been sown too late in the season; but as they lay uninjured in the soil during the winter, they will come up the ensuing spring.

opium fully equal to the best Turkey. He informs me that incisions on the head of the poppy are immediately followed by a copious flow of juice, which gradually concretes; it can be taken from the head a short time after it flows, as it soon becomes indurated; but even after it has become inspissated to a proper degree to be removed from the heads, the loss of weight is very great. In one instance I weighed carefully a fresh gathering from the heads, and found it weighed 106 grains; in twenty-four hours after, I weighed the same again, and found it to be 44 grains, so that the loss was 62 grains.

The great desideratum is expedition in making the incisions, to be effected by some implement that shall encompass the heads adapted to any size, and which will incise them all around at one stroke ; it should consist of a circle of elastic lances, to proceed conically from a stem ; the lancets to be gauged at the end, and furnished with guards, and encompassed with a sliding ring, by which the lancets could be held adjusted to the size of a poppy head as they were pushed down over it. It should be made of the best steel, and well tempered; this instrument once made and successfully applied, would give a new impulse to the cultivation of the poppy. I have a fine piece of land selected, which I design for the cultivation of the poppy, and will commit to you the result of my experiments.

I think it an object for our southern planters to turn their attention to the cultivation of the poppy, as prospects of the successful manufacture of opium in this country are very encouraging, and all the experiments which have yet been made upon the subject, have produced the most favourable results.

OBSERVATIONS AND EXPERIMENTS

ON

PERUVIAN BARK.

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The cinchona, or, as it is more generally denominated, Peruvian bark, is the product of several species of the genus Cinchona, which, in botanical arrangement, belongs to the class Pentandria, order Monogynia, and to the natural order Contorta.

The descriptions of the species of this genus, from the limited and imperfect nature of the information possessed, have been generally so confused and indefinite, as to convey little or no information.

Cinchona is found in various parts of South America, always inhabiting mountainous tracts, where it grows from a few inches in diameter to the thickness of a man's body. The bark is collected in the dry season, say from September till November; and after being well dried in the sun, is packed up in skins, forming what is called *seroons*, weighing from fifty to one hundred and fifty pounds.

Several species are frequently mixed together in these seroons, which are afterwards separated, according to quality ; it is not, however, uncommon to find several species mixed together on their arrival at our markets. The tree has never yet been cultivated by the Spaniards, who procure it by stripping the natural trees of their bark, which ultimately must destroy the genus, as they always die after the operation.

Most of the varieties of cinchona being highly valuable, and consequently very liable to be adulterated with various substances, it is therefore important to adhere to a critical examination of all its characters.

The accounts of the discovery of cinchona are very numerous; and many, from their singularity and improbability, are no doubt founded in fiction. It has long been esteemed a valuable medicine in Peru, where it is said the natives have adopted its use, from observing that animals recur to it. Be the source of its first employment what it may, it was not used by Europeans until the year 1640, when the Countess Cinchon, wife of the Spanish viceroy, was cured of the ague by means of it, and hence the derivation of its name, cinchona. As frequently occurs on the introduction of any *new remedy*, considerable noise was made, and opposition raised against it by several eminent physicians; but when admitted to proper experiments, its efficacy soon suppressed the groundless clamour which had been too hastily excited.

The principle, says Dr. Paris, on which the tonic and febrifuge properties of bark depend, has ever been a fruitful source of controversy. Deschamps attributed it to cinchonate of lime. Westering considered tannin as the active principle; while M. Seguin assigned all the virtues to the principle which precipitates gallic acid. Fabroni concluded from his experiments, that the febrifuge power of the bark did not belong exclusively or essentially to the astringent, bitter, or to any other individual principle, since the quantity of these would necessarily be increased by long boiling; whereas the virtues of the bark are notoriously diminished by protracted ebullition.

Perhaps no vegetable substance underwent so many analyses, by the most distinguished chemists of Europe, as the cinchona; and yet so little positive knowledge was obtained of its true constituents, and such was the very obscure condition of our informa-

tion of the active principle of cinchona, when the scrutinizing, critical, and successful researches of Pelletier and Caventou detected the existence of two salifiable bases, in peculiar states of combination, in the different species of cinchona. The medical profession is therefore indebted to these intelligent and enterprising chemists, for one of the most valuable additions ever made to the materia medica.

Among all the late discoveries in vegetable chemistry, there is none which claims so much attention, from extensive usefulness, as that of quinine. This principle contains all the tonic and febrifuge properties of Peruvian bark, in their most concentrated state. By the substitution of this preparation for the crude bark, the physician can conveniently administer it to the most delicate constitution, in an eligible form, and by no means an unpleasant dose, what previously was considered the most nauseous and disagreeable medicine, and frequently, from its bulky nature (when administered in less than ordinary doses,) was rejected by the stomach.

In consequence of the prevailing endemics, ague and remittent fevers, which, of late years, have visited almost every section of our country, the article *cinchona* has increased very much in practice and demand, and become one of the most important articles of the materia medica.

The descriptions which have been given by most authors, to distinguish the many species and varieties of this extensive and important genus, are so imperfect and confused, that they tend rather to involve research in more dense obscurity, than to develope any information. It is admitted, there is no method so well calculated to ascertain, with any degree of certainty, the comparative activity of the different species of Peruvian bark, as that of analysis; and, from this circumstance, I have made trial of some of the most important species which now occur in our commerce, for the pur-

pose of determining their qualities, which I have done by extracting the alkaline principle, upon which their virtue as a medicine entirely depends, and from the product of which their comparative strength may be accurately and readily ascertained.

It is a source of regret, that many of our country physicians so little appreciate the quality of cinchona as to be governed entirely by the price, which, from the following statement, will appear to be the most remote and inaccurate ground for calculation, as the cheapest or lowest-priced bark in the market is far dearer to the practitioner, and particularly to the patient, than that which commands the highest price ; for it not only requires the patient to swallow twelve times the quantity to produce the same effect, independent of the loss of time, but also, by charging the stomach, when in a weak and debilitated state, with so large a portion of ligneous and insoluble matter, may give rise to diseases more serious than those for which it was administered as a remedy.

The bark of commerce, in this country and in England, is generally designated under the limited nomenclature of red, pale, and yellow. There are now no less than twenty-five distinct species of cinchona, independent of any additions we may owe to the zeal of Humboldt and Bonpland, as well as of Mr. A. T. Thompson, who states, that in a large collection of dried specimens of the genus cinchona in his possession, collected in 1805, both near Loxa and Santa Fé, he finds many specimens which are not mentioned in the works of any Spanish botanist.

Dr. Paris, in his valuable Pharmacologia, justly remarks, that notwithstanding the labour of the *Spanish botanists*, the history of this important genus is still involved in considerable perplexity ; and owing to the mixture of the barks of several species, and their importation into Europe under one common name, it is extremely difficult to reconcile the contradictory opinions which exist upon

this subject. Under the trivial name officinalis, Linnæus confounded no less than four distinct species of cinchona; and under the same denomination, the British pharmacopæias for a long period placed as varieties the three barks known in the shops. This error indeed, is still maintained in the Dublin pharmacopæia; but the London and Edinburgh colleges have at length adopted the arrangement of Mutis, a celebrated botanist who has resided in South America, and held the official situation of director of the importation of bark for nearly forty years.

The apothecaries of this country and England, at the present day, distinguish the denominations of their bark by terms expressive of the colour; and it is a source of still greater surprise, to find the orders and prescriptions of some of our most intelligent physicians designating the species of bark they wish to employ by no other than one of the terms signifying red, pale, or yellow; thus reducing the extensive genus cinchona, of not less than twenty-five species, into three varieties, and leaving it entirely to the discretion of the apothecary to give him any species of a colour correspondent to that ordered. Independent of the great insufficiency of these terms to distinguish the numerous species, the colour of the powder is one of the most uncertain and inaccurate methods which could be adopted, of classing or assorting the cinchonas; as, under the same denomination, the best species of bark in commerce (calisaya arrollenda) would be confounded with the most inferior (carthagena) as the colour of the powders of both is yellow; hence a physician writing for yellow bark, leaves it to the choice of the apothecary to give him what species he may think proper, of a correspondent colour, but varying in quality from calisaya to carthagena, or in medicinal activity as from twelve to one.

The importance, therefore, of adopting terms more definite, to distinguish the several species of Peruvian bark, must be obvious;

and that the botanical nomenclature of these species is imperfect and inadequate, is equally so. The quality of Peruvian bark appears to be modified and influenced by locality, produced by difference in soil, altitude of situation, exposure, or some other circumstances peculiar to the location; hence the different provinces of Peru afford bark differing very materially in their physical characters, and particularly in the activity of their medical qualities, from which circumstances it would appear, that a nomenclature derived from the names of the provinces in which the different species grow, would be a systematic arrangement.

The following are some of the most important species which now occur in commerce, which I have submitted to experiments, and have given to each the comparative proportion of quinine and cinchonine which they respectively contain. The names which are given to distinguish these several species, are derived from the provinces in which they grow, which at present (in consequence of the confusion in the botanical history and arrangement of cinchona) is the most direct and certain mode of distinguishing those species of bark which now are found in our shops.

It is possible that bark of very different qualities may sometimes come from a particular province or port, and probably brought there from a distant place. It of course would be necessary to guard against this by an examination of the physical character of the bark. All general rules or systems of every kind are subject to some defects and exceptions.

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CALISAYA BARK—TWO VARIETIES.

Of this very important species there are two varieties in commerce.

1st. Calisaya Arrollenda (Quill Calisaya.) This variety is in

quills from three quarters of an inch to an inch and a half in diameter, and from eight inches to a foot and a half in length. The epidermis is thick, and may be readily removed from the bark; and hence you find in the seroons or cases a great proportion deprived of this inert part. It is generally imported in seroons weighing about one hundred and fifty pounds, and very seldom comes in cases; it has many deep transversal fissures running parallel; the fracture woody and shining; the interior layer is fibrous and of a yellow colour, and the taste is slightly astringent and very bitter.

2d. Calisaya Plancha (Flat Calisaya.) This variety consists of flat, thick, woody pieces, of a reddish brown colour, deprived of its epidermis, and the interior layer more fibrous than that in the quill. This variety yields from twenty to twenty-five per cent. less quinine than the arrollenda, and is consequently a less desirable article.

This species of bark will yield a much larger proportion of the active principle (quinine) than any other bark in commerce, and consequently may be justly esteemed the best.

There has lately been introduced a variety of flat calisaya bark, which is very superior, and is even preferred to the arrollenda, or quilled calisaya; it appears, however, to me, to be the arrollenda straightened while green or fresh from the tree, the epidermis then taken off, and of course dried in flat pieces; in consequence of the separation of the epidermis a given quantity will produce more quinine, than the same of the arrollenda.

False Calisaya.—There has also lately been imported with the flat Calisaya bark, and sold under that name, a species somewhat resembling it, but of very different quality, yielding much less quinine, although it has all the sensible quality in taste and bitterness like the calisaya. It is in smaller, shorter, and thinner pieces, and the epidermis is smooth and thin, without the deep

fissures and rough exterior which characterises the epidermis of the true calisaya. I do not know any better term to distinguish this variety of bark, than by the term of *False* Calisaya; and, like every thing which bears that name, should be guarded against.

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SUPERIOR LOXA, OR CROWN BARK.

Loxa is the name of the province and port where this bark is obtained, and from which it is exported. In this province cinchona was originally discovered. This bark has been highly esteemed by the royal family, and is that which has been selected for their use; hence, the name of Crown Bark. The following are the characters which distinguish this bark.

The Loxa bark occurs in small quills, the longitudinal edges folding in upon themselves forming a tube about the circumference of a goose-quill, and from a foot to a foot and a half in length. It is of a greyish colour on the exterior, and covered with small transverse fissures or cracks; the interior surface is smooth, and, in fresh or good bark, of a bright orange red; it is of a compact texture, and breaks with a short clean fracture; it is the bark of the cinchona condaminia, and is known at Loxa by the name of cascarilla fina. Yet, notwithstanding this bark appears to have held the decided preference to all other species, analysis fully indicates that it is not equal in medicinal strength by at least twenty-five per cent. to that denominated *Calisaya:* this bark is more astringent and less bitter than the calisaya.

This species yields from twenty-five to thirty per cent. less cinchonine and quinine than the calisaya arrollenda does quinine, and the proportion of cinchonine is much greater than that of the quinine.

CINCHONA OBLONGIFOLIA, OR RED BARK.

The above term appears to be more applicable to the species in question, than any other which can be selected, as under that denomination the best red bark has always been well known; and as there is but one other species affording a red powder, it is not likely to be confounded. The inferior red bark, of which there is a considerable quantity in our market, is no doubt more frequently obtained by colouring low-priced yellow bark, than from the product of a distinct species.

There is but one species of bark in addition to the oblongifolia, as before stated, producing a red powder which is called Rosea, and as that species is seldom or never known in our commerce, there can be little or no powder produced by it; hence, all the inferior kinds of red bark, of which there is no small quantity, to the discredit of those who sell it evidently must be either such of the oblongifolia as has been rendered almost inactive by age, weather, or some other exposure, or, as before surmised, is inferior yellow bark, coloured; and as the product of the former must be small, it in all probability proceeds from the latter source; hence the *price* of red bark is as various (and the *qualities* corresponding *with* the prices) as the yellow bark, although the number of species of which we are acquainted is not one-eighth the number of the latter.

Physicians cannot be too particular in their orders for red bark; they should never receive a second quality of it, for there is but one species of *genuine* red bark, and which cannot be sold at a low price; it is always worth at least $2 per ℔., and may, in the course of time, become more scarce and higher in value. A lower price red bark would probably be very inferior bark coloured, for which would be demanded double its worth. The purchaser would therefore get, although at a less price, an ar-

ticle much dearer than the true red bark, at its market price. The cinchona oblongifolia is the magnifolia of the flora peruvianna, and is known in Spain by the name of colorada, and is what constitutes the red bark of commerce; it occurs, generally, in large thick pieces, being the product of the largest tree of the genus *cinchona*. There are two varieties of this species.

1st. Colorada canan, or quill red bark, which occurs in quills of various diameters, from one fourth of an inch to two inches in thickness. The epidermis is white or grey, with transversal fissures, or watery concretions, of a reddish colour; the interior is of a brick-red colour, the cross fracture short and fibrous, the longitudinal fracture compact and shining, the taste not so bitter as that of the calisaya.

2d. Colorada plancha, or flat red bark. This bark is in very large thick pieces, from half an inch to two inches in thickness, and from one to two feet in length, the epidermis brown, thick and rugged, with cracks running in various directions. The fracture very fibrous inside, is of a deep brick colour, the taste is less bitter than that of the quill, and of course much less so than that of the calisaya.

These two varieties frequently come in the same seroon, and from their appearance are no doubt the product of the same species, or perhaps the same tree; the quill being produced by the branches, and the flat thick pieces from the trunk; or the former from young, and the latter from older trees.

This bark is generally more scarce in our market than the yellow or pale, and commands a higher price. It is seldom imported into this country direct from South America, the supplies being generally received from abroad. About eight or ten years since a lot of about fifty seroons were imported from Guayaquil, by John R. Neff, Esq. of this city: there has been no arrival since of consequence, and I am informed by a respectable druggist in

this city who has been many years in business, that this is the only arrival in quantity of red bark, direct from South America, within his knowledge or recollection. The seroons averaged about one hundred pounds each. The large flat pieces and quills were indiscriminately mixed, and in some seroons in very nearly equal proportions. This bark, when first received, was of a very deep and bright colour, and particularly the powder produced by the flat pieces; after being exposed, however, in a dry place for about six months, it faded considerably, insomuch that any one not in possession of the proof of the fact would have doubted whether the powder had been produced from the same bark.

From experiments on the above bark, I procured twenty per cent. less cinchonine and quinine, taken together, than the amount of quinine produced by the same quantity of calisaya arrollenda bark; and the proportion of cinchonine was rather more than half of the product of quinine.

It will appear, therefore, from what has been said, that notwithstanding the great prejudices, both of eminent authors and skilful practitioners, which have so long existed in favour of the superiority of the *oblongifolia* (red bark) over other species, that it is decidedly inferior to the *calisaya* (yellow bark,) as the whole product, as before stated, of its active principles, does not equal that of the calisaya and cinchonine, constituting rather more than half the product, which, according to an eminent author, is five times less active than the quinine; this point, however, I think, is very far from being settled. An interesting paper was read before the Academy of Medicine at Paris, which is published in the Bulletin des Sciences Medicales for November, 1825, in which M. Bally states that he has experimented upon the sulphate of cinchonine, with a view to determine its febrifuge qualities. He administered this sulphate in twenty-seven cases of intermittent fevers, of dif-

ferent types, in doses of two-grain pills, giving three or four in the interval of paroxysms; by which treatment he cured the disease as effectually and as speedily as with the quinine; of which twenty-seven cases, there were sixteen tertian, nine quotidian, and two quartan. He remarked, further, that the cinchonine has properties less irritating than those of quinine, and that, consequently, its employment should be more general, and preferred in all simple cases. I believe few or no experiments have been made by the physicians of this country upon the medical properties of the cinchonine; it consequently must be very little known by them from their own experience. It certainly is a medicine which deserves at least a trial.

We might also infer, in favour of cinchonine, that the Loxa, or crown bark, which is held in preference in South America to all other species, owes its medicinal properties to cinchonine. This bark is also much esteemed by many of our distinguished practitioners here, and is certainly a very superior quality of Peruvian bark.

From the preceding description, the several species of Peruvian bark most commonly met with at the present day may be readily recognised, as the physical characters are prominent and distinctive in each variety; after, however, selecting the best species of Peruvian bark, by the several distinguishing and specific characters, one very important adventitious condition yet remains to be investigated. It is a fact established beyond controversy, that age is a very powerful agent in deteriorating the active properties of bark, insomuch that the best species of Peruvian bark, when old, is little superior, and sometimes even inferior, to the Carthagenian bark when fresh; hence it is, that large parcels of a superior species of Peruvian bark, which would have commanded two dollars per pound at Cadiz when fresh, has been offered publicly in this city for one-eighth of the sum, twenty-five cents, and that without

a purchaser; and which it appears has been operated upon by no other unfavourable circumstance but age. In what manner or by what process age, or rather the circumstances connected with it, act upon bark, other than by a combination with oxygen, or a volatilization of its active principle, I know not. Fabroni states, with truth, that cinchona loses its solubility, and consequently its activity, by long exposure to the air, but does not give his opinion as to the manner in which it is thus affected. I cannot, however, conceive, under existing circumstances, how the solubility of Peruvian bark can be diminished, except through the agency of oxygen; and it is by this means the extract of bark, prepared according to the common formulas of our dispensatories, is rendered useless; for, owing to the oxigenizement of the extractive matter, the solubility of the extract is so diminished during its formation, that scarcely one half is soluble in water.

From a number of experiments which I have made upon Peruvian bark in different states, I have observed, as an unequivocal result, that the same species of bark which, when fresh, is very productive of quinine, when old, will produce little or none of this active principle, upon which its virtue as a medicine entirely depends.

It will appear, therefore, an important duty, critically to examine the state of bark, as to age; and it may, perhaps, be useful in this place, to describe the physical characters of bark in this state, and by which it may be readily known. The prominent features which characterise old bark, and distinguish it from recent, are the following:—Old bark has lost nearly all that bitter and astringent taste and peculiar aromatic odour, which are such prominent characteristics of recent bark of good quality. The specific gravity is also sensibly diminished; and the fracture, instead of being shining and compact, is dull, fibrous, and of a loose texture; and the colour very frequently passes from a bright orange to a dull

brown, as the bark advances in age, particularly if much exposed. By attention to these few conspicuous characters—taste, smell, specific gravity, fracture, and colour, no mistake can arise in the selection of good bark, unless there is a gross deficiency of judgment. Yet, notwithstanding the distinguishing characters of Peruvian bark in these two states are so prominent and striking, we regret to say, that gross mistakes have been made public in this particular, by men whom we might suppose most capable of appreciating the quality, under the influence of every incidental circumstance.

Dr. Paris, in the sixth edition of his Pharmacologia, makes the following remarks under the article *cinchona*:—"The frauds committed under this head are most extensive; it is not only mixed with inferior bark, but frequently with genuine bark, the active constituents of which have been extracted by decoction with water. In selecting cinchona bark, the following precautions may be useful:—it should be dense, heavy and dry; not musty, nor spoiled by moisture; a decoction made of it should have a reddish colour, when warm, but when cold it should become paler, and deposit a brownish red sediment. When the bark is of a dark colour, between red and yellow, it is either of a bad species, or it has not been well preserved. Its taste should be bitter, with a slight acidity, but not nauseous, nor very astringent; when chewed, it should not appear in threads, nor of much length; the odour is not very strong, but when bark is well cured it is always perceptible, and the stronger it is, provided it be pleasant, the better may the bark be considered. In order to give bark the form of quill, the bark gatherers not unfrequently call in the aid of artificial heat, by which its virtues are deteriorated; the fraud is detected by the colour being much darker, and, upon splitting the bark, by the inside exhibiting stripes of a whitish sickly hue. In the form of powder, cinchona is always found more or less

adulterated. *This must be recollected as applying to the English market.* During a late official inspection of the shops of apothecaries and druggists, the censors repeatedly met with powdered cinchona having a hard metallic taste, quite foreign to that which characterises good bark.* The best test of the goodness of bark is afforded by the quantity of cinchona or quina that may be extracted from it; and the manufacturer should always institute such a trial before he purchases any quantity, taking a certain number of pieces indiscriminately from the bulk."

Before concluding, it may not be out of season to remark, that the sulphate of quinine, as it is generally termed, is not a perfectly neutral salt, but in the state of a sub-sulphate, and is only partly soluble in water. Its exhibition in water is rendered much more eligible by the addition of a drop of sulphuric acid to each grain of the salt, which makes a perfectly transparent solution, and which, I think, from its obvious advantages, should entirely supersede the common formula: with sugar and gum arabic, a few grains of citric or tartaric acid will have the same effect in dissolving the quinine as the sulphuric acid, and has been preferred by some.

Dr. Paris,† on the exhibition of quinine, states that he lately saw a prescription in which the salt is directed to be rubbed with a few grains of cream of tartar, and then to be dissolved in mint-water. This, he continues, is obviously injudicious, since tartaric acid decomposes the sulphate, and occasions an insoluble tartrate, which is precipitated.

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* Mr. Thompson has suggested the probability of this circumstance having arisen from the admixture of a species of bark lately introduced into Europe from Martinique, resembling the *cinchona floribunda*, and which by an analysis of M. Cadet, was found to contain iron.—London Disp. edit. 3, page 247.

† Pharmacologia, edit. 6, vol. ii. page 163.

With due deference to the exalted judgment of Dr. Paris, I must, however, on the following grounds, dissent from his opinions. The cream of tartar is objectionable, merely from the circumstance that the active part of the compound may be obtained in a more direct and speedy process by the tartaric. The combination of cream of tartar and sulphate of quinine in the above prescription does produce decomposition, as Dr. Paris has observed; but the virtue of the medicine is not in the least affected by it, and the precipitate, instead of being an insoluble tartrate of quinine, as he observes, is sulphate of potass; tartrate of quinine is a very soluble salt, and is held in solution, while the water becomes slightly turbid by the precipitation of sulphate of potass; which, however, from its extremely minute division, is speedily taken up by the water, when you have a transparent solution of tartrate of quinine and sulphate of potass, and as the latter answers neither a good nor a bad purpose, it of course can very conveniently be dispensed with, and therefore, as before stated, the tartaric acid should be preferred, as having a more speedy and direct action.

Piperine has proved a valuable adjunct to quinine; equal proportions of each will act with much more energy than the whole quantity of quinine or piperine alone. Dr. Chapman informs us, he has met with much success in the treatment of intermittent fevers by employing the following prescription:

℞. Quinine, grs. ×
Piperine, grs. ×
M. ft. Pill, No. ×

One to be taken every hour in absence of fever.

Oil of black pepper is much more active than piperine, one drop being fully equal to three grains of piperine; three drops of oil of black pepper added to ten grains of quinine, will greatly increase the powers of this remedy: oil of black pepper alone is a

valuable stimulant in typhus fever, and is a valuable adjunct to many medicines.

All the preceding varieties of bark, sulphate of quinine, cinchonine, and all the preparations of bark and quinine, may be procured at George W. Carpenter's Chemical Warehouse, 301 Market street, Philadelphia.

Note.—An alkaline substance, somewhat analogous to quinine, has recently been discovered in the cornus florida, which has been denominated cornine, and which has been very carefully and accurately described by Dr. Samuel G. Morton, in the Philadelphia Journal of Medical and Physical Sciences. From the most respectable sources in the medical profession, from various parts of the United States where the article has been sent, the most favourable accounts have been received of the unequivocal success of the cornine in the treatment of intermittent fevers, in the same doses as the quinine; and the only circumstance which precludes its competition with that substance, is the extremely minute comparative proportion of cornine yielded by the cornus florida.

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I beg leave earnestly to call the attention of the Faculty to the following valuable preparation, which is preferred by many physicians to the sulphate of quinine; and I should suppose few physicians would use the latter while they can get this extract, equally efficient as to quinine, in the same doses, and at so comparatively low a price.

CARPENTER'S

PRECIPITATED EXTRACT OF BARK,

Containing Quinine, Cinchonine, the new organic alkali Chiniodine, and all the active principles of Peruvian bark, except the ligneous fibre, and possessing all the febrifuge properties of Quinine, in the same doses, and at about

one-third the price.

As the sulphate of quinine has become scarce, and increasing in price, it is an object of the highest importance to the community to obtain a preparation of equal efficacy at a reduced price. The above extract we are pleased to find, will effect this object in the strictest application, and being the product of the same cinchona, and containing, in addition to the quinine, other alkalies of the same bark, of equal, if not superior efficacy to the quinine, it unquestionably will meet with the approbation of the faculty, and will no doubt be fully tested by the experience of our most distinguished physicians. It has frequently been asserted by chemists and scientific authors on cinchona, that there, no doubt, existed other active alkaline principles, or extractive matters, in addition to those already discovered in the bark; and the conclusive facts in relation to the use of quinine, the use of bark, and that of the residuary extract, corroborate the truth of this assertion. It is well known that numerous cases of intermittents have yielded to the use of bark in substance, which have resisted quinine, even when long continued, and in large and repeated doses, to the extent of six or eight grains. And we have the evidence of the late Dr. Emlen, who was the first to use the residuary extract of bark after the quinine was separated, and who asserts he discovered the happiest effects in its exhibition, in doses of two grains, and that it was in no respect inferior to the sulphate of quinine; and Drs. Parrish and Wood, distinguished members of the profession in this city, found the result of their practice fully successful.*

Dr. Serturner, chemist, of Hamelin, likewise confirmed what has been observed by others, that, as a tonic, quinine cannot be substituted for cinchona, and made analytical researches on the

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* See Journal of the Philadelphia College of Pharmacy, vol. i. page 44.

bark, to discover the cause of the difference. The precipitate obtained by treating the acidulous extract of cinchona by alkalies, comprises, besides quinine and cinchonine, certain additional organic alkalies. These new organic alkalies, especially the principal one, which Dr. S. calls chiniodine, are intimately united with a sub-acid, resinous substance. The new alkali exists in the cinchona bark associated with quinine and cinchonine, and they are all precipitated together in the above extract. The chiniodine resembles the other alkalies of cinchona in its solubility, colour, and taste; but it is distinguished from them by its activity, its greater capacity of saturation, its alkaline reaction, and its intimate combination with an extractive matter. Dr. Serturner further states, that, as a medicine, chiniodine is one of the most precious agents of the materia medica. It is not only a better febrifuge than quinine, and even than the bark in substance, but it possesses many other therapeutic properties, which, admitting that they exist in the bark itself, are not to be found in quinine. It was prescribed by Dr. S. in the dose of two grains, three times a day. In all the cases treated by the new remedy, the fever was cut short, without relapse and in every instance the concomitant symptoms, such as paleness of the face, loss of appetite, ædema of the legs, &c. disappeared in a shorter time than is usually the case. The medicine failed only in a single instance. The quantity necessary for a cure was generally from twelve to twenty-four grains.*

The above extract is kept of two degrees of consistence; the soft can be made into pills with the addition of liquorice powder or starch, and the hard can be pulverized and made up with conserve of roses or syrup. It can be made into a solution in either

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* See Journal des Progres for 1829, Vol. iii.

state, with water, by the addition of one drop of sulphuric acid to each grain of the extract.

The following formula is an elegant mode of exhibition, which produces a beautiful transparent solution.

℞ Precipitated extract of bark - - -	48 grains.
Acid sulphuric - - - - -	48 drops.
Alcohol - - - - - -	2 drachms.
Aqua cinnamon - - - - -	4 ounces.

M.

Drop the sulphuric acid in the alcohol with about two drachms of water, which should be used to triturate and dissolve the extract, after which the remaining water should be gradually added. If alcohol is inconvenient, it can be made without it, and common water can be substituted for the cinnamon.

MM. Henry and Delondre, of Paris, differ in their opinion with Serturner, and consider what he denominates chiniodine to be a compound of quinine and cinchonine, associated with a peculiar yellowish substance of very difficult separation. I think the opinion of Serturner to be correct, as it is supported by numerous pharmaceutical facts and characteristic properties of the substance. The peculiar yellowish substance of very difficult separation, described by Henry and Delondre, is no doubt also an active component of this extract; and we find in a number of vegetable crystalline products, that they frequently owe their activity to certain principles associated by their crystallization, and if rendered entirely pure, they are feeble or inert. Thus, piperine owes its activity to the resinous oil which is associated, more or less, with it; and in proportion as it contains this or is deprived of it, is its activity increased or diminished. It has been fully ascertained, that one drop of the oil is equal to three grains of piperine. Thus also it is with narcotine, which is more or less associated with a viscid substance resembling caoutchouc, an acid and extractive

matter in combination ; and in proportion as the crystals are deprived of this combination, and are rendered pure and white, is its activity diminished. In the process of denarcotizing opium, this product is obtained with the narcotine, but it is not to narcotine that opium owes its stimulating and unpleasant properties, but to this compound. Majendie states that one grain of narcotine, dissolved in oil, has a powerful effect on the animal system, resulting in death. My experiment with narcotine differs exceedingly from the above, having given several grains without any sensible effect whatever; and a physician of this city, who has made a number of experiments on this salt, in a pure state, informs me that it possesses little or none of the narcotic or stimulating powers ; that he took ten grains of it at once, and that it produced no other effect than a slight nausea; but associated as it is in its first extraction from opium, with the peculiar substances before named, it possesses very active and deleterious properties.*

Quinine, when it was first made, contained a portion of extractive matter associated with it; and it is a fact well known to every physician who has employed this salt extensively, that it is not as active as it formerly was, and that it requires a larger dose for patients unaccustomed to the use of quinine.

We also know that the common manna is more active than the flake, and it could be so purified that it would not be more active

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* Dr. Tully, in a highly interesting paper on Narcotine, published in the xxi. volume of the American Journal of Science and Arts, although differing with me as to the degree of activity of this substance, states that it is less active on the human system than opium itself. That from two to five grains constitute a medium full dose, where a single dose is to be taken. That it is entirely destitute of all stimulating powers, whether it is given in full or in moderate and uniform doses, at regular and short intervals; but that it possesses soporific effects greater, in proportion to its powers, than the sulphate of morphia.

He concludes by stating that he does not esteem it by any means impossible that the bitter principle, or extractive (as vaguely called,) or perhaps some other part of this complex drug may yet be found to *contribute* something to its medicinal effects.

than white sugar. The seeds of the palma christi contain, no doubt, two oils, one bland and the other acrid, and in proportion as they are united, by the difference in the process of manufacture, is this oil increased or diminished in activity; thus the cold expressed is more bland and less active than the hot pressed. The acrid oil reside sin the skin of the beans, and is obtained in greater proportion in the latter. If the oil were obtained from the skins alone, it would no doubt be as active as the croton, for if we swallow one or two of the beans with the skins, the action is very powerful. I would by no means infer, that in all cases of the combination of vegetable proximate principles such effects would result; we know, indeed, some instances to the contrary; but in the cases above referred to, there will probably be no diversity of opinion.

In relation to the precipitated extract of bark, I must further state, that I have endeavoured to have it tried as extensively as possible, and the result has been most satisfactory; by many physicians it is preferred to the quinine, and they will probably use the latter rarely, when they can obtain this extract at so low a price.

I would wish it to be particularly understood, that this is not the same as that formerly sold under the name of extract of quinine, as it contains all the essential properties of the bark, and is destitute of no principle except gummy matter, gluten, and the woody fibre, which are inert.

Numerous letters have been received all testifying strongly in favour of this preparation; it is decidedly equal to the sulphate of quinine in the same doses, and I am greatly surprised that physicians should make use of the quinine while they can get this article, equally efficient in the same doses, at so comparatively low a price.

I select a few letters from several highly respectable physicians, whose observations are entitled to entire confidence.

Extract of a letter from Dr. E. B. Martin, a respectable physician of Bowling Green, Kentucky, dated Aug. 23, 1833 :

Dear Sir,—Your precipitated extract of bark is a very valuable remedy in intermittent fevers, and I wish no other article while it can be obtained.

E. B. MARTIN, M. D.

To Mr. G. W. Carpenter.

Extract of a letter from Drs. Seldon and Moseley, highly respectable physicians of extensive practice in Norfolk, Virginia, dated Aug. 9, 1833 :

Dear Sir,—We have found your precipitated extract of bark very efficacious in the cure of intermittents ; we think it is fully equal to the sulphate of quinine. Please send us sixteen ounces of it by first opportunity.

SELDON & MOSELEY.

To Mr. G. W. Carpenter.

Extract of a letter from Dr. J. B. Hereford, a highly respectable physician of considerable practice at St. Francisville, Louisiana, dated February 22, 1834 :

Dear Sir,—I have found your precipitated extract of bark very useful, particularly in quartan ague ; I have succeeded in curing three cases of quartan ague with it, when the quinine failed entirely. I consider it a highly valuable preparation.

J. B. HEREFORD, M. D.

To G. W. Carpenter.

The above extract will always be sold at about one-third the price of quinine ; and as it is of equal if not superior efficacy to the latter, it will no doubt be extensively used, and can always be had at *Carpenter's* Chemical Warehouse, No. 301 Market Street, Philadelphia.

Postscript.—I have just observed a paper in the London Medical Gazette for Dec. 1831, in which Mr. R. Battley gives a detailed analysis of the cinchona. He finds it to consist of thirteen distinct principles, from quinine to the woody fibre. They all possess active properties, except three. The sulphate of quinine, in consequence of the absence of all the other properties above alluded to, can therefore be but partially efficient as a medicine. Thus the researches of Mr. Battley have corroborated my statements in relation to the extractive matter of Peruvian Bark. This gentleman has suggested the propriety of using the liquor cinchona as a medicine, and maintained its decided superiority, since it contains all the principles of the bark above described, except the three objectional ones, viz. gummy matter, gluten, and the woody fibre. This liquor, Mr. Battley observes, is admitted by many competent judges to be superior to the quinine; and as it is prepared by the same process as the quinine, which excludes these three principles, and contains all the rest, it would, on evaporation, make precisely the same extract, as I have described under the name of the precipitated extract of bark.

CARPENTER'S

OLEO-RESINOUS EXTRACT OF MUSTARD,

OR

OIL OF SINAPINE.

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The seeds of the sinapis nigra have been found, by long experience, to be one of the most useful of all the rubefacients. It is usually applied, as is well known, in the form of a paste, made with the farina of the seeds and vinegar, which is to be applied in the manner of a poultice. This is frequently attended with considerable difficulties and inconveniences; and mustard differs so essentially in quality, that little dependence can be placed upon the certainty of its effect. It is, almost always, more or less adulterated, and the flour which is sold from the stores is frequently composed of more than half foreign or inert matter. At the suggestion of our distinguished professor, Dr. Physick, I have made a series of successful experiments on the mustard, with a view of ascertaining the active constituent principle, and separating it, in a form best adapted for its application as a rubefacient. I have obtained, separately, the active principle of the mustard, which is combined with a volatile acrid oil.

This peculiar principle, in conformity to the usual nomenclature of vegetable proximate principles, I have denominated Sinapine. It bears the same relation to mustard that piperine does to pepper, and, like it, is united with an acrid oil, and is otherwise analogous to piperine in its chemical properties, in not forming salts with acids, &c. This differs essentially from the volatile

oil obtained by distillation, being in every respect superior, and will entirely answer all the purposes of the mustard plaster, as a rubefacient. It is simply to be applied to the skin, and in a few hours all the effects of the mustard plaster will be experienced, and vesication may be produced by a second application of the oil. To the country practitioner this oil is very valuable: it is inconvenient to carry the mustard about the country; its activity is soon diminished, and even destroyed, so that, if not kept in a close bottle, it becomes inert. As country practitioners seldom carry this article with them, they are thus frequently deprived of the use of sinapisms, so important in some cases as to be essential to the life of the patient.

This oil is so concentrated a preparation, that a small vial, which can be conveniently carried with the medicine usually taken by the physician, will be sufficient for several applications. As its action will always be uniform, and it will not be liable to deteriorate in any length of time, it will be found, as a rubefacient, to be a valuable substitute for the crude mustard, and I hope will prove a valuable addition to the materia medica.

OBSERVATIONS

ON A

NEW PREPARATION

OF

BALSAM COPAIVA.

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Balsam Copaiva being a medicine used in the practice of almost every physician, its characters, effects, and uses are consequently familiar to them. It is admitted by all to be one of the most nauseous and disagreeable articles of the materia medica. Disguised or mixed, as it may be, its unpleasant nature is still manifest, and little, if at all, diminished, communicating its nauseous taste, and imparting to the breath its disagreeable odour, which is experienced for several hours after each dose, and frequently acting as an emetic or cathartic.* From these circumstances, its use is frequently abandoned in cases where it otherwise would be of the highest utility, and even where it is almost

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* Our distinguished professor of practice, in the first volume of his Therapeutics, page 417, observes, that two circumstances frequently interfere with the exhibition of Copaiva, and detract from its utility. It sometimes purges, and when it does, it is lost or greatly diminished. If laudanum does not check this injurious tendency, it must be discontinued till the bowels recover their tone. To the stomachs of some persons the copaiva is so exceedingly offensive, that it cannot be retained. As it is hardly possible to disguise the taste of the article, it is sometimes very difficult to overcome this prejudice.—See Chapman's Therapeutics.

indispensable, and other remedies much less efficient are substituted, thus protracting the cure which would have been speedily effected by the copaiva.

Since the introduction of this remedy down to the present period, it has ever been a desideratum to obviate these inconveniences; and it is a circumstance not less unfortunate, and much to be regretted *than* it is singular in its character, *that*, amidst the rapid march of improvement and discoveries (which forms a peculiar character in modern chemistry and pharmaceutical knowledge,) an improvement of the exhibition of copaiva should so long have evaded the vigilant researches of the critical and scrutinizing chemist and pharmaceutist. With these premises, I feel happy to inform the medical faculty that I have succeeded in consolidating copaiva to a proper consistence for being formed into pills. The consolidated copaiva is the oil and resin united, and consequently possesses all the properties of the balsam. It may be made into four-grain pills, and one or two pills taken three times a day: two pills are equal to thirty drops of the balsam. These pills may be taken without the least inconvenience, neither communicating taste, nor imparting odour to the breath, it is also retained without the least disquietude or uneasiness to the stomach; and I am informed by Dr. Rousseau, that in large doses it does not purge.

This article differs very essentially from what is termed extract, or resin copaiva, being not in the least deteriorated in the preparation, nor at all weakened by admixture of any foreign substance, for the purpose of giving consistence. It is particularly recommended to the faculty, for its numerous advantages over the *balsam*, and all its preparations. As the oil of copaiva is an active preparation, it is the best mode of using this article; for, being united with the resin, it may be made into pills, which can be taken

without experiencing the nauseating taste of the oil, while the oil alone cannot be taken otherwise than in draught, which will subject it to the same inconveniences with the fluid balsam, having its disagreeable taste, with its unpleasant effects.

The *consolidated copaiva* is manufactured and sold at GEO. W. CARPENTER'S Chemical Warehouse, No. 301, Market Street, Philadelphia.

OBSERVATIONS

ON A NEW VARIETY OF

PERUVIAN BARK;

WITH SOME REMARKS ON THE

ALKALINE BASES, QUININE & CINCHONINE.

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Peruvian Bark, one of the most important articles of the materia medica, embraces a number of species, in the medicinal qualities of which there is a vast disparity. It is therefore peculiarly unfortunate, that its natural history and classification should be so enveloped in ambiguity, the nomenclature of the different species so inadequate and defective, and the various writers so opposed in their opinions on the subject, as to render the investigation of the student, from books, almost fruitless. The attention of our pharmacologists should be particularly directed to the cinchona, for the purpose of determining a specific classification of those species now occurring in commerce, and of establishing a nomenclature for them, by which each variety could be readily particularised, and at once understood by its name, which, in its present unsettled history, is impossible. In the Philadelphia Journal of the Medical and Physical Sciences, vol. xi., I called the attention of the faculty to this subject, and described the several species of Peruvian bark which then occurred in commerce,

as carefully and accurately as possible, from specimens before me, so that the several species might be readily known and contradistinguished. I then suggested as the most appropriate nomenclature, the names of the provinces in South America from which the different species were collected, as Calisaya, Loxa, &c. &c.; and which, I am pleased to find, has become generally adopted, and is now the most familiar mode of distinguishing the barks of commerce. The terms Calisaya, Loxa, and Carthagena, convey at once the particular kind of bark, and is perfectly understood, while the terms lancifolia and cordifolia involve in abiguity as to the kind intended, inasmuch as several varieties of different qualities come under the same term, and it is impossible to determine which is intended ; for example, the calisaya and carthagena (the former the best, and the latter the worst species in commerce,) being both yellow bark, would come under the name of cordifolia; hence, if cordifolia was ordered, it would be difficult to determine whether the carthagena or calisaya was intended, or some intermediate quality.

Having devoted considerable attention to this valuable article of our materia medica, I have determined to describe every new species which I may meet with ; and as there has appeared, since my description of Peruvian bark alluded to, a species not hitherto observed in our market, and unnoticed by any of the writers on the subject, I propose to describe it in the present communication. This bark I denominate Maracaibo, being brought from that place, generally in bales from seventy to one hundred pounds; and the importation of it is likely to be continued, so that we may calculate upon a regular supply. This bark is much superior to the carthagena, or common bark, producing more than double the amount of saline matter composed of cinchonine and quinine; also a larger quantity of extractive matter than the latter, and is therefore of at least more than double the value of the same. As

the former can be purchased at the same price as the latter, it will be advantageous for the practitioner to be acquainted with its distinguishing characters, that he may be enabled to discriminate it among the different species and varieties of common bark.

It occurs in flat, short, and broken pieces, as if separated from the tree with difficulty, mostly from one to three inches in length, and half to one inch broad, and rather thinner than carthagena bark. Occasionally, small quills are found, the longitudinal edges folding together, forming tubes from a fourth to a half inch in diameter. It is of a deep yellow colour; the epidermis is extremely thin, smooth, of a light grey colour, and is generally removed from the bark. It may be distinguished from the carthagena bark by being more compact, by breaking with a short and cleaner fracture, and more particularly by its taste, which is much more bitter. It is quite as strong a bitter as the Loxa bark, but does not possess the astringency of the latter. The internal layer is fibrous, but in a less degree than the carthagena. This bark has only appeared in our market within a year or two, and as it will supply the place of a much inferior article, is of high importance to the profession.

The quality of barks depend unquestionably upon the product of cinchonine and quinine they respectively contain; and the separation of these alkalies is a very valuable mode of discovering with precision the comparative quality of different species of bark. Different barks, however, produce various *proportions* of these two salts; thus, we find the calisaya produces most quinine, the loxa most cinchonine, and the red, or oblongifolia, both these salts in nearly equal proportions. What is the comparative value of these two salts is yet a subject of controversy, a considerable majority, however, are in favour of the quinine, perhaps because most of them have not had an opportunity of employing the cinchonine. Dr. Paris goes so far as to state, that cinchonine is five times

less active than quinine; others contend the reverse. In an interesting paper read before the Academy of Medicine at Paris, and published in the Bulletin des Sciences Medicales for November, 1825, M. Bally states, that he has experimented upon the sulphate of cinchonine, with a view to determine its febrifuge qualities. He administered this sulphate in twenty-seven cases of intermittent fevers of different types, in doses of two-grain pills, giving three or four in the interval of paroxysms, by which treatment he cured the disease as effectually and as speedily as with the quinine, of which twenty-seven cases; there were sixteen tertian, nine quotidian, and two quartan. He remarks further, that the cinchonine has properties less irritating than those of quinine, and that, consequently, its employment should be more general, and preferred in all simple cases. I believe few or no experiments have been made by the physicians of this country upon the medical properties of the cinchonine; it consequently must be very little known to them, from their own experience. It most certainly deserves at least a trial.

The high price which the sulphate of quinine has always commanded, and the increasing demand which its character and reputation has constantly kept up, has been an inducement for imposition and fraud; and it is much to be regretted, that this valuable article of our materia medica, like others of an expensive kind, has been mixed with foreign substances of inert character, for the base consideration of reducing the cost, and enhancing the profit on its sale; and all this at the expense of the health of the suffering patient, and to the great disappointment of the practitioner, and not unfrequently to the injury of the general character of the genuine medicine. It is of high importance, therefore, to be acquainted with the most efficient means of testing its character, where we have any doubts of its purity. The following are the characters and properties of the sulphate of quinine, and the

most simple and effectual method of discovering fraud and adulteration in its composition.

1st. The sulphate of quinine must be soluble in rectified alcohol at a moderate heat, and if it contain sulphate of lime, soda, potash, or any other substance insoluble in alcohol, the adulteration will easily be detected.

2d. It is soluble in acidulated water; say one drachm of sulphuric acid to an ounce of water, which will readily dissolve the quinine. By this means, if there is any stearine or acid margaride, (substances prepared expressly for adulterating this article,) they will float on the surface.

3d. It should give by sal ammoniac a white precipitate, rather flaky, which is soluble in alcohol, and which, on being exposed to a gentle heat, will consume without leaving the least residuum.

4th. After having dissolved it in acidulated water, it can be decomposed by means of a little sal ammoniac; it must then be filtered and evaporated. If sugar has been introduced into it, it will be easily detected by the taste, or by fire, which will produce its peculiar odour.

5th. If a white substance, insoluble in cold water, be found in the sulphate of quinine, heat the mixture to about 170 degrees of Fahrenheit. This will render the starch soluble, and its presence may be determined by the addition of an aqueous solution of iodine, which will immediately occasion a blue colour, and eventually a blue precipitate. The iodine must be added in very small quantities, and very slowly, or the experiment will fail.

It is a remarkable fact that the carthagena bark yields, in addition to the small quantity of true quinine, an alkaline principle, which in crystalline form and external characteristics, resembles the true quinine, but it is found to be entirely inert, as a tonic and febrifuge. The difference, therefore, between these two salts is obviously more striking than the comparative difference in the quality

of carthagena and calisaya barks in substance.* As there has of late years been frequent complaints of the quinine received from abroad not being so active as formerly, it is a question with me, whether or not this salt obtained from the carthagena bark, and perhaps also the salacine, is not more or less mixed with the quinine. I think physicians should be very particular in the purchase of the article, and should give preference to the American, coming from a respectable and responsible person, on whom they can depend. In order that the faculty may judge, of the quality of the quinine which I put up, I am particular to envelope each bottle with specific directions for testing its purity, by the most simple processes, and by which any foreign matter with which it can be adulterated will be readily detected. The American quinine, as generally sold by the druggists of Philadelphia, is of very superior quality.

Physicians will be supplied with specimens of all the species of Peruvian bark which occur in commerce, neatly put up in bottles, with a full description of each, with a treatise on cinchona, for *five dollars*, at Geo. W. Carpenter's Chemical Warehouse, No. 301 Market Street, Philadelphia.

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* Berzelius' Chemistry, vol. iii. page 279.

CARRAGEEN,

OR

IRISH MOSS.

——:o:——

This article has lately been introduced into the eastern states, and has acquired considerable reputation as a dietetic medicine, and for domestic uses. The following is a brief history of its properties and uses:—

This valuable Moss has long been highly esteemed by the peasants on the western coast of Ireland, as a dietetic remedy for various diseases; more especially for consumption, dysentery, rickets, scrofula, and affections of the kidneys and bladder. Dissolved, by being boiled in water, it forms a thick jelly, more pure and agreeable than that produced from any other vegetable; and the jelly made from it is found to agree better with the stomach than any prepared from animal substances. A decoction of the moss made by boiling half an ounce in a pint and a half of water, or milk, until reduced to a pint, is recommended as food for children affected with scrofulous or ricketty diseases, for such as are delicate and weakly, and for infants brought up by hand, or after weaning.

As an article of food for invalids, and for infants, it is superior to *Arrow-Root*, *Sago*, *&c.* being more highly nutritious, easy of digestion, and pleasing to the taste. Prepared in warm milk, and

sweetened, it is most particularly recommended as a breakfast for consumptive patients; and if taken at intervals during the day, dissolved in water, and the flavour varied with lemon juice, Seville orange, cinnamon, almonds, wine, &c., it will be found to restore, even in the most obstinate cases. Being capable of use in so many varieties of preparation, its powerful nutrient qualities still existing under every change, the most delicate stomach will at all times receive it, without that distaste invariably following the frequent use of varied restoratives, and which must do away the desired effect.

The carrageen was first introduced by Dr. Reece, who considers it an important article of food for invalids. Dr. Sulby, of Wivelscombe, highly recommends it as an article of diet for invalids and weakly people, as well as for children. The Doctor, speaking of a case of great debility in a young gentleman he was attending, says, "I believe my patient owes his life to the excellent effects of the Carrageen moss, of which," says the Doctor, "I cannot speak too highly. I consider it the most important addition to invalid cookery that has been made for many years, and it affords me pleasure to find that Mr. O'Reilly, his late Majesty's confidential medical attendant, and Sir Henry Halford, speak of the Carrageen as the most nutritious article of diet for invalids they are acquainted with, as well as a light nutritious food for delicate and weakly children."

This marine plant has long been of great repute on the coast of Ireland, where persons of delicate health resort to use it. *It has the confidence of the Faculty in that vicinity;* and the encomiums on it as a domestic article, and the cures attributed to it in all diseases of the lungs, &c. are numerous.

The carrageen appears to possess qualities similar to the Iceland Moss, but without its unpleasant flavour; and the quantity of nutritious jelly which a few sprigs produces, is truly surprising.

The prevalence of consumptive diseases in this moist climate, which often arise from neglected colds, renders this simple restorative of peculiar interest; it is therefore necessary to take some healing antidote, and the carrageen appears to be a valuable auxiliary.

Directions for using the Moss medicinally.

Steep a quarter of an ounce of the moss in cold water for a few minutes; then withdraw it, (shaking the water out of each sprig) and boil it in a quart of new or unskimmed milk, until it attains the consistence of warm jelly; strain, and sweeten it to the taste with white sugar or honey, or if convenient, with candied Eryngo Root: should milk disagree with the stomach, the same proportion of water may be used instead. The decoction made with milk is recommended for breakfast for consumptive patients; and that with water will be found a most agreeable kind of nourishment, taken at intervals during the day, the flavour being varied with lemon juice or peel, Seville orange juice, cinnamon, or wine of any sort most congenial to the palate.

The decoction in water is also taken for the relief of cough, at any time in the course of the day, when it is troublesome, and it is, for this purpose, simply sweetened with honey.

In dysentery, the decoction either in milk or water, may be administered with equal advantage, and in addition to the sweetening matter, if a tea spoonful of the tincture of rhatany be mixed with each cupful of it, tone will thereby be given to the intestines, at the same time that nourishment will be conveyed to the system, and irritation prevented—a large tea-cupful of the decoction may be taken three or four times a day.

As a pleasant strengthening food, boiled with milk and strained, with the addition of a little sugar, it is unrivalled for infants. Persons may take it in this way for breakfast and supper, with the happiest effect, who are sustaining an attack of the cholera.

Culinary Directions.

To make Blanche-Mange. Take half an ounce of the moss, and having cleansed it by the process above described, boil it in a pint and a half of new milk, until it is reduced to a proper thickness to retain its shape: to be sweetened and flavoured with lemon, white wine, or any thing to suit the palate.

To make Orange, Lemon, or Savoury Jellies. Use a similar process, substituting water for milk: add lemon, orange, herbs, &c., according to taste.

To make White Soup. Dissolve in water, and afterwards add the usual ingredients.

It only remains to state, that the Carrageen, or Irish Moss, as a domestic article, is peculiarly interesting; it is the best thickener of milk, broths, &c.; makes excellent jellies, and for Blanche-Mange is equal to the most expensive ingredients, whilst the cost is comparatively nothing; it may be used instead of isinglass, for jellies, &c.

The above article is neatly put up in pound packages, with directions for use, at CARPENTER'S Chemical Warehouse, No. 301 Market Street, Philadelphia.

FORMULA

FOR THE

SULPHATE OF RHUBARB,

OR RHUBARBINE.

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Formula for the preparation of Rhubarbine, with some remarks on Rhubarb and its preparation.

Boil for half an hour six pounds of coarsely-powdered Chinese rhubarb in six gallons of water, acidulated with two and a half fluid ounces of sulphuric acid; strain the decoction, and submit the residue to a second ebullition in a like quantity of acidulated water; strain as before, and submit it again to a third ebullition; unite the three decoctions, and add, by small portions, recently-powdered pure lime, constantly stirring it, to facilitate its action on the acid decoction. When the decobtion has become slightly alkaline, it deposits a red floculent precipitate, and the fluid is changed from a yellow to a crimson colour; the precipitate is then to be separated by passing it through a linen cloth, and dried, after which reduce it to powder, and digest in three gallons of alcohol, at thirty-six degrees, in a water bath, for several hours, at a moderate heat. Separate this solution from the calcareous precipitate, and distil off three-fourths of the alcohol, there then remains a strong solution of rhubarbine, to which add as much sulphuric acid as will exactly neutralize it; evaporate this slowly to dryness,

without having access to atmospheric air; the residuum will be of a brownish red colour, intermingled with brilliant specks, possessing a slightly pungent styptic taste, soluble in water, and its odour that of the native rhubarb.

This preparation has been represented to be a concentrated form of this valuable cathartic, separated from its ligneous and mucous portions, and to bear a similar relation to the crude substance that quinine does to Peruvian bark.*

From the experiments which I have made upon several varieties of rhubarb, I found the Chinese to be the most active; and that variety which has been denominated in the market Russian, and which commands double the price of the Chinese, produced about one half of active matter, and consequently is much inferior to the former. This rhubarb, in fact, appears to be nothing more nor less than the English variety, suitable pieces of which have been selected, bored, rasped, &c., in imitation of the Russian, but which wants in degree all the characteristic properties of weight, solidity, compact fracture, and particularly the essential quality of cathartic energy, which are all so strikingly exhibited in the Russian variety and in corroboration of which Dr. Paris, in his excellent work the Pharmacologia, under the article rhubarb, states that inferior kinds of Russian, East India, and English rhubarb are artfully dressed up and sold under the name of Turkey; and I am well informed that a number of persons in this town, known by the name of *Russifiers*, gain a regular livelihood by the art of dressing this article, by boring, rasping, and colouring the inferior kinds, for which they charge at the rate of eighteen pence per pound. I had not an opportunity of making any

* By subsequent experiments I have proved the sulphate of rhubarb to be much less active than the alcoholic extract on a subsequent page, as will be seen by additional remarks on preparation in a subsequent part of this work.

experiment on the Turkey Rhubarb, as I could not procure what accorded with the physical characters of the genuine article. The difference in the medical activity of these several varieties most essentially depend upon climate and cultivation, as it is asserted by Dr. Rehman, that they are the roots of the same species, rheum palmatum (although the Dispensatories and Pharmacologia consider them distinct species,) and ascribe the Chinese to be the product of the *rheum undulatum*, and the Turkey of the *rheum palmatum;* and it is established beyond controversy, that climate and cultivation are two of the most powerful agents in modifying the condition of vegetable matter.

On the preparation of Spiced Syrup of Rhubarb.—Paris in his Pharmacologia states, that water at two hundred and twelve degrees takes up twenty-four, and Thompson thirty parts in sixty; and by decoction its purgative qualities are destroyed, which decoction is extremely turbid and deposits a copious precipitate on cooling, and will be decomposed by standing a few days, whilst alcohol takes up two and one-seventh from ten parts, without the mucous portion, and is perfectly transparent, and will remain unaltered by keeping. Hence, as water takes up a larger proportion of mucous and inactive matter, and as decoction destroys its purgative properties, I think a very important alteration might be made in the formula of the preparation of syrup of rhubarb of the shops, by substituting a concentrated spirituous tincture of the rhubarb, spices, &c. in place of the aqueous decoction of the same, and to add it near the conclusion of the formation of syrup of proper consistence. The alcohol in this mode cannot be made an objection, as it need not much exceed, if any, the proportion of spirit in the former method to prevent the fermentation of the aqueous decoction; and if these circumstances are correct, it certainly will be a more active and eligible preparation, and well deserves the practical investigation of the faculty. This pre-

paration does not enter the works of Paris or Thompson in any shape, but is given by Dr. Coxe, in the late editions of his standard work, the American Dispensatory,* in the manner now prepared, and is very extensively employed in this city, perhaps as much so as any other pharmaceutical compound; and if its activity could be increased, it no doubt would be a very desirable object. It now requires a large dose to be effectual, and sometimes frequently to be repeated, insomuch that its use is almost exclusively confined to children, the dose for adults frequently exceeding two ounces, which is certainly objectionable, and excludes its use in many cases where, if more active, it would no doubt be extensively employed to advantage.

Extract of Rhubarb.—This preparation, according to the method now pursued, is very feeble; the protracted heat necessary to evaporate the water, and the absorption of oxygen, acts so unfavourably during its formation, that its purgative properties, although not entirely destroyed, are so greatly impaired, that its use has become almost abandoned by the profession. By the following process, however, a much more active preparation may be obtained, and where the use of the extract is approved, this will be found to possess the proper characters.

Take of coarsely-powdered Chinese rhubarb ℔j., digest in six

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* I am much pleased to find the second edition of the United States Pharmacopœia, has directed the aromatic syrup to be made in this manner, and Drs. Wood and Bache, in the second edition of their valuable dispensatory make the following comments:—"This process is a decided improvement upon that of the first edition of the U. S. Pharmacopœia, in which the rhubarb and spices were boiled long in water, and sugar and alcohol afterwards added to the strained decoction. The oils of the aromatics were thus driven off and wasted, water being able to take up but a small proportion, while the preparation was rendered too stimulant by the spirituous addition. By the present process, the alcohol employed in the maceration, after having performed its office, of extracting the virtues of the medicines, is evaporated, at a temperature insufficient for the volatilization of the oils; and a syrup is obtained, at least as strong as that of the old Pharmacopœia, with less waste of materials, and without the objectionable presence of a large proportion of spirit.

pints of alcohol for seven days, and filter; distil off the alcohol, in a water-bath, to the consistence of thin honey; then evaporate to a proper consistence in a water-bath saturated with muriate of soda.

By this process much less heat and time is required to evaporate the menstruum; and, owing to the alcohol, much less oxygen is absorbed, and an extract of much more activity is thus obtained. This mode is certainly more expensive; but if the product is more effectual as a medicine, this small difference should not constitute an objection, as much of the alcohol is saved by distillation; and, in the preparation of all medicines, a preference should be given to that method which will render them more active and effectual without regard to expense, unless it be exorbitant, and the difference inconsiderable, for where health is implicated, interest should be suspended.

Professor Coxe has the above article introduced in the last edition of his valuable dispensatory.

REMARKS

ON THE USE OF

PIPERINE.

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Remarks on the use of Piperine, with the formula for its manufacture; together with observations and experiments on the Piper Nigrum and its preparations.

Since the discovery of quinine and cinchonine by the celebrated chemists Pelletier and Caventou, vegetable chemistry, previously almost unknown as a science, has made rapid advancement; and the still further successful experiments and discoveries since made upon vegetable matter, have not only swelled the catalogue of highly important and useful materials, but have given an additional stimulus for the undertaking, and created an ardent zeal for investigation in those already engaged in researches, as well as opened a field of encouragement, in which numberless votaries have appeared. By these means this department of science, having emerged from a state of neglect and obscurity, has risen with unparalleled rapidity, even within the space of a few years, to its present exalted position; and the numerous advantages and useful discoveries resulting from its rapidly improving condition, have caused it to rank as one of the most important branches of chemical science.

Every vegetable substance in the materia medica which has

yet been subjected to chemical analysis, has produced an elementary or alkaline principle, upon which the virtues and activity of the medicine entirely depend. An instance is found even in opium, which, acting in a double capacity, both as a stimulant aad sedative, has afforded two principles, corresponding with the operations of the crude material; one is stimulating, the other sedative. When administered in combination, acting like the crude substance; when separate, individually exercising the sedative or stimulating effects, as one or the other may be employed. These isolated substances possess many and great advantages over the crude materials. The activity of those particular effects which are desired from the administration of the medicine, being concentrated, and consequently greatly increased by the separation of the inert and injurious portions, obviates almost entirely the difficulty of exhibition, as well as facilitates a more speedy and certain action on the constitution.

It is well known that many substances, in their crude state, in consequence of bulk and insolubility, cannot be administered in many stages of debility in sufficient quantity to produce the desired effect. In such instances, the alkali is well adapted to form a substitute; for being separated from the more gross, ligneous, and inert portions, it requires a comparatively small dose, and constitutes a valuable remedy in cases where the former would be rejected. Another, and no less important advantage in favour of the alkaline principles is, the uniform persistency of their strength. No one will for a moment question the many inconveniences and evils resulting from the great uncertainty of effects, and difference of activity, in most of the crude materials; and some of the most important are subject to these defects. Peruvian bark, for example, is composed of twenty-five species, and each one differing in strength. Bark, even of the same species, from a difference in adventitious circumstances,* to which it is always exposed (al-

* See Carpenter on cinchona.

though its external characters are sometimes scarcely affected, its quality is always injured,) is scarcely ever found alike. I have met with bark, in the preparation of quinine, of the same species and of the same importation, differing twenty-five per cent. in the preduct of the active alkalies. The physician, therefore, would have been deceived in the strength and consequent effect of this bark, while the quinine is universally the same. For example, the quinine, produced by the inferior bark, although much less in quantity, was fully equal in quality. If the practitioner, therefore, may be so much deceived by the difference of strength of the same species, how much more would he be disappointed by those which produced but one-eighth or one-twelfth the quantity ; and some yield even but a trace of the principles upon which their febrifuge properties exclusively depend.

The preceding observations in support of concentrated medicines, are made in consequence of there existing, even at this period of time, some few who disapprove of vegetable alkalies, and reject their use on all occasions, by giving preference to the crude material. If their conclusions were drawn from experiment, they would most certainly be entitled to credit and respect; but where a determination is made against admitted facts, without advancing new grounds drawn from argument or reason, and where new discoveries are denounced without even a single experiment or authority of any kind, I am sorry to say that such a course can be attributed only to prejudice, and should accordingly be so appreciated.

There is another class of opposers, governed by a peevishness of envy and jealousy, either to the person who introduced the article, or who may have extolled its virtues; this is a worse species than the former; they are, however, of little importance as to *influence.* It has ever been a grievous circumstance, that, in almost every department of science, criticism is so easy a task, hat the

least informed and most unintelligent will make bold opposition against the most useful and important researches, and sometimes from no other cause than that they themselves were not the authors. Their efforts are, however, overbalanced by the happy consequence, that sentiment and expression do not, in the least, alter or modify the condition of matter; and follies of this nature, therefore, so far from effecting an injury or causing the least impediment to the march of science, merely offer an exposition of their own errors, either to be dispersed by truth or corrected by the light of science.

The object of the present communication is, to describe a new principle recently discovered in black pepper, which has been denominated *piperine*, and which is proved from careful experiments, to be a successful remedy in intermittent fevers, and has been employed with advantage in typhus fever and periodical headache; and, from the respectability of the authorities given in its support, bids fair to become an important addition to the materia medica. It may be given in doses from one to four grains. It has been employed in doses of one grain every hour, in several cases of intermittent fever, with as much success as the quinine. It is found to be a valuable adjunct to that substance, equal parts acting with more energy and success than the whole quantity of quinine.

Black pepper, in its crude state, has long been known as a valuable medicine, and is stated to be an excellent adjunct to bark in intermittents, and the author* observes that Mr. Brande must certainly be mistaken, when he says it acts only as a warm condiment, agreeable to the stomach.†

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* Rennie's Supplement to the Pharmacopæias of London, Edinburg, Dublin and Paris.

† It may be observed, with deference to Mr. Brande's opinion, that there never has been a medicine yet discovered, respecting whose qualities some diversity of opinion has not existed, and every medicine, however valuable, has met with some opposition.

It is mentioned in Dr. Coxe's valuable dispensatory, under the article "piper," that Dr. Frank, physician to her majesty Maria Louisa, recommends the black pepper in different species of intermittent fevers.

This had previously been used in the east with success, after every known means had been ineffectually tried. The dose is five to ten grains, twice a day; and Dr. Ghigini reports ten cases cured by it. Dr. Frank mentions seventy patients, who came under his notice between April and June, of whom fifty-two had tertian, ten quotidian, and eight the quartan fever. Fifty-four were completely cured within a week or so, without any subsequent relapse. He dips the seed of black pepper into a mucilage of gum arabic, and subsequently into powdered colombo, to disguise it, and gives from five to eight pills twice a day. None of his patients required more than from seventy to eighty pills for a complete cure. Dr. Frank recommends to the profession to try the extract of black pepper in intermittent fevers. This preparation was tried on nine individuals affected with intermittent evers of different types, in doses of four, eight, ten, or twelve grains, dissolved in water in some cases, and given in the form of pills in others, by Dr. Clock, of Trent; and the effects surpassed his warmest expectations.

From these experiments it is concluded, that the extract of pepper is not only one of the best succedaneums for the bark, but that it is even preferable to it, on several accounts.

First. It never produces disturbance in the stomach or bowels.

Second. It never fails in producing a cure.

Third. Those who were cured did not, in any one instance, experience a relapse.

Fourth. It produces a regular alvine discharge, as well as the excretion of urine and sweat.

Fifth. None of those who were cured experienced that sensation of languor so common to a state of convalescence.

The following cases, treated with piperine, are given by Dr. J. Gordoni, physician to the hospital of Livourne:*

Cleonice, of Paoli, entered the hospital in the month of March, 1824, to be treated of an incipient phthisis, in combination with amenorrhœa: a treatment lightly depleting for several months produced sensible advantages; and although the disease could not be called perfectly cured, a strong indication of a speedy recovery was apparent, for the *crachats* presented a better appearance, the cough was diminished, and the plethoric habit, accompanied with a kind of melancholy, had disappeared; when, towards the end of September, of the same year, she was attacked with a violent intermittent fever, having the type of a double tertian. This disease was treated, without success, by the skilful Dr. Guidotti, both by quinine in substance, and the sulphate of quinine in pills. On the 16th of October, having succeeded Dr. Guidotti in the hospitals, I found the patient much dejected, and disgusted with the insufficiency of the means employed. Supposing the failure of the quinine depended upon some neglect in its administration, or that the pills were perhaps difficult of solution, I prescribed three doses of the same substance, in powder, to be taken daily. Two days after this treatment the fever stopped short, and the patient recovered a repose, which she had lost for a month. The remedy was continued for six days, which prevented a relapse, which had always been dissipated by the same remedy; but every time the use of it was suspended, the fever invariably returned. As there were not sufficient symptoms to consider it of an inflammatary nature, I determined, on the second of November, to substitute for the sulphate of quinine eight grains of piperine, to be taken in three doses, as the sulphate, and with the same precautions. The fever ceased the first day, and never returned. The piperine was continued several days after, and I assured myself of the certainty

* Bulletin des Sciences Medicales, Avril, 1826.

of the cure, having attended the patient from her first disease until the end of December.

Second. A man aged thirty years, at Castiglione, on the seashore, in the beginning of December, was seized with a tertian fever, which obliged him to enter the hospital of St. Antoine, of Livourne. Dr. Nicholas Orisimi, being assured that the patient had never before been afflicted with a like fever, nor ever made use of the quinine, thought proper, as a good opportunity, to employ in this case the piperine, to assure himself of its efficacy. With this view, he let the fever run out one of its intermissions, without employing any remedy, in order to be better acquainted with the nature of the disease. He then ordered a scruple of piperine, divided into six pills, to be taken in three doses, the last of these doses to be given two hours before the fever, and the two others at intervals of two hours preceding. After the administration of this remedy the paroxysm did not appear; the patient, who believed himself cured, wished to leave the hospital, notwithstanding the remonstrances of the physician, who assured him he could not calculate yet upon an entire cure. The patient soon repented not having taken counsel, for, on his way to the shore, he had a fresh attack of the fever and was obliged to return to the hospital. He again made use of the piperine, and having continued it for several days, he went out perfectly cured.

Third. Joseph Torsi, aged twenty-six years, entered the hospital of St. Antoine the evening of the sixth of September, 1824; had been attacked six days before, with a true quotidian fever, and it was the first he had ever experienced. On the morning of the seventeenth, sixteen grains of piperine were ordered to be divided into eight pills, of which four should be taken every two hours before the fit; but before the last dose was taken, the fever returned in spite of these means. The piperine was then carried to eighteen grains, to be taken in the same manner, when the

fever disappeared; and the use of the remedy being continued for several days, preserved the patient entirely from all symptoms of recidivation. Dr. Orisimi, who directed the treatment, was fully convinced of the perfect recovery and cure of the patient, who, having entered the hospital three months after to be treated for peripneumonia, assured him that he had no accession of fever since he left the hospital.

From these observations, and many others, Mr. Gordoni draws the following conclusions :—

1. That the piperine will cure intermittent fevers, in the dose of eight or even six grains.

2. That it will cure fevers which have resisted the sulphate of quinine.

Finally: That it will prevent a relapse of fever better than that substance.

M. Meli* has also successfully employed the piperine, and considers it more certain, as a remedy in intermittents, than the sulphate of quinine.

For the following interesting communication on the use of piperine, I am indebted to Dr. J. S. Rose, of Philadelphia, who was the first to employ it in this city.

"I have employed the piperine prepared by Mr. Carpenter, in twenty cases of intermittent fevers, and am decidedly of the opinion, that it will be found by all who may be disposed to try its virtues, a more certain and efficient remedy than any preparation of bark heretofore used."

"I have also used it in two cases of low nervous fever, or typhus. I was induced to employ it in these cases by observing, that in intermittents it did not prevent (in the first intermissions)

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* Ainslie's Materia Indica, vol. 2, page 622.

all the stages of paroxysm; at the time the patient expected his chill he found a gentle diaphoresis, which continued to increase for two, three, and in some cases for four hours; on the next day, however (of the expected return,) there was nothing like diaphoresis or fever; the patient passed this period without the least inconvenience, and remained exempt from a relapse, which is not always the case after the use of quinine. These facts led me to believe, that in typhus, when we wish a stimulating diaphoretic, nothing is better adapted, not even volatile alkali, which I have proved satisfactorily to myself. In this form of febrile action, when the animal powers are about to yield to the influence of disease, and the patient falls a victim to the timidity of the practitioner, I have boldly withheld all other remedies, and administered the piperine in doses of two grains every two hours, until eight grains had been taken; in one of these cases, the low, muttering delirium now began to subside, the skin became moist, and the patient, sensible of his improvement, pronounced himself better. On the following day the same doses were administered, and repeated, for three, four, or five days, when I found no fever; the strength increased, and the patient, with an inclination for food, was certainly convalescent. These two are the only cases of typhus I have treated since I became acquainted with this valuable remedy. But these alone would incline me to say, with one of our professors, "as well might we deny the power of bark in intermittents, or mercury in syphilis," as piperine in the cases alluded to. Yet I am not prepared to adopt his language fully, and call it a *panacea.*

J. S. R.

I subjoin the following important results from the use of piperine, by Dr. J. C. Rousseau, of Philadelphia, whose experience with the articles of our materia medica, entitles his observations to the highest confidence and estimation.

Dear Sir,

In compliance with your request to state my opinion upon the efficacy of the piperine in the cure of intermittent fever, I can testify, that although I have been able to administer this new article of the materia medica in few cases, it is satisfactory to inform you, that it has been successful in every one. The paroxyms left the patients on the first, and never later than the second day.

Some few remarks may with propriety be added to this succinct account, which may become instructive, and inculcate the necessity of caution in prescribing it in too large doses. The following case will illustrate this position:—

A young girl, about twelve years of age, having had a return of intermitting fever, that had been stopped by the sulphate of quinine, was directed to take one grain of the piperine, made into a pill with conserve of roses. She was a short time after seized with a vomiting, which was repeated to the number of seven times in the space of two hours. It then began to promote alvine evacuations, to the extent of twelve or fifteen times. The fever did not return, and she was directed to continue one grain of the medicine night and morning. It invariably produced alvine discharges in an unusual quantity.

In another case, a subject of about forty, it produced a radical cure, in the dose of three grains taken every twenty-four hours, and continued for some days after; and it is so much the more remarkable, as this patient had taken the sulphate of quinine for some days, in the quantity of thirty grains in every twenty-four hours, as he informed me, remarking at the same time, that during the use of it he was under a most violent and painful state of excitement.

I can state with confidence, that this preparation of the black pepper may be as useful and beneficial as the like preparation of

the Peruvian bark; and I entertain no dout of the probability of obtaining similar products from all the other peppers, having been for many years in the habit of administering the black and red peppers, with decided success, in the cure of intermittent fevers.

Yours, &c.,

J. C. Rousseau, M. D.

Geo. W. Carpenter.

I have just received the following valuable illustration of the effect of piperine from my friend Dr. J. R. Black, of Philadelphia, which is an additional strong testimony of the success of this medicine in the cure of intermittent fevers:—

Mr. S., aged about forty years, during the first part of last month, applied to me, with a severe quotidian fever, attended with rejections from the stomach, and with violent pain, and great determination of blood to the head during the hot stage, with cold feet and slight delirium.

The case was treated with the lancet, emetics, and purges, which on the third day changed its type to the tertian. On the day of intermission, sul. quinine was administered, which was often rejected, while it always increased the patient's nausea, and headache. Piperine was substituted in doses of one grain every hour, to the number of ten a day. The paroxysms immediately ceased, and the patient was in a few days discharged, radically cured.

J. R. B.

Numerous other cases might be quoted, in which this medicine has been employed with the like happy results; but I think sufficient has been advanced to satisfy the most skeptical of its active properties.

Alcohol and sulphuric æther are the best menstrua for the active properties of the pepper, which very soon imparts its acrimony

to these fluids. Mr. Brande gives alcohol and water. I am surprised that Mr. Brande should have omitted æther, since it is the most powerful solvent, and particularly that he should quote water, since it requires five hundred and fifty pints to extract the sapidity of one ℔. of pepper. Water appears to be the best solvent for the colouring matter, for after pepper has been exhausted of its acrimony, by æther and alcohol, water will make a dark solution, which on evaporation, produces an extract exhibiting little of the pungency of pepper.

The piperine employed in the above cases, I prepared according to the following formula:—

Digest one pound of coarsely-powdered black pepper, in one gallon of alcohol, for ten days, distil off one half of the alcohol in a water-bath, add by degrees, a few drachms of diluted muriatic acid, then add water sufficient to precipitate the resin, and separate the oil; concentrate this solution by evaporation, and add pure potass to decompose it, and neutralize the acid, when the piperine will be deposited in yellowish transparent crystals. The crystals may be obtained perfectly colourless, by observing great care in separating the oil and resin, but as there is no disadvantage in the colour, the additional trouble and expense would not be compensated. The piperine, in a colourless state, is insipid and inodorous; but united with as much resin as enters into its crystallization, its taste is extremely powerful, possessing in an intense degree, all the heat and acrimony of the pepper, with considerable of its odour, and I think is a more active preparation than the former, it was in this form exhibited in the treatment of the cases above described. I have obtained larger crystals, by employing sulphuric æther as a menstruum, instead of alcohol.

The crystals of piperine are transparent, of a straw colour, and assume the tetrahedral prismatic form, with oblique summits; I

have obtained them larger than the ordinary crystals of sulphate of magnesia.

———:o:———

EXTRACT OF BLACK PEPPER.

Digest eight ounces of black pepper, coarsely ground, in four pints of diluted alcohol, for four days, occasionally submitting it to a temperature near ebullition in a water-bath; filter and evaporate to the consistence of an extract. This is found also to be an active remedy in intermittents, in doses of two or three grains. In a soft state it has proved very convenient to give consistency to piperine or quinine for the formation of pills, while at the same time it increases their activity, particularly the latter; it is certainly preferable to the conserve of roses, or gum arabic, which enlarge the pill without increasing the effect.

The extract of pepper, in every formula I have seen, is directed to be prepared with water. This forms a much less active preparation, and possesses several inconveniences to which the above is not subject.

I have employed the white and black peppers in the above preparations, and although it is stated that the white pepper is milder than the black, I have found it to yield more piperine, and an extract of much more acrimony and activity, and to contain much less colouring matter.

The constituent principles of pepper are piperine, oil, resin, extract, colouring and fecular matters.

Subsequent experiments have proved the oil of black pepper to possess all the valuable properties of piperine in a superior de-

gree, one drop being equal in energy to three grains of the latter. I have combined quinine, piperine, oil of black pepper, cornine, gentianine, and several other tonic vegetable principles, in the form of a mass, which I have denominated compound tonic extract, and which has proved much more efficient in intermittents than any of the articles used singly, even in double doses. This article is now much used in the southern states, and has given the highest degree of satisfaction.

SENNA.

The leaves of this valuable plant is one of the safest and most extensively used cathartics. It is prompt and efficient in its action, and is therefore well calculated where a decided, but not violent action is required, and is consequently highly useful in a large class of diseases, particularly in fevers and febrile complaints. An objection is sometimes made to its use, in consequence of producing griping in the bowels; this, however, can be obviated by combining it with fennel or carraway seed, or any of the carminatives or aromatics, or of the alkaline salts. It is commonly directed with Epsom salts or cream of tartar, or all three combined.

The following are the proper proportions for its use:—

℞

Senna	ʒvj.
Epsom salts	ʒss.
Cream tartar	ʒij.
Fennel seed	ʒiss.

M.

Infuse in one pint of boiling water; when cold, strain and press all the liquid from the ingredients. This is a searching and active evacuent, and can always be depended upon for a certainty of action. Dose, a wine-glassful every fifteen or twenty minutes.

There are three varieties of senna to be found in our market, varying essentially in medicinal quality.

1st. Alexandria Senna. This is decidedly the best quality, and

although commanding nearly quadruple the price of the India senna, is fully worth the difference, and should always be preferred and prescribed by physicians, and particularly named in their orders for medicines. The name of the senna is derived from the Egyptian port from which it is shipped. It consists chiefly of the product of the acutifolia, and is mixed by the merchants of Cairo also with leafllets of obovate, brought from various parts, and also with the leaves of the cynanchum oleafolia, which are distinguished by their greater length, as well as their structure, which differs from the leaves of the senna by having a straight side, and being regular at the base, and also destitute of any lateral nerves on the under disk, by which characters they can be readily distinguished from the senna. The proportions in which these constituents are said to exist, are five parts of acutifolia, three of obovate, and two of cynanchum.

2d. Tripoli Senna. This senna derives its name also from the port from which it is shipped. Dr. Paris states that this senna contains a much larger portion of cyranchum. This is obviously incorrect, as it consits exclusively of the acutifolia, but differing in some respects from those contained in the Alexandria, by being shorter, less acute, thinner, and more fragile, and their nerves much less distinct; from these characters of the plant, it is obvious to conclude that it grows in a different region. It is supposed that the Tripoli senna grows upon the Mediterranean coast of Africa, in the vicinity from whence it is exported.

3d. India Senna. This article is the product of the cassia elongata. Though it is imported from Calcutta, it appears not to be the growth of that country. Ainslee states that senna grows abundantly in India, but is of the species with obtuse leaves, and is considered inferior. A better kind, distinguished by its long pointed leaves, is taken to India from Mocha, and is extensively used; this is undoubtedly identical with that which we obtain

from India, and of which the native country is Arabia Felix. It is further stated by Ainslee that the Arabian senna plant has been recently introduced into the south of India, and promises to succeed.

The following is a descriptive account of the characteristics of the three species of senna.

1st. Cassia Acutifolia. The leaves are pinnate, alternately placed upon the stem, and have two narrow pointed stipules at their base.

2d. Cassia Obovata. The leaves are very obtuse, sometimes mecrovate, and have from five to seven pair of leaflets.

3d. Cassia Elongata. The leaves are elongated, acute, thin and flexible, with very short petioles; the most conspicuous characteristic of the leaflet is its length and thinness.

This name was given by M. Lemaire, upon the plant from which the India senna of commerce is derived.

EXPERIMENTS

ON

MERCURY

AND

BLUE MASS.

——:o:——

On the division or extinction of Mercury by trituration : with observations and experiments on the Blue Mass, and other preparations of Mercury.

Mercury has been considered by some writers to produce no action on the body, when taken internally, in the metallic state. This has been doubted, with sufficient reason, by Orfila in his Toxicology.

Blue Mass, Pil. Hydrargyri, or Blue Pill, as it is commonly termed, has heretofore been always esteemed one of the most valuable preparations of mercury, being mild, and at the same time more certain and efficacious in many diseases, than any other preparation of that valuable mineral; hence it has been, and continues to be, very extensively employed in most cases where mercurial action on the constitution is required; and when properly made, and in like manner administered, has invariably supported its wonted and established reputation.

In the preparation of it, the most viscid and tenacious substances are employed, as conserves, honey, manna, &c., for the

more speedy extinction of the mercury, as it is generally termed, or more properly its minute division; after which some vegetable powder (of which starch is most proper) is added, to give the mass a proper consistence for the formation of pills. It has generally been supposed that the mercury, by this process, was converted into the state of a protoxyde; but late careful experiments, prosecuted exclusively for the purpose of ascertaining the condition of the mercury, have satisfactorily proved the contrary.

From the remarks and experiments of Mr. Joseph Roux (Pharmacien à Nimes,) addressed to Mr. Planche, in the Journal de Pharmacie, tome xi. page 215, it will appear that (although from the various discussions of chemists, on the method of reducing mercury, a conclusion has generally been drawn in favour of those substances which contain the most oxygen) turpentine and liquid styrax will as speedily and effectually extinguish or reduce the mercury as the oxygenous fat; and that the various conserves, syrups, extracts, oils, meals, feculæ, and vegetable powders, all produce the same results, in that speedy and effectual reduction of the mercury in proportion to the tenacity of the substance employed: for example, the extracts succeed better than the conserves, the conserves better than the syrups, the syrups than the oils, &c. These different experiments led to the conclusion that oxygen was not essential for the extinction of mercury, and to prove which, it was acted upon by substances destitute of this element; bitumens were accordingly selected, such as petroleum and maltha.* Having reduced the petroleum to a more than syrup consistence, the result was perfectly satisfactory; and Mr. Roux observes, "I was then authorized to think my conjecture was correct, but in order to assure myself positively of the fact, I acted upon it free from the contact of atmospheric air. I accordingly

* Pitch and Wax melted together.

placed a vessel containing the mercury and maltha (reduced to a consistence that allowed the pestle to work) in the receiver of an air-pump, and after having made a vacuum, I put in motion, by the means of a handle, a pestle surrounded by a brass stem, a little bent at the lower part which passed through the bell and the copper framing by which it was surmounted. This experiment succeeded as well as any of the others, and established beyond a doubt the fact, that mercury may be extinguished without the aid of oxygen."

Mr. Planche observes,* that from the ingenious experiments of Mr. Roux on the division of mercury in vacuo, by means of a substance containing no oxygen, it has been proved, that the mercury in the ointment and other preparations exists in the state of minute division, and not in that of an oxyde, which is no longer a subject of doubt to a great many.

This may readily be proved by melting the ointment in hot water, or by washing the blue mass in cold water, decanting the saccharine and feculent matter, and placing the remainder (carefully washed from the vessel with a little water) on a filter of paper, and left to stand until perfectly dry, when nearly all the mercury used in its formation may be collected; a small portion necessarily will be lost in its preparation, together with more minute globules which cannot be collected. I treated in this manner 3j. of the blue mass manufactured at Apothecaries' Hall, London, in which the mercury was more effectually reduced than any I had ever seen, and obtained from it sixteen grains of metallic mercury, within four grains of the quantity originally employed in making the mass; small globules were also visible in the residuum, which I could not collect. On examining several drops of the liquor I decanted, which had accidentally fallen on some white paper and dried, it had a shining metallic appearance, and evi-

* Journal de Pharmacie.

dently contained metallic mercury, which was proved, after two days' standing, by the aggregation of globules. Mr. Thos. Evans, an intelligent druggist of this city, in a paper published in the Journal of the Philadelphia College of Pharmacy, states that from one hundred grains of blue pill, which had been triturated for many days, twenty grains of running mercury were *easily* collected, and *numerous* globules were still visible in the residuum.

An effect takes place in making the pommade mercurielle, a preparation employed extensively in France, which goes strongly to prove that the mercury in this preparation is not in the state of an oxyde, as well as all the others; for it is admitted by all, without the least doubt, that in all cases where mercury is reduced by simple trituration, it exists in the same condition. In making this preparation, if it happens that the butter of cocoa (*beurre de cacao*) which enters its composition be too suddenly cooled, the mercury, which previously had every appearance of perfect extinction, immediately appears in large globules; to reduce them it is only necessary to gently heat the pestle and stir the pommade a few minutes, when the mercury is again reduced. I will ask if any man acquainted with the laws of chemistry can for a moment suppose that the mercury in this preparation is in any other than the metallic state, or attribute so sudden a reduction of the mercury to the absorption of oxygen, when eight days' trituration would not be sufficient to effect it by the old process?

Besides these, there are other preparations of mercury where it has been triturated with pulverulent substances, as chalk, magnesia, sugar, &c., in all which cases the mercury exists in the same condition as in the ointment, mass, and pommade, that is, in a state of minute metallic division, and not of an oxyde. From a portion of hydrargyrum cum creta, imported from the Apothecaries' Hall, London, in which the mercury was apparently oxydized, inasmuch that not a globule was visible (when most favourably

exposed on paper,) even with the assistance of a good microscope, I put a small quantity in a vial, and agitated it a short time in cold water; when subsided, I decanted the water, and, after several washings and decantations in the same manner, the sub-carbonate of lime was separated, and there remained a grayish powder, which I placed on a filter of paper, which by simple imbibition of the paper, without pressure or trituration, the mercury assumed the form of globules, in weight nearly equal to the quantity originally employed in the composition.

Mercury reduced by trituration with sugar may most readily be tested by dissolving the sugar, which will leave the mercury in its metallic state. From the suggestions of Mr. Phillips, of London, I treated a portion of the hydrargyrum cum creta with acetic acid, having placed a small quantity of the powder in a vial, and washed it in successive portions of the acid until the sub-carbonate of lime was dissolved; then I threw the whole on a filter of paper, which, when dry, exposed the mercury entire.

As the above experiments are in the reach of any one desirous of proving the fact, I hope advantage will be taken of them, and little doubt will hereafter exist, as to the state in which the mercury exists in these several preparations. Although differing from the opinion of many authors of established reputation, I feel confident in stating the fact, inasmuch as I believe, (from their own expressions,) their conclusions were drawn from external characters, without experiment; as in most instances where these preparations are spoken of, it is remarked, that the mercury is in the state of minute division, and probably converted into the black oxyde; the word probably implies an uncertainty and speculation as to the real state in which the mercury exists in these preparations, and indicates that they have never been examined with a view to discover its condition, otherwise their descriptions must have been more definite.

Mr. Rennie, in his late valuable supplement to the pharmacopæias, observes, that, chemically, the blue pill is described in two ways. One party of chemists say that the mercury is unchanged, and exists in a state of extreme division, whilst another party assert unconditionally, that mercury is converted into a black oxyde, which is a protoxyde. Mr. Phillips, on the other hand, more justly observes, that experiments are still wanting to explain the subject, but that it probably contains a sub-oxyde, as he supposes to be the case with the hydrarg. cum creta.

It may be remarked by some, if the mercury exist in its metallic state, why resort to the tedious method of its division? It may be readily answered, that, independent of increased action by its minute division, mercury, from its fluidity and volubility, could not be administered in its metallic state, in the various doses, forms, and compounds in which the blue mass has been so conveniently and successfully exhibited. It has also been proved by experience, that the mass which contains the mercury in the most minute division is preferable, on account of a more speedy action, as well as being less liable to lose the mercury by exudation. Hence it is, that the blue mass and other preparations of the mercury manufactured at Apothecaries' Hall, London,* and at the laboratory of Mander & Co., of Wolverhampton, have justly been preferred as more eligible preparations, at which places they possess considerable advantages of improved machinery, by steam-power, for the more speedy and effectual reduction of the mercury. It has been suggested and recommended to use the black oxyde of mercury as a substitute for the blue pill. However valuable a

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* The mass is prepared at Apothecaries' Hall, London, by a machine consisting of an iron mortar and four wooden pestles, driven by a steam-engine. This both triturates and rolls the mass, and the pills are said to be stronger than those made by the hand.——Rennie's Supplement, &c.

medicine the black oxyde may be, it cannot be substituted for the blue pill, on the ground of being the active principle of that substance; although I do not doubt that a few grains out of a hundred may be in the state of a sub-oxyde, but most certainly not in sufficient quantity to have the sole agency in the effect of the blue pill; but, on the contrary, from its minute proportion, to have little or none. The black oxyde of mercury, however, is no doubt a most valuable medicine; and from the careful and correct experiments of Dr. Benjamin H. Coates, of this city, its efficacy has been fully established.

As the blue mass holds an important place in the materia medica, and is, perhaps, more extensively employed than any other compound, it will no doubt be desirable to have a formula which will most readily reduce the mercury. After a number of experiments, with a view to discover what combination and proportion of substances most speedily and effectually reduce the mercury, and at the same time preserved the mass longest of a pillular consistence. I have adopted the following formula and process, as possessing the greatest advantages. This forms a mass more like that manufactured at the Apothecaries' Hall, London, than by any other process which I have seen. The globules of mercury are effectually reduced in a short time, and are perfectly invisible, when rubbed on white paper and inspected with a microscope. The mass is of a fine blue colour, and will preserve a pliable consistence a long time.

℞	Hydrarg. Pur. - - - -	℥iss.
	Manna Pinguis - - - -	℥iss.
	Mel. desp. - - - - -	℥ss.
	Amyli - - - - -	℥i.

M. S. A.

As the mercury of commerce is frequently adulterated with lead, bismuth, tin, and zinc, it is important to have it distilled previous to employing it in the above preparation.

The manna and honey in the blue pill are better than any other substance yet employed, and reduce the mercury more speedily and effectually than the conserve of roses, over which they have other advantages. The conserve of roses is objectional, also, from occasionally containing sulphuric acid, which has been added to increase its colour; hence a poisonous sub-sulphate of mercury may be formed during the trituration. Dr. Coxe justly remarks, in his dispensatory, (although conserve of roses is in the formula he has selected) that experiments fairly made, would sanction the manna as preferable to any other substance for the speedy and effectual extinction of the quicksilver; and whatever may be thought of the conserve of roses, it appears probable that its use is only dependent on the sugar in its composition.

In making this preparation, the whole amount of mercury should be triturated with a small part of the manna and honey, until reduced, (which will be more speedy than if worked with all the ingredients;) the remaining portion of manna and honey is then to be added, and the whole beat up till well incorporated; to which then add the starch, to give it a proper consistence. This mass, when finished, has a fine blue colour, no globules visible when exposed on paper, even with the assistance of an ordinary microscope; it is of proper consistence for the formation of pills, and will retain its moisture for a long time. A quantity made according to the above formula has been kept for upwards of a year, when its consistence was nearly as good as at the time of its formation, and no globules discoverable when carefully examined. It is a desirable thing that the mass should remain soft, which the above formula will particularly effect. I have seen blue mass become perfectly hard, sufficiently so to powder, in consequence, no doubt, of having gum arabic in its composition. Liquorice root and rhubarb enter into some receipts for the preparation of the blue pill, but the mass which contains them may be known by

its dirty gray colour, and frequently becoming mouldy after a short time.

As a great quantity of blue mass is badly made, and I believe more from not having a proper formula than from any want of art or attention in its reduction, I am induced to offer the above, under a full assurance, from careful experiment, of its superiority to the common formula with conserve of roses; and should it prove useful in the hands of those who may think proper to adopt it, the author will have obtained the object of its publication.

SCAMMONY.

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This valuable cathartic is the concrete juice of the root of the convolvulus scammonia. The milky juice which exudes from the fresh root is collected in shallow vessels, and concretes by the slow evaporation of time, which is true scammony. Considerable of that which comes to the market is composed of an admixture, while yet soft, with the expressed juice of the stalks and leaves, and sometimes further mixed with flour, ashes, sand, and other substances. The true scammony, or the best received in this country, is produced in Syria, and is called Aleppo scammony.

There are several other varieties; that which is most met with of these is called *Smyrna* scammony, which is very inferior, being made up almost entirely of foreign substances, and not even owing its cathartic effects to scammony. The Aleppo scammony is brought to this market in drums, and is in large irregular masses, or in round cakes of one or two inches thick; the colour is dark ash or olive; it is friable and readily pulverised, and when wet and rubbed with the finger it becomes milky, and the powder always has the characteristic odour, which is compared to cheese made from ewe's milk.

The Smyrna scammony as it is called is in circular cakes rather more than half an inch thick, of a hard and compact texture, and almost black. Its smell is weak and unpleasant, it is more irritating and less purgative than the Aleppo, and is, no doubt, altogether a fictitious article, and should not be sold or used by the physicians, particularly when the Aleppo or true scammony is always to be had.

SECALE CORNUTUM.

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This is a morbid excrescence which occupies the place of the seed in the secale cereale, or rye. It is extensively used in obstetrical practice, in consequence of its specific action on the uterus.

It is employed in powder, infusion, decoction, or tincture. The dose of the powder is from fifteen to twenty grains; particular care should be taken to preserve the powder, as it is easily decomposed. It should be kept in a ground stopper, or closely-corked bottle, and should not be used after it is old.

I have tried a number of experiments with a view of obtaining a more uniform and concentrated preparation, and was in hopes of obtaining a proximate principle, but have failed, and believe it cannot be used to more advantage than in substance or tincture.

Wine of Ergot.

℞ Ergot in powder - - - 4 ounces.
Teneriffe wine - - - ℔j.

Digest ten days, and filter.

The above preparation is extensively used in this city, and is decidedly the best mode of exhibiting the ergot. The dose is a tea-spoonful every twenty minutes or half hour. It has many advantages over the powder, and will keep unaltered for years, if the wine is good. The alcoholic tincture has been recommended by some authors, but it is much inferior to the above preparation made with the wine.

ACID BENZOIC.

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This acid is obtained from the gum and balsam of benzoin, by two processes. The most is obtained by sublimation, which is effected simply by placing the benzoin in a glass vessel, and subjected to heat in a sand-bath, which is continued until nothing more ascends. The second process is by precipitation, which is obtained by the following process of Stolze:—the balsam is dissolved in alcohol, in the proportion of one part to three of the latter; the filtered solution is introduced into a retort, and the acid, saturated with carb. of soda, is dissolved in a mixture of eight parts of water and three of alcohol. The alcohol is distilled off, and the benzoate of soda contained in the residuary liquid is decomposed by sulphuric acid, which precipitates the benzoic acid. This is purified by solution in boiling water, which lets fall the acid when it cools.

The benzoic acid generally found in our market is obtained by sublimation; some of it is pure and handsome, others again very inferior, and possessing a very strong unpleasant odour. That which is obtained by precipitation, when carefully prepared, is decidedly the best; it has an agreeable aromatic and pleasant odour; it is somewhat heavier than the sublimed, and in much smaller crystals. The principal use made of this article is as an ingredient to paregoric.

CANTHARIS VESICATORIA.

———:o:———

SPANISH FLIES.

The vesicating properties of the Spanish flies are known to every physician, and there appears to be no difference of sentiment in relation to the valuable properties of this article, which is more or less employed by every practitioner of medicine.

Great care is necessary in the drying of Spanish flies, so as not to destroy their properties; if kept perfectly dry they will keep a considerable time, but if suffered to get damp they speedily undergo putrefaction. They should be kept in a glass vessel or drawer. The vesicating properties reside in a green oil and a crystallizable substance called cantharidin.* This preparation dissolved in oil, or mixed with cerate, is decidedly preferable to using the fly in substance.

Cantharides is a very powerful stimulant, internally used, producing a peculiar influence on the urinary organs, &c. The dose in powder is one to two grains, which may be given twice a day, in the form of pills. The tincture, however, is decidedly the most eligible mode of administering this substance internally, and the following formula of our distinguished professor, Dr. Dewees, is particularly recommended to the faculty :—

Dr. Dewees' Tincture of Cantharides.

℞	Pulv. cantharid. - - -	℥ij. 3ij.
	—— cochineal - - -	3ij. gij.
	Spt. vin. prob. - - - -	8 pints.

M. Digest ten days, and filter.—Dose, 15 to 20 drops.

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* See oil of cantharidin.

COLCHICUM AUTUMNALE.

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This valuable plant is a native of Europe ; it has been cultivated in this country, but has proved much inferior to the English ; the climate is not adapted for its growth, and rarely produces seed in this country. The root and the seed are both used. Physicians should be more particular in their orders for this article, to specify whether the *seed* or *root* is intended ; they generally simply order colchicum, and leave it to the discretion of the druggist to send the root or the seed.

The root should be collected between the first of June and August; if collected prior or after this time, its properties are very inferior, if not worthless : great care should also be taken in drying it, for which purpose the root should be sliced, not dried whole, as the internal part of those dried whole, are generally partially decomposed and mouldy. It is owing to these circumstances, and particularly in the season of collecting the root, that so much difference of opinion has existed among authors in relation to the properties of the colchicum, and that so great a difference of quality actually exists in that which is always found in the shops. The celebrated Eau Medicinale, for the cure of gout, owes its activity to colchicum ; it has been highly recommended, and with just claims in gout and rheumatism, also as a diuretic and expectorant in dropsy and humoral asthma. The most eligible preparation of colchicum is the vinous tincture, made by the following formula:—

Wine of Colchicum Root.

℞ Rad. colchi. catus. - - - - - ℥6.
Vin. alb. - - - - - - - ℔j.
M. Digest ten days, and filter.—Dose, 25 to 30 drops.

———:o:———

SEED OF COLCHICUM.

Dr. Williams, of Ipswich, England, first brought the seed into notice; he considers them superior to the bulb, in the certainty of their effects and the mildness of their operation. Drs. Wood and Bache consider their virtues analogous to the bulb, and to have the advantage of not being liable to become injured by drying, and, I may add, not to become so soon deteriorated by age or exposure. The active properties of the seed reside in the husk or shell. It is unnecessary, therefore, to bruise the seed to make a tincture. The seed should be collected about the beginning of August; they are ovate, globose, and about a sixteenth to an eighth of an inch in diameter, of a reddish brown colour, exceedingly tough and unyielding. The seed of other plants are sometimes mixed with them, and sold for them. The most eligible preparation is the vinous tincture, made by the following formula:—

Wine of the Seed of Colchicum.

℞ Sem. colchichi. - - - - - - ℥2.
Vin. alb. - - - - - - - ℔j.
M. Digest two weeks and strain.—Dose 25 to 30 drops.

ON

IODINE

AND ITS PREPARATIONS.

——:o:——

This is one of the most valuable and important of the medicines recently introduced. It is soluble in æther, and in alcohol; the latter dissolving it proportionable to its degree of rectification. Water does not dissolve more than 1-700th part of its weight.

It is extracted from the mother waters of soda, prepared from sea-weed, where it exists in the state of hydriodate of potass. These waters are obtained by burning the fuci that are found on the coast of Normandy, draining the water through the ashes, and concentrating the liquor.

To obtain the iodine, an excess of concentrated acid is added to these waters, and the liquor is gradually brought to ebullition in a glass retort furnished with a receiver. The acid seizes on the basis of the hydriodate and on the hydrogen of the hydriodic acid, so that the result is sulphate of potass, water, sulphurous acid and *iodine*, which rises in violet-coloured vapours, passes into the receiver with a small quantity of acid, and in that state is condensed. In order to purify it, it must be washed, mixed with water containing a little potass, and again distilled. Dr. Coindit, of Geneva, was the first to use the iodine as a medicine, which he employed with remarkable success in the treatment of goitre; it

has since been used both in Switzerland and France, by several physicians, who speak very highly of its effects as a medicine in goitre, in scrofulous ulcers, &c., and quotes a number of cases of the successful treatment of these diseases by the use of iodine. The iodine is now used in this country to a considerable extent; it is generally employed in the form of tincture and ointment, formulas for the preparation of which will be given hereafter. Dr. Gardiner has published in England a very interesting memoir on the effects of iodine on the animal economy, and on its advantages in the treatment of goitre, and scrofulous and tuberculous affections of the thorax and abdomen.

Dr. Barron appears to have employed the remedy with some success in the treatment of scrofulous phthisis, and certain other tuberculous affections.

Tincture of Iodine.

Take of alcohol 36°	1 ounce.
Iodine	48 grains.

The iodine should be triturated fine with the alcohol in a mortar, and occasionally rubbed down in it; after standing twenty-four hours it is fit for use, and should be filtered before using, as there is generally a portion of the iodine undissolved.

It is given to adults in the dose of from four to ten drops, three times a day, in a glass of sweetened water; the quantity may be gradually increased to twenty drops, (which contains about one grain of iodine,) three times a day.

Solution of Hydriodate of Potass.

Take of hydriodate of potass	36 grains.
Distilled water	1 ounce.

This solution is still capable of dissolving iodine, and of thus forming an iodurettted hydriodate of potass. If we wish to procure

the solution called Coindit's, ten grains of pure iodine must be added to the solution of the hydriodate of potass described above.

These preparations, whose mode of exhibition is the same as that of the tincture of iodine, are employed as well as it in the treatment of goitre and scrofula; in the latter case some tonic is generally combined with it.

M. Magendie, has for some time made use of the solution of hydriodate of potass both in hospital and private practice; he is confident the dose of this solution may be increased to three *gros* per diem, without any unpleasant consequences; debilitated and very nervous women have taken this quantity for many weeks, without the least appearance of derangement in any function. In this dose two cases of cancer of the tongue recovered in the space of a fortnight, in the incurable wards of *L'Hospice de la Salpetriere.* The women were affected with this disgusting and horrible disease for many years, and admitted into the hospital as incurables; one still remains there, having been three months under treatment, and is going on very well. In the same place, a woman who had for a long time suffered under ulcerations of the tongue, has just received a complete cure from the use of the hydriodate of potass.

Ointment of the Hydriodate of Potass.

Take of hydriodate of potass	½ drachm.
Axunge	1½ ounce.

Mix.—This may be used to the extent of half a drachm night and morning, in the way of friction, upon a goitre or glands enlarged with scrofula; at the end of a week, the quantity may be increased to a drachm or more, according to the age of the patient and extent of the tumour. Sometimes by these means a complete resolution of tumours is effected, which could not be removed entirely by saline solutions. This ointment has been successfully

used in various cases of enlargement of the testicles, which had resisted other means. Sometimes, however, mere friction will not do, and recourse must be had to both modes of exhibition; but in general, more advantage seems to be derived in scrofulous affections from the saline solutions. The activity of this ointment may be increased by adding from ten to fifteen grains of pure iodine to form what is called ointment of ioduretted hydriodate of potass.

Ointment of Iodine.

Take of iodine	1 drachm.
Axunge	1 ounce.

Powder the iodine and triturate it with the lard in a glass mortar. This ointment is used in the same manner as that of the hydriodate, in about the same quantity; it is, however, not as much used as the hydriodate ointment, which latter is in every way preferable.

Iodurets of Mercury.

The *Proto-Ioduret of Mercury* is prepared by uniting solution of hydrate of potass and protonitrate of mercury, which precipitates the proto-ioduret. It is of a yellow colour and insoluble in water; according to Dr. Thompson, 162 parts contain 62 of iodine and 100 of mercury, or 25 of mercury and 156 of iodine.

The deuto-ioduret is prepared by dissolving separately 70 parts of corrosive sublimate, (deuto-chloruret of mercury,) and 100 parts of the hydriodate of potass, and uniting the solution, when the deuto-ioduret of mercury will be precipitated; it is very soluble in the hydriodate of potass and in mercurial salts, so that care must be taken not to apply an excess of either of them. This preparation contains 250 parts of mercury and 312 of iodine. Hydriodic acid may be substituted for the hydriodate of potass in the preparation of these iodurets.

These preparations are employed in the form of ointment, tinc-

ture, solution, and pills, and have proved a valuable remedy in chronic syphilis and venereal ulcers.

Ointment of Proto-ioduret of Mercury.

Take of proto-ioduret of mercury	20 grains.
Axunge	1½ ounce.

This ointment has been highly recommended in the treatment of inveterate venereal ulcers, in which it is said to accelerate the cicatrization.

Ointment of the deuto-ioduret of Mercury.

Take of deuto-ioduret of mercury	20 grains.
Axunge	1½ ounce.

This preparation is more active than the preceding, and is therefore to be used in smaller quantities.

Tincture of deuto-ioduret of Mercury.

Take of deuto-ioduret of mercury		20 grains.
Mix.	Alcohol at 36°	1½ ounce.

Twenty-six drops of this tincture are nearly equivalent to one eighth of a grain of the deuto-ioduret itself, it may be given to the extent of ten, fifteen, or twenty drops in a glass of distilled water. We are assured that it has succeeded in scrofulous complaints complicated with syphilis.

Sulphuric Æther with deuto-ioduret of Mercury.

Take of sulphuric æther		1½ ounce.
Mix.	Proto or deuto-ioduret of mercury	20 grains.

This being a more active dose than the preceding, must be administered in smaller doses.

Pills of the deuto-ioduret of Mercury.

Take of deuto-ioduret of mercury	1 grain.
Extract of Juniper	12 grains.
Liquorice Prowder	q. s.

Mix, and make into eight pills; two to be taken at first, morning and evening, augmenting the dose subsequently to four, at the same periods.

Pills of the Proto-ioduret of Mercury

May be made in the same manner, and taken in the same dose.

The combination of mercury and iodine must certainly be a medicine of considerable activity, and from the effects of each of them on the system in glandular affections, we might anticipate the most favourable results from the compound in scrofulous and venereal diseases.

Liquor Ferri Hydriodatis.

This article is generally sold under the name of Iodide of Iron. It was first introduced in practice in Philadelphia by our distinguished professor, Dr. Samuel Jackson, and has acquired considerable celebrity. It acts as a mild tonic and emenagogue, and brings on a more healthy hematosis; it has proved a valuable adjunct to the common pectoral syrup in coughs and pulmonary affections; the dose is from five to ten drops. The following formula of Mr. Durand, an improvement on the same recommended by Baup and Caillot, is recommended to the profession:—

Take of iodine	10 drachms.
Iron filings, pure and unoxidized	5 drachms.
Distilled water	12½ fluid oz.

Put the iodine in a porcelain capsule, with half the water, and add the filings by small portions, stirring the mixture with a glass rod. The combination soon takes place, and the mixture acquires an orange colour, gradually deepening to a dark red. When the whole of the iron has been added, heat the mixture slowly by means of a sand-bath or spirit lamp, and stir it continually; when the union has been completed the solution becomes colourless,

and in this state is filtered; and the residue on the filter is washed with the remaining distilled water previously heated to the boiling point. The amount of the liquid obtained measures twelve and a half fluid ounces, and contains twelve and a half drachms of iodide of iron, or a drachm of the iodide to each fluid ounce. This liquid will become a deep red by standing, some iodine being set free, and the oxide of iron precipitated. This defect is remedied by putting in the solution some pure iron filings, which constantly reproduces the iodide of iron with any free iodine as soon as disengaged. The colour should be a light orange. Drs. Wood and Bache states, it acts as a tonic and alterative, and may be given in various diseases in which it is desirable to stimulate the absorbent system, as in scrofulous complaints and visceral obstructions, attended with deficient action. The average dose of the solution obtained by Mr. Durand's formula, is ten drops three times a day, gradually increased until some obvious impression is produced.

Solution of the Iodo-Hydrargyrate of Potassium.

This valuable preparation has lately been introduced by Dr. Channing, of New York, who has used it with great success in pulmonary affections and other diseases. A highly interesting paper is published in the American Journal of Medical Sciences, in February number for 1834. He has prescribed it in the following formula:—

℞	Deutiod. Hydrarg.	grs. iv.
	Hyd. Potass.	grs. xx.
	Aq. distillat.	℥j.

M. ft. solut. Dose, five drops three times a day, which may be gradually increased to ten drops.

The following are such diseases as uniform observation has proved to have more readily yielded, or to have been more promptly benefited under its operation alone, than under any known treatment, viz.:—

Chronic Bronchites,	*Colitis,*
Hooping Cough,	*Constipation,*
Amenorrhœa,	*Dyspepsia,*
Leucorrhœa,	*Herpes,*
Lithiasis,	*Psora,*
Apthæ,	*Psoriasis.*
Tonsillitis,	*Anasarca,*
Pharyngitis,	*and*
Chronic Gastro-Enteritis,	*Scrofula.*

Dr. Channing further states his acknowledgements to Drs. Macnevin, Mott, Vanderburg, Wilson, Mason, Borrowe, and Wallace, of New York ; and to Dr. Jackson of Philadelphia, for their aid in proving the powers of the article. Some of these gentlemen, within the last few months, have used this medicine extensively in their practice, and fully concur in the writer's views respecting its wide application to disease, as well as its mode of administration.

Iodide of Lead.

This compound was introduced as a remedy for scrofulous swellings and ulcerations, and has proved highly useful in venereal ulcers and tumours. Its most useful exhibition is in ointment, made by rubbing one drachm of the iodide in an ounce of simple cerate. It has also been used internally in the same diseases, in doses of from one quarter to half a grain repeated several times a day.

Alcoholic Extract of Nux Vomica.

The nux vomica is one of the most active articles of the materia medica, and has lately been successfully employed in the treatment of paralysis. M. Fouquier, who has had much experience with its use and action, gives it in the form of pills, consisting of two grains each. The dose is two pills daily for the commence

ment, and gradually increased to ten or twelve, a number rarely exceeded.

The constant effect of this substance is to produce first in the paralyzed parts, and afterwards in the rest of the body, a succession of shocks or contractions similar to those occasioned by galvanism.

Magendie recommends the pills to be made of one grain each, and to commence with one or two daily, increasing the dose until the desired effect is produced. This is the dose I have generally seen prescribed by the physicians of this city. A tincture may also be employed according to the following formula :—

Tincture of the Extract of Nux Vomica.

Take of alcohol at 36°	1 ounce.
Dry extract of nux vomica	3 grains.

Dissolve.

Of this a few drops may be given in any simple vehicle. In this form it may also be used by friction upon the parts affected: it is a mode much employed in Italy, and from which M. Magendie has seen great effects result in his own practice.*

Strychnine.

It would appear to be almost useless labour expended to obtain a more concentrated preparation than the nux vomica, or the extract. The crude substance, however, like all other articles of the materia medica, is subject to vary in quality and strength, and to be affected by various circumstances to which it may be exposed, thus making the strength of the crude material vary; and consequently, the extract differing in proportion to the acting of the nux vomica, and also in the variable modes of its preparation.

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* As there are other tinctures of nux vomica, physicians who wish this article should particularly name the tincture of the *extract* of nux vomica.

Strychnine, as we generally see it, is of a grayish white, granular, or in powder; this is owing to its too rapid crystallization: if carefully prepared it is in the form of minute crystals, which, by the aid of the microscope, are found to consist of four-sided prisms, terminated by pyramids with four depressed faces. The sign of its purity is not reddening with nitric acid, a degree almost unattainable in strychnine procured from nux vomica. That obtained from St. Ignatius' bean is purer, but the purest and most easily obtained is furnished by the Upas; it is also obtained from the snake root.* The brucine exists with the strychnine in all the above articles, but in less proportion in the St. Ignatius: and M. Magendie observes, "it is unfortunate that the bean of St. Ignatius is so rare an article in commerce, as the strychnine contained in it is nearly free from brucine, and could be readily obtained from it in a state of purity."

Its action on the system is the same as that of the extract of nux vomica, and is applicable in the same cases, though much more powerful and requiring a less dose, and it might be entirely unnecessary to have recourse to strychnine, if the extract of the nux vomica were always prepared in the same manner, and exempt from those variations in their effects arising from the different modes in which they are prepared; in consequence of the greater uniformity of the strychnine in this respect, it is in general preferred. In Germany and Italy accounts have been published of its successful employment. It is generally employed in the form of pills, which are made from the following formula:—

Pills of Strychnine.

Take of pure strychnine	2 grains.
Conserve of roses	½ drachm.

Mix accurately, and divide into 24 pills.

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* Lignum or Strychnos Colubrinum.

Tincture of Strychnine.

Take of alcohol at 36°	1 ounce.
Strychnine	3 grains.

Mix.

Dose, from 6 to 24 drops, in draughts or common drink.

The pills, where they can be taken, are preferable to the solution, in consequence of the extreme bitterness and unpleasant taste; for, although nearly insoluble in water 6667 times its weight, at a temperature of 10° its bitterness will be distinctly perceptible. If a solution of strychnine made in cold water, and consequently not containing above 1-6000 part of its volime, be even still diluted in a hundred times the quantity of the same fluid.*

The strychnine is certainly a valuable remedy in paralysis, if we regard the writings of some of the most distinguished physicians. Dr. Ratier states he had occasion to see it administered to a young man affected with paralysis, in pills containing each a quarter of a grain. In the dose of a grain and a half it occasioned, but in a more considerable degree, the phenomena proper to the nux vomica; viz., a general titanic rigidity, with twitchings, which supervened every two or three minutes. These effects, which had at first alarmed the patient and assistants, terminated gradually in about three or four hours, and without any troublesome consequences.

Strychnine readily unites with acids, and forms salts which are crystallized and are soluble; this must be remembered when giving strychnine in common drink, for lemonade and all acids very much increase its activity. The following are some of the salts of strychnine, sub-carbonate, sulphate, hydrochlorate, phosphate, nitrate, iodate and hydriodate, it also forms salts with the acetic, oxalic, tartaric and hydrocyanic acids, all of which are readily obtained, and form crystallizable salts.

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* Majendie's Formulary.

The salts of strychnine, in consequence of their greater solubility are more active, and consequently more intensely poisonous than their base. When the patient is habituated to the action of strychnine, it may sometimes be advantageous to substitute the salts for the strychnine itself without increasing the dose. M. Magendie has used none of the salts except the sulphate, which has produced most decided relief in a case of paraplegia, given in a dose of a twelfth of a grain.

Brucine.

This exists, as before stated, in nux vomica, and several of the articles containing strychnine; it is analogous to strychnine, but less intense, being in the proportion to that of pure strychnine as one to twelve; or according to M. Andral, jr. six grains of brucine are equal to one of impure, and a quarter of a grain of pure strychnine; it is generally given in the form of pills or tincture, increasing the dose gradually. In medical use, that which is obtained from the bark of the brucea antidysinterica should be preferred,* as that furnished by the nux vomica is rather apt to be mixed with a portion of strychnine, which increases its power and deranges our calculation as to the effects. As it possesses the properties of strychnine in a milder degree, it may be given to the extent of one, two, or even three grains, without apprehension as to the consequences, in the same cases as the preparations of nux vomica are found to benefit. It is probable that much larger

* Brucine is obtained by subjecting the inner bark of the brucea antidysinterica to a similar process to that directed for the preparation of strychnia, with this difference, that the magnesian precipitate must not be so elaborately washed.—Brucine being much more soluble in water than strychnine, on account of the greater quantity of colouring matter which it contains. By evaporating the alcoholic liquors, the brucine is readily obtained in a resinous form, not being yet sufficiently pure to crystallize. In its purification it must be combined with oxalic acid which is to be again decomposed by magnesia, and the brucine separated by alcohol, which being slowly evaporated in the open air, brucine will be obtained in a crystallized form.

doses may be given, but we must be attentively upon our guard. M. Andral has given it in cases of palsy with advantage, from half a grain to five grains. M. Magendie has used it successfully in two cases of atrophy, one of the arm and the other of the leg. The patient took six pills daily of one-eighth of a grain. As it is subject to variation of strength from the frequent admixture of strychnine in it, the latter should be preferred, as being a more active and uniform medicine.

Pills of brucine and the tincture may be made in the same manner as those of the strychnine. Brucine forms salts in the same manner as the strychnine, and being more soluble than brucine itself, is more active and possesses some advantages.

Morphia.

This is the anodyne or sedative principle of opium. M. Robiquet prepares it by precipitating a strong infusion of opium by means of caustic ammonia; filters and evaporates the liquid down to a sixth part of its bulk; to this he again adds ammonia, and obtains a fresh precipitate of pure morphia, which he receives on a filter and washes it with cold water; when well dried, he sprinkles it with a little alcohol, and passes the spirituous liquors through a filter, which carries with it a large portion of the colouring matter and also a small quantity of morphine. He then dissolves the morphine in acetic acid, and treats the solution with ivory black. This mixture, being agitated frequently during twenty-four hours, is finally projected on the filter, and passes through in the receiving vessels entirely colourless. He next applies ammonia, and the morphia is precipitated in the form of a white powder; if this be again dissolved in alcohol, and allowed to evaporate spontaneously, the morphine will be found in fine regular white crystals, four sided rectangular prisms. Dr. Staples, an ingenious chemist of this city, has obtained the morphia by a more simple process; his

formula is published in the North American Medical and Surgical Journal of this city.

Morphia unites with most of the acids, forming various salts of these preparations; the acetate and sulphate have hitherto obtained the preference. Their proportion in respect to the opium is an eighth of a grain for a grain. M. Magendie recommends the syrup of these salts; four grains of the salt to a pound of syrup. The sulphate is preferable to the acetate on account of its solubility, being perfectly soluble in cold water. The acetate is also rendered perfectly soluble in water by adding a few drops of acetic acid to it.

For a further description of morphia and its preparations, see the article opium.

Narcotine.

This preparation is not used as a medicine. For particulars, see description of it under the head of opium, in a preceding part of this work.

Emetine.

This is a peculiar principle lately found in the ipecacuanha. M. M. Pelletier and Magendie state that this substance being much more active than the ipecacuanha itself, without possessing its disagreeable taste or nauseous smell, might upon all occasions be substituted for it with advantage. Emetine is little used in this country, much less than most of the other proximate principles.

To prepare emetine:—The ipecacuanha is reduced to a coarse powder, and digested in æther at 60°, to dissolve the fatty odorous matters. Then exhaust it by alcohol in successive portions. Place the alcoholic tinctures in a water-bath, and re-dissolve the residue in cold water; it thus loses a portion of the wax and a

little of the fatty matter which still remain; it is only necessary further to macerate it on carbonate of magnesia, by which it loses its gallic acid, to re-dissolve it in alcohol, and to evaporate it to dryness.

The emetine obtained in this way is not perfectly pure, but is the kind altogether in use here; the exceeding high price of the perfectly pure and white emetine has excluded it altogether from use here. The emetine obtained in the above process presents itself in the form of transparent scales of a reddish brown colour, having scarcely any smell, but a bitter, though not disagreeable taste.

The action of the pure emetine to that of the coloured, is as one to four; particular care should therefore be observed in prescribing emetine, to distinguish which kind you intend, or serious mistakes might occur. In prescribing emetine it should be recollected, that it is little soluble in water, and when we wish to give it in an aqueous vehicle, it should previously be dissolved in a little acetic or sulphuric acid: emetine is administered under the form of syrup or pastiles. M. Magendie has proposed emetic pastiles as a convenient form for children who cannot be made, without difficulty, to swallow liquids.

Take of refined sugar	4 ounces.
Coloured emetine	32 grains.

From this make pastiles of 18 grains, one of which suffices for children, and three or four for adults.

Pectoral Pastiles of Emetine.

Take of refined sugar	4 ounces.
Coloured emetine	32 grains.

For pastiles of nine grains. One is given every hour; if more frequently, nausea will be excited.

Syrup of Emetine.

Take of simple syrup	℔i.
Coloured emetine	16 grs.

Make a syrup.

The above syrup may be substituted for the syrup of ipecacuanha used in France.

The Pastiles and Syrup of Emetine

May be made in the same manner as the above, by using one fourth the quantity of pure emetine, that is, 8 grains instead of the 32 grains of coloured emetine.

For the alkalies of cinchona bark, see the article cinchona.

Quinine and Cinchonine.

The sulphate of quinine is preferred; and in general use, it is prescribed generally in pills of one or two grains each, or in the form of mixture with gum arabic and cinnamon water; the mixture is objectionable on account of the quinine being only partly soluble in water, and is merely suspended for a short time by the mucilage of the gum arabic. The following I consider a more eligible mode of exhibition, as it forms a perfectly transparent and entire solution, which will keep unaltered for any length of time :—

Take of sulphate of quinine	8 grains.
Alcohol	℥i.
Acid sulphuric	6 drops.
Aqua cinnamon	1 ounce

Reduce the quinine in powder, and add by degrees ℥ii. of water in which the sulphuric acid is mixed, and as soon as dissolved, add the remainder of the cinnamon water and alcohol.

Veratrine.

This very acrid alkaline principle is met with in all the plants of the family of veratrum, and especially in the sabadilla, colchicum, and white hellebore; on account of its strongly purgative property it can with advantage be substituted for these plants.

To obtain the Veratrine.

The seeds of the sabadilla are to be treated repeatedly with boiling alcohol. These tinctures filter while still nearly boiling, which will deposit on cooling, whitish flakes of wax; the substance in solution, reduced to the consistence of extract, is to be taken up by cold water, and re-filtered. There then remains upon the filter a small quantity of fatty matter; the solution is to be slowly evaporated. A precipitate is to be formed of an orange yellow colour, which exhibits the characters of that colouring matter which is found in almost all woody vegetables. A solution of acetate of lead is now poured into this highly-coloured liquid, and there forms immediately a new and very abundant yellow precipitate, which is separated by filteration. The lead is separated by means of sulphuretted hydrogen; the liquor is then filtered and concentrated by evaporation, afterwards treated by magnesia, and again filtered. The magnesian precipitate is next exposed to boiling alcohol, and the spirituous fluids being evaporated, yield a pulverulent substance extremely acrid and possessing all the alkaline properties; by frequent solutions in alcohol and precipitations this substance which is at first yellowish, will become very white, and perfectly inodorous.

Its taste is very acrid, without any perceptible bitterness; but, however small the quantity taken in the mouth, it excites profuse salivations. It is perfectly inodorous, but must not be smelt too closely, for even the trifling quantity carried by the air into the

nasal cavities is often sufficient to produce violent and dangerous sneezing; a quarter of a grain conveyed into the intestinal canal readily produces very copious dejections and by a quantity trifling beyond this, vomiting more or less violent is excited. M. Magendie, however, has lately given it to the amount of two grains in twenty-four hours, without excessive purging; in the case of an old man who had suffered an apoplectic attack; which furnishes another proof that the state of the nervous system materially influences the action of medicines.

M. Magendie thinks it should take the place of those pharmaceutical preparations whose basis is either colchicum or hellebore; they would thereby be rendered more powerful therapeutic agents, and at once more convenient and certain. By this change the tincture of colchicum, the eau medicinale, and some others, would lose that uncertain character which gives just cause of dissatisfaction with them.

M. Magendie has proposed the following formula:—

Pills of Veratrine.

Take of veratrine ½ grain.

Gum arabic and syrup sufficient to make six pills; one of which is to be administered, and if no purging follows, three may be given in the course of the day.

Tincture of Veratrine.

Take of veratrine 4 grains.

Alcohol 1 ounce.

This tincture may be given in the quantity of from 10, 15 to 25 drops, in a cupful of any mild or simple drink. It may be administered internally instead of the tincture of colchicum, in anasarca and other varieties of dropsy; and externally, in frictions, in the same diseases, and also in gout.

☞In Ratier's formulary *one ounce* of veratrine is directed to be used with four ounces of alcohol, and the dose is directed in the same quantity as the above, prepared with four grains. This is certainly a very great error and might lead to very serious accidents.

Solution of Veratrine.

Take of sulphate of veratrine	1 grain.
Distilled water	2 ounces.

To be substituted for eau medicinale of Husson.

Ointment of Veratrine.

Take of veratrine	4 grains.
Axunge	1 ounce.

In external applications in cases of chronic rheumatism, anasarca, and gout.

NICOTIANA TABACUM.

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TOBACCO.

NICOTIANA is so called from M. Nicot, by whom the plant was first introduced; and Tabacum from the island on which it was discovered. It is narcotic and emetic; in small doses it has been successfully used in incarcerated hernia, and obstinate constipation of the bowels. As an unguent or lotion, Dr. Chapman states it is much employed in the popular practice of this country to clean foul ulcers, to remove eruptions, as tinea capitis and some other of these affections, and also in the shape of cataplasm, as a discutient of indolent tumours. The active principle of tobacco is no doubt the essential oil, which is obtained by distillation, and collected from the water, on the top of which it will be found to float. The oil can be used for all the purposes for which the tobacco is recommended, by graduating the dose according to the circumstances of the case. It is conjectured by Dr. Paris* that the juice of the cursed Hebanon, by which, according to SHAKSPEARE, the king of Denmark was poisoned, was no other than the essential oil of Tobacco:—

——————" sleeping within mine orchard,
My custom always of the afternoon,
Upon my secure hour thy uncle stole
With juice of cursed hebanon in a vial,
And in the porches of mine ears did pour
The leprous distilment,"——————

* Paris' Pharmacologia.

In the first place the learned commentator, Dr. Gray, observes, that the word here used (hebanon) was more probably designated by a metathesis, either of the poet or transcriber, for hebanon, i. e. henbane. Now, it appears, from Gerarde, that tobacco was commonly called henbane of Peru, (hyosciamus Peruvianus,) and when we consider how high the public prejudice ran against this herb in the reign of James, it seems very likely that Shakspeare should have selected it as an agent of extraordinary malignity. No preparation of the hyosciamus with which we are acquainted would produce death by application to the ear; whereas, the essential oil of tobacco would, without doubt, occasion a fatal issue. The term distilment has also called forth a remark from Stephens, which is calculated to support this conjecture: "Surely," says he, "the expression signifies that the preparation was the result of a distillation."

ANTHEMIS NOBILIS.

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CHAMOMILE.

This plant is cultivated for medicinal purposes in Germany, France, and Italy, and is generally known by the name of Roman chamomile. The flowers, which are large, are generally preferred: this is an erroneous idea of the characteristic of their quality. The flowers readily become large and double by cultivation, but the active properties reside almost wholly in the internal disk. The single flowers are therefore to be preferred as being more active. A great portion of the chamomile flowers in the shops are almost inert, as they are very soon injured by age and exposure, and become, in a short time, worthless. Physicians should be very particular, therefore, to order them fresh, and not to get many at a time, and keep them in a close bottle or drawer. The fresh are much cheaper than some which have been long kept, even at four times the price; and more attention should be given to the quality than the price. Chamomile is a mild tonic and febrifuge medicine, and is frequently prescribed, and is considerably used in families as a domestic remedy, in colds, fevers, &c. The infusion is the most eligible mode of using this article; a quart of boiling water may be poured upon an ounce of the blossoms, and when cold, a wine-glassful may be taken frequently through the day.

ULMUS.

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SLIPPERY ELM.

The inner bark is the part used in medicine. The Ulmus Fulva, which produces this valuable medicine, is indigenous, and grows in all parts of the United States, but most abundantly on the Alleghany mountains. It is an excellent demulcent, and is recommended in dysentery, diarrhæa, consumption, &c. Its mucilage is highly nutritious, and is also found by recent experience to be singularly beneficial when applied to cutaneous eruptions, chilblains, and various kinds of sores and ulcers. The superfine flour, prepared by grinding the interior bark and passing it through a bolting cloth, is decidedly the best preparation. This flour is applicable to a variety of important cases; experience and the testimony of the most eminent physicians prove it to be a valuable medicine in all inflammations of the mucous membranes, such as colds, influenza, pleurisy, quinsy, dysentery, stranguary, and inflammation of the stomach and bowels. It is also a pleasant and salutary medicine and diet in consumption.

The following mode of using it is recommended:—Mix a teaspoonful of the flour with as much sugar, stir them in a tea-cupful of cold water, and season with nutmeg, or any agreeable spice; pour this into a pint of hot water, boil, strain, and it is finished. The jelly may be made thick or thin, and seasoned to suit the taste. It may be taken in the same quantity as the arrow-root, is as palatable, and far preferable as a medicine. It is prepared in superfine flour, and neatly put up in convenient packages with directions, at my CHEMICAL WAREHOUSE, No. 301 MARKET STREET, Philadelphia.

ALOES SPICATA.

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This article is obtained by evaporating the juice of the plant, obtained by wounding the leaves, and sometimes by expression. There are three varieties in commerce.

1st. Cape Aloes. This variety is almost entirely used in this country, and is confounded with the name of socotpine, from which however, it differs considerably in appearance and sensible properties. It breaks with a clear, bright, and almost glassy surface, of a bright olive colour approaching to black; the powder is of a greenish yellow colour.

2d. Socotrine Aloes. This article is very rarely found genuine in our country. It is frequently composed of Cape aloes, gamboge, and some aromatic gums, and occurs of a reddish brown colour with a tinge of yellow. The colour of the powder is a very light yellow, and the taste, although very bitter, is accompanied by an aromatic flavour.

3d. Caballine or Fœtid Aloes is seldom imported or used in this country; it is prepared from the dregs or residuum of the other varieties, and used chiefly for horses. The low price, however, of the Cape aloes has rendered it unnecessary to introduce this inferior article. Aloes is well known as a valuable cathartic, and is frequently used as an adjunct to others of the same class. The dose is ten grains.

AMMONIACUM.

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Gum Ammoniac is the concrete juice of the ammoniac plant. The juice exudes from the plant from innumerable punctures made by an insect of the beetle kind. It is generally imported in cases from Calcutta.

Ammoniac occurs in commerce of two kinds, in separate tears and conglommerate masses. Physicians should be very particular in their orders for this article to direct the gum ammoniac in tears, and not in mass, as the former is much superior in quality, and can be used with more convenience. Ammoniac is always more or less, mixed with foreign matter, frequently with seeds of the plant, sand, or other earth, from which the pure tears may, however, be readily separated; but in the massive variety they are all enveloped or consolidated.

Gum ammoniac has been used with great advantage in chronic catarrh, asthma, and other pectoral affections, and enters into the composition of numerous formulas of mixtures, pills, plasters, &c. &c.

GUM MYRRH.

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This gum resin is much more extensively used within the last two years than it has been heretofore. There is a very considerable difference in the quality of it; a great portion of that which comes to our market is very inferior. The Turkey myrrh is the best; it has a mild, aromatic, slightly bitter taste, and pleasant fragrant odour; occurs in irregular fragments or masses, frequently somewhat like tears, of a reddish yellow colour, and somewhat translucent, and occasionally with small pieces of the bark attached; it is brought from Arabia by the route of Egypt. The inferior myrrh is in large irregular masses of a deep opaque colour, and a harsh, disagreeable, bitter, and astringent taste, and is known by the name of India myrrh.

The Turkey myrrh, previously described, is worth three or four prices of the other, and is, intrinsically, worth more than this difference. Physicians cannot be too particular in their inspection and examination of this article, as the qualities of it are so very various.

RHEUM.

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THERE are several varieties of rhubarb in our market, Chinese, Russian, European and Rhaponticun. The principal part, however, which is to be met with is the Chinese, and which is a very superior article. Most of that which is sold at a high price in our market is Chinese rhubarb, which has been prepared by rasping and cutting, or russifying, as it is termed. I have also seen the English rhubarb (which is inferior to the China) thus russified, and sell at two or three dollars per pound, while the best quality of the China rhubarb could be bought for 75 cents, or less. Rhubarb of good quality is moderately heavy and compact, of a lively yellowish colour, brittle, presenting when broken a fresh appearance, with reddish and yellow veins entangled with white, and an odour aromatic, with a slightly bitter and astringent taste. When light, rhubarb is worm-eaten or porous; and when very heavy, it is of inferior species or culture.

The English rhubarb is more spongy and fibrous, is of a lighter colour than the Chinese, and is far inferior to it. I have never seen any genuine Russia or Turkey rhubarb in this market. Fresh China rhubarb, of a good quality, is little inferior to the Turkey, and superior to most which is sold for Turkey, but which is, in fact, inferior kinds of Russia, East India, and English rhubarb artfully dressed up and sold under the name of the best Turkey at a high price. I would advise physicians to specify distinctly in their orders the Chinese rhubarb.

ACID CITRIC.

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This valuable acid occurs in the crystalline form and is obtained from the juice of limes and lemons. The juice of the fruit is of variable quality, yielding from 4 to 6 ounces of the crystallizable salt to the gallon.

It is certainly a valuable acquisition to the physician in the country, who cannot always have at his command fresh lemons; and indeed in the city, where they are to be had, I think a decided preference should be given to this salt, for its uniformity of strength and its convenience of use, and possessing at the same time all the qualities which are valuable or important in the fresh lemon-juice. In making the neutral mixture it is a valuable substitute for the fresh lemon-juice, and it is a subject of surprise it is not more frequently prescribed. In consequence of its definite and fixed degree of acidity, the proportion of the acid and alkali can be definitely prescribed; and not suffering it to be left to the uncertain judgment of inexperienced youth to neutralize the mixture, by no other test than the taste, or its ceasing to effervesce, and which frequently, if not always, is inaccurately prepared. 3i. of the acid dissolved in two ounces of water is equal to a like quantity of lemon-juice of the average strength. 3i. of the sub-carbonate of potass will neutralize this quantity, to which, if 6 ounces of water and 3ij. spt. nit. dulc. is added, you have a beautiful mixture, forming the usual saline draught prescribed by our most distinguished physicians. An agreeable *lemonade* may be formed for patients or for an agreeable beverage, by dissolving 3ss.

of the acid in a pint of water, to which a sufficiency of sugar, to suit the taste, may be added.

Lemon acid has of late been found much adulterated with tartaric acid, particularly some which has been received from France. I have seen none from our own manufacturers but what has been pure. As long as we can get a good article at home at a fair price, we should not go abroad to pay higher for an inferior article.

MANNA

Is a gentle laxative, usually prescribed with senna, or other purgatives.

It is the product of the fraxinus ornus, which is a native of the south of Europe, growing abundantly in Calabria, Apulia, and Sicily. It is obtained by spontaneous exudation, and especially by making longitudinal incisions, about three inches in length, in one side of the tree, and continued from the base of the trunk to the other branches. There are 3 varieties of manna in commerce:

1st. The flake manna is the purest and cleanest; it is collected in the month of July or August, and is in irregular, unequal pieces, with a rough encrusted surface, porous and brittle, of a yellowish white colour.

2d. The common, or manna in sorts, is in small fragments, of a yellowish colour, mixed with a soft adhesive mass; it is collected about the beginning of October, when the heat of the weather has begun to moderate, and the juice does not concrete so rapidly.

3d. The fat manna is collected about the first of November; the juice has now less disposition to concrete, and, flowing down to the trunk, is received in a small excavation at the base; it is a soft viscid mass, of a dark brown colour, heavy, and containing more or less impurities.

The medical properties of these varieties of manna are about equal, although there is a very great disparity in their prices. I would recommend to the physicians to use the manna en sorte, being fully equal to the best flake in its medical properties, and at almost one half the price. The pure flake manna contains a considerable proportion of saccharine matter.

The dose for adults is 1 to 2 ounces, but it is generally given combined with other medicines.

MOSCHUS.

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Musk varies considerably in quality, according to the locality where the animal inhabits. The best is imported from China; the colour is a deep brown with a shade of red. The musk is contained in a sac, which is oval, hairy, and projecting. In the adult and vigorous animal the sac contains sometimes 2 to 3 drachms, but in the old ones seldom more than a ½ to 1 drachm, and in the young animals it is entirely destitute. The sacs are convex and hairy on one side, flat and without hair on the other. The Chinese, which is the most highly valued, is in bags of a rounder shape, covered with brownish yellow hairs, containing at most a drachm of large grain musk. It is high time this article was expunged from the materia medica; there has probably not been an ounce of pure musk sold for many years. There is no article in which there has been greater fraud or imposition; most of that which now comes from Canton and other places is in sacs, artificially made of leather, and sometimes bladder, on which hair is ingeniously attached to one side, and the other rendered extremely like the natural sac; this is filled with dried blood, animal membrane, asphaltum, and other substances, mixed with a few grains of musk. Sometimes a sac weighing more than an ounce dose not contain, probably, more than 10 or 15 grains of pure musk, or sufficient to give it odour; and some who vend the article here, not satisfied with this, make several ounces out of one by a further admixture, or what they call granulation. The faculty should open their eyes to this detestable fraud, which has been practised for years, and continued to this day.

MOXA.

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This substance is employed to produce an eschar, by being burnt slowly in contact with the skin. The Chinese moxa is prepared from the leaves of the artemesia Chinensis; it is a fine lanuginous substance, and is prepared by beating the leaves in a mortar. A similar moxa has been made in France, from the leaves of artemesia vulgaris, or common European mugwort. In consequence of the difficulty of obtaining these substances, various articles have been proposed as substitutes; our distinguished professor Dr. Jackson has used cotton impregnated with nitre. It is important that the impregnation should be uniform. It is prepared by introducing one pound of cotton in a solution of two ounces of nitre in a gallon of water, and a moderate heat applied until all the liquor is evaporated. The cotton, when dry, is then formed into cylinders, from a ½ to 1 inch in diameter, and several inches long.

The following substitute is recommended in the Journal of the Philadelphia College of Pharmacy:—

Macerate strips of coarse cotton or muslin in a saturated solution of the above salt, and when nearly dry, roll them tightly on a piece of wire of the twentieth of an inch in thickness, until the cylinder shall be about ¾ of an inch in diameter, or as thick as may be thought desirable. The roll must then be wrapped round very

tightly with strong thread, and covered with a piece of fine muslin stitched over it. The wire may then be withdrawn, and the cylinder completely dried. When wanted for use, a small piece of the requisite length may be cut off by a sharp knife, and fixed on the part by a piece of adhesive plaster, having a cross cut in the centre. This moxa burns with a more uniform and steady ignition than those prepared with nitre.

ACID PYROLIGNEOUS, PURE.

ACETICUM FORTIUS.

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THERE are two sorts of common vinegar in commerce, the white and red. The former from the acetification of white, and the latter of coloured wine. The red vinegar, however, can be rendered colourless by filtration through animal charcoal. Vinegar is prepared from various substances and different processes; in the United States it is chiefly prepared from cider. Vinegar, when good, is of a pale colour to a deep red, of an agreeable and penetrating odour and pleasant acid taste. Vinegar is sometimes adulterated with sulphuric, muriatic, or nitric acid, which may be detected by the usual tests, barytes, &c. &c. The strong acetic acid, or concentrated pyroligneous acid, is prepared from charred wood, which yields several valuable products, among which are empyreumatic oil, tar, and an acid liquor. The impure pyroligneous acid consists essentially of acetic acid, diluted with various proportions of water.

Pure pyroligneous acid which is concentrated by the separation of the water, and in proportion to the degree of this separation is the acid designated by numbers corresponding with the degree of strength, &c. Thus No. 6 is six times the strength of common vinegar; No. 8 is eight times; and so on in numbers, from 1 to 12, and upwards. No. 8 is the most convenient, and best adapted for the use of the medical profession; one pint of which added to seven pints of water, is equivalent to a gallon of distilled vinegar of the ordinary strength of the shops, and is much preferable,

being always of uniform strength, and possessing every advantage and property of the latter.

Pyroligneous acid diluted has been advantageously employed in gangrene and chronic ulcers. Dr. T. Y. Simans, of Charleston, has published his successful treatment with this remedy in the fifth volume of the American Journal of Medical Sciences.

It has the remarkable property of keeping sound and good any length of time, and in all climates. It is a powerful antiseptic in contagious diseases; particularly grateful as a fumigator; preserves meat either cooked or raw, for days and weeks, in the hottest weather; and, by washing the part affected, completely removes must, taint, and even putrefaction from meat, fish, game, &c.

No sea captain should be without this invaluable article, and for their convenience it is sold in bottles containing one pint or pound, as it may be used for the conservation of fresh provisions for sea-stores. All that is required is to dilute the acid with water as directed above, and immerse the meat therein; or, which would be more economical, to sponge the meat carefully all over.

PRUSSIC ACID.

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This very powerful medicine was discovered by Scheele in 1770, although he could only obtain it mixed with variable proportions of water. To M. Gay Lussac we are indebted for its acquisition in the state of purity.

For the preparation of prussic acid see Coxe's dispensatory, and most of the chemical works.

Prussic acid is readily decomposed if left to itself; in well stopped vessels it sometimes decomposes in less than an hour, and it can rarely be preserved for any length of time. This circumstance forms a considerable objection to its use. It should be kept in black bottles, as light is found to decompose it rapidly; its taste at first is an agreeable freshness, but soon becomes acrid and irritating. Its odour is powerful and noxious, being insupportable when not mixed with a considerable quantity of air; it then resembles the smell of bitter almonds. Its action on animals is very powerful; one drop of the *pure* acid introduced into the fauces of a remarkable strong dog killed him instantly; a few particles applied to the eye will produce effects almost equally sudden. The acid which we receive is not so strong, and is called medicinal prussic acid; prepared, no doubt, from the formula of Scheele, or the acid of Gay Lussac diluted. Prussic acid diluted according to the formulas we are about to give, has been successfully employed in all cases of morbid irritability of the pulmonary organs; it is also advantageously employed in the treatment of nervous and chronic coughs, asthma and hooping cough,

and where this symptom is sympathetic with an affection of some other organ, as also in dyspepsia.

The acid prepared by Scheele's process is very variable, in consequence of the arbitrary discretion which the process allows the operator. That of Gay Lussac is much better adapted for use when properly diluted, being of more uniform strength. It is to be mixed with six times its volume of distilled water. This is the preparation which M. Magendie has given the name of medicinal prussic acid, and is about the strength of the prussic we now receive, so that physicians can prepare it according to the following formula:—

Pectoral Mixture.

Take of medicinal prussic acid	℥i.
Distilled water	℔i.
Refined sugar	℥i½.

Mix.

Of this mixture a table-spoonful may be taken night and morning. The dose may be gradually increased to five or six times this quantity; it is very important that the mixture should be well shaken immediately before using it, to avoid serious consequences, as the acid sometimes floats on the surface of the water.

Cyanic Syrup.

Take of simple syrup	1 pound.
Medicinal prussic acid	℥i.

Make a syrup.

This preparation is used in common pectoral drinks, and as a substitute for other syrups.

In consequence of the variable strength of the prussic acid, and preparations made by different processes being indiscriminately sold, the faculty should be cautious in their prescriptions for it,

to ascertain if possible the strength of it, or to begin with a very small dose, which can be gradually augmented until he discovers what quantity would be most judicious to employ.

Cyanuret of pure Potassium.

M. M. Robiquet and Villermer have proposed the solution of the cyanuret of potassium as a substitute for the prussic acid, its action on the animal system being the same ; which being an uniform preparation, will obviate the inconvenience of the variable strength of the prussic acid. This preparation has yet been little used in this country.

Cyanuret of Zinc.

This preparation of late has been employed in Germany instead of the hydrocyanic acid, and has obtained the reputation of possessing decided vermifuge powers. The following is the mode of preparing a composition which is apparently the one in vogue in Germany.

M. Pelletier has succeeded in obtaining this preparation by the following process : sulphate of zinc is precipitated by hydrocyanate of potass which forms a triple hydrocyanate of zinc ; which, being well dried and calcined at a dull red heat, is converted into cyanuret of zinc. It always contains, however, cyanuret of potassium.

This preparation may be given in the same doses as cyanuret of potass, beginning with one-fourth of a grain, and advancing gradually to a grain and a half, in a mixture, to be taken by spoonful. But caution should be particularly observed in its administration.

Dr. Henning reports (in Hufleand's Journal for 1823) that this medicine has been successfully employed in all cases where prussic acid is applicable, more especially among children in cases of worms. He there gave one grain with powder of jalap.

Cyanuret of Iodine.

This preparation has not yet been used in medicine, nor its effects on the animal system yet ascertained. M. Serullas is of the opinion, from its composition, that it ought to produce powerful effects on the animal economy, and that probably, as a medicine, occasion may be found for its employment. It does not, however, appear to be so deleterious as the nature of its elements would lead us to suppose. M. Serullas tasted it, and several persons in his laboratory. M. Thenard had furnished M. Magendie with a sufficient quantity of this substance, but was not able to report yet upon its mode of action.

Solanine.

This alkaline principle exists in the leaves of the solanum dulcamara, and is also found in the greatest abundance in the berries of the solanum nigrum, where it exists in the state of malate. In order to obtain it the juice of these berries, when filtered, is to be treated with ammonia, which produces a grey-coloured precipitate; this deposit collected on a filter, washed and treated with boiling alcohol, yields by evaporation a salafiable base, which, if the berries have been perfectly ripe, is in effect sufficiently pure. If the berries were green the solanine will contain a portion of green colouring matter, which is with difficulty separated. Introduced into the stomach of a cat to the amount of two to four grains, it produces violent vomiting, followed quickly by a state of drowsiness which lasts several hours. The acetate is the only salt of solanine which has been tried upon the human species. In the dose of a quarter of a grain it produces nausea, but the tendency to sleep has not been remarked.

From what has been reported of it, it appears that solanine, like opium may produce vomiting and sleep, but its emetic powers

seem to be more decided than those of opium ; the narcotic properties are evidently much less so. It has not yet been given in cases of disease, but it may be employed wherever the extract of solanum nigrum or that of dulcamara may be indicated.

Delphine.

This alkali was detected in 1819 in the seeds of the delphinum staphisagria. It has not yet been employed as a medicine, but if the stavesacre possesses any medical power, it no doubt resides in this alkali ; it may therefore be employed where this plant is applicable to diseases, and the salts, of which it forms the base, will there be preferable on account of their solubility.

Urea

Is the immediate principle of the urine of mammiferious animals. It is obtained by evaporating the urine to the consistence of syrup, forming a supernitrate of urea by nitric acid, and decomposing again by sub. carb. potass, by which the urea is obtained in crystals.

M. Fouquier has employed the urea as a diuretic, though to M. Balley it does not appear to possess that property; the dose is from fifty to sixty grains. It does not appear to be a medicine likely to be very important.

Thrydace, or Lactucarium.

M. Bidault de Villers had for a long time employed the inspissated juice of the garden lettuce, and M. Francois has proposed to renew its use under the name of thrydace. He ascribes to this substance a sedative action milder than that of opium, inasmuch as it is accompanied neither with constipation nor stupor. The dose is two grains. "It is necessary," says M. Francois, "to increase rapidly the doses, and, for one or two days, to interrupt its

exhibition, as the stomach very soon accustoms itself to its action. It may be carried to the extent of eight grains, taken in three doses during the twenty-four hours, without any inconvenience.

Preparations of Gold and Platina.

The preparations of gold have been highly extolled in inveterate syphilitic affections. With M. Cullerier, who has given them a persevering trial, they have not succeeded. They are difficult to manage, as much on account of their great activity as on account of the facility with which they are decomposed. The dose ought to be extremely small, not exceeding the fifteenth or twentieth of a grain. The same observations may be applied to the salts of platina.

Four preparations of gold are now employed in medicine :

1st. The chloruret, or muriate of gold.

2d. The chloruret, or muriate of gold and soda.

3d. The oxide of gold.

4th. The oxide of gold, by tin or purple powder of cassius.

The muriate of gold is that most generally employed in medicine and is preferable to the other preparations.

Lupuline

Is the active principle of the hop, (humulus lupulus,) it is in the form of small shining yellowish grains, which cover the base of the strobiles of the hop ; it is of a golden yellow colour, of an aromatic odour and pulverulent. Upon analysis, it is found to consist essentially of rosin, a little volatile oil, and a bitter principle; its taste is extremely bitter. Magendie states it is soluble in water, alcohol and æther. I have only found it partly so in æther, and that alcohol was the best menstrua. M. Magendie has not recognized in lupuline the narcotic properties advanced by Pro-

fessor Ives, of New York; although this is one of the properties, he observes, most readily manifested in his experiments with it on animals.

It may be administered in the form of powder, pills, tincture or syrup. It can be readily reduced to powder, by mixing it with two parts of sugar, and triturating, then gradually pound them together in a mortar.

Pills of Lupuline

May be made of two grains each, it may be beaten into a pillular mass without any adjuvant.

Tincture of Lupuline.

Take of powdered lupuline	1 ounce.
Alcohol at 36°	4 ounces.

Digest it for six days in a close vessel, strain, press it strongly, and filter: Magendie directs it made with two ounces of alcohol and when pressed, sufficient alcohol is added to make up three ounces of tincture. This is certainly objectionable, for the quantity of alcohol which is added to the tincture would certainly be preferable to add while digesting, as the two ounces of alcohol does not exhaust the lupuline, and barely covers it; four ounces is quite small enough; and I even think that six or eight ounces of alcohol would be preferable, and would then be considerably stronger than the tincture of hops.

Syrup of Lupuline.

This is made by adding the tincture of lupuline to simple syrup. The doses of these preparations are not yet accurately fixed, but as the lupuline possesses no poisonous quality, the dose may easily be determined by the practitioner.

Lupuline has generally been prescribed, in this city, in doses

of two or three grains; and I have been informed by several of the faculty, that it possessed anodyne properties, and was a highly valuable substitute for the hop.

Croton Tiglium.

The seeds of this plant yield a very acrid and powerful purgative oil. One drop of the pure oil being a dose for an adult. It is a native of the Molucca islands, and of the greater part of the peninsula of India. Dr. Burroughs informs us, in India the oil is expressed from another plant a different species of croton. This article, although less powerful than the genuine croton oil, is an active cathartic in doses of four or five drops. The croton oil is composed of 45 per cent. of acrid principle, and 55 per cent. of fixed oil. It is sometimes adulterated with other fixed oils; they can be detected by their less degree of solubility in alcohol, and if adulterated with castor oil it is discovered by its greater solubility. If cold alcohol dissolve less than 45 per cent., olive oil may be suspected, and if more, castor oil is no doubt present. As these oils may be mixed in certain proportions, it may be difficult to detect them. The physician must therefore rely upon the person who he procures it from for its genuineness.

I have taken considerable pains and great precaution to get the article direct from an individual upon whom I can place every confidence. Under these circumstances, I have thought proper to put up my oil in small vials, and to affix my written signature to each on the outside envelope of the vials, as a guarantee of its purity.

The dose for an adult is one to three drops, and may be administered to those who can take it in castor oil; or where the stomach is very irritable, it can be made into pills with castile soap or crumbs of bread; it can also be given in emulsion or tincture, where small quantities are required.

It is obtained from the seeds by expression and boiling, similar to obtaining the castor oil. Dr. Nimmo of Glasgow has obtained the oil by digesting the bruised kernels in sulphuric æther, by this process he obtained from three hundred grains of the seed two drachms of the oil; which had the taste and medicinal properties of the common oil of croton.

The oil of croton may be employed as an ordinary purgative, when there does not exist any symptoms of irritation about the stomach or intestinal canal; it should especially be preferred when common purgatives have been administered without success in appolexies, in dropsies, and when mechanical or other obstacles oppose the action of usual purgatives, but above all when it is requisite to produce action on the bowels speedily.

It is recommended by Dr. Ainslee, of Madras, to be externally used in cases of rheumatic affections.

A number of cases of obstinate constipation is cited by Dr. Kinglake, as having been cured by a single drop of this oil given in the form of a pill.

In this manner he cured a patient labouring under colica pictonum. (See Bulletin des Sciences Medicales Fevrier, 1824, page 145.)

Soap of the Oil of Croton.

M. Caventon, to obviate the inconveniences arising from the variation in the size of drops, has prepared a soap according to the following method. Two parts of the oil, and one part of the liquid caustic soda of the French pharmacopœia, are to be triturated together without heat. When it has acquired consistence, it is poured into a paper mould, and cut in slices to be kept in a large mouthed stopper bottle.

This soap has been given by M. Balley, in doses of from two to

three grains, in pills or solution, and the effect has been the same as oil of croton.

The oil of croton may be advantageously used as an adjunct to other cathartic medicines, which would increase the activity and not enlarge the bulk.

Professor Coxe suggests that a similar acrid and powerful oil exists in the *skins* of the castor oil bean, and suggests the importance of experimenting upon them; the seeds, when taken into the stomach, most certainly in small quantities excite very considerable and increased action, more than equal to the quantity of oil which would result from ten times the quantity of seeds; it therefore must be evident that there is still a very active principle left in the residuum of the beans, after the oil has been expressed; and hence it is, that the hot-pressed oil is more active than the cold-pressed, which, no doubt, arises from pressing the seeds more closely, and the heat separating a portion of this acrid oil from the skins. There can be no doubt but that the opinion of Professor Coxe would be verified by experiments upon this article.

Oil of Euphorbia Lathyris.

Dr. Carlo Calderino obtained an oil from the seeds of the euphorbia lathyrus, or spurge, which may be used with advantage for the oil of croton tiglium, and which, like it, acts in a very small dose.

The oil is obtained by simple process of expression; fourteen ounces of seeds will yield six ounces of very prime oil.

My friend, Dr. Milnor, of Allentown, New Jersey, about a year since, sent me some of the seeds of the euphorbia, which grew in the neighbourhood very abundantly. I have expressed the seeds and obtained the oil similar to that imported; since which Mr. Thomas Bellanger, of New Jersey, has sowed an acre of this plant, and manufactured considerable of the oil. The euphorbia

grows abundantly in this country, and will no doubt be extensively cultivated, should full experience with the article justify its value as a medicine.

The oil differs from croton in not being acrid, nor possessing an unpleasant flavour; it very much resembles the castor oil; it has the same colour, but not quite so dense, and does not possess any odour. It forms, like croton oil, soap with alkalies. The action of the oil of euphorbia is purgative, and its effect is very certain and prompt. "It is to be considered," says the Italian author, "as a very mild purgative; it does not produce vomiting, cholic, or tenesmus; it may be administered even in dysenteries, when there is irritation in the intestinal canal. It may be employed in all cases where it is desirable to purge gently, and with a small dose of medicine. The dose of the oil of spurge is from four to eight drops; children of two or three years may take a dose of three drops in chocolate. To very irritable subjects an emulsion may be given, made with eight drops of the oil, some aromatic water, and syrup of orange peel; this has in several cases produced very good effects.

Gentianine.

This is the active principle of the gentian root of commerce. It is little soluble in cold water, but dissolves in boiling water; it is yellow, inodorous, possessing very strongly the aromatic bitter taste of the gentian. All which I have seen imported is of a dark brown colour, and is no doubt very impure, resembling more a common extract than any other of the alkaline or proximate principles.

The gentianine is obtained by digesting the powder of gentian in cold æther, which furnishes a green tincture; this being filtered and poured into an open vessel, if sufficiently concentrated, will deposit a yellow crystalline mass; this mass is to be treated with

alcohol, which filtered and exposed to a strong heat, the yellow crystalline substance begins to appear, assuming at the close of the evaporating process a solid mass, extremely bitter ; taken up again by alcohol, it is partially dissolved. This last spirituous solution, besides the bitter principle of the gentian, contains an acid substance and the odorous principle also. Upon evaporating this liquid to dryness, washing the residuum in water, adding a little calcined and well-washed magnesia, boiling and evaporating in a water-bath, the greater part of the odorous matter of the gentian is driven off, the acidity is removed by the magnesia, and the bitter principle remains partly free, and partly in a state of combination with magnesia, to which it imparts a beautiful yellow colour. Then, upon boiling this magnesia with æther, the greater part of the bitter principle is obtained pure, and is insulated by evaporation. The tincture is the most preferable form for its administration, and it may be made in the following manner:—

Take of alcohol at 24°	1 ounce.
Gentianine	5 grains.

This may be substituted for the tincture of gentian, and used in the same circumstances.

Syrup of Gentianine.

Take of simple syrup	℔i.
Gentianine	16 grains.

Make a syrup.

This is one of the best bitters that can be employed in scrofulous affections.

CHLORURETS

OF

LIME AND SODA.

——:o:——

The advantages of these substances were made known in 1812 by M. Mazuyer, professor to the faculty of medicine at Strasburg. At that time he employed them with great success, in the wards of hospitals in which typhus fevers were then raging, and for the purification of the theatres of anatomy. M. Labarraque has demonstrated, by a great number of experiments, that the chloruret of soda was one of the most powerful agents for the instantaneous annihilation of that disgusting fetor which is produced by the maceration of intestines in water. The same gentleman extended the use of the chlorurets to the purification of all animal substances under putrefaction, and many distinguished physicians have used them as medical agents. A prize of three thousand francs to M. Labarraque, and two thousand to M. Mazuyer, was decreed by the Academy of Sciences, for this useful discovery.

The method for preparing the chlorurets has been known for a long time; it will nevertheless be useful to describe the manner in which M. Labarraque prepares them, in order to obtain always the same compound.

The Chloruret of Soda

Is prepared by dissolving five pounds of pure carbonate of soda*

* Soda Sub. Carbonas.

in twenty pounds of distilled water. Put the liquor into a flask of sufficient size, that it may be about three-fourths full. Expose a glass balloon sufficiently large to contain four pints, having a long neck with a wide mouth, introduce into it 567 grammes of hydrochlorate of soda, and 448 of the per-oxide of magnesia; lute to the mouth of the globe a large curved tube, and a tube with a double curve for the introduction of the weak acid; place the first tube into a flask containing a small quantity of water for the purpose of washing the gas, and from this flask should proceed a large curved tube, communicating with the vessel containing the saline solution.

The apparatus being properly disposed, and the luting very dry, pour into the bent tube the diluted acid cold, and having been mixed for some hours with water, apply fire to the sand-bath, and continue the heat until chlorine ceases to be disengaged. The operation being finished, examine the strength of the product by its action in decomposing the sulphate of indigo.

The chloruret of soda has chiefly been employed in medicine, and has produced highly satisfactory results, and has succeeded in all cases in which it has been used for the removal of general or local infections. Thus in carbuncle, in hospital gangrene, bad venereal ulcers, sloughing wounds, or those of the phagedenic kind, rapid advancement has been observed towards cicatrization, by the employment of the chloruret diluted in ten or fifteen parts of water. In numerous patients affected with ulcerated cancer of the breast, or of the uterus, which were in the hospital, it has been used daily as a lotion at the time of dressing; by this means the fetor of the discharge has been destroyed, and the sufferings of these unfortunate women have been much meliorated; and they have found, from the use of these lotions, their sleep has been more tranquil. M. Alibert has prescribed similar lotions with advantage for herpes exedens. M. M. Roche and I. Cloquet have

found it equally useful in the worst cases of gangrenous ulcers. M. I. Cloquet directs the diseased limb to be bathed in a solution of one part of the chloruret, with from ten to fifteen of water, and administer twenty-five or thirty drops of it in a pint of barley-water. It has been used as a gargle in sore throat, as a lotion in ulcerated gums exhaling an offensive odour. M. Lisfranc has used it extensively in burns and common ulcerations; for this purpose a solution of the chloruret, marking three degrees of the chlorometer of Gay Lussac.

The Chloruret of Lime

Is prepared by placing the hydrate of lime on shelves of a convenient distance from each other. The gas is disengaged from a similar mixture to that employed for the chloruret of soda, and passed into a chamber containing the lime, which must be occasionally stirred, so that the chlorine may act equally on all parts of it; the hydrate of lime sufficiently charged with chlorine becomes moist, by which it is ascertained that the operation is about to terminate.

This is a very powerful disinfecting agent, and can be used in the following manner:—Previous to examining an animal body in a putrifying state, it will be only necessary to procure a bucket and mix the chlorate of lime with water. Let a sheet be completely moistened with this solution, and wrapt about the whole subject, so that every part of it may be covered, and the putrid odour will soon cease. If there be an unpleasant smell in passages, stair-cases, &c., let them be sprinkled with the liquid. Care should be taken to sprinkle the cloth which covers the body frequently with this liquid, by which means the offensive odour will be prevented. The chloruret of lime may be used with advantage for the disinfection of privies, water-closets, ships, stables, hospitals, wards, &c., for which purpose it will be sufficient to dilute the chloruret in sixty times its weight of water, and to sprin-

kle the clear solution over the surface of the objects or places which are intended to be purified; a broom or watering pot may be used for the purpose, and a few minutes will be sufficient to complete the disinfection.

In wards with patients the solution is to be poured into deep plates, and placed under the beds. The infectious odour cannot spread, because it is destroyed in proportion to its formation, in consequence of the continual disengagement of chlorine.

Several physicians and surgeons of the hospital have made a useful application of these substances in the treatment of burns, chronic inflammation of the mucous membrane, &c. M. Lisfranc has used the following preparation successfully in burns:—

Chloride of calcium (marking three degrees of the chlorometer of Gay Lussac)	℥i.
Water	℔i.

This solution has also been used as an injection in the case of chronic catarrh of the vagina or bladder, and has been equally employed in the treatment of gangrene. Besides its utility as a disinfecting agent, it appears also to exert a beneficial influence on the progress of cicatrization.

Lozenges of Bicarbonate of Soda, or Digestive Lozenges.

These lozenges have proved highly beneficial in the treatment of dyspepsia, and have been found useful in promoting digestion, by saturating the free acid of the stomach, which is essential to the complete solution of the aliment.

Formula for preparing the digestive lozenges of M. D'Arcet:—

Take of dry pure bicarbonate of soda	5 grammes.
Fine white sugar in powder	95 do.
Mucilage of gum tragacanth prepared with water	q. s.
Essential oil of mint	2 or 3 drops.

Let the bicarbonate of soda and refined sugar, each reduced separately to a fine powder, be put into a very dry bottle. Shake the bottle well, that the powder may be thoroughly mixed. Take any quantity of this powder, let it be well mixed on a marble slab with a sufficient quantity of mucilage of gum tragacanth and oil of mint; form the mass into lozenges weighing about one drachm dry them in the air or on a stove. As these lozenges attract slightly the moisture of the atmosphere, they ought to be kept in well-stopped bottles, or in a dry place. They may be flavoured with any other essential oil, or with the balsam of tolu, which is very suitable for that purpose.

Much benefit has been obtained from the use of these lozenges, taken immediately when the functions of the stomach are found to be in a deranged state; if taken before a meal, the digestive functions will be performed with more facility. These lozenges being very useful to assist digestion, ought to be prescribed before and after a meal to patients affected with gout or calculi.

Carpenter's Concentrated Liquid Chloride of Soda.

In consequence of a pestilential disease of a highly malignant and fatal character, having prevailed over a large portion of Europe, and swept off thousands wherever it approached, having at length invaded the borders of our territory, and is now raging in New York, and will, no doubt, traverse our whole country; it is an object of the highest possible consideration, to use every precaution to prevent its approach, as well as to mitigate its deleterious influence when it may appear among us. As it no doubt originates from an impure atmosphere, either endemical or imported, any thing which will purify and sweeten the air, by removing all offensive exhalations and neutralizing their pestilential influences, will be admitted by all to be an expedient of the greatest possible

utility and importance. M. Labarraque has demonstrated by a number of experiments that the chloride of soda is one of the most powerful agents for the instantaneous annihilation of the most offensive odour of animal or vegetable decomposition. The chloride of lime has been recommended in consequence of being a less expensive article, and within the reach of all classes; it, however, is inferior to the chloride of soda, from many disadvantages which it possesses compared with the soda, and for all the finer purposes of its application, particularly in family use. This preparation of the chloride of soda is a transparent clear liquid, and a much neater preparation; ready for immediate use, and of specific strength, so that accurate directions can be given for its application in the various purposes for which it is recommended.

The chloride of lime is of very uncertain strength, differing more or less in every parcel which is made, and therefore cannot be so much depended upon for a certainty of effect, in any specific quantity or proportions of strength graduated for the various purposes of its application.

The chloride of soda has lately been considerably employed in medicine, and has produced highly satisfactory results, and has succeeded in all cases in which it has been used for the removal of general or local infections. Thus in carbuncle, in hospital gangrene, bad venereal ulcers, sloughing wounds, or those of the phagedemic kind, rapid advancement has been observed towards cicatrization by the use of the chloride in ten or fifteen parts of water. In numerous patients affected with ulcerated cancers which were in the hospital, it has been used daily as a lotion at the time of dressing; by this means the fetor of the discharge has been destroyed, and the sufferings of these unfortunate beings much meliorated, and they have found from the use of these lotions that their sleep has been more tranquil. M. Alibert has prescribed

similar lotions with advantage for herpes exedens. M. M. Roche and J. Cloquett have found it equally useful in the worst cases of gangrenous ulcers. M. J Cloquett directs the diseased limb to be bathed in a solution of one part of the chloride with from ten to fifteen of water, and administer twenty-five or thirty drops of it in a pint of barley water. It has been advantageously used as a gargle in sore throat, and as a lotion in ulcerated gums exhaling an offensive odour. M. Lisfranc has used it extensively in burns and common ulcerations with decided benefit.

For foul ulcers, a wine-glass of chloride must be mixed with as much as five times that quantity of pure water, and pledgets of lint must be dipped into this wash and then laid over the ulcers. This dressing to be renewed twice a-day. If the sore becomes red and angry, the wash of five parts water must be still further diluted ; if, on the contrary, the sore does not change its appearance, it must be dressed once or twice with chloride and water, half and half, so as to dispose to a slight inflammation, which is indispensable to convert fetid and running ulcers into simple sores. The healing then progresses rapidly. The moment the chloride is applied upon an ulcer the disagreeable smell is destroyed.

Open cancers can be cleaned with tepid or cold water containing one twentieth of the chloride of soda.

For the *tinea capitis*, or scald head, the chloride should be mixed with an even quantity of pure water, and the affected parts moistened with this liquid twice a-day.

The lint and cloths which have served for the dressings of fetid ulcers instantly lose their smell on being dipped into water containing one thirtieth of chloride.

The chloride, highly diluted, has been found very advantageous for all the purposes of the toilet; from twenty to twenty five drops in a glass of water,acting as a bracing and preserving wash, prevents the spread of tetters, and cures certain cutaneous diseases.

A person afflicted with a serious illness, or suffering with fetid ulcers, vitiates the air of the apartment in which he is confined, much to the injury of both patient and assistants. The air in these circumstances can be rendered perfectly pure, by putting a spoonful of the chloride into six spoonfuls of water on a plate under the patient's bed.

Those about to approach or tend on the sick who are ill with contagious disorders, such as small-pox, &c, will find it very well to rinse the hands in water, chlorided one twentieth, and to use a smelling bottle of concentrated chloride, &c. After touching or handling the sick the chloric wash to be repeated.

Whenever animals or human beings, healthy or unhealthy, are crowded together, the air becomes loaded with animal emanations, and acquires deleterious properties. These emanations can be destroyed by sprinkling chloride diluted with twenty-five or thirty parts of water, or by placing in some corner, out of sight, vessels containing the chlorided water, which in no case *can be at all injurious*, no matter what the quantity. This mode of purifying the air is indispensably necessary in lazarettoes, hospitals, prisons, poor houses, large work-shops, churches, seminaries, convents, students' halls, dormitories of colleges, and lodging-houses, cabins of ships, court-rooms, theatres when crowded, or drawing-rooms when filled to excess on levee days, &c. &c.

Sprinklings of chlorided water are more especially necessary when some epidemic or contagious malady rages; they should be resorted to as preservatives against the hurtful influences of marshes, and the neighbourhood of rotten hemp or flax, &c. They are of use also in epidemics among cattle. In places where silk-worms are raising, or, indeed, wherever the air can be rendered noisome by exhalations, which, when accumulated, produce fatal effects.

In cases of asphyxiation from the fixed air of drains, sewers, or

masses of putrifying animal substances, the patient must be made to breathe the concentrated chlorine; and sprinklings of chlorided water must be made in the room, to put him completely under the influence of the disinfecting agent.

In warm weather, if the slaughter-houses are sprinkled with the chlorided water, the meat will keep sweet longer in consequence.

In larders or safes, especially in the country, when, oftentimes, provision for the week must be laid in at once, the meat can be kept fresh by there being placed at hand a vessel of chlorided water, to be changed daily. For meat that has become stale, a mere immersion into water chlorided one fourteenth will destroy all smell, and the meat, after having been washed in fresh water, may be cooked and eaten without offending the palate or injuring the health.

Particular Uses and Mode of Application.

To keep Fresh Meat, Game, &c. in the hottest weather, and to restore when tainted:—Immerse into, or sprinkle the liquid over the article, according to circumstances, two or three times a-day—hang it to dry. No flies will touch it. *Rate of dilution:* 1 part by measure of chloride to 60 of water.

To preserve Cooked Meat, pour a little of the diluted solution into a plate, and put it where the meat is kept.

To purify Bad or Dirty Waters:—Stir up, and add one pint of the undiluted chloride to 120 gallons water.

Bleaching Liquid for Linens, Muslins, Lace, &c.:—Let the articles remain in the liquid from 2 to 4 hours; then be well rinsed. *Rate of dilution:* 1 part chloride to 15 parts water.

Removing the stains of Port Wine, Tea, Coffee, Fruit, Mildew, &c., from White or Buff Linens:—If the stain be small, apply a little of the *undiluted* liquor to the spot; but if large, immerse the stained part in it; if it be a stain which the solution is

capable of acting upon, it will be discharged in a few minutes. *Rate of dilution:* equal parts.

From Muslins or Lace :—Never use the undiluted liquid, but in all cases immerse them, whether the stain be large or small, and rinse well. *Rate of dilution:* equal parts.

For removing Ink Spots and Vegetable Stains from Engravings :—Wash the print with the solution: when the stains are removed, wash with water and a sponge until the smell has ceased. *Rate of dilution:* 1 part chloride to 20 parts water.

To sweeten Casks :—After being scalded or steamed, rinse them with the liquid. *Rate of dilution:* 1 part chloride to 60 parts water.

To prevent Infection from Small Pox, Measles, Cholera Morbus, Scarlet and Typhus Fever, &c. :—Sprinkle the diluted liquid around the bed and upon the floor; keep some in open dishes in the chambers of the sick; soak the linen of the patient in it, and afterwards rinse before sending to wash. *Rate of dilution:* 1 part chloride to 60 parts water.

To disinfect the Chambers of the Sick, to purify the air in Hospitals, Workhouses, Prisons, Ships, Crowded Places, Colour Manufactories, &c. :—Sprinkle the floors occasionally with the diluted liquid; expose it in dishes; moisten linen cloths in it, and suspend them in the apartment or place to be disinfected, renewing twice or thrice a-day, and let the fetor regulate the frequency and strength. *Rate of dilution:* 1 part chloride to 60 parts water.

For purifying the Air between Decks of Ships :—Sprinkle the decks during the day, and suspend some of the fluid in buckets between decks during the night. *Rate of dilution:* equal parts.

To sweeten Bilge Water, and to purify Sugar Ships :—Throw one or two bucketsful down the pump-well, until the smell ceases. *Rate of dilution:* 1 part chloride to 60 parts water.

To remove MILDEW in SAILS :—Moisten the part affected, and continue the application so long as it shall appear necessary. *Rate of dilution :* equal parts.

NIGHT CHAIRS, or any vessels in which putrid matter has been kept :—Rinse out with a little of the solution, and when in use put one glassful into the chair or pan. *Rate of dilution :* 1 part chloride to 60 parts water.

To disinfect CLOTHES, LINEN, &c., especially of patients infected with CONTAGIOUS DISORDERS :—Immerse the articles in the liquid, and they may be withdrawn immediately, *completely disinfected ;* or the clothes may be hung in a closet, with a quantity of the diluted solution placed in a shallow vessel. In cases of a malignant nature, let them remain in the liquor a couple of hours, and afterwards rinse. *Rate of dilution :* 1 part chloride to 60 parts water.

To disinfect SEWERS, DRAINS, CESS-POOLS, PRIVIES, &c. :—First throw down a quantity of clean water, and afterwards a pailful of diluted solution. If not successful, repeat the application after 10 or 15 minutes. In empyting unusually dangerous sewers place a pailful by each workman ; wash the nostrils occasionally, or moisten a sponge with the liquid, and let it be fixed near the mouth and nostrils. *Rate of dilution :* 1 pint to 2 pails.

To disinfect DEAD BODIES, and for the use of UNDERTAKERS, CORONERS, and JURYMEN, and to prevent the necessity of EARLY INTERMENT in warm weather :—Wash the body occasionally with the solution, sprinkle the floor often, or surround the corpse with a sheet well moistened with the solution, and renew the moistening frequently. *Rate of dilution :* 1 part chloride to 60 parts water.

To destroy GARDEN INSECTS :—Water frequently with a garden pot. *Rate of dilution :* 1 part chloride to 20 parts water.

To clean VINES from ANIMALCULÆ :—Wash the stem. *Rate of dilution :* 1 part chloride to 4 parts water.

To destroy CANKER, DECAY, or FUNGUS FRUIT-TREES :—Wash and water well. *Rate of dilution :* 1 part chloride to 2 parts water.

To destroy Bed-Bugs, and remove their offensive odour. Wash the joints of the bedstead, and all parts of the floor and wall where their presence may be suspected. *Rate of dilution:* 1 part chloride to 20 parts water.

Asphyxia :—Breathe the undiluted chloride.

To purify Stables contaminated by disease, as Glanders, &c. : —Wash the walls, racks, mangers, &c. with the solution, sprinkle the floor with a watering pot, and rinse all with plenty of clean water. *Rate of dilution :* 1 part chloride to 60 parts water.

For the purpose of extensive fumigation, dilute the chloride with twenty parts of water, and add to it a mixture of sulphuric acid and water, in the proportion of one part of the former to ten parts of the latter; and after the removal of every living thing which is not to be destroyed, close the apertures.

Glanders, Staggers, Farcy, Grease, Foot-Rot, Foulness in the Hoof, &c. :—Wash the nostrils and parts affected *frequently. Rate of dilution :* 1 part chloride to 12 parts water.

Prepared and sold at Carpenter's Chemical Warehouse, No 301 Market Street, Philadelphia.

Digitaline.

M. Augusti Leroyer has obtained the active principle of digitalis, which he has obtained in well-defined crystals of various forms. M. Leroyer has made the following experiments with it: —he dissolved a grain of digitaline in three gros of distilled water, which he injected into the abdomen of a middle-sized rabbit; after some minutes the respiration became slower, the pulse, which was rapid, fell to sixty, and became very irregular; all the vital phenomena became gradually extinct: it died without agitation and without distress, like falling asleep. A grain and a half of digitaline was dissolved in half an ounce of water, and was injected into the jugular vein of a middle-sized dog: he died in fifteen

minutes. The arterial blood of the animals which have been killed by this substance presents a very strong venous colour, &c. &c. It appears that the deleterious principle in solution in the blood acts directly upon the nervous system.

This substance has not yet been employed as a medicine, and nothing therefore can yet be said of its action on the human system.

Phosphorus.

This substance has been little used in medicine : it has lately been much extolled by Dr. Lobstein. The diseases in which it has been given with great success, according to the author, are, extreme prostration of strength, obstinate intermittent fevers, rheumatic and gouty affections, &c. &c.

Bertrand Pelletier, who has made very extensive and useful researches respecting phosphorus, has pointed out a very excellent method of preparing this substance for medical purposes. This process consists of putting six grains of phosphorus, cut into small pieces, in an ounce of sulphuric æther ; this mixture must be occasionally agitated for three or four days. The dose of this medicine is from ten to fifteen drops in a glassful of barley water, or any convenient vehicle, and repeated, so that from 120 to 150 drops may be taken in the space of three or four days. This liquid may be used in frictions also, when such are deemed necessary. M. J. Pelletier objects to these preparations in which the phosphorus is dissolved in a volatile fluid, only such as æther and essential oil, because exposed to the air and heat of the body. driving off the menstruum the phosphorus remaining per se, may influence by heat and friction ; but with fat or fixed oil this inconvenience will not take place, because the substances not being volatile, cannot leave the phosphorus.

Salacine.

This new and valuable article of the materia medica is the alkaline principle of the willow bark, and has acquired considerable reputation in Europe as a substitute for quinine. The following is the process for preparing it, as recommended by M. Peschier:—The bark of the willow is to be dried, crushed, boiled for one or two hours in water, and the liquid separated by a cloth and powerful pressure. Sub-acetate of lead is to be added as long as precipitation occurs; the whole filtered; the clear liquor boiled with carbonate of lime sufficient to decompose the excess of acetate of lead; saturate the acetic acid, and remove the colour. Being left to settle, the clear liquor is to be decanted, the deposit is to be washed twice or thrice, the washing liquor added to the former, and the whole evaporated to the consistence of an extract. This extract, while hot, is to be put on bibulous paper, and pressed for some hours; after which, it is to be digested in alcohol of s. g. 0.847, the fluid filtered and concentrated, when it will yield crystallized salacine, very white and pure. Salacine, when thus prepared, and administered in doses of three to five grains, repeated at intervals of one hour during the apyrexia of intermittent fevers, is said to be found effectual in arresting their progress with more certainty than the sulphate of quinine. Salacine (according to M. M. Pelouze and Jules Gay Lussac) when pure, forms white crystalline prismatic needles. It has a bitter taste, and somewhat the odour of willow bark. One hundred parts of water dissolve 5. 6 parts of salacine at 67° F.; at 212° F. it appears to dissolve in any proportion. It is equally soluble in alcohol, but æther and oil of turpentine take up no portion of it.

This article has lately been introduced here, and as far as it

has yet been used, has given the most entire satisfaction. Dr. Miller, of Lancaster, informs me he has successfully treated several cases of intermittents in which quinine appeared to have no effect, and which readily yielded under the use of the salacine; and from the experiments which he has made with it, is fully of the opinion that it is a very valuable medicine, and more efficient than the quinine.

SMILAX

SARSAPARILLA.

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This article differs very materially in quality according to the locality in which it grows. It is brought to us from various foreign ports; that which is by far the most superior is brought from the bay of Hindorus; by which name it is designated and distinguished from the others in commerce: it is packed in bales covered with skins, in a number of small bundles, weighing altogether about 100 pounds.

The Carraccas sarsaparilla is imported from Laguira; it does not come in round bundles, but packed in loose roots in oblong bales, about the same weight as the former. It is inferior to the Hindorus.

Large quantities of sarsaparilla is also imported from the Mexican ports of Vera Cruz and Tampioca but it is inferior to either of the others.

The Brazilian, commonly called in Europe the Lisbon sarsaparilla, seldom reaches this country, as it commands a more ready sale and higher prices than here. It grows in the country between the sources of the Orinoca and the Rio Negro; it is celebrated in South America by the name Rio Negro, and is considered there and in Europe the most valuable variety of this drug. Experience, however, in making the extracts from both, has proved, without doubt, the superiority of the Hindorus.

This highly valuable article of our materia medica has been variously represented. The greater part of our most respectable physicians, however, concur in the opinion that it is a medicine of very useful powers in venereal, scrofulous, and mercurial diseases. When combined with mezerion, guaiacum, sassafras, dulcamara, &c. &c. becomes one of the most efficient compounds for depurating the blood and removing most constitutional diseases arising from this cause.

This preparation has been much recommended in scrofulous and rheumatic affections, and in some of the chronic diseases of the skin. Quarin regarded the compound decoction of sarsaparilla as the most useful remedy we possess in gout: Sydenum also considered it useful in this affection, and Scudemore says it sometimes proves beneficial during the state of convalescence. The mezerion, one of the ingredients of the compound sarsaparilla, is recommended in venereal and mercurial diseases, and in chronic cutaneous eruptions. Dr. Cullen states that he found it successful in diseases of this kind. Lauris sassafras, another of the constituents of the compound sarsaparilla, has also been recommended by some of the best authors. Alibert speaks very favourably of its virtues in rheumatic affections; he administered it frequently at the hospital St. Louis, and it always appeared to him, he observes, to exert a manifest action on the cutaneous emunctories. He mentions a case of chronic rheumatism which yielded to the infusion of sassafras, after a great variety of other remedies had been tried ineffectually. He also speaks of two cases of gout, in which the sassafras was employed with complete success. Professor Eberle also states that he has known the continued use of an infusion effectually to cure a case of inveterate rheumatism; he further states, that it has generally been employed in the form of infusion, but the oil is the most efficient, and therefore the best preparation. *Guaiacum*, another of the ingredients

of compound sarsaparilla, stands high in the estimation of almost every physician. "In the treatment of rheumatism," says a distinguished author, "it has long been considered as peculiarly serviceable, and is unquestionably a remedy of very considerable value in this disease." "It has also been prescribed," continues the author, "in affections arising from the influence of mercury, and in such cases I have had several striking examples of its usefulness." Mr. Pearson says, "I have given the decoction of guaiacum with the best effects to a great number of patients, in cutaneous diseases, in ozæna, and scrofulous affections of the membranes and ligaments."

From what has been said from the most respectable sources of authority, in support of the different articles constituting the compound sarsaparilla, it would appear most unquestionably to be a medicine, when combined and properly prepared, possessing the most valuable properties, and deserving the particular attention of the faculty.

The preparations of sarsaparilla have most generally been improperly made, and there can be no doubt but the variable opinions which have been entertained of its properties by different physicians and writers have arisen entirely from the various modes of its preparation. The compound decoction of sarsaparilla requires considerable boiling to take up its active and soluble matter; this I do not say from speculation, as many have done, but from actual experiments repeatedly made, for the purpose of ascertaining and establishing the fact; and I have found, that after several days' boiling, these ingredients, (and particularly the sarsaparilla) contained a very considerable proportion of extractive matter, quite as active as that obtained by the first boiling. It has been foolishly suggested that decoction injures its active properties, and that it should be only macerated and not boiled; this would merely wash off the dirt which adheres to the roots, together with some

of the decayed corticle fibre which is more or less found among the freshest roots we receive ; this may give a little colour to the decoction, and may be mistaken for its active principle. After undergoing this operation the root would be in a good condition to begin the decoction. I have experimented with various menstruum upon the roots of sarsaparilla, and find that successive and alternate ebullition and digestion in water and proof spirit is the best, producing a more active preparation of the root than any other, and in a larger quantity. Alcohol is the next most active menstruum, but it is altogether objectionable from the increased expense incurred in its preparation, producing an extract possessing no advantage whatever over the above.

Geo. W. Carpenter's Compound Fluid Extract of Sarsaparilla,

For purifying the blood and removing all diseases arising from excess of mercury, exposures and imprudences in life, chronic constitutional diseases arising from an impure state of the blood, &c. &c. &c.

This article is now prescribed by some of the most distinguished physicians in this city, and has proved more efficient in practice than any preparation of sarsaparilla yet offered to the public. For the advantages it possesses over the ordinary preparations, see Professor Dewees' valuable work on the Practice of Physic, and most of the late standard works on medicine.

Numerous preparations of sarsaparilla and various modes of preparing them, have been given, all of which, of course, will differ according to the mode of preparation which each individual may adopt. It is, therefore, an object of the highest consideration and importance, that we should have a standard preparation of uniform strength, and possessing the most advantages; also, the trouble and difficulty which patients are subjected to in making the de-

coction and syrup has rendered it a still further object of importance to procure a preparation of it in a more convenient form than those usually prescribed. Sarsaparilla, as before stated, requires considerable boiling to take up the extractive matter, and it has, consequently, most frequently been improperly made by those unacquainted with pharmaceutical preparations. To obviate these difficulties, I have made a number of experiments to ascertain the most effectual means of extracting the virtues of the compound sarsaparilla, and to discover the most eligible form of preparing it for exhibition, which has resulted to my most entire satisfaction; and it is with much pleasure I now offer to the faculty my *compound fluid extract of sarsaparilla*, which possesses all the virtues of this medicine in a highly concentrated degree. It possesses numerous advantages over sarsaparilla, its syrup, decoction, and solid extract, and is intended as a preparation of much easier portability, not liable to injury by long keeping, and consequently better adapted to the use of persons travelling or residing abroad.

The *fluid* extract of sarsaparilla is a more convenient article than the solid, the latter requiring some trouble and difficulty to dissolve it, while the former is immediately dissolved when it is put into water, and is consequently immediately fit for use.

As the decoction will rarely keep more than twenty-four hours, particularly in warm weather, it would be exceedingly troublesome for the patient put under a course of sarsaparilla, which has to be taken for some time, to be obliged to prepare the decoction every day, besides getting a very weak and inferior preparation from the short time he would have to boil it, not taking up perhaps one fourth of its active principle.

The syrup, which is the common preparation generally used, has still further objections; it being the decoction prepared in the common way, overloaded with sugar, which is exceedingly objectionable, as it will be necessary for the patient to surfeit, and not

unfrequently nauseate his stomach with a large portion of saccharine matter in taking a dose of the decoction, which is generally weak, so that not unfrequently it might be said with propriety that he is taking a dose of sugar rather than sarsaparilla, as the former exists in a large proportion in the preparation. We frequently hear of *concentrated* syrups of sarsaparilla, which is simply change of name for the same article, as it is impossible, when a fluid is saturated with sugar, to take up an extra portion of any substance; and if the decoction is much concentrated, a portion of the fluid extract which it holds would be precipitated by the sugar. I will not in this place call in question the essays of one of my fellow competitors to support or refute the value of the extract of sarsaparilla, but might quote numerous authors whose opinions have considerable *weight and influence*, and whose experience and observations would entirely sink and outweigh those who are little acquainted with the subject, and who, from want of experience, aided by prejudice, have fallen into the greatest absurdities. I will simply select one on the present occasion, which is published in the Medico-Chirurgical Review for July 1830, Vol. 18, No. 41, page 162:—"Observations on the Extract of Sarsaparilla in venereal Affections, &c., by Benjamin Traver's, F.R.S., &c. &c." Speaking of the compound of syphilis and mercury, he states that no remedy, next to the adjustment of diet, is equal to the extract of sarsaparilla. The extract dissolved in water or milk is the menstruum which I rely most upon in these cases; its power is extraordinary, more so than any other drug which I am acquainted with. To regard it as inert, as a mere diluent or an offensive nutrient, is either a proof of very limited experience or very prejudiced observation. It is in the strictest sense a tonic, with this invaluable attribute, that it is applicable to a state of the system so sunken, and yet so irritable, as renders other substances of the tonic class unavailable or injurious.

"We take the liberty of marking in italics," says the distinguished editor, Dr. Johnson, "the passage respecting sarsaparilla, because we most cordially concur with Mr. Travers in the statement which it contains in favour of the valuable properties of the extract of sarsaparilla."

The compound fluid extract of sarsaparilla which I have prepared has decidedly proved one of the most popular medicines ever introduced in Philadelphia. There has been a little clamour against it by some of my worthy competitors in trade, (this must be expected in all valuable and extensively used articles; it was so with quinine, and some of our most inestimable medicines,) but all sinks into insignificance when compared with its general approbation by the faculty, and its extensive use by some of our most distinguished physicians. It has already been sent to almost every populated section of the United States, and whether in town or country, hospital or private practice, it has invariably given to patient, and practitioners the most decided and unequivocal satisfaction, and produced the most salutary and beneficial effects. Numerous letters have been received from some of the most distinguished physicians in the country, and from the professors of several medical colleges, all recommending in the highest terms the value of this medicine, and its superiority over other preparations of sarsaparilla. Several cases of secondary syphilis, mercurial and scrofulous diseases, have entirely recovered in the incurable wards of our public institutions, which had for many years resisted every mode of treatment which could be devised. These cases furnish striking examples of the salutary effects of this medicine in arresting some of the most inveterate diseases, after the glands were destroyed and the bones already affected.

The dose of the fluid extract is two tea-spoonsful, morning and night, in a glass of water. Two table-spoonsful added to fifteen ounces of simple syrup, immediately produces a mixture similar

to a pound of the compound syrup of sarsaparilla, and the same quantity added to fifteen ounces of water instantly forms a mixture equivalent to a pint of the Lisbon diet drink.

One bottle of the fluid extract of sarsaparilla, is fully equal to a gallon of the syrup or decoction as it is generally made.

Two grains of corrosive sublimate carefully dissolved in a small portion of alcohol or water, and added to the syrup above formed, will be similar to the anti-scrofulous and syphilitic remedies lately introduced under various names.

The fluid extract of sarsaparilla is now prescribed by some of the most distinguished physicians in this city, and has been more efficient in practice than any preparation of sarsaparilla yet offered to the public. For the advantages it possesses over the ordinary preparations, see Professor Dewees' valuable work on the Practice of Physic, and most of the late standard works on medicine.

Professor Gibson, of the University of Pennsylvania, has successfully employed this medicine, and has recommended its properties in his lectures to the medical class, and considers it superior to the preparations of sarsaparilla commonly in use.

Professor Eberle, in the last edition of his Therapeutics, vol. 2nd, page 206, makes the following remarks:—"Carpenter's compound fluid extract of sarsaparilla is a very neat and excellent preparation. It possesses all the active properties of the root in a highly concentrated state, a table-spoonful being equivalent to half a pint of the ordinary decoction. I have used it in several instances with decided benefit. From the smallness of the dose it is peculiarly adapted for administering this remedy to children."

Professor Frost, of the Medical College of South Carolina, has written to me of the salutary effects of this medicine in a case of secondary syphilis, by using two bottles, united with small doses of the perchloride of mercury, and his high opinion of this medicine, and its superior advantages over the ordinary preparations of sarsaparilla.

Extract of a letter from Dr. Samuel R. Haywood, of Louisburg, North Carolina, dated May 7, 1833.

Dear Sir,—I have made trial of your compound fluid extract of sarsaparilla with the most complete success in chronic rheumatism, where the joints were very much swelled; and I now have a case of scrofula upon both of the fore arms; and it has been so decidedly beneficial as nearly to have restored both my patients; but I am now entirely out of it, and must request you to send me two dozen bottles as soon as possible.

Mr. Geo. W. Carpenter. SAM'L. R. HAYWOOD, M. D.

The above preparation of sarsaparilla is decidedly the most efficient mode in which this valuable medicine can be used. It is far superior to any syrup of sarsaparilla which can be made. for a fluid saturated with sugar, as the syrup, is incapable of holding much extractive matter in solution. All the syrups which are made are weak preparations, and the term concentrated syrup is a delusive application. This will also apply to the various nostrums prepared from sarsaparilla, as panaceas, &c. &c. &c., which frequently depend for their activity on corrosive sublimate, or some active mineral, which should not be used except under the direction and superintendence of a physician. One bottle of the fluid extract of sarsaparilla is equal in activity to several bottles of panacea: one bottle of the fluid extract of sarsaparilla added to sufficient water and sugar, will make one gallon of compound syrup of sarsaparilla as strong as that made in the usual process.

Two tea-spoonfuls may be taken morning and night in a glass of water.

Two table-spoonfuls of the fluid extract, added to fifteen ounces of simple syrup, immediately produces a mixture similar to a pound of the compound syrup of sarsaparilla; and the same quantity added to fifteen ounces of water, instantly forms a mixture equivalent to a pint of Lisbon diet drink.

I might quote numerous authorities in addition. of the most respectable character, but sufficient has been said to establish the character of this preparation, and its decided superiority to the ordinary preparations of sarsaparilla.

CAUTION.

After the reputation of any valuable medicine is established with considerable expense, trouble, and many experiments by the proprietor, he should receive the benefit of it. He is sometimes, however, interrupted by spurious imitations of his preparations, made by the ignorant, who prepare inferior and frequently entirely different compounds, and sell them under the same name, and on the reputation of the genuine medicine, *copying the directions, and putting it up in the same bottles and form;* thus frequently deceiving the public and injuring the reputation of valuable medicines. Under these circumstances, I would beg the faculty to be extremely particular in their orders for the extract of sarsaparilla, and to observe that each bottle will have my written signature, without which none will be genuine.

A copperplate label is also on the outside of each bottle, on coloured paper, as a caution.

Oil of Black Pepper.

This article is precipitated in the preparation of piperine. It contains all the heat and acrimony of the pepper in a very powerful degree, and is no doubt the active principle of it. A portion of this oil is always combined with the piperine, to which it no doubt owes its effects. We find all the sensible characters of the piperine to increase or diminish in proportion to its degree of purity, or as it may be more or less combined with the oil; hence it is that the pure white crystals of piperine are without taste, the yellow crystals possessing considerable heat and acrimony, and

the dark greenish crystals are extremely active and powerful, containing nearly fifty per cent. of oil. One drop of the oil of black pepper is equal to four grains of piperine. One drop of the oil of black pepper added to three grains of quinine will greatly increase the powers of that remedy.

Physicians should be extremely particular in their orders for this article, as an oil of pepper has been obtained by distillation, which is entirely different from the above preparation, possessing comparatively little or none of the active principle of the pepper; the above preparation is a fixed oil, and of course cannot be obtained in this way. The object was, no doubt, to obtain a cheaper preparation, but it will not answer the purpose at all, and would therefore be dear at any price. As it has been sold for the true preparation, I make these observations that physicians may be on their guard in relation to it. I received some time since a letter from a highly respectable physician in Virginia, stating that he had been induced to make trial of the oil of black pepper from reading an article of mine on the subject in the American Journal of Medical Sciences, that he had written for some of it, and had obtained an article which did not in any way correspond with my description of it, either in the appearance of the article or in any of its sensible characters. I requested him to send me on some of it to examine, and I was much surprised to find it was the distilled oil of pepper which had been sent to him instead of that obtained in the process of piperine; and it is more than probable others have been equally disappointed.

Copaiva.

Balsam Copaiva is obtained by boring or wounding the trees near the trunk, from which it exudes copiously; it is a thin limpid fluid at first, but in time acquires a yellow colour and a greater

consistence. The copaiva tree which produces the balsam is a native of South America and the West India islands. It is composed of oil and resin in nearly equal proportions. The oil may be readily distilled; it is as transparent as water, and as thin as most of the essential oils; all the medical properties of the copaiva reside in the oil. The rezin is entirely inert. The oil forms a beautiful mixture with sweet spirits nitre and cinnamon water. The copaiva is readily administered (to those who cannot take the liquid balsam) in a solid state. (See solidified copaiva.) A great deal, however, of this article is rendered almost inert by the process of its manufacture, and physicians should therefore be particular in getting the solidified copaiva from those who they can depend upon furnishing a good article, or they may get an article not at all superior to common rosin. The effects of the copaiva are well known to be stimulant, diuretic, and slightly purgative. It is successfully used in the treatment of gonorrhea and gleets, and its virtues may be greatly enhanced by means of other articles as adjuvants. I have combined it with sarsaparilla and cubebs, and several diuretics, and the compound has proved the most efficient preparation yet discovered in the treatment of gonorrhea, gleets, &c.; one bottle of it seldom fails to cure a case. See Carpenter's compound of sarsaparilla, cubebs, and copaiva.

Oil of Copaiva.

This oil is obtained by distillation from the balsam, and is a valuable preparation. It contains all the virtues of the balsam in a concentrated state, and being more limpid than the balsam, it is administered with less inconvenience, and is altogether a very considerable improvement in the exhibition of copaiva, and altogether preferable to the common balsam. The dose of this oil is five to eight drops. When distilled in glass vessels, and pure, it is preferable to naptha for preserving potassium.

Cubebs.

Piper Cubeba.—This species of pepper is a native of Java, Batavia, Guyana, and the Isle of France. They are about the size of a small pea, of a blackish or greenish colour, covered with veins reticulated over the surface of the berry, and finished with a short stalk. The active properties of cubebs reside in a volatile oil which is obtained by distillation, of a greenish colour and a fragrant and agreeable smell. Cubebs are diuretic and slightly purgative; they are also gently stimulant, with a decided determination to the urinary organs. In gonorrhea and gleet they have long been used by the earliest practitioners, and are to this day extensively used and with the most decided success; they are a valuable adjunct to copaiva in gonorrhea, and the oil is the most eligible mode of using it. In a preparation which I have lately introduced to public attention, called compound sarsaparilla, cubebs and copaiva, these with several other diuretics are combined. It has proved more successful in gonorrhea that any medicine which has yet been offered. It is also an active ingredient in my compound fluid extract of buchu, which is decidedly one of the most popular articles which has been for a long time introduced to public attention.

Oil of Cubebs.

This oil is obtained by distillation from the cubebs. It is a very active preparation, and possesses all the virtues of the cubebs; and being a very concentrated preparation, is much preferable to the crude substance, which is objectionable from the bulk of the dose, which is otherwise unpleasant. This is a valuable adjunct to the oil or balsam copaiva; ten to twenty drops to an ounce of balsam will greatly increase the powers of that remedy in gonorrhea.

CARPENTER'S

CITRATED KALI,

For making Saline Draught or Neutral Mixture.

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I know of no article so desirable to the practitioner as the above preparation, for either city or country practice. When made extemporaneously for prescriptions with the lemon juice and salt of tartar, it is frequently not exactly neutralised, and the object and effect of the medicine is thus lost. It is also much more convenient, and at the same time less expensive, and being identical with the mixture fresh made with lemon juice and salt of tartar, is certainly in every respect preferable. It only requires to dissolve one drachm of this salt in four ounces of water, and you have at once the neutral mixture similar and equal in every respect as before said, to that prepared with fresh lemon juice and salt of tartar. To the country practitioners this preparation is inestimable, as it furnishes him the means of access to a highly valuable medicine, which he otherwise would be cut off from, by the scarcity, difficulty, and frequent impossibility of getting lemons in inland towns, and they are frequently not to be had in some parts of the season in our ports. It is unnecessary to quote any thing in relation to the value of this medicine as a refrigerent in fevers, &c. &c.. as it is appreciated and highly valued by every intelligent physician.

This article will no doubt be altogether used when its proper-

ties become generally known. Wherever it has yet been used, it has given the highest degree of satisfaction, and produced the most beneficial effects.

Black Oxide of Mercury,

For extemporaneously making the blue pill according to the popular opinion, that the mercury is in the state of oxide in blue mass.

One fourth of a grain of the black oxide is equal to three grains of blue pill. This medicine is highly approved of by many physicians, and preferred by them to the blue mass.

Carpenter's Compound Tonic Extract.

This article is a compound of some of the most active vegetable alkalies, being composed of *cornine, quinine, piperine, capsicine, &c &c.* It has proved more efficient than any preparation yet employed in the treatment of intermittents, arresting the paroxysms in cases which resisted quinine and other remedies in large doses. For an account of the cornine, see Dr. Morton's valuable paper in the Philadelphia Journal of the Medical and Physical Sciences. For an account of the piperine, see my paper in the American Journal of the Medical Sciences.

CAUTION.

This compound is entirely original with me, and several of the constituents only prepared by me, yet the name has been borrowed for another preparation, and my directions copied word for word, and has no doubt been sold on the reputation of mine. I would recommend the faculty to be extremely cautious and particular in their orders for this preparation, and I am sure they will not be disposed to patronize innovations of this kind, but give preference to the true and original article.

Ext. Sem. Stramonii.

This is a very active and highly valuable medicine. Dose one fourth of a grain. For a full account of this article, see a paper published in the 7th volume of the Medico-Chirurgical Transactions.

Extract of Quinine.

This is the residuum of the preparation of quinine, and is preferred by some to the sulphate, as it comes much lower than the former, being but one third the price: it would be well for physicians to satisfy themselves of its value. Two grains are considered equal to one grain of the sulphate of quinine.

Carpenter's Selection of Cinchona, or Peruvian Bark.

There is no article of the materia medica in which there has been more fraud and deception than Peruvian bark: the author, under these circumstances, has been extremely particular in the selection of these species, and has them put up in packages with his written signature on each, as a guarantee of their purity and his responsibility, if they should prove otherwise.

Superior Red Bark,

Selected with great care from the cinchona oblongifolia, and put up in pound and ounce sealed cylindrical packages. The *red*, when pure, is the best species of Peruvian bark: it contains both the alkalies, quinine and cinchonine, in considerable proportions.

Superior Calisaya Bark.

(CALISAYA ARROLLENDA.)

This is the best species of yellow bark, and derives its name from the province in which it is collected. It is the bark which yields quinine in greater proportion than other species: it is neatly put up in sealed cylindrical packages of pounds and ounces.

Superior Loxa, or Crown Bark.

This bark was more esteemed in Spain than any other species, and was selected for the royal family; hence the name *crown* bark. This is a milder bark than the red or Calisaya; its product is cinchonine. It agrees better with the weak and delicate stomach than the stronger barks. This, like the preceding, is put up in sealed packages of pounds and ounces.

Maracaibo Bark.

This is the best species of what is called common or low-priced bark; the best bark is cheaper at a higher price than the present difference of cost which exists between the different kinds of bark. There is no advantage whatever in using inferior bark, but all the disadvantages arise from it; still there are many that will have it, because it is lower priced. To such I would recommend the Maracaibo bark, being much superior to the Carthagena, and at an equally low price.

For a full and detailed account of all the varieties of bark which occur in commerce, see the article cinchona, in a preceding part of this work.

Cornus Florida.

The common dogwood grows in almost every section of the United States, and most abundantly in the middle states. It is tonic and astringent, and possesses properties similar to the Peruvian bark, and has been successfully used in intermittent fevers: its taste is bitter, astringent, and slightly aromatic. The bark of the root is the most active. Dr. Walker speaks highly of the medicinal properties of this article. It owes its medical virtue to a peculiar alkaline principle which I have denominated cornine, and which has proved fully equal if not superior to quinine, in its tonic and

febrifuge properties. See Dr. Morton's interesting communication upon the subject in the Philadelphia Journal of Medical Sciences. In consequence, however, of yielding this salt in so very minute comparative proportion to what the quinine is yielded by the cinchona, it is even more expensive than the latter.

Sulphate of Cornine.

It gives me much pleasure to announce the discovery which I made of an alkaline base in the Cornus Florida, which I have denominated cornine, and which with acids form neutral salts, the sulphate of which has proved a highly valuable tonic febrifuge. This article has been very carefully and accurately described by Dr. Samuel G. Morton, of this city, in the Philadelphia Journal of the Medical and Physical Sciences; and from the most respectable sources in the medical profession from various parts of the United States, where this article has been sent, the most corroborating evidences have been received of the unequivocal success of the cornine in the treatment of intermittent and remittent fevers, in the same doses as the quinine; and the only circumstance which precludes its competition with that substance, is the minute comparative proportion of cornine yielded by the Cornus Florida. If, however, at any time we should fail in our supplies of cinchona, which is not impossible, or even improbable, we shall then be able to supply its place by this principle of the Cornus Florida.

Extract of the Cornus Florida.

The Cornus Florida yields a beautiful extract resembling very closely that of cinchona, differing, however, in its sensible characters from the extracts of the superior species of the Peruvian bark, by being less bitter and more astringent. The following is the most eligible mode for preparing this extract:—Evaporate in a sand or water bath a tincture of the bark, made by digesting it in proo

spirits in the proportion of two ounces of the former to a pint of the latter, suffering it to stand for at least a week before straining, occasionally during this time submitting it for a few hours to a mode rate heat, and thereby facilitating the solution.

This extract, from its most prominent and sensible characters, is unquestionably much more active than the common extract of Carthagena bark, and is a preparation admirably adapted in all cases where the cornus may be employed with advantage: and in consequence of being a concentrated preparation, separated from the ligneous and insoluble portions, and containing less gum and mucous matter, (which constitutes so large a portion,) is certainly much preferable to the crude substance, and no doubt will be resorted to by many country practitioners as a useful expedient, particulary in those places where this article is in profusion, and where bark of good quality is frequently very scarce, and sometimes even unknown.

Cornus Circinata.

This plant is a native of this country, and is recognised in various parts of the United States by the name of the mountain willow, white rind and round-leaved dogwood. It may be found in many parts of that extensive tract of land from Canada to Virginia. Professors Morson and Ives are entitled to the credit of first having introduced this plant into medical practice: these gentlemen recommend it very highly for its astringent and tonic properties, and have successfully used it in intermittent fevers and dysentery: an infusion of the bark is recommended as the most eligible preparation. Dr. Brown, who has also used this article with much success, prescribes it in powder and tincture. It contains, like the Cornus Florida, an active salifiable principle, which I have demonstrated cornine. The alcoholic extract is probably the most eligible mode of using this article.

Extract of Cornus Circinata.

The cornus circinata is a more astringent substance than the Florida; an extract may be made from it by the same process as that of the former. The cornus circinata has been very successfully administered in cases of dysentery by Professor Ives, of New Haven (see Dr. Robinson's interesting essay on this article in the North American Medical and Surgical Journal.)

CARPENTER'S

OIL OF CANTHARIDIN.

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This is a new and highly valuable article ; and I have no doubt, from the many advantages which it possesses, that it will entirely supersede the common mode of blistering ; a few drops rubbed two or three times on the part will effectually draw a full and complete blister, with little or no pain, and without the necessity of applying any thing on it to assist the operation. This is certainly preferable to applying a plaster, which often gets removed from one place to another, and thus frequently vesicates a greater surface than was intended or required ; and sometimes, from this frequent transition, only partly vesicates, and causes considerable pain without having produced the effect intended, or being any benefit whatever to the patient. A piece of paper which has been made to imbibe this oil forms an excellent blister, which may be accommodated accurately to the shape of any part, however irregular. The vesication thus produced is so exactly circumscribed, that the blister formed corresponds with the sharpest angles which may be given to the paper employed.* One drop is sufficient to make a blister of the size of a quarter of a dollar. On such places where the skin is thicker or more solid than those which are less exposed and covered with clothing, it requires that the oil be applied two or three times in the course of one or two hours, or that the part to be blistered be covered rather more with the oil ; this

* It would be better to rub the oil well on the part before applying the paper.

however will be seldom necessary, as blisters are most frequently applied on parts which do not require this particularity.

It begins to draw in four, five, or six hours, according to the place where it is applied.

In some cases it may be advisable to cover the part with a little soft paper or linen where it will likely get rubbed; but in most cases no protection whatever is necessary. After the blister is cut, and the lymphatic water is discharged, it will be of great service to press the epidermis close to the skin, and in most cases it heals in twenty to forty-eight hours.

When a rubefacient is wanted, one drop dissolved in ten or fifteen drops of sweet oil, or mixed with lard, will answer that purpose; and for its convenience and ready application, will be better adapted than any preparation I am acquainted with.

One ounce of this oil contains the vesicating properties of nearly one pound of cantharides. Its use is so mild, that, generally speaking, it produces a blister without the least disagreeable sensation, except on those places where muscles, nerves, or tendons are in a state of compression. We trust, an article possessing so many advantages will receive the sanction of the faculty.

P. S. We are pleased to find, since the above has been written, that a number of experiments made by several distinguished members of the faculty, have resulted in the most satisfactory manner, and entirely corroborate the above statements. We therefore can offer the above preparation with the highest degree of confidence.

CAUTION.

To guard against spurious imitations of this article, each vial will have the written signature of the proprietor on the outside envelope of the same.

Extract of Black Pepper.

Digest one pound of coarsely ground black pepper in four pints of diluted alcohol for four days, occasionally submitting it to a temperature near ebullition, in a water bath; filter and evaporate to the consistence of an extract.

This is found also to be an active remedy in intermittents, in doses of 2 or 3 grains. In a soft state it has proved very convenient to give consistency to piperine and quinine, for the formation of pills, while at the same time it increases their activity. The extract of pepper in every formula I have seen is directed to be prepared with water. This forms a much less active preparation, and possesses several inconveniencies to which the former is not subject.

I have employed both the white and the black pepper in the above preparations; and although it is stated by most authors that the white is milder than the black, I have found it to yield more piperine, and an extract of much more acrimony and activity, and to contain much less colouring matter. The constituent principles of pepper are piperine, oil, resin, fecula, and colouring matter.

Calomel.

This is decidedly the most valuable of the mercurial preparations, and there is no article of the materia medica which a physician should be more particular in than calomel, as it is more liable to be improperly prepared without any evident signs of the fact, than any other preparation. It frequently contains a portion of corrosive sublimate, which does not in the least alter its external appearance. It is therefore an object of the highest importance for the physician to test his calomel before using it, unless he gets it where he can place the most implicit confidence. Corrosive sublimate may be detected, if present in calomel, by precipitation

being produced by the carbonate of potash, in a solution made by boiling the suspended sample with a small portion of muriate of ammonia in distilled water. A more simple mode, and one which will generally answer the purpose, is by rubbing the calomel with the pure water of ammonia; it should become intensely black, and not exhibit any trace of an orange hue: also lime-water, which is a more delicate test than ammonia, for the corrosive sublimate. The modes of preparing calomel are various; that by sublimation appears to be preferable and is the process now generally adopted in the preparation of calomel. It has been suggested that the precipitated calomel is more free from corrosive sublimate; this is altogether a mistaken notion, as the precipitated is quite as liable to contain the muriate, and also the sub-nitrate. When properly made, the sub-muriate obtained by precipitation scarcely differs from that obtained by sublimation. Gottling found no other difference, than that the precipitated sub-muriate became gray* when triturated with lime-water, whereas the sublimed sub-muriate becomes black. But he exposed to heat half an ounce of the precipitated sub-muriate in a subliming apparatus; scarcely a grain of a reddish matter remained fixed, and the sublimed matter now became black when triturated with lime water, and differed in no respect from the sub-muriate prepared in the ordinary way by sublimation. It would therefore seem to be an *improvement* in the process to sublime the sub-muriate after it is precipitated, especially as by that operation it would be most effectually separated from any sub-nitrate which might be mixed with it. Calomel can be rendered completely free from corrosive sublimate by repeated washings in large quantities of water, the latter being soluble, while calomel is not. The English calomel is generally prepared

* Messrs. Kurlbaum & Co., chemists of this city have prepared a very superior precipitated calomel, which instantly becomes black with lime water, and shews no trace of a gray or orange colour; it is a very pure and excellent article.

with great care, and free from corrosive sublimate, and has consequently been preferred by our physicians, who prefer giving a high price for it, to be more certain of obtaining a pure article. I am exceedingly pleased, however, to find that the calomel prepared by Messrs. Farr & Kunzie, of our own city, is equal to any of the English I have ever seen, and physicians and others can safely rely upon this calomel being equal to any of the imported obtained by sublimation or precipitation.

Tartar Emetic.

This article, so important to the physician, is another which he should be extremely careful in purchasing, as it is liable to vary considerably in activity. It should always be purchased by him in *crystals*. The following are the characteristics of its purity :— A solution of it in distilled water ought to furnish a gold-coloured precipitate with dilute sulphuret of potash, or ammonia; a precipitate soluble in nitric acid with acetate of lead; and with lime-water a white and extremely thick precipitate, dissolving with facility in pure nitric acid. If the crystals deliquesce, the presence of other salts may be inferred, and they ought to readily and totally *dissolve* in water, forming a *clear solution*, both previous to and after adding the wine, in making the antimonial wine.

Vegetable Extracts.

These are a highly valuable and important class of medicines, and there is none in which there is a greater disparity in the quality; some of them are extremely active, while the same is almost inert at other times, owing to the various modes of preparation, the time they have been kept, and other circumstances which influence their condition. It requires the physician to be more discriminating in this class of articles than any other in the catalogue of medicines; he should be particularly guarded in the purchase

of them, also in keeping them well protected from the air and light, in a cool situation and not accessible to dampness; he should be particular in ascertaining the manufacturer of the extracts, in order that he may know whose preparation he can rely most upon and having discovered a person who makes good extracts, he should under no circumstance use any other. I have found of the imported extracts those made by Mander, Weaver, & Mander are superior to any I have ever seen; they are of uniform strength, and can always be safely relied upon. I have made arrangements to be constantly supplied with extracts from this house, and physicians can always receive these extracts at my Chemical Warehouse, 301 Market Street.

Carbonate of Iron.

The carbonate of iron is one of the most excellent and safest chalybeates; it may be given from five to twenty grains, but all chalybeates answer better in small doses frequently repeated; hence it is the chalybeate waters, aided by saline medicines are so beneficial.

Physicians should always prefer the precipitated carbonate, and should also be particular in knowing it to be properly made. The rubigo ferri (sub-carb. ferri) is a very imperfect preparation, and large quantities of it is now manufactured in a very rough and careless manner; I have seen considerable of it which I found, on examination to be near one half whiting. In the Medico-Chirurgical Review, vol. xviii. No. 42, for October 1830, is an interesting paper from the Glasgow Journal, on the pharmaceutical preparations of the precipitated carbonate of iron. The British pharmacopæias direct a watery solution of sulphate of iron and sub-carbonate of soda to be mixed, and the resulting precipitate to be collected on a filter and dried. The precipitate at first is white, but soon becomes of a dark green colour, and very bulky in substance.

Exposed to the air, the colour changes to a rusty yellow, the effect of oxygen. A decomposition is produced according to our author in the following manner.

The precipitated carbonate of iron consists of carbonic acid combined with the black oxide, which black oxide readily combines with more oxygen, forming the red oxide of iron; but as the red oxide cannot, like the black, retain carbonic acid in combination, this acid flies off: so that, in the yellow matter alluded to, an additional dose of oxygen has taken the place before held by carbonic acid. The yellow colour is owing to the red oxide existing in combination with water, or to use the language of modern chemistry, a hydrate, and the yellow colour is changed to red whenever we apply so much heat as will drive off the combined water. Then the red oxide of iron, or colcothar of vitriol alone remains. The consequence is, that what is sold in shops for precipitated carbonate of iron contains no more than a trace of that substance, and is frequently nothing more than colcothar of vitriol. "This colcothar," the author observes, "is not less different from carbonate of iron in its medicinal effects than its chemical properties."

I have seen patients of different ages and sexes swallow for a fortnight, at the rate of half an ounce per day of colcothar of vitriol, without producing any apparent effect, except that their stools were coloured by the powder to a reddish hue, indicating that it had passed through the body unaltered. Whereas, I have seen a healthy man made sick by a dose of a quarter of a drachm of genuine carbonate of iron, and made to pass, in consequence, dark greenish black stools for two days after; and I have seen similar effects produced on patients who had been unaffected by colcothar of vitriol. The sickness, however, is not produced after the the first or second day.

These observations deserve the attention of the profession in these days when carbonate of iron is so much in use.

We give the remaining part of the paper in the author's own words.

"From the preceding observation it is easy to gather, that the two defects to be avoided are exposure to air and heat. Both of these defects I propose to avoid by forming the precipitated carbonate into an electuary, thus:—

Take of sulphate of iron and sub-carbonate of soda each eight ounces; powder each salt, and dissolve them separately in warm water; if necessary and filter. Being filtered and cool, mix the solutions in a deep vessel capable of holding one or two gallons of water, which fill up cold, stir; let it subside, and then decant the clear liquor from the precipitate; fill up again with water, and likewise again decant, and repeat this operation two or three times, so as to separate the soluble salts, next put the precipitate on a filter of cotton or linen cloth, supported by a square frame. When the water has ceased to pass, gather into one hand the edges of the filter, so as to make it a sort of bag, and with the other twist round from the holding hand, downwards, so as to squeeze out the remaining water. The precipitate will now have the appearance of clay too soft for moulding. With soft sugar and aromatic powder in suitable proportions make it into an electuary.

Thus we obtain a carbonate of iron uniform in its properties, hardly deteriorated by the process it undergoes, and little liable to change by keeping.

The precipitated carbonate of iron while yet moist is soluble in carbonic acid; hence a tea-spoonful of the above electuary is soon dissolved in a glass of ginger beer, except the aromatic powder it contains. It may be asked, therefore, whether an eligible medicine might not be obtained by uniting this preparation with the ginger beer powders; the excess of carbonic acid in them

would dissolve the iron, and you would have a highly agreeable draught with all the chalybeate properties of this highly valuable medicine.

G. W. Carpenter is pleased to inform the faculty he has prepared the above preparations in the most careful manner, and given them the following names, by which physicians can always designate them when they wish these preparations prepared by him.

Carpenter's Aromatic Chalybeate Confection.

This article, since I have had the pleasure of preparing it, has been used by a number of the most respectable physicians, and has given the highest degree of satisfaction, and who accord fully with the writer in the review.

Carpenter's Chalybeate Ginger Beer Powders.

These powders form an extremely pleasant and agreable draught, and from their tonic and chalybeate properties, aided by the stomachic effects of the fine purified ginger in their composition, render them an extremely valuable medicine, and adapted to many cases of weak and diseased state of the stomach and bowels. They have already been extensively used, and have given in all cases the highest degree of satisfaction, and produced the most salutary and beneficial effects.

They can at all times be used as a wholesome and agreeable beverage, and will be found highly valuable medicine in dyspepsia.

Physicians should be very particular in their orders for these powders to designate them particularly, as they are essentially different from the common ginger beer powders usually sold.

From full experiments carefully made with the preparations of iron, as suggested above, the most satisfactory results have occurred, and there appears to be no doubt but that it deserves all the at-

tention of the faculty, which the writer claims, that it will receive their sanction and approbation from its decided superiority to the ordinary preparations and of iron, will entirely supercede their use.

BUCHU.

Diosma Crenata.—This plant is a native of the Cape of Good Hope, and the natives have long used the leaves in a variety of diseases. It has proved by sufficient experiment in this county to be a safe and valuable remedy in most complaints of the urinary organs, particulary gravel, chronic inflammation of the bladder and urethra, retentions or incontinence of urine. It has also been recommended in chronic reheumatism and cutaneous affections.

Carpenter's Compound Fluid Extract of Buchu. Diosma Crenata.

For diseases of the bladder, obstructions of urine, chronic gonorhea, and gleets of long standing.

The Buchu leaves (Diosma Crenata) have been highly recommended for diseases of the bladder, by some of the most distinguished physicians in Europe; and when united with cubebs and diuretics, have effected some extraordinary cures, a few cases of which will be given hereafter. In order that physicians may have a uniform preparation of this valuable medicine, made in a careful manner, with proper proportions and specific doses adapted to the disease, George W. Carpenter is pleased to announce his Compound Extract of Buchu, which he recommends to the medical profession as a concentrated preparation of this article, and the

most convenient mode in which it can be exhibited, and which will obviate the necessity of preparing the decoction, which is always attended with trouble and expense, and always differs more or less in strength, according to the mode of preparation which different individuals adopt, and not unfrequently much impaired, if not totally rendered inert, by the injudicious and unskilful management of those unacquainted with pharmaceutical preparations. This compound will therefore overcome all these difficulties, and being of uniform strength, and ready prepared for the patient, can be administered with more certainty of success by the practitioner, and with less trouble and expense to the patient. Under these circumstances this medicine has been prepared expressly for the use of the faculty, and will no doubt receive their approbation and encouragement.

Among various highly satisfactory accounts of the value of the Buchu in diseases of the bladder, obstructions of urine, chronic gonnorhea, gleets of long standing, &c, I will quote a few cases and remarks by Dr. Ephraim McDowell, a highly distinguished physician and member of the Royal College of Surgeons in Ireland, published in the Transactions of the King and Queen's College of Physicians.

A variety of remedies have been advised, says Dr. McDowell, for chronic inflammation of the bladder, &c. which, when neglected, extends to the urethra and kidneys, producing a train of severe local as well as constitutional symptoms. Its original cause frequently cannot be discovered in many cases; we will, however, find it frequently succeeding to mismanaged gonnorhea, neglected retention of urine, diseases of the prostrate glands, strictured urethra, or calculous affections.

In some cases, as, for example, when it depends on diseases of the prostrate gland, we can do little more than palliate urgent symptoms; in other instances much may be effected.

A variety of remedies have been advised for these diseases; most of them I have repeatedly tried with little or no effect, beyond that of being in some degree palliative. The Compound Buchu having been lately strongly recommended, I was induced to make trial of it, and my experiments have resulted in the most satisfactory manner, having succeeded in saving the most inveterate cases, in which I had no hopes of success. I will quote a few for example.

Case First.

The first case in which I used it, was apparently a hopeless one, recommended to me by a medical friend in December, 1821. James Thomson, æt.——— upwards of six years ill, emaciated and greatly debilitated; lower extremities paralytic. When he passed his urine it was generally either with great difficulty, from its being loaded with a large quantity of slimy, tenacious and stringy matter, or else involuntarily. His bowels were habitually costive, appetite totally gone. He had been under the care of so many medical practitioners, without the least benefit, that I feared little could be done for him. I passed a bougie in the first instance, to ascertain the state of urethra, which I found rather irritable. I also used several of the common remedies for irritable bladder with no effect, at the same time closely attending to the state of the digestive organs; lastly, I gave the compound Buchu, which gave immediate relief. In six days after I found his appetite and strength improved, able to walk firmly, the mucous much diminished in quantity, capable of retaining his urine some hours, and no longer passing it involuntarily. His own words to a medical friend were nearly the following:

"Instead of being disturbed every five minutes during the night by painful erections, or by the desire of making water, I can sleep some hours at a time: no involuntary passing of urine.

I can walk stoutly through my room, and even up stairs without help; my appetite is excellent; the heart-burn gone; the sediment in the urine greatly diminished. I feel a strength in my back and loins unknown to me for years." He continued to improve for a considerable time, but being unable to obtain any more of the Buchu, he in some degree relapsed; his condition, however, infinitely improved, and a short further continuance of the Buchu would restore him to entire health.

Case Second.

Philip Dwyer, aged sixty-seven years, sallow complexion, emaciated, ill for three years; complains of severe pain in the pubic region, particularly before he passes water. Great irritability of bladder, passing water in small quantities every quarter or half hour during the night; during the day can occasionally retain it for two or three hours. Less irritability when using much walking exercise; when sitting, is affected with a stinging or scalding sensation in the prostrate region. Urine generally white or muddy. Frequently passes a large quantity of slimy, pale yellow coloured mucous, voided with great difficulty, and soon putrefying; is much relieved by its expulsion from the bladder. Is greatly debilitated, and has lost much weight. Tongue loaded with yellowish mucous. Thirst. No appetite. Bowels generally constipated. No enlargement of the prostrate glands could be felt.

Previous History.—Never had gonorrhea. Has been a temperate liver. The disease commenced three years ago, first with slowness and difficulty in passing water, which was followed by frequent micturition. He attended the Talbot dispensary for five months, and left town apparently cured. He relapsed however, in a month, and returned to the dispensary, May 13, 1822. He was ordered to a pint of the Aqua Calcis daily, twenty drops of

the muriated tincture of iron three times daily, an opium suppository (three grains) every night, and purgative pills to be taken occasionally.

May 24. Up five times last night to pass water; slime in less quantity; can expel his urine with more force.

May 29. Worse; up fifteen times last night. The slime has not been discharged for some days; since its stoppage great irritability of the bladder has existed. Prescribed the Buchu, and continued the use of muriated tincture of iron.

May 31. Reports that he has been better for the last two nights than for years previous. Passed a large quantity of slime yesterday, which came away readily; up but four times last night.

June 7. Continues better.

June 9. Great irritability of the bladder. A painful swelling in pubic region; no mucous discharged for some days. This relapse arose from not being able to procure the Buchu during the last week. The Buchu repeated as before, also the muriated tincture of iron.

June 21. Much better. The slime was discharged after taking the medicine twice; up but twice last night.

The Buchu continued as before.

July 5. Continues mending.

August 4. Called on me to say he continues well, and has been able to follow his ordinary occupation as a labourer for the last month, and considers himself radically cured.

Case Third.

Henderson Waters a debilitated and emaciated man, aged thirty-one years, visited me August 4, 1822, with my friend Dr. Cumming, found him labouring under much fever. Urine dribbling almost constantly from him, or else passing it in the quantity of half an ounce every five minutes; the urine loaded with slime; lower extremities totally paralysed, the upper nearly so. His

lower limbs rigid, and frequently jerked up under him by painful spasms; severe pains in the soles of his feet; much irritability of the rectum. The glans penis in a state of slough, from keeping it constantly immersed in the urinal. The last dorsal vertebræ more prominent than usual: no pain caused by its forcible pressure. The usual remedies were applied by two eminent physicians who had been attending him without success or benefit.

June 8. Put on the use of the Buchu as the last case.

August 10. Can retain his urine for half an hour at a time; little or no pain in the bladder; strength and appetite improved. The sloughs detached from penis, sore healthy; a slight slough over the trochanter major, from pressure and debility; ordered nourishing diet, and to continue the Buchu.

August 20. (Reported by Dr. Cumming.) In every respect better; can now retain his urine for two or three hours at a time; no uneasiness in the bladder. For some days past, sitting up; looks greatly improved. Tongue, pulse, and bowels natural. Paralytic affections of lower extremities, as before.

August 30. At his work as a watchmaker. Can retain urine for four or five hours; health good; limbs much stronger.

January 8. Continues as last reported and is entirely recovered.

In dyspepsia it appears to be a valuable auxiliary to other medicines. I had an opportunity of meeting with a case of gravel, of the uric acid kind, in a sedentary and dyspeptic individual; the attack coming on whenever the digestive organs were deranged, and frequently lasting with much severity for three days, attended with violent pains, shooting in the course of the ureter to the groins, testicles, and anterior part of the thigh; much fever, restlessness, and irritability; any excess in drinking wine invariable produced an attack. He has been in the habit, for the last three years, of taking the Aqua Kali Caustica whenever attacked, and usually continued for a considerable time, in quantities of one

ounce daily. In a late paroxysm he took it along with the Buchu, a white precipitate in the urine in large quantities resulted; he then omitted the alkali, and took the Buchu alone. He recovered rapidly; both the white and red precipitate ceased to recur, and he has had no attack of it since.

The above accounts of Dr. McDowell are entitled to the highest degree of confidence, being a man highly distinguished in the medical profession, and of large experience from the most extensive practice.

Numerous certificates and letters have been received from distinguished physicians in various parts of the United States, who have employed this medicine with great success, substantiating fully the evidence given by Dr. McDowell; and who speak in the highest confidence of its valuable properties. I will quote one or two for example.

The following is an extract of a letter from Dr. A. A. Evans, an eminent physician of Elkton, Maryland, whose observations are entitled to the fullest share of public confidence.

The subject, a respectable widow lady, aged about forty years, had been under the care of an intelligent physician for something like eighteen months before I saw her. He had given her, as she stated to me, a variety of medicines without much relief. Indeed, she had become materially worse than she was in the early part of her disease. When I visited her for the first time, she laboured under great uneasiness in the region of the bladder, with an almost incessant inclination to void urine. Whenever a few drops collected in the bladder she was compelled to arise from her bed and discharge it. There was, at times, a discharge of mucous with the urine. She was much exhausted by the irritation of the disease and want of sleep; had but little appetite, and a quick, irritable pulse. She had in the course of her disease become af-

flicted with leucorrhœa, and a partial prolapsus uteri, which were relieved by injections, a pessary, &c. but the difficulty in the urinary apparatus continued unmitigated.

After trying all the remedies which my reading and experience suggested with but temporary relief, her patience, as well as my own, (she lived a considerable distance from me,) became exhausted, and she determined to leave off all medicine for a while. Shortly after seeing her for the last time, you sent me one of your bottles of the Buchu, which I sent her by the first opportunity, with a request that she would give it a trial. She did so, and when the bottle was finished, she sent her son to inform me that the medicine had given her more relief than any thing she had ever tried ; but that she was not entirely well, and wished me to send her another bottle : not having any more on hand, I gave her your address, since which time I have not seen her, but heard some time back that she was up, and attending to the affairs of her family as usual before her disease.

Yours, with respect,

To Mr. G. W. Carpenter. A. A. EVANS, M. D.

July 24th, 1831. Elkton, Maryland.

The following case is an extract of a letter from Dr. W. S. Wallace, an intelligent physician of extensive practice at Earle, Lancaster County, Pennsylvania.

Mr. ———, aged twenty-eight years, having laboured under a disease of the bladder and urinary passages for upwards of two years ; the symptoms were a difficulty in passing urine, accompanied with great pain, the urine passed by dribble, sometimes almost amounting to a suppression ; occasionally a sharp lancinating pain in the prostate gland, but no enlargement could be felt ; with irritability of the rectum. Having tried many remedies without

any benefit, I was induced to try your compound Fluid Extract of Buchu, and am happy to say with the most decided benefit. Before using three bottles of it, the patient could urinate freely without pain, and all the above symptoms entirely gone, which has not been the case before with him since the commencement of the disease. I am decidedly of the opinion that it is one of the most powerful diuretic medicines I am acquainted with.

Respectfully yours,

To Mr. G. W. Carpenter. W. S. WALLACE, M. D.

Aug. 1st. 1831. Earle, Lancaster Co., Penn'a.

This medicine has also been successfully prescribed in a number of similar cases by our distinguished professor, Dr. Physick, of this city.

The above preparation of the buchu is manufactured and sold only by *Geo. W. Carpenter*, at his Chemical Warehouse, No. 301 Market Street, Philadelphia.

Dose for grown persons two tea-spoonfuls three times a day, which may be made more agreeable in a little sugar and water, if necessary.

This medicine will be found particularly serviceable in gonorrhea, or clap, and gleets of long standing.

CAUTION.

After the reputation of any valuable medicine is established with considerable expense, trouble, and many experiments by the proprietor, he should receive the benefit of it. He is sometimes, however, disappointed by spurious imitations of his preparations, made by the ignorant, who prepare inferior and frequently entirely different compounds, and sell them under the same name, and on

the reputation of the genuine medicine, *copying the directions, and putting it up in the same bottles and form;* thus frequently deceiving the public and injuring the reputation of valuable medicines. Under these circumstances, I would beg the faculty to be extremely particular in their orders, and to observe that each bottle will have my written signature, without which none will be genuine.

CARPENTER'S

SARATOGA POWDERS,

FOR MAKING

CONGRESS SPRING OR SARATOGA WATERS.

——:o:——

THERE is, perhaps, scarcely an individual in the United States who is not acquainted, either by experience or report, with the salutary effects of the Congress Waters at Saratoga. From thirty to fifty thousand persons annually visit these springs, many from the remotest sections of the United States, and some from the West Indies, and other foreign places. The great expense in visiting the springs excludes the greater portion of the community, (more than nine out of ten,) and the bottled water, from its high price, prevents its use to the extent of being serviceable, and confines it to a small number. It appears to be a serious evil that so valuable an article should be so restricted that comparatively few should be able to enjoy what is so conducive to general health in the hot weather of our summer months. From these circumstances, Geo. W. Carpenter is pleased to announce the preparation of the above powders, containing all the essential substances with which these celebrated springs are impregnated, and from which the waters of the Congress Springs at Saratoga are precisely and effectually imitated. With a view to accommodate the public, and to bring into general use so convenient and

valuable a substitute for these waters, he has been induced to go very extensively into the manufacture of them, and to put them at a price to be within the reach of most persons. For the accommodation of the public, agents have been appointed in all the cities and principal inland towns, to give a general circulation to so useful an article throughout the country. The public are recommended to make trial of these powders, as he finds, by experience, and from the opinion of the most eminent of the faculty, that the water made from them possesses the same medical qualities, is as effectual in its operations, and precise in taste as that taken immediately from the springs. These powders are therefore recommended as a valuable remedy in all cases where Saratoga Waters are prescribed.

Persons on sea voyages, or residing at a distance from the springs, and in warm climates, will at once perceive the great advantage of making use of these powders, which besides being more portable and less expensive than the bottled water, will keep without injury for any length of time ; and as they are equal in medical effect to that taken fresh from the springs, they are certainly much preferable from the many advantages they possess.

These powders are superior to the Seidlitz, inasmuch as they are equally aperient and agreeable, and at the same time possessing tonic and chalybeate qualities in a superior degree, and are consequently better adapted to weak and debilitated constitutions than any other cathartic in use.

It is now scarcely two years since the introduction of these powders, in which time they have been sent to almost every populated section of the United States, and have given in all places the highest degree of satisfaction. They are now extensively used throughout the southern states, where they are highly appreciated by the faculty, and extensively employed by the most distinguished physicians. They have elicited from the professors of

several medical institutions, and from highly distinguished individuals in various places, voluntary acknowledgments of high commendation on their valuable properties. The reputation and demand which *Carpenter's* Saratoga Powders have acquired, will no doubt be an inducement for the ignorant to attempt their preparation; the proprietor has already received frequent complaints that spurious and inferior imitations have been made, and that sales are effected on the reputation and character of his preparation. I deem it justice to the community to apprise them of these facts, that they may be on their guard. They should be particular to specify in their orders "Carpenter's Saratoga Powders," otherwise they may get a different article from what they intended.

We are pleased to find that the imitation powders are not patronized by the faculty, but are objected to wherever they are known; in many cases, however, they are purchased by individuals who are not acquainted with the circumstances, and do not discover the fact until they begin to make use of them. The proprietor has received numerous letters on the subject of this grievance, and a number of expressions of dissatisfaction have appeared in various Journals and Gazettes of the Southern states, where these powders are most used. The following is from the Southern Times and State Gazette of July 11, 1831, published at Columbia, South Carolina.

"I copy with pleasure the editorial article* from the National Gazette of Philadelphia, because I can safely and honestly say the compliment is deserved. There are some very inferior imitations of Carpenter's Saratoga Powders, which are by no means worthy of public notice, compared to Carpenter's. As a summer laxative, equally pleasant and efficacious as the water, these powders may be relied upon."

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* See National Gazette of June 22, 1831.

CARPENTER'S

COMPOUND

SYRUP OF LIVERWORT.

——:o:——

Hepatica Triloba.

This plant has proves to be a safe and valuable medicine for coughs spitting of blood, consumption, and liver complaints.

Most of the medicines made use of for the above diseases, are of a stimulating nature, composed generally of rezins and balsams in alcoholic solutions, which, although sometimes giving temporary relief, in almost every instance where they are freely used, aggravate the disease and reduce the strength of the patient.

This article possesses superior advantages over these preparations, its action being of a tonic, invigorating and strengthening nature, thus overcoming the disease by promoting expectoration and gradually increasing the strength of the patient, and this without being attended with any unpleasant effects; it also agrees with the stomach in all cases, and is a pleasant and agreeable medicine to take.

It has generally been administered in the form of tea or decoction; this has most frequently been improperly made by those unacquainted with pharmaceutical preparations, and has brought this medicine in disrepute, preventing its application in many cases where it would otherwise have proved highly useful and beneficial.

To guard against these inconveniences, and to bring before the

public a concentrated preparation of this valuable article of uniform strength, George W. Carpenter is pleased to announce the preparation of *Compound Syrup of Liverwort* which will obviate all the disadvantages above described. This preparation is as active as it can be made from the fresh plant, and the virtues considerably improved by the tonic and expectorant medicines which have been selected as adjuvants.

Directions.—Dose for grown persons, a table-spoonful three or four times a day when the cough is troublesome; for children, a tea-spoonful may be taken in the same manner.

N. B. During the cough the patient will find much advantage from taking a dietical jelly made of the flower of slippery elm.

Remarks on Carpenter's Compound Syrup of Liverwort.

It is scarcely one year since the introduction of this preparation, in which time it has been sent to almost every populated section of the United States, and has in all places been highly approved of by the faculty, and prescribed by the most distinguished physicians, and has given in all cases the most decided and unequivocal stisfaction, and produced the most salutary and beneficial effects—and in numerous instances elicited, from the most distinguished members of the medical profession, (for whose use, and under whose direction the article is expressly prepared and respectfully submitted,) voluntary acknowledgments of high commendation upon the valuable properties of this medicine.

The following are a few extracts from letters of highly respectable physicians, addressed to the subscriber on the subject of the above preparation.

From Dr. S. P. Hereford, of Haymarket, Virginia,

Whose observations on the liverwort are entitled to the high-

est consideration. His experience with this plant is perhaps superior to any other medical man in our country, and the public are indebted to him for many valuable and interesting essays on the subject, in our periodical journals and papers.

From the National Intelligencer.

As phthisis pulmonalis, or consumption of the lungs has been emphatically styled an *approbrium medicorum*, and as it has for its victims all ages and sexes, and a large portion of the young and beautiful, it becomes the paramount duty of every humane physician to contribute in any way he can towards arresting in its march this terrible disease. With an eye to this purpose, I have strenuously recommended, and do still recommend the Liverwort, particularly Carpenter's compound syrup, which I consider the most valuable mode in which it can be exhibited, being a concentrated preparation of the fresh plant, with valuable expectorant medicines selected as adjuvants; and although I have never recommended it as a medicine indiscriminately adapted to all cases, yet I am fully persuaded that it has done more signal service than any other single remedy, so far as experiments with it has been made, or according to the extent it has acquired the public confidence; but we are too apt to appreciate lightly, or invest with little consequence, things which have the external appearance of simplicity; while those which are enwrapt in secrecy, or have a mysterious character, allure, fascinate or inspire us with confidence and admiration.

T. B. HEREFORD, M. D,

Jan. 18, 1830. *Haymarket Virginia.*

From Dr. William Watson, a highly respectable physician of Bedford Springs, Pennsylvania, whose extensive practice and experience entitles his observations to the highest public confidence.

BEDFORD, June 27th, 1830.

DEAR SIR—You were pleased to send with my medicines two bottles of your Compound Syrup of Liverwort. I have a favourite servant boy, who was taken with pneumonia inflammation, in November last, which resisted all the remedies and means I have been able to apply. For some time I have considered him to be in the hetic state of phytisis, having purulent cough, much expectoration, night sweats, great emaciation, &c. Under these circumstances, without any expectation of benefit, I gave him the two bottles you sent me as directed, and immediately the fever aud expectoration diminished, the sweats were removed, and his strength and cheerfulness increased. I had a quantity of the herb gathered, a syrup made in the usual way, but notwithstanding the free use of this syrup, he immediately declined, and he is now in the state in which he was when he commenced with your preparation. I believe a cure would have been effected by a few more bottles of your syrup. As I wish to give it a fair trial, you will please to send me a dozen bottles by the earliest opportunity, and oblige,

Yours, &c.

WILLIAM W. WATSON, M. D.

To G. W. CARPENTER.

We are pleased to hear the above case of Dr. Watson's has recovered under the further continuance of this preparation.

The following extract from Dr. Thos. F. Slaughter, a highly respectable and skilful physician of Orange Court House, Virginia, is additional evidence of the valuable properties of this medicine.

Orange Court House, Virginia, June 1, 1830.

DEAR SIR—I made trial of Carpenter's compound syrup of liverwort, in the case of a lady, an old patient of mine, who had

been reduced from extreme corpulency and robust health, by her disease, to the verge of the grave; she used only one bottle of it, and has ever since been rapidly improving in health and appearance, which is attributable to the use of this medicine. She is solicitous for its further use, which I cannot gratify her in till I receive more of the article. I am anxious to make a fair trial of it in this case, as well for scientific purposes as for the great value of the life of the patient.

Your's respectfully,

THOMAS F. SLAUGHTER. M. D.

To Geo. W. Carpenter.

The following extract from Dr. Richard M. Hill, a very respectable physician of Gholsonville, Virginia, is an additional testimony of the value of this preparation.

Dear Sir—I am now making trial of your compound syrup of liverwort, a few bottles of which I obtained in Petersburg, and, so far, am highly pleased with its effects, and consider it admirably suited to the cases in which it is recommended.

Yours, truly,

RICHARD M. HILL, M. D.

The increasing reputation and extensive demand for the compound syrup of liverwort is perhaps greater than any medicine ever yet offered to public attention within the short period since its introduction.

This has given rise to a number of imitators, who endeavour to effect the sales of various preparations, to which they affix the same name, and occasionally dispose of it on the reputation which my medicine has justly acquired. I mention this fact in order that physicians may be on their guard, and to request them to be particular in their orders, to specify distinctly *George W. Carpen-*

ter's compound syrup of liverwort, or they may get a different article from what they intended to order; and the same course may be recommended to all my preparations.

A large number of letters have lately been received, containing voluntary acknowledgements of high commendation upon this medicine, and the following are indiscriminately selected from a large pile, all corroborating the statements herein given.

Extract of a letter from Dr. W. A. Anthony, a respectable physician of Pittsylvania Court House, Virginia, dated August 19th, 1833:

Dear Sir,—I take pleasure in communicating to you, by my friend Captain Bennett, the effects resulting from the use of your compound lately introduced in practice in the southern climate.

I have used your extract of liverwort in several cases of chronic asthma with the most unparalleled success, and in this character of disease I think it an incomparable article. I have used it in two cases of pneumonia biliosa, when one patient had been given out, and the other despaired of, and succeeded in relieving both, and if our facilities were greater for procuring your articles, I would use them much more in my practice.

To Mr. Geo. W. Carpenter. W. A. ANTHONY. M. D.

Extract of a letter received from Dr. R. W. Walker, a respectable physician of extensive practice in East Baton Rouge, Louisiana, dated Feb. 15, 1833:

Dear Sir,—I have found your compound syrup of liverwort very valuable and efficient in pulmonary irritations, where there have been no organic lesions; or even in cases of evident disorganization, an excellent palliative. That which I obtained from you direct was good, but some purchased from a druggist in a neighbouring village, in Mississippi, made by some other person of the north, in imitation, produced much disorder of the stomach and bowels, and proved wholly inert as an expectorant. Under these circumstances, I would advise physicians to be on their

guard against spurious imitations of Mr. Carpenter's medicines.

To Mr. Geo. W. Carpenter. R. W. WALKER, M. D.

Extract of a letter from Dr. Christian Garber, a respectable physician of Lancaster county, Penn. dated May 15, 1833:

DEAR SIR,—I must here make mention of a very protracted case of spasmodic croup in a little patient of mine, four years old, which readily yielded to your compound syrup of liverwort, in combination with small doses of tartarized antimony. After one or two active emetics had been administered, the spasms returned with full vigour; after taking four tea-spoonfuls of the syrup, with 1-16th grain of tartar emetic, the spasms entirely left the little girl. I continued the antimony twenty-four hours longer, and left off giving the syrup, without any other medicine, and the patient recovered rapidly. I consider the liverwort in combination with tartar emetic a medicine of much more utility in the above disease than any I have ever made use of in my practice.

Extract of a letter from Dr. John Slavens, a distinguished physician of Mount Sterling, Kentucky, dated September 4, 1833:

DEAR SIR,—I have found your compound syrup of liverwort fully to realize all that has been said of its virtues by yourself and other writers, and it is with pleasure I confidently and heartily recommend it to the medical profession, under the full impression they will find it, on fair trial, an invaluable medicine in pulmonary consumption and hepatic affections.

JOHN SLAVENS, M. D.

To Mr. G. W. Carpenter.

Extract of a letter from Ebenezer C. Ledyard, a respectable druggist of Mariana, Florida, dated Aug. 20, 1833:

DEAR SIR,—Your compound syrup of liverwort is a very valuable medicine for coughs, colds, consumption, &c. The physicians have witnessed the most beneficial effects from its use.

E. C. LEDYARD.

To Mr. G. W. Carpenter.

Extract of a letter from Dr. Richard A. Foster, a respectable physician of Prince Edward Court House, Virginia, dated September 15, 1833:

Dear Sir,—I have had an opportunity of trying your compound syrup of liverwort, (hepatica triloba,) and I must add, that if it succeeds as well in the hands of others as it has in mine, in future it will be one of the most approved remedies in pulmonary affections. The case in which I used it was a chronic catarrh, which had not been at all alleviated by antimony, squills, and a variety of other remedies. It was given in doses of a table spoonful three times a day, and continued for five or six days with decided benefit, and has now almost entirely relieved the patient. When I commenced the use of this medicine, the case was very violent, a distressing cough, very copious expectoration, pain in the chest, dyspnœa, irregular fevers, and restless nights, all of which are now relieved, except a slight cough with some debility, from which he is now gradually recovering. I will thank you to send me two dozen more bottles of the syrup. I am so well pleased with the quality of your medicines, and the manner which they are put up, &c., that I shall in future obtain all my supplies from you, and can confidently recommend your establishment to the notice of the faculty, particularly those in the country, who are obliged to dispense medicines to their patients.

RICHARD A. FOSTER, M. D.

To Mr. G. W. Carpenter.

Extract of a letter from Charles P. Cummins, a respectable physician of Franklin county, Pennsylvania, dated October 14, 1833:

Dear Sir,—So far I am highly pleased with your compound syrup of liverwort, which I lately ordered from you. Both my patients for which I obtained it, have been already materially

benefited by it, and I think a short continuance with the medicine will effect a perfect cure.

CHAS. P. CUMMINS, M. D.

To Mr. G. W. Carpenter.

Extract of a letter from Dr. Daniel T. Hays, a respectable physician of Washington county, Maryland, received October 25th, 1833:

Dear Sir,—Having had a patient afflicted with a chronic inflammation of the lungs, and having seen an advertisement in the Hagerstown paper of Victor Thompson, druggist, having received a supply of your compound syrup of liverwort, I procured a bottle of it, and in a short time I saw the good effects of it, and immediately procured a few more bottles of it, and with it and several simple sedatives I actually cured her, since which time I have procured several dozen bottles of your preparation in Baltimore, and have made it a regular antidote. I confidently recommend it to the faculty as being the best preparation of the kind that has ever appeared before the public.

DANIEL T. HAYS, M. D.

To Mr. G. W. Carpenter.

Extract of a letter from Dr. C. M. Hill, a highly respectable physician of Birdsville, Burke county, Georgia, dated October 18th, 1833:

Dear Sir,—I have had a severe and almost constant indisposition during the summer and part of the fall; however, my health is now nearly restored; and I think I am indebted to your valuable compound syrup of liverwort for it. My indisposition was *catarrhal*, attended with a most distressing cough. After the stage of excitement had passed away, leaving considerable pulmonary engorgement, I placed myself upon the use of your syrup, and I declare unequivocally, that I never had any article to afford me such prompt and decided relief; its effects were of the most soothing

and tranquillizing nature. For the bottles you sent with my medicines, please accept my warmest thanks.

C. M. HILL, M. D.

To Mr. G. W. Carpenter.

Extract of a letter received from Dr. C. G. Ballard, a respectable practitioner of Westport, Oldham county, Kentucky:

Dear Sir,—I am very much pleased with several of your new compounds; I have used your compound syrup of liverwort in two cases, one of which was a protracted case of asthma, and the other incipient phthisis pulmonalis, in both of which cases I have realized all that has been said of its virtues, and most heartily concur with the rest of your friends in recommending it to the medical faculty, under the firm belief that it will be found on fair trial an invaluable remedy. Yours respectfully,

C. G. BALLARD,

Westport, Kentucky, March 2, 1834.

To Mr. G. W. Carpenter, Philadelphia.

CARPENTER'S

COMPOUND

CERATE OF COPAIVA,

A valuable Application in Burns, Scalds, Wounds, Ulcerations, and Sores of various kinds.

It has long been a desideratum to obtain a preparation of the above character for the use of families; a convenient application which can always be at hand when accidents occur, and which will afford immediate relief. G. W. Carpenter is pleased to annouce the introduction of the above preparation, as possessing all the qualities here described, and with much pleasure recommends it to the faculty and public, as a safe, pleasant, and soothing application for all external irritable wounds, or inflamed surfaces.

It has been fully tested in private practice, and the result has been of the most satisfactory and beneficial character.

In burns, scalds, wounds, ulcerations and sores of various kinds, no application has been productive of so much benefit, and it is confidently recommended to the public as an article upon whose virtues they can confidently rely. Mild, soothing, and gentle in its effect, it is particularly applicable to burns; it allays the heat and irritation of the parts in a short time, and quickly induces the healthy process.

Every family in the city and country should supply themselves with this preparation; it is superior to most of the cintments which are obtruded upon the public, and may be advantageously employed in all cases where a mild and stimulating application is required.

The following letter has just been received from Dr. Alexander C. Draper, of this city:—

Dear Sir,—I have for some time past adopted in my practice your compound cerate of copaiva, and have been much pleased with its effects. In burns, ulcerations, and anthrax, I have derived in almost every instance the most decided benefit; and in these affections, I know of no application equal to it in power and efficacy. It is in burns unquestionably superior to the Kentish or turpentine ointment, and in general, it will be found to speedily accomplish the purpose for which it is designed. While physician in the Southern Dispensatory and Moyamensing Alms-house, I employed the cerate of copaiva in a large number of cases, and I recollect of no instance in which it has disappointed me in my expectations.

I cheerfully add my testimony to this compound, and think it an important and valuable addition to our remedial agents in those affections for which you recommend it.

Your obedient servant,

ALEXANDER C. DRAPER, M. D.

To Geo. W. Carpenter. Philada., April 29, 1834.

Prepared and sold, only, at G. W. Carpenter's Chemical Warehouse, No. 301 Market Street, Philadelphia.

As there may be attempts of imitation, the proprietor will affix his signature as a guarantee of its genuineness.

GEORGE W. CARPENTER'S

COMPOUND FLUID EXTRACT OF

BONESET.

——:o:——

Eupatorium Perfoliatum.

This preparation is combined with Peruvian Bark, Colombo, Centaury, and other vegetable tonics, and is a valuable preparation in Intermittent Fevers, General Debility, Loss of Appetite, &c.

The valuable tonic and diaphoretic properties of the eupatorium are well known to every practitioner of medicine who has had any experience in his profession. Its usefulness as a febrifuge and tonic in curing intermittent and other fevers, is well known to every person who lives in the vicinity of its production, where large quantities are annually collected, dried, and sent to distant cities. It is said to have been employed in the earliest periods by the Indians in intermittent fevers, as the chief remedy on which they relied, and has proved highly successful in the hands of medical men of eminent standing of the present day. Distinguished authors of the latest period ascribe to it valuable properties as a tonic in dyspepsia, indigestion, and general debility of the constitution arising from various causes, particularly after fevers.

The valuable properties of Peruvian bark, colombo, and centaury, selected as adjuvants in this preparation, are too well known to the faculty to attempt a description, and their combination in this preparation, in which all their active properties are concentrated and united in equitable proportions, must at once convince them of the character of this medicine and its valuable properties

as a tonic and febrifuge. And as the constituents are openly and candidly communicated to the faculty, they cannot ascribe to it the odious epithet which secret medicines are justly entitled to.

I have been applied to by a number of physicians to prepare an extract of the eupatorium thus combined, that would obviate the trouble and difficulty of preparing the decoction, which is always attended with inconvenience and greater expense, having to be prepared fresh daily; and it is most frequently improperly made by those unacquainted with pharmaceutical preparations, thus frequently presenting an obstacle to its general use.

The proprietor has thought it advisable, under these circumstances, to prepare an extract of it, combined as before described, which he now offers to the faculty as a preparation containing all the active properties of these substances in the most concentrated form, and in the most eligible mode of exhibition, and which he offers with pleasure to the profession, as it will no doubt be extensively prescribed by them as a valuable remedy in fevers and debility, and as a useful auxiliary to quinine, in the more obstinate stages of intermittents. Its usefulness and convenience will no doubt be fully appreciated by physicians in the country, who have not the convenience of an apothecary to compound their preparations, and whose engagements will not allow their attention to it, and consequently, in many cases, must be under the necessity of confiding in those who are entirely ignorant of, and unqualified to prepare their medicines. To such this medicine cannot but be a great desideratum.

Prepared and sold only at my Chemical Warehouse: GEO. W. CARPENTER, No. 301 Market Street, Philadelphia.

CAUTION

TO

PHYSICIANS.

——:o:——

I must beg leave to call the attention of my medical friends and the faculty in general, who wish to get my preparations, and who do not send their orders direct to my establishment, to be particular to order "George W. Carpenter's" preparations. I urge this in consequence of several attempts having been made to imitate my preparations by the ignorant and inexperienced.

After the reputation of any valuable medicine is established with considerable expense, trouble, and many experiments by the proprietor, he should receive the benefit of his improvement or discovery as long as he continues to prepare the article in a satisfactory manner, and gives his attention to it and his business. He is sometimes, however, annoyed by the spurious imitation of his preparations, made by the ignorant and careless, who have not genius or industry to invent or discover any thing, or to make any improvement of their own; but when they see any thing established and like to become popular, they will steal the name and copy the directions, and embezzle the reputation of it to appropriate to themselves. These apish propensities should not be countenanced in this enlightened age.

They are a class of people who should receive no support from the faculty or the community, but their mean designs should receive the reproach and indignation of the profession. They pre-

pare inferior, and frequently entirely different compounds, a kind of hodge-podge composition, which they sell under the same name, and on the reputation of the genuine medicine; copying and pilfering the directions; putting them up in the same bottles and form; thus deceiving the public and injuring the character and reputation of valuable medicines. The author regrets the necessity of having repeatedly adverted to this subject in the present work, but the evil cannot be too repeatedly censured; under these circumstances I hope the faculty will indulge me with these remarks, and will see the necessity, when they wish any of my preparations, to be particular in their orders to state it explicitly, and to guarantee their genuineness I will affix my written signature to each article.

G. W. CARPENTER.

CATALOGUE

OF

MEDICINES,

SHOP FURNITURE,

AND

Surgical Instruments,

FOR A PHYSICIAN AT THE OUTSET OF HIS PRACTICE;

Prepared at

CARPENTER'S CHEMICAL WAREHOUSE,

No. 301,

MARKET STREET,

PHILADELPHIA;

Where the articles can be procured of the most unexceptionable quality, put up in the neatest and most careful manner, and as low as those of like character can be had in Philadelphia or elsewhere.

——:o:——

It is often a difficult task for the young practitioner to call to mind the various articles which he will requiring at the outset of his practice, and particularly to proportion the quantities. In the annexed list are all the essential articles required for practice in the proportion which they are generally consumed. The quantities are made small, which is preferable at the commencement of practice, as they can be increased as they may be required. Those residing at a considerable distance, and require some time to receive their medicines after they are ordered, it would be advisable to increase the quantities of some of the most important articles.

lb. oz.

Antimony, Tartrat. - - - - - - 4

Emetic, purgative, and diaphoretic, dose half grain to one scruple.

Febrifug. (James' Powder.) - - 1

Diaphoretic, 5 to 10 grains.

Alcohol, 36, - - - - - - - 2

Stimulant, used as a menstruum or vehicle for other medicines.

Aqua Ammonia, - - - - - - 8

Stimulant and diaphoretic, dose 10 drops diluted with water; externally in frictions.

Acid Muriatic, - - - - - - 4

Stimulant, externally, 2 to 4 ounces in foot-baths, internally half drachm to 1 drachm in each pint.

Acid Nitric, - - - - - - - 4

Stimulant, diuretic. In lemona e, by drops, until an agreeable acidity is produced.

Acid Sulphuric, - - - - - - 8

Stimulant, dose 20 to 30 drops in 2 pounds of water.

Acid, Pyroligneous Concentrated, - - - 4

Astringent, refrigerent when diluted, dose of the concentrated acid 1 scruple to 1 drachm, or common acid 1 ounce.
One pint of this concentrated acid added to seven pints of water, instantly produces a mixture similar and equal, in every respect, to the distilled vinegar of the shops.

Acid, Tartaric, - - - - - 4

Refrigerent, dose 12 to 36 grains in solution.

Acid, Citric - - - - - - - 1

Refrigerent, dose, 10 to 15 grains in a pint of liquid.
One drachm of this salt dissolved in 2 oz. of water, instantly produces a mixture equal to a like quantity of fresh lemon juice, and for many purposes of medicine is even preferable, being always of uniform strength.

Acid (or Flor.) Benzoin, - - - - - *ss.*

Stimulant, dose 10 to 20 grains.

Ammonia, Carbonate, - - - - - 4

Stimulant, dose 5 grains to 1 scruple.

	lb.	*oz.*
Anodyne, Hoffman's,		8
Anti-spasmodic and anodyne, dose half to 2 drachms.		
Arsenic, alb. crude,		1
Tonic, (externally an escharotic,) dose 1-10 to 1-2 grain.		
Arsenic, Fowler's Solution of		4
Febrifuge, 5 to 15 drops.		
Æther, Sulphuric,		4
Diffusible, stimulant and anti-spasmodic, dose 1-2 to 2 drachms.		
Spt. Nitre, dulcis,	1	
Refrigerent, diuretic, and anti-spasmodic, dose 20 to 40 drops.		
Aqua Rosarum,	1	
Slightly astringent.		
Arrow Root, Bermuda,	1	
Nutrient.		
Argent. Nitrat.		¼
Tonic, anti-spasmodic and escharotic, half to 4 grains.		
Blue Pill, mass,		2
Stimulant and anti-syphilitic, dose 5 to 8 grains.		
Boras, Sodæ,		4
Detergent, 1 scruple to 1 drachm, in gargles.		
Bismuth, oxyd. alb.		1
Tonic and anti-spasmodic, dose 2 to 12 grains.		
Burgundy Pitch,	1	
Externally rubefacient.		
Black Drop,		1
Anodyne and sudorific, 5 to 15 drops.		
Balsam Copaiva,		8
Astringent, dose 20 to 60 drops in any emollient mixture.		
Solidified Copaiva,		2
Two four-grain pills are equal to a dose of the balsam.		
Oil of Copaiva, in vials,	¼ doz.	
This may be used in the same manner as the balsam, dose 5 to 10 drops.		

lb. oz.

Balsam Tolu, - - - - - - - 1

Dose 10 to 30 grains.

Black Oxyde of Mercury, - - - - 1

For extemporaneously making Blue Pills, 1-4 grain equal to 4 grains of the latter.

Bac. Juniper, - - - - - - - 8

Diuretic and cordial, infusion, a tea-cupful every 3 or 4 hours.

Cubebs, - - - - - - - 4

In gonorrhea, 20 to 30 grains.

Oil of Cubebs, - - - - - ½

This is a valuable adjunct to copaiva, 10 or 15 drops added to a copaiva mixture will increase its virtues considerably in cases of gonorrhea.

Sulphur, sublimed, - - - - - 1

Laxative and diaphoretic, dose 1 to 3 drachms.

Bol Armeniæ, - - - - - - 1

Perkins' Blister Cloth, - - - 1 *box.*

A very convenient article for the country physician, being ready spread for immediate use.

Creta, ppt. - - - - - - 8

Antacid and absorbent, dose 10 grains to 2 scruples.

Carb. Ferri, - - - - - - 4

Tonic and emenagogue, dose from 4 to 20 grains twice a day.

Carb. Magnesia, - - - - - 4

Absorbent, purgative, used for acidity in the primavia, and cases of poisoning by sulphuric acid, dose from 1 scruple to 2 drachms.

Canella alba. - - - - - - 4

Stimulant and slightly tonic, dose from 10 grains to 1 drachm.

Citrated Kali, - - - - - 1

This is a very valuable medicine in fevers; 1 drachm dissolved in 4 oz. of water instantly produces the saline mixture, similar and equal in every respect to that prepared with fresh lemon juice and salt of tartar.

Pulv. Colocynth, - - - - - 1

Drastic purgative, dose 2 to 10 grains.

	lb.	*oz.*
Cream of Tartar,	2	
Purgative, diuretic and refrigerent, dose 4 to 6 drachms.		
Catechu,		2
Astringent, dose 3 scruples to 1 drachm in infusion or mixture.		
Cochineal,		1
Anti-spasmodic and anodyne, in whooping cough.		
Cort. Peru. Rub.	1	
Tonic, febrifuge, and antiseptic, in adynamic intermittent fevers, scorbutus, gangrene, &c.		
Cort. Peru. (common) or Carthagena,		8
1-12th the value of the former.		
Cort. aurant.		1
Refrigerent. In fevers and inflammations 1 scruple to 1 drachm.		
Cort. Mazerion,		4
Stimulating diaphoretic, dose 1 to 4 grains.		
Caryophillum,		4
Tonic, stomachic, and emenagogue, dose 6 to 12 grains.		
Cassia,		4
Stimulant, cordial, dose 10 to 20 grains.		
Calomel,		8
Purgative, vermifuge and syphilitic, dose 1 to 12 grains.		
Corrosive Sublimate,		1
Dose 1-4 to ½ grain in solution.		
Cera. alb.		3
External application in the composition of cerate.		
Denarcotised acidulous tincture of Opium,		8
This will be found very useful in cases where opium and common laudanum disagrees with the patient. This is sedative without the stimulating properties of opium. Dose 15 to 25 drops.		
Secale Cornut. pulv.		1
In parturition, dose 20 to 30 grains in powder.		
Emplast. Epispastic,		8

lb. oz.

Emplast. Adhesive, - - - - 8

ditto, spread on linen, - - ½*yd.*

Dyacylon, simple, - - - 8

ditto, cum. gum - - - 8

Roborans, - - - - - 8

Extract Gentian, - - - - - 1

Tonic and stomachic, dose 1 to 4 grains.

Extract Colocynth, Comp. - - - - 1

Cathartic, 5 to 10 grains.

Extract Hyosciami, - - - - 1

Narcotic, anti-spasmodic, and resolvent in all nervous disorders, dose 1 to 2 grains.

Extract Cicuta, - - - - - 1

Narcotic, anodyne, and resolvent, dose 2 to 10 grains, externally in cataplasms, lotions, &c. in scirrhus and cancerous affections.

Extract Stramonii, - - - - -

Narcotic and resolvent in epilepsy, histeria, corea and cancer.

Extract Glycyrrhiza, - - - - 1

Demulcent in allaying coughs, dose 20 to 60 grains.

Carpenter's Precipitated Extract of Bark, - 1

Two grains of this extract are equal to one grain of the sulphate, and is at one third the price.

Carpenter's Compound Fluid Extract of Sarsaparilla, - - - - ¼ *doz*

One table-spoonful of this extract added to a pint of water, instantly produces the Lisbon diet drink of the usual strength. It is particularly recommended to the faculty as an active preparation of sarsaparilla, and for its convenience and portability.

CAUTION.

The reputation and demand for this article has induced base imitations of it, against which the faculty should be on their guard.

Caustic, Potass. - - - - - 1

Used externally as an escharotic.

lb. oz.

Cantharides - - - - - - 4

Internally, stimulant and diuretic; and externally rubefacient and epispatic, dose 1 to 3 grains.

Conserv. Rosarum, - - - - - 4

As a vehicle for other remedies.

Elaterium, (Clutterbuck,) - - - - $\frac{1}{8}$

Dose 1-8 to 1-4 grain.

Flor. Chamomile, - - - - - - 4

Aromatic and emenagogue, dose, in infusion, from 2 scruples to 2 drachms.

Fol. Senna Alexandria, - - - -

Purgative, 2 drachms to 1 ounce, in infusion.

Fol. Digitalis. - - - - - 2

Diuretic and sedative, dose 1 to 5 grains.

Fol. Uva Ursi, - - - - - 4

Astringent and diuretic, dose 1 scruple to 1 drachm two or three times a day.

Fol. Sabina, - - - - - -

A powerful stimulant, with diaphoretic, emenagogue and anthelmintic properties, dose 5 to 10 grains two or three times a day.

Opium, ... 4

Narcotic, anodyne and sudorific, dose $\frac{1}{2}$ to 3 grains.

Manna, Flake, - - - - - 4

Laxative, dose for children 1 to 4 drachms, adults 1 to 2 ounces.

Camphor, - - - - - - 5

Sedative, vermifuge and sudorific, dose 2 to 20 grains suspended in emulsion.

Gum Myrrh, Pulv. - - - - - 2

Tonic, vermifuge, emenagogue and stimulant, scarcely used except externally, dose 15 to 30 grains.

Gum Assafœtida, - - - - - 3

Antispasmodic, dose 12 to 30 grains; in enema $\frac{1}{2}$ drachm.

Gum Guaiac, - - - - - - 4

Sudorific and antisyphilitic, in gout, rheumatism, syphilis, &c., dose $\frac{1}{2}$ to 1 drachm in powder; tincture. 1 drachm to 1-2 ounce.

lb. oz.

Gum Aloes, - - - - - - - 8

Drastic purgative, dose 5 to 30 grains.

Gum Ammoniac, - - - - - - 4

Stimulant and expectorant, dose 6 to 20 grains in emulsion.

Gum Kino, - - - - - - - 2

Tonic, astringent and febrifuge, tincture ½ to 1 drachm; powder 15 to 30 grains.

Gum Gamboge, - - - - - - 2

Drastic purgative, in passive dropsy, chronic jaundice, vermes, &c., dose 5 to 15 grains.

Gum Scammony, - - - - - - 1

Drastic purgative, dose 5 to 20 grains. This is the Alleppo scammony, the Symrna is very inferior, and should not be used.

Gum Arabic, - - - - - - 4

Demulcent and pectoral, dose ½ to 1 ounce.

Glyster Pipes, - - - - ½ *doz.*

Hydriodat Potass, - - - - - - 1

See the remarks on this article and Iodine in a preceding part of this work.

Iodine, - - - - - - - 1

Kermes Mineral, - - - - - - 1

Diaphoretic, expectorant and emetic, dose 1 to 2 grains.

Patent Lint, - - - - - - 4

Magnesia, Calcined, - - - - - 4

Antacid and purgative, dose 1 to 2 drachms.

Oleum Olivarum, - - - 1 *bot.*

Purgative, emetic and demulcent, dose ½ to 4 oz.

Oleum Bergamot, ... 1 oz.

Used in giving fragrance to cologue water and other articles.

Oleum Lemon, - - - - - - 1

Used the same.

Olem Ricini, - - . - 2 *bot.*

Purgative, dose ℥ij to ℥ij.

lb. oz.

Oleum Cinnamon, ... 1

Stimulant, cordial, dose 2 to 5 drops.

Oleum Caryophilli, ... 1

Tonic, stomachic, and emenagogue, dose 5 to 10 drops.

Oleum Carui 1

Stimulant and carminative, used as an adjunct to purgative pills, dose 1 to 10 drops.

Oleum Juniper, - - - - - 1

Carminative, diaphoretic and diuretic, dose from 2 to 10 drops. It is sometimes given in dropsy, and may be added to foxglove when given in pills.

Oleum Lavender, - - . . . 1

Stimulant and cordial, dose 1 to 4 drops.

Oleum Sabina, - - - - - 1

Stimulant, diaphoretic and emenagogue, dose from 2 to 6 drops.

Oleum Wormseed, - - - - - 1

Anthelmintic, 10 to 20 drops.

Oleum Menth. Pip. - - . - . 1

Stimulant and carminative, dose 1 to 3 drops.

Oleum Sassafras, - - - - - 1

Stimulant, sudorific, and diuretic, in chronic rheumatism and cutaneous affections, dose 2 to 10 drops.

Oleum Croton Tig. - - - 1 *vial.*

Purgative, 1 to 2 drops. See full account of it in a preceding part of this work.

Oil of Black Pepper, - - - 1 *vial.*

This is much more active than the piperine, one drop of which is equal to 3 grains of the latter. It is a valuable adjunct to quinine, 1 or 2 drops added to 6 grains will greatly increase the powers of that medicine.

Oil of Amber, rectified, - - - - 1

Stimulant, anti-spasmodic, and rubefacient, dose from 5 to 12 drops.

Anniseed, - - - - - 2

Carminative, dose from 5 to 15 drops.

	lb.	*oz.*
Merc. Precipit. Alb. - - - - -		1
Externally, in the form of ointment for cutaneous eruptions.		
Merc. Precipit. Rub. - - - - -		4
Escharotic, externally incorporated with cerate or other ointments.		
Piperine, - - - - - -		¼
This is highly approved of by the faculty as an adjunct to quinine in intermittent fevers. For a full and detailed account of this article, see a preceding part of this work.		
Pill Boxes, - - - - 2 *papers.*		
Pulv. Jalap, - - - - - -		8
Purgative, dose in powder, 15 to 30 grains.		
Pulv. Rhei, - - - - - -		8
Purgative, dose 30 to 40 grains.		
Pulv. Ipecac. - - - - - -		4
Emetic, purgative, and diaphoretic, dose in powder 15 to 30 grs.		
Quicksilver, (hydrargyrum) - - - -		4
Vermifuge, in decoction 1 pound of mercury to 2 pounds of water.		
Rass. Lig. Quassia, - - - - -		4
Tonic, stomachic and febrifuge, dose in powder from 1 scruple to 1 drachm, infusion 1 to 2 drachms, tincture half drachm to 1 oz.		
Rad. Gentian, - - - - - -		8
Bitter, tonic and febrifuge, tincture half to 2 drachms.		
Rad. Colombo, - - - - - -	1	
Stomachic and anti-emetic. Employed in nervous affections of the stomach, dose half drachm to 1 ounce.		
Rad. Colombo Pulv. - - - - -		8
Rad. Serpentaria, - - - - -		4
Tonic, febrifuge, and diaphoretic, dose from 1 to 2 drachms in infusion.		
Rad. Seneka, - - - - - -		4
Stimulant, expectorant, and diaphoretic, dose, decoction, half to 1 ounce; powder 10 grains to half drachm.		
Rad. Spigelia, - - - - - -		8
Vermifuge, dose 2 to 4 drachms in infusion.		

lb. oz.

Sarsaparilla, - - - - - - 1

Sudorific, in syphilis, diseases of the skin, gout, and rheumatism ; dose, decoction 1 to 2 ounces ; the fluid extract is the best preparation, see a preceding part of this work.

Rad. Scilla, - - - - - 4

Diuretic, emetic, and expectorant, in dropsies, &c. dose from 4 to 12 grains, oxymel and syrup, 2 drachms to half an ounce.

Rad. Glycyrrhiza, - - - - - 8

Mild demulcent, in decoctions generally, and joined to other remedies.

Rad. Valerian, - - - - - - 4

Anti-spasmodic, tincture 25 to 60 drops, dose in powder 20 to 30 grains.

Sponge, fine, - - - - - - 2

Sem. Fœniculi, - - - - - - 4

Carminative, used with senna and other purgative medicines.

Sem. Anisi, . . - . . . 4

Used same as the above.

Sulphate Quinine, - - - - - ½

Tonic and febrifuge, dose 1 to 5 grains.

Compound Syrup of Hepatica, - - ¼ *doz.*

This is a valuable tonic and expectorant medicine, and will be highly useful in most cases of pulmonic and hepatic affections. For a full account of this article see a preceding part of this work.

Sup. Carb. Soda, - - - - - 4

Stimulant, diuretic, and sudorific, dose 20 to 40 grains.

Sapo. Castile, - . - - - - 4

Aperative and dissolvent, used as an adjunct to aloes and other purgatives in pills, externally in fomentations, lotions and baths.

Sulph. Zinci. - - - - - -

Dose 1 to 5 grains, externally in solution.

Sulph. Copper, - - - -

Externally in solution.

	lb.	*oz.*
Spermaceti,		1

Demulcent, emollient, dose 1-2 to 1 drachm in the form of emulsion, externally in the composition of several ointments.

Salts, Glauber	2	
—— Epsom	6	

Purgative, 1 1-2 to 2 ounces.

Sal. Tartar, (Sub. Carb. Potass.)		4

Deobstruent, diuretic and antacid, used in saline draughts neutralised with lemon juice.

Sal. Rochelle,		8

Purgative, 1-2 to 2 ounces.

Sal. Soda, (sub. carb.)		4

Antacid, diuretic, dose 10 to 20 grains.

Sal. Ammonia, (muriate,)		4

Diaphoretic, diuretic, febrifuge and tonic, dose 10 grains to 2 scruples, externally discutient.

Sal. Nitri,		4

Refrigerent and diuretic, and when externally applied, cooling and detergent; dose 10 to 15 grains.

Sal. Martis,		4

Tonic and febrifuge, dose from 1 scruple to half a drachm in solution or pills.

Sac. Saturni,		3

Styptic and anti-sudorific, externally 2 drachms to 1 ounce in a pound of water, internally, 1 grain in pills or solution.

Sulph. Potass,		4

Purgative, dose half to 2 ounces in water.

Ung. Merc. Fort.		4

Externally applied.

Ung. Citrini,		8

Externally applied, stimulating and detergent in hepatic and other cutaneous eruptions.

Carpenter's Compound Fluid Extract of Spigelia, ¼ *doz.*

This will be found a very convenient article for the practitioner, and can be administered without difficulty to children, the dose being small and not unpleasant. It will be found one of the most efficient vermifuges yet introduced.

Carpenter's Compound of Sarsaparilla, Cubebs and Copaiva, - - - - ¼ *doz.*

An efficient remedy in gonorrhea, gleets, strictures, &c.

Carpenter's Oil of Cantharidin, - - 2 *vials.*

This will be found a very convenient article for children, it produces speedy vesication by rubbing a drop or two on the part.

Carpenter's Compound Extract of Boneset, ¼ *doz.*

A valuable tonic and febrifuge in fevers.

Carpenter's Compound Cerate of Copaiva, ¼ *doz.*

This will be found one of the most efficient remedies in anthrax, and burns, and as a soothing and healing application to all ulcerated surfaces.

Carpenter's Saratoga Powders, - - ¼ *doz*

This is a valuable medicine where the stomach is debilitated, and ordinary medicines cannot be retained. It is much preferable to the Seidlitz Powders, being equally aperient, and at the same time possessing valuable tonic and chalybeate effects.

Carpenter's Compound Extract of Buchu. 2 *bot.*

This is a new article highly valuable in diseases of the bladder. It is recommended by some of the most distinguished physicians in the English Medical Journals. For a full account of it see a preceding part of this work.

Composition Mortar and Pestle, - - - No. 1

Glass Funnel, - - - - - " 1

Graduated Measure, - - - - " 1

Scales and Weights, - - - - 1 *set.*

Spatluas, different sizes, - - - - " 2

Sheep Skin, - - - - - " 1

Syringes, Penis, - - - - - " 6

Syringes, Female,	"	3
Do. Enema, pint,	"	1
Stomach Tube, elastic,	"	1
Scarificator,	"	1
Cupping Glasses,	"	6
Thumb Lancets,	"	2
Catheters, elastic,	"	6
Bougies,	"	6
Pocket Case of Instruments,	1	*set.*
Teeth Extracters, in case,	1	*do.*
Breast Pipe,	No.	1
Nipple Shells,	"	4
Quart Specie Bottles,	"	12
Do. Tinctures,	"	12
Pint Species,	"	12
Do. Tinctures,	"	12
Half pint Salt mo.	"	6
Do. Tinctures,	"	6
4 oz. Tinctures,	"	6
Wrapping Paper, blue and white,	*qrs.*	3
Assorted Vials,	*gross.*	½
Vial Corks,	*do.*	1

The following articles can always be had at Carpenter's Chemical Warehouse, and are frequently wanted by the physician who has become established in successful practice.

French Skeletons on Wires—male and female.

These are very superior, the bones are white as snow, the teeth perfect, and put together in the most neat and substantial manner, and with the greatest anatomical precision.

Arterial Preparations.

Very complete arteries and veins injected, and muscles displayed.

Dissected Heads and separated Craniums.

Heads sawed in various ways.

Ditto, with Dr. Gall's phrenological marks, illustrating his system of Phrenology, and referring by numbers to his work.

French Anatomical Preparations, preserved in alcohol.

Superior Skeletons unwired perfect from 10 to 20 dollars, according to quality.

G. W. C. always keeps on hand a large assortment of London and American Surgical Instruments of all descriptions, of the most superior quality.

He will also at any time have made to order, any description of surgical instruments which may be wanted.

Very superior sets of Cupping Instruments, in mahogany cases, with exhausting syringes, &c. They are now in general use in this city, and are much preferable to the ordinary mode of cupping.

Pill Machines, to make from 12 to 24 pills, and size from 1 to 4 grains. They will be found a very convenient and highly useful article for the physician who has a large practice.

Superior French Syringes of every description, for the ear and eye; Penis, Female, Enema, Stomach Pumps, &c. &c. These are made of block tin, and are much superior to the pewter syringes; they are made very true, being bored and turned, instead of cast; and work as true as an air pump.

Eye Glasses, to wash the eye without the necessity of bathing it with a cloth, which frequently irritates, and only has access to the exterior. 25 cents each.

Very neat small cases for filing, plugging, and scaling the teeth.

Obstetrical Models, or machines of leather, with mannakin, complete, for illustrating the practice of obstetrics.

Obstetrical instruments of every description, all complete and of the best quality.

Splints for the thigh, each arm, and legs, all complete.

Amesbury's Apparatus for Fractures of the Leg and Thigh.

Vaccine Virus Bottles for preserving the virus.

Having made arrangements with one of the Vaccine Physicians of this city, physicians in the country will be supplied with *fresh virus*, by application to the subscriber, on the lowest terms.

"Having made preparations particularly for supplying physicians in the country, they can at all times depend upon receiving every article carefully selected, of the choicest and most unexceptionable quality, and their orders will receive the most prompt and particular attention."

Breast Pumps in mahogany boxes, with stop-cocks.

Silver-eye Syringes in boxes, with gold and silver probes.

Brass Injecting Syringes for anatomical preparations.

Brass and Block-tin self-injecting Syringes, with elastic tubes; a very superior and neat article.

Very superior Block-tin Enema syringes. Quart, pint, half pint, 4 and 2 oz. These are much superior to the common pewter syringes usually sold, and are the kind recommended by Professor Dewees in his practice of medicine.

Stethescopes of various patterns and sizes; mounted with ivory and plain.

Elastic Enema Syringes.

Do. Penis Syringes, a new article; the injection liquid can be carried in the syringe.

Minum Measure, a very convenient article to measure drops.

Superior Silver Lancet cases, for 2 and 4 Lancets.

Medical Spoons, to administer remedies to children.

Bleeding Vessels, graduated from 1 to 16 oz; a very useful and convenient article.

Suspensary Bandages, silk and cotton.

Evans's genuine Lancets, a very superior article.

Medical Saddle Bags, for the country practitioner.

Fine Bleached Sponge, a very superior article for surgical use.

Porcelain and Human Teeth, very superior, and imported to order from France, and kept constantly on hand. The human teeth are in bottles containing eight teeth of the front upper row. Gold, Silver and Tin Foil for plugging. Materials and apparatus for the manufacture of porcelain teeth.

CATALOGUE

OF

SURGICAL INSTRUMENTS

Used in Practice, &c.

——:o:——

It will no doubt be interesting to the practitioner to have a list of the surgical instruments now in use, with a description of the contents of the different sets and cases, which are put up under various names.

Lythotomy.

In a neat mahogany case, containing the following instruments:

Dr. Physic's Gorget, with 6 blades of different sizes.
4 pair Forceps, different sizes
4 Male Sounds,
4 Male Staffs,
1 Female Sound,
1 ——— Staff,
1 Scoop,
1 Hamula,
1 Scalpel,
1 pair of Forceps, with a screw for breaking stone

———

Amputating.

In a neat mahogany case, containing the following:

1 Capital Saw,
1 Metacarpal do.

2 Capital Knives,
1 Catline Knife,
1 pair Artery Forceps, with slider,
1 Scalpel, steel handle,
1 pair Bone Nippers,
1 Tourniquet,
12 Curved Needles,
1 Tenaculum.

Trepanning.

In a neat mahogany case, containing the following:

2 Trephines,
1 Elevator,
1 Hey's Saw,
1 Scalpel, with Raspiter,
1 Brush.

Midwifery.

In a neat leather case, containing the following:

1 pair Forceps,
1 Vectis,
1 Crotchet,
1 Perforating Scissors,
1 Blunt Hook.

Dissecting.

In a neat mahogany or morocco case, containing the following:

6 Scalpels,
1 Single Hook,
1 Double hook with a joint,

1 pair Forceps,
1 Silver Blow Pipe,
1 pair Scissors.

Pocket Instruments. No. 1, *or four fold.*

In a neat morrocco case with a lock, containing the following:

1 pair crooked Scissors,
1 —— straight do.
1 —— Dressing Forceps,
1 —— Dissecting do.
1 Director,
1 Spatula,
2 Silver Probes,
1 Tonsil Forceps,
1 Curved probe-pointed Bistoury,
1 Large Scalpel,
1 Gum Lancet,
1 Abscess Lancet,
1 Tenaculum,
1 Small Scalpel,
1 Straight Spear Bistoury,
1 Silver Female Catheter,
1 Physic's Forceps and Needle,
6 Curved Needles,
1 Thumb Lancet,
1 Physic's Guarded Bistoury,
1 Seaton Needle.

Pocket Instruments. No. 2, *or three fold.*

In a neat morocco case with a lock, containing the following:

1 pair crooked Scissors,
1 —— Dressing Forceps,

1 pair Dissecting do.
1 Director,
1 Spatula,
2 Probes,
1 Tonsil Forceps,
1 Curved probe-point Bistoury,
1 Straight Spear do.
1 Large Scalpel,
1 Tenaculum,
1 Abscess Lancet,
1 Gum do.
1 Thumb do.
6 Curved Needles.

Pocket Instruments. *No. 3, or two fold.*

In a neat morrocco case with a lock, containing

1 large Scalpel,
1 pair straight Scissors,
1 Curved Spear Bistoury,
2 Probes,
1 Tenaculum,
1 Spatula,
1 Pair Dressing Forceps,
1 Director,
1 Gum Lancet,
1 Thumb Lancet,
6 Curved Needles.

Eye Instruments.

In a neat case, containing

3 Knives,
1 Iris Knife,

2 Needles, curved and straight,
1 Curette and Hook,
1 silver Speculum,
1 pair Forceps,
1 —— Curved Scissors.

Phlebotomy.

Silver Spring Lancets, button-trigger,
Do. do. do. lever,
Brass do. do. do.
—— Horse do. do.
German silver Spring Lancets, a neat and cheap article.
Thumb Lancets,
Lancet Phlemes.

Cupping.

In a neat mahogany case, containing

6 Glass Cups with brass caps and valves, and a Breast Glass for exhausting the breast,
1 Brass Pump or Exhauster,
1 *Scarificator, improved.

* Or with German scarificator.

Cupping.

In a neat mahogany case.

6 Glass or Horn Cups, with stop cocks and breast glass,
1 *Scarificator, improved,
1 Brass Pump, or Exhauster,

* Or with German scarificator.

Pessaries.

Doctor Dewees's silver gilt,
do. do. plain,
do. flexible metallic,
do. ivory,
do. wood,
Gum Elastic,
Glass Pessaries, a new article, and recommended by Professor Dewees.

Teeth Extractors.

In a neat morocco case, containing the following:

1 Foxe's Key, spring bolt,
1 Curved Forceps, double joints,
1 Straight do. do.
1 Tooth Punch,
1 Gum Lancet.

Any other key can be substituted for Foxe's, if desired, but it is decidedly the best for extracting teeth generally.

Instruments for scaling and plugging the teeth, in neat morocco cases, containing
12 Scalers and Borers, assorted.
Also cases of six do.

These are very neat instruments, and are much used, the price being very low.

Teeth Instruments.

Hinge Fulcrum Key, with a spring bolt, ivory handle,
Do. do. ebony do.

Dr. Foxe's Key, spring-bolt, ivory handle,
Do. ebony do.
Dr. Clarke's improved Spring Key, with a pivot, ivory handle,
Do. do. do. ebony do.
Curved Turn Key with a pivot,
Plain Fox's Key, ebony handle,
Curved Common Key,
Straight do. do.
Curved Forceps, double joints,
Straight do. do.
Hawk's Bill do. do.
Pelican — do. do.
Forceps, common joints,
Curved Tooth Punches,
Straight do. do.
Tooth Files,
Gum Lancets.

Trusses.

Eberle's ivory patent,
Do. do. double,
Do. wood do.
Do. do. do.
Ivory Turnpads,
Do. do. double,
Wood do.
Do. do. double,
Leather do.
Do. do. double,
Plain Ivory Turnpads
Do. do. double,

Opposite sided do.
Do. do. double,
Bellows Head do.
Do. do. double,
Common spring Turnpads,
Do. do. double,
Children's do.
Do. do. double,
Umbilical,
Suspensory.

Catheters and Bougies.

Silver Male,
Do. Female,
Flexible Metallic Male,
Do. do. Female,
Gum Elastic Male,
———— Bougies,
Flexible Metallic do.
Rectum Catheters and Bougies.

Miscellaneous.

Curved Trochars, for bladders,
Straight do. Lancet-pointed,
Do. do. Angular,
Polypus Forceps,
Double Canulas, for extracting polypi,
Tubes for Tracheotomy,
Dr. J. K. Mitchell's Spine Apparatus,
Do. do. with improved chair,
Bulloeg's Sound,

Bullet Forceps,
Doctor Physic's Tonsil Instrument,
Scarificator for Tonsils,
Dewees's Obstetrical Forceps,
Heighton's do. do.
Boudelocque's do. do.
Hall's do. do.
Davis's do. do.
Seabold's do. do.
Improved Breast Glasses and Pump, in case,
Syringe and Elastic Tube for extracting poison from stomach,
Doctor Bond's Œsophagus Forceps,
Stethoscopes,
Cooper's Bistoury,
Doctor Physick's Guarded Bistoury,
Improved Womb Syringes, in cases,
Do. Ear do.
Hare-Lip Pins,
Silver Lachrymal Pins,
Probangs.

In addition to the above, the author will have made to order any description of instruments used in the practice of surgery.

CATALOGUE

OF

ANATOMICAL

PREPARATIONS,

On hand, and furnished at

Carpenter's Chemical Warehouse.

———:o:———

Preparation of the adult, entire, exhibiting the muscular and nervous systems, arterial and venous circulation, with the heart in situ.

Do. of different ages, from the adult to the fetus.

Do. of the adult, muscular and nervous.

Do. do. muscular, nervous and arterial.

Do. of the head, showing the sinuses of the dura mater, tentorium, and all the preservable parts of the head and its appendages, as the submaxillary and parotid glands.

Do. of half of the head, showing the encephalic circulation, duct of Steno, and parts pertaining to the section of the head.

Do. of the trunk, with the heart, diaphragm, kidneys, and bladder in natural situation, connected by the ureters, rectum, uterus in the female, thoracic and abdominal nerves, superior and inferior mesenteric arteries, entire.

Preparation of a section of the thorax and abdomen, showing the vena azygos, thoracic duct, splanchnic nerves, and the intercostal nerves, arteries and veins.

Do. of the hand or foot injected with mercury, showing the dermoid vessels minutely.

Do. of the penis, showing the corpora cavernosa, corpus spongiosum urethræ, glands penis, vena magna ipsius, with the arteries attached.

Do. of the young subject, showing the circulation of the fetus in utero.

Do. of the upper and lower extremities, muscular and nervous.

Do. do. do. do. and arterial.

Do. do. do. do. and venous.

Do. of the adult heart, with the vessels connected

Do. fetal do.

Do. of the stomach, showing the cardiac and pyloric orifices, with and without the duodenum attached.

Do. of entire or separate portions of intestines, exhibiting the arterial and venous circulation.

Do. of larynx, trachea, pharynx, and œsophagus attached, chordee vocales and thyroid gland.

Do. of the testicle injected with mercury.

Do. of the placenta, showing its circulation.

Do. of the side view of the pelvis, showing the penis, bladder, rectum, and vesicular seminales.

Do. of the ligaments, either of the whole subject, superior or inferior extremities.

Do. of the pelvis ligamentous, with the fetal head, for the study of midwifery.

These, with many other anatomical preparations not mentioned

in the list will be furnished, carefully put up, and sent to any part of the country.

They are prepared in such a manner that insects will not touch them, and they will retain their perfect state and beauty for years.

Every part of the preparation is retained in its natural situation, in order that it may not only serve as a guide to the surgeon, but for the student of anatomy.

THE FOLLOWING IS A

LIST OF ARTICLES

Which should be purchased by a

DRUGGIST,

AT THE OUTSET OF HIS BUSINESS.

——:o:——

The quantities to be proportioned according to his location and extent of the business anticipated.

Antimony Tartrate,
" crude
" " pulv.
" Sulph. Aur.
" Glass of
Alcohol, 36 deg.
Aqua Fortis
Æthiop's Mineral
Arsenic, white pulv.
" Fowler's solution
Ammo. Carbon.
Acid, Benzoic
" Citric
" Muriatic
" Nitric
" Oxalic
" Pyroligneous
" Tartaric, in crystals
" " pulv. "
" Prussic
Æther, Sulphuric
" Nitrous
Aqua Ammo.
Anodyne, Hoffman's
Arrow Root, Bermuda
Argent. Nit.
Blue Pill, Eng.
Blacking, Paste
Bole Armenia
Borax, refined
Borax, crude
Brimstone, roll
" flour
Bac. Juniper
" Lauri
" Cubebs
Bismuth, oxide
" metallic
Blood Root
Bees' Wax
Bed pans, earthen
" pewter
Burgundy Pitch
Barbadoes Tar
Balsam Copaiva
Balsam Sulphur
" Peru
" Tolu
Black Drop
Cantharides
" pulv.
Cobalt
" pulv.
Cayenne, American
" African
Cera alb.
Caustic Potash
Cream Tartar pulv.
Creta Ppt.
Cort. Peru flav.
" " " pulv.
" " rub.
" " " pulv.
Canella alb.
Cascarilla
Cort. Anchusa
" Angustura
" Sassafras
" Aurant.
" " ground
Cochineal
Cowage down
Castor Fib.
Colocynth pulv.
Cloves
Court Plaster
Silk paper
Coc. Ind.
Corros. Sub.
Charcoal pulv.
Corks, vial
" bottle common
" " velvet
Chlorine Tooth Wash
Dragon's Blood
Dover's Powders
Essence of Spruce, for beer
" Rose
Ens. Veneris
Ergot
Emp. Epispastic
" Hydrargyri
" Roborans
" Saponis
" Adhesive, superior
" Diac. cum Gum
" " Simple
Extract of Jalap
" Logwood
" Butternut
" Hyosciami
" Gentian
" Belladona
" Taraxici
" Rhubarb
" Valerian
" Rhatania
" Balsam Copaiva
" Cicuta
" Glycy. opt.
" " refined
Flowers of Roses
" Chamomile
" Lavender
" Althea
French Chalk
Fol. Anthos
" Digitales
" Senna Alex. best
" " India opt.
" Uva Ursi
Gum Thus
" Hemlock
" Tragacanth
" Galbanum
" " strained
" Arabic, Turkey
" " India
" Scammony, Aleppo
" " Smyrna
" Gamboge
" Opium
" Camphor
" Myrrh, opt. Turkey

Gum Myrrh, India
" Assafœtida, best
" Benzoic
" Kino
" Ammo. opt.
" Guiac.
" Mastic
" Aloes
Ginger Root
" " powdered
" " Jamaica
Glyster Pipes
Harrowgate Salts
Hord. Pearl
Honey
Lint, English
Lemon Syrup, opt.
Isinglass, Russia Sheet
" American
Iodine
Ivory Syringes
Iceland Moss
Morphine
Musk
Magnesia Carb.
" calcined
Manna, Flake
" small "
" sorts
Nux Vomica
Oat Meal
Orris Root, opt.
" " pulv.
Otto Rose, pure
Oil Anniseed
" Wormwood
" Cubebs
" Valerian
" Copaiva
" Peppermint
" Wormseed
" Savine
" Fennel
" Almonds
" Olives
" Lemon, pure
" Bergamot, pure
" Ricini opt.
" Cassia "
" Lavender, spike
" " garden
" Juniper "
" Origanum, pure
" Anthos "
" Carraway "
" Cloves "
" Spearmint
" Wintergreen
" Tanzy
" Pulegi
" Amber, rectified
" Spruce
" Hemlock
" Fir
" Croton in vials
" Orange
" Sassafras
" Linseed
Pocket Lights
Precipitate, Red
Phosphate of Iron
Quassia Wood, rasped
Quicksilver
Rad. Gentian
" " pulv.
" Colombo India
" " pulv.
" Ipecac.
" " pulv.
Rad. Rhei India, opt.
" " " pulv.
" Gallangal
" Hellebore
" " pulv.
" Glycy.
" Scillæ
" Serp. Verg.
" Seneka
" Spigelia, roots only
" " with stalks and leaves
" Jalap, pulv.
" Curcuma ground
" Sarsaparilla
" Colchicum
" Anchusa
Saunders Wood ground
Sponge, coarse
" fine bleached
Sem. Cardamom
" Colchicum
" Chenapodii
" Fennel
" Annis
" Coriander
" Fenugric
" Sinapis Carui
Sal. Martis, real
" Succini
" Nitre, refined
" Diuretic
" Absynth
" Tartar
" Ammo. Ind.
" " English
" Soda
" Rochelle
" " pulv.
" Glaub.
" Epsom
Sugar of Lead, white
Sup. Carb. Soda
" " " pulv.
Sulph. Quinine,
Sperm Ceti
Soda Powders
Seidlitz Powders
Sago
Slippery Elm Bark
Spirits of Tar
Syringes, P. P.
" female
" 1 oz.
" 2 oz.
" 10 oz.
" 16 oz.
" self 24 oz. in boxes
" " 16 oz "
" " 10 oz "
" " 6 oz "
Spatulas, from 3 to 12 inch assorted
Trusses, common
" patent, several kinds
Tin Foil
Tartar Vitriol
Tamarinds
Tonqua Beans
Turpeth Mineral
Tincture Mur. Iron
Ung. Althea
" Stramonium
" Bazilicon
" Merc. Fort.
" " " Mit.
" Citron
" Simplex
" Carb. Zinci.
Wafers, opt.
" " 2d.
Wash Balls
Windsor Soap, Eng.
White Vitriol crystallized.

BRUSHES.

Extra Fine Ground Paint Brushes, assorted from No. 7 to 0000
Common Paint Brushes, assorted from No. 5 to 00
Sash Tools, assorted from No. 1 to 8
Oval Varnish Brushes, assorted from No. 6 to 1
Flat Badgers' Brushes, in knots, assorted from No. 1 to 4
Thick Flat Badger, in tin, assorted from 1 to 4 inch
Flat Camels' Hair in tin, assorted from ½ to 4 inch
Thick Flat Bristle Varnish in tin, assorted from No. 1 to 8
Fine Bristle Grainers, assorted from 1½ to 4 inch
Veining Brushes, assorted from No. 1 to 4
Artists' Fine Pencils, 6 sizes bound in silver wire, 6 sizes bound in brass, 6 sizes bound in thread, 6 sizes flat in tubes
Sable Pencils, flat and round tubes assorted
" " Long and Short Red
" " Black in quills
Camels' Hair Pencils long & short, assorted
Camels' Hair Pencils, goose quills single
Camels' Hair Pencils, goose quills assorted
Camels' Hair Pencils, Swan
" " " Duck
" " " Crow
" " " Pigeon
Gilders' Tips, Badgers' hair
" " Camels' "
Redding Brushes
Tar Brushes, short handle
" " long "
Sprinkling Brushes, No. 1, 2, 3,
Masons' Colouring Brushes, No. 1, 2, 3
Flesh Brushes, assorted from No. 1 to 8
Tooth Brushes from 3 to 5 row'd
" " 3 " solid back
" " 4 " " "
" " 4 " fluted & carved
" " 4 " solid back
" " Trepanned

SUNDRIES.

Diamonds, Glaziers' swivel
Emery
Blacking, Sponge
Boxes, Pill, paper
" " wood

Boxes, Wafer 1 oz.
" " 2 "
" " 4 "
Jujube Paste, French, opt.
Jewellers' Rouge
Glue, Russia
" American best
Ink, India
Chalk
Gallypots with covers
Ink, Liquid
" Powders
Ink Indelible
Mortars, Iron, from a pint to 5 gallons
" Wedgwood
" glass
Pink Saucers, large
" " small
White Rosin
Common "
Tar
Pitch
Soft Turpentine
Medical Spoons
Starch
Soap, Castile
" Windsor, Eng.
" " Am. in boxes, No. 1, 2, 3
" Fancy assorted
Thermometers

Patent Medicines.

Pills, Lee's Windham
" " New London
" Anderson's Eng.
" " Am.
" Hooper's Eng.
" " Am.
" Rush's
Opodeldoc, Steer's
" Liquid
Itch Ointment
Haarlem Oil
Anderson's Cough Drops, large and small
Balsam, Turlington's
British Oil
Bitters, Stoughton's
Bateman's Drops
Cephalic Snuff
Dalby's Carminative
Essence Peppermint
Eyewater, Carpenter's
Godfrey's Cordial
Gowland's Lotion
Erasive Salts
Salts of Lemon
Worm Tea
Wormseed Oil
Effervescing Magnesia
Patent Barley in papers
Slippery Elm Bark in papers

Surgeons' Instruments

Amputating Cases
Trepanning "
Dissecting "
Couching "
Pocket Cases cont'g 12 insts.
" " " 16 "
" " " 22 "
American Spring Lancets
German " "
Dentists' Cases, 6 instrum'ts
" " 12 "
Ivory handle spring bolt tooth keys
Ivory handle pivot bolt tooth keys
Ebony handle spring bolt tooth keys
Ivory handle hinge fulcrum tooth keys
Common do. do. do.
Suspensary bandages, cotton
" " silk
Evan's Lancets, best
" " imitation
Common " shell handles
Gum Elastic Catheters
" " Bougies
" " Nipple Shields
" " Pessaries
" " Setons
" " Stomach Tubes
" " Rectum Bougies
Double Canula
Bullet Forceps
Polypus "
Bone "
Dissecting "
Dressing Forceps
Breast Glasses and Air Pumps for drawing the breast, in case
Breast Glass and Air pump without case
Scissors, curved and straight
Silver Stiles
Probangs
Silver Probes,
Midwifery Forceps
Tourniquets
Trocars
Scarificators, Am.
" German
Tooth Files
Plugging and Scaling inst'ts
Gum Lancets
Tenaculums
Abscess Lancet
Seton Needles
Silver Male Catheters
" Female "
Flexible Metallic Catheters
Curved Needles
Scalpels
Trephines
Amputating Knives
" Saws
Catline
Hair-lip Pins
Spring Lancet Blades
Tooth Claws
Vectis or Lever
Crotchets
Blunt Hooks
Ear Syringes
Perforating Shears
Syringe for the Eye
Ivory Nursing Tubes, new article
Metacarpal Saws
Hay's Saws
Stethescopes
Maw's Domestic Instruments

GLASS WARE, &c.

Breast Pipes
Eye Glasses
Cupping "
Electrical Cylinders, assorted from 4 to 12 inch
Funnels assorted
Globes for leeches 1, 1½, 2 gals.
Med. Chests square assorted from 1 to 8 oz.
Graduate Measures, 1, 2, 3, 4, 6, 8, 12, and 16 oz.
Preston's Salts, bottles cut
" " " plain
Nipple Shells
Nursing Bottles
" Flasks
Retorts and Receivers, plain, 10, 8, 6, 5, 4, 3, 2, 1½, and 1 gallon; 2 and 1 quart; 1 pint, ½ pint, and 1 gill.
Tribulated Retorts and Receivers, 10, 8, 6, 5, 4, 3, 2, 1 and ½ gallon; 1 quart, 1 pint, ½ pint and 1 gill.
2 gal. Salt Mouth with stoppers, 1 gal. ½ do. ¼ do. ⅛ do. 1-16th do.
3 gal. Specie Cap'd Jars, 2 do. 1 do. ½ do. ¼ do. ⅛ do. 1-16th do.; 4 and 2 oz. do.
3 gal. Tincture Bot. ground stop. 2 do. 1 do. ½ do. ¼ do ⅛ do. 1-16th do.; 4, 1, and 2 oz.
Urinals
Vials from ½ to 8 ounces
Assorted Vials
Bateman's "
British Oil Vials
Turlington's "
Ess. Peppermint Vials
Godfrey's Cordial "
Haarlem Oil "
Opodeldoc, Steer's "
" Liquid "
Cephalic Snuff "
Calc'd Magnesia "
Cologne Water "
" " Fancy patterns
Castor Oil Bottles
" " " pint

PERFUMERY.

Hair Powder, scented and plain
Pearl Powder
Vegetable Rouge
Milk of Roses
Cold Cream
Cream of Amber
Naples Compound Tablets
Pomatum, French, in pots,
" " rolls
Vinegar of Rouge
Florida Water, large size,
" " small "
Cologne Water, plain
" " Gothic
" " Barrel
" " Column
Lavender Water, fancy
" " ½ pint bot.
Antique Oil in round boxes
Macassar Oil, genuine
" " imitation
Bear's Oil, large size
" " small "
Orange Flower Water
Bear's Grease in pots
" " in vials

DYE STUFFS, &c.

Fig Blue
Annatto
French Berries

Argol
Logwood
Fustic
Brazilletto Wood
Nicaragua, La Hache
Ground Camwood
" Logwood
" Fustic
" Brazilletto
" Nicaragua
Indigo, Bengal
" Spanish float
Sumac
Nutgalls
" ground
Madder Umbro.
Blue Vitriol
Oil Vitriol
Alum
Copperas
Woad
Cudbear

Paints, &c.

White Lead, dry
" " ground in oil, No.1 and 2
Red Lead
Black Lead
Orange "
Spanish Brown
" " Bristol
Venet. Red, Eng.
" " Am.
French Yellow Ochre
American " do
Chrome "
King's "
Stone Ochre
Litharge, coarse
" fine
Prus. Blue, Eng. No. 1 and 2
" " Am. " "
Chinese Vermillion
English
Verdigris, dry
Terra de Sienna
Rotten Stone
Ivory Black
Rose Pink, Eng.
Whiting
Paris White
Turkey Umber
" " ground
Gum Copal
" Shellac
Spirits Turp.
Copal Varnish, Furniture
" " sup. article
" " Coach
Mastic "
Japan "
Venetian Turpentine
Bronze, Copper Yellow
" " " extra
" Red
" Scarlet
" Crimson
" White Metal
" Green
Pumice Stone
" " ground
Red Chalk
Blue Paint, ground
Distilled Verdigris
Putty
Carmine, No. 1, 2, and 3
Drop Lake, " " "
Sap Green
Chrome Yellow
" Green
Flake White
Lamp Black, Eng.
" " Am.
" " small papers
" " Germantown
Blue Black
Frankfort Black
Mineral Green
Purple Brown
Vandike "
Blue Verditer, No. 1 and 2
India Red
Cream White
Ultramarine
Cobalt Blue.

CARPENTER'S CHEMICALS.

The following articles are very popular and saleable, and are extensively used wherever they have been introduced.

Carpenter's Compound Fluid Extract of Sarsaparilla, for extemporaneously making the Lisbon diet drink. One table-spoonful is equal in strength to 1 lb. compound syrup of sarsaparilla, or a bottle of panacea. Price $9 00 per doz.

Carpenter's Compound Fluid Extract of Buchu, (Diosma Crenata,) a valuable medicine for diseases of the bladder, chronic gonorrhea, &c. Price $16 00 per doz.

Carpenter's Compound Syrup of Liverwort, (Hepatica Triloba,) a safe and valuable medicine in hepatic and pulmonary affections. Price $5 per doz.

Carpenter's Oil of Cantharidin, for producing speedy and certain vesication, by simply rubbing the part. Price $6 00 per doz.

Carpenter's Oil of Sinapine, a most valuable rubefacient, and acts instantaneously on its application. Price $6 00 per doz.

Carpenter's Citrated Kali, for extemporaneously making the saline draught or neutral mixture. Price $5 00 per doz.

Carpenter's Saratoga Powders, for making Congress Spring or Saratoga Water equal to that fresh from the spring. Price $4 50 per doz.

CAUTION.—The reputation of my Saratoga Powders has induced numerous imitations which have been sold on the character of my preparation. Physicians who wish the genuine article, will please write their orders, "Carpenter's Saratoga Powders," as they may get the spurious compound. G. W. CARPENTER.

Carpenter's Chalybeate Ginger Powders, a valuable remedy in dyspepsia and indigestion. Price $4 00 per doz.

Carpenter's Precipitated Extract of Bark, fully equal to Quinine in the same doses. Price $1 00 per oz.

Carpenter's Compound of Sarsaparilla, Cubebs and Copaiva, the most valuable and effectual remedy yet discovered in gonorrhea, gleets, &c. Price $9 00 per doz.

Carpenter's Compound Fluid Extract of Pink Root, (Spigelia Marilandica,) the most safe and efficient vermifuge yet introduced. Price $6 00 per doz.

Carpenter's Tonic Extract, composed of Quinine, Cinchonine, Piperine, Capsicine: is a much more active preparation than Quinine in intermittents. Price $4 50 per oz.

Oil of Copaiva. Price $2 50 per doz.

—— *Cubebs.* Price $3 50 per doz.

Carpenter's Compound Cerate of Copaiva, a valuable remedy for burns, fresh cuts, and sores of every kind. Price $2 and $4 per doz.

Carpenter's Compound Extract of Boneset, (Eupatorium Perfoliatum,) a very valuable febrifuge. The valuable properties of the Eupatorium are known to every practitioner of medicine. Price $9 00 per doz.

Carpenter's Essays on the Materia Medica, containing a full account of all the new and popular medicines, their doses, uses, and mode of administration.

LIST OF
DRUGS & MEDICINES

WHICH SHOULD BE PURCHASED BY A COUNTRY STOREKEEPER.

It is a difficult task for the Country Storekeeper, at the commencement of business, to know the different kinds of Drugs and Medicines he should supply himself with, in order to have a complete assortment. Every article in the annexed list will be found saleable, and offering a better profit to him in retailing, than any other kind of Merchandize he can select, and it w ll therefore be to his advantage to make the assortment complete.

Aqua Fortis
Sulphuric Acid, or Oil of Vitriol
Tartaric Acid
Æther Sulphuric by the lb.
do do in vials
Sweet Spts. of Nitre by the lb.
do do do in vials
Alcohol, or Spts. of Wine
Smelling Salts by the lb
do do in fancy bottles by the dozen
Com. Sal Ammonia by the lb.
Tartar Emetic by the lb.
do do in v'als
Black Sulphuret of Antimony by the lb.
Spts. of Hartshorn by the lb.
do do in vials by the doz.
Balsam Copaiva by the lb.
do do in vials by the doz.
Calomel by the lb.
do in vials by the doz.
Camphor by the lb.
Spts. of Camphor by the lb.
do do in vials by the doz.
Cloves
Powdered Ginger
Antimonial Wine, in vials
Blistering ointment by the lb.
do do in boxes by the doz.
do do spread on sheets
Peruvian Bark, viz.
Red Bark,
Yellow or Calisaya
Common Bark,
Put up in lbj. and oz. papers
Verdigris
Blue Vitriol
Liquorice Ball
Refined Liquorice by the lb.
do do in boxes by the doz.
Gum Aloes
do Arabic
Assafœtida
Gum Myrrh
Opium
Gum Tragacanth
Laudanum by the lb.
do in vials
Magnesia, Calcined, by the lb.
do do in vials by the doz.
Nutmegs by the lb.
Sweet Oil by the gallon
do in quart, pint, & half pint bot.
Castor Oil by the gallon
Lump Magnesia

Castor Oil, in qt. pt. and half pt. bot.
Burgundy Pitch
Sugar of Lead
Red Lead
White Lead, dry
do do ground in oil
Pearl Ash
Sal. Æratus
Pot Ash
Saltpetre
Cream of Tartar
Sulphate of Quinine by the oz.
do do in solution, in vials by the dozen
Pink Root
Race Ginger
Superior Jamaica Ginger, lbj. equal in strength to 4 or 5 lb. of common ginger
Castile Soap
Mustard by the lb
do in vials by the dozen
Sponge, fine
do coarse
Borax crude
do refined
Roll Brimstone
Flour of Sulphur
White Vitriol
Rhubarb Root
do do in powder by the lb.
do do in vials by the doz.

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Carpenter's Essays on the Materia Medica, containing a full account of all the new and popular medicines, their doses, uses, and mode of administration.

Patent Medicines, &c.

Anderson's Pills
Bateman's Drops
British Oil
Indelible Ink
Cologne Water
Fancy Soap
Court Plaster
Cough Lozenges
Ess. of Bergamot
———Lemon
———Cinnamon
———Cloves
———Peppermint
Godfrey's Cordial
Eye Water
Haarlem Oil
Ink Powder, black and red
Ink in bottles, black
do red
Itch ointment
Lemon Acid
Lee's Pills
Carpenter's Pills
Worm Tea
Opodeldoc
Preston's Smelling Salts
Seidlitz Powders
Sodaic do
Wine Bitters
Worm Tea
Wormseed Oil

Paints and Miscellaneous Articles.

Annatto
Black Lead
Chalk, White
do red
Chrome Yellow
do Green
Copperas
Logwood
Fustic
Gum Copal
——Shellac
Indigo
Lamp Black
Litharge
Prussian Blue
Putty
Red Lead
Rotten Stone
Smalts, Blue, Brown, Green & Red
Spanish Brown
Terra de Sienna
Turkey Umber

Black Varnish for leather, by the gallon ; and in quart, pint and half pint bottles, by the doz.
Copal Varnish for cabinet ware, by the gallon ; do. in quart, pint and half pint bottles
Venitian Red
Spts. Turpentine by the gallon ; do in quart, pint, and half pint bottles
Yellow Ochre
Whiting
Ivory Black
Shoe Blacking
Vial Corks
Bottle do
Assorted Vials
Fig Blue
Tapers
Glue
Pocket Lights
Pomatum
Sealing Wax, red and black
Vomits of Tartar Emetic
Doses of Calomel and Jalap
Wafers by the lb.
do in boxes by the doz.

CATALOGUE

OF

CHEMICAL TESTS AND APPARATUS,

FOR SALE AT

Carpenter's Chemical Warehouse,

PHILADELPHIA.

—:o:—

These articles are all chemically pure, and prepared expressly for lectures and experimental operations.

Acetate of	Alumina	Solu.	Acids	Fluoric	
"	Baryta	Cryst.	"	Citric	Cryst.
"	ditto	Sol.	"	Hydro-Chloric	
"	Cobalt	Sol.	"	Nitric	
"	Copper	Cryst.	"	Nitrous	
"	ditto	Sol.	"	Nitro Muriatic	
"	Iron	Cryst.	"	Oxalic	Cryst.
"	Lead	Cryst.	"	ditto	Sol.
"	ditto	Sol.	"	Phosphoric	
"	Silver	Sol.	"	Phosphorous	
"	Soda	Sol.	"	Hydro-Cyanic	
"	ditto	Cryst.	"	Succinic	Cryst.
"	Zinc	Sol.	"	ditto	Sol.
"	ditto	Cryst.	"	Sulphuric	
Acid	Acetic		"	Sulphurous	
"	Arsenic	Solid.	"	Tartaric	Cryst.
"	ditto	Solu.	"	ditto	Sol.
"	Arsenious	Solid.	Alcohol		
"	ditto	Solu.	Ammonia		
"	Benzoic	Cryst.	Ammoniuret of	Cobalt	
"	Boracic	Cryst.	do	Copper	

Ammoniuret of Nickel
Arseniate of Potassa Cryst.
" Soda Cryst.
Baryta Solid.
ditto Sol.
Benzoate of Ammonia Cryst.
do do Sol.
do Lime Sol.
Borate of Soda Dry.
Bi-Carbonate of Ammonia Sol.
Bi-Carbonate of Ammonia Solid.
Carb Ammonia Cryst.
" ditto Cryst.
" Baryta Solid.
" Potassa Dry.
" ditto Sol.
Carb. Soda Dry.
" do Sol.
" Strontia Precip.
Ether Acetic
" Hydro-Chloric
" Nitric
" Sulphuric
Flux Black
" White
Fluate of Ammonia Sol.
Ferro-Cyanate of Ammonia Sol.
do Baryta Sol.
do Potassa Sol.
do do Cryst.
do Mercury Cryst.
do do Sol.
Hydro-Sulphuret of Ammonia
Lime Sol.
Hydro-Chlorate of Ammonia Cryst.
do ditto Sol.
do Baryta Cryst.
do ditto Sol.
do Cobalt Sol.
do Platinum Sol.
do Iron Sol.
do Lime Cryst.
do do Sol.
do Gold Sol.
Hydro Chlorate of Strontia Cryst.
do do Sol.
do Tin Sol.
do Zinc Sol.
Nitrate of Ammonia Cryst.
do Baryta Cryst.
do ditto Sol.
do Bismuth Cryst.
do ditto Sol.
do Copper Cryst.
do ditto Sol.
do Iron Sol.
do Lead Cryst.
do do Sol.
do Lime Cryst.
do do Sol.
Nitrate of Mercury Cryst.
do do Sol.
Nitrate of Mercury, without heat Sol.
" Silver Cryst.
" ditto Sol.
" Strontia Cryst.
" ditto Sol.
Oxalate of Ammonia Cryst.
do ditto Sol.
Phosphorus
Phosphate of Soda and Ammonia Dry.
Phosphate of Ammonia Sol.
do Soda Sol.
do do Dry.
Potassa Solid.
ditto Solu.
Papers Brazil
do Tumeric
do Litmus
do Galls
Papers Ferro-Cyanate of Potassa
do Starch
Soda Solid.
ditto Solu.
Strontia Solid.
ditto Solu.
Succinate of Soda Sol.

Succinite of Ammonia			Sol.	Sulphate of		Potassa	Cryst
Sulphate of ditto			Cryst.	do		ditto	Sol.
do	Iron	red	Sol.	Tincture Brazil			
do	Soda		Sol.	do	Galls		
do	do		Cryst.	do	Litmus		
do	Silver		Sol.	do	Tumeric		

APPARATUS.

Retort Stands
Balance & Weights
Spirit Lamps
Blow Pipes
Platinum Wire
Forceps
Platinum Foil
Silver Crucibles (pure)
Platinum do
Sets Hessian Crucibles
Steel Mortars and Pestles
Wedgwood Mortars and Pestles
Wedgwood Evaporating Dishes
Hydrometers for Sulph. Acid
ditto Spirits
ditto Ether

Hydrometers for Nitric Acid
1 oz. Flasks
8 oz. ditto
Assay Jars
do do graduated
Glass Funnels 3 inch
do do 1 1-2
Pint Retorts
Gill do
do Receivers
Test Tubes
Glass Rod and Tubes
1 oz. Bottles Stopped
1-2 do do
6 oz. do do
1-4 oz. do do

CATALOGUE

OF

CHEMICAL AND PHILOSOPHICAL APPARATUS,

UTENSILS & MATERIALS

Manufactured by a distinguished Artist of this City, and will be furnished at moderate prices at

Carpenter's Chemical Warehouse,

Philadelphia.

1 A portable Chest, containing various sized glass-stoppers and corked bottles, and tin boxes filled with Acids, Alkalies, and such Salts, Earths, Metals, and other ingredients as are necessary for making the Gases, and conducting the ordinary routine of Chemical Experiments. A Wedgwood Mortar, Pestle, Funnel, and nest of Evaporating Dishes. A glass Funnel, graduated glass Measure, two small glass Retorts and Receivers; a Stand with rings to support same; a Spirit Lamp; a copper Sand Bath; a Thermometer; twelve Test Tubes and stands for same; a small tin Pneumatic Trough, and nest of glass Jars for collecting gases; a ditto for mercury. A pair of small Scales and Weights; a Blowpipe; a suspended Magnet, with Tests and Filtering papers—being all that is necessary for conducting a complete course of Chemical Experiments on a small scale. As the whole packs into one small case, this apparatus will be found invaluable to those who travel, or have not access to a laboratory, or the means of procuring chemical apparatus or ingredients.

The above is made of two sizes, and varies in price according to the number and quantity of its contents, and the size of the instruments.

2 A small Chest, applying more particularly to the chemical examination of minerals, ores, and mineral waters, containing all the necessary tests and re-agents, with a Blow-pipe, Lamp, Scales

and Weights for specific gravities, a silver Crucible, platina Capsule and Forceps, steel Hammer and Anvil, a Goniometer, Magnifying Glass, glass Flasks, &c.

3 A smaller ditto, limited to the blowpipe examination only of mineral substances, and containing all the necessary apparatus for that purpose.

4 The same on a smaller scale, and made up in the form of a morocco leather pocket book.

5 N. B. All the brass instruments for the above are made also in silver, at an extra charge.

6 Neat Mahogany Cabinets with drawers, locks and keys, containing from one to five hundred select specimens of Minerals, Shells, Fossils, or an assortment of each for study, according to the size and rarity of the specimens. Catalogues with name and localities attached to each. Also, Dr. Green's casts of the Trilobites.

GENERAL IMPLEMENTS FOR A LABORATORY.

16 Open-mouthed white glass Jars with tin tops, for fitting up Laboratories, as follows: one gallon, half gallon, quart, pint, and half pint.

17 Wide-mouth Bottles with glass ground stoppers—quart, pint, eight, six, four, and two ounces.

18 Narrow-mouth white glass stopper Bottles for fluids—quart, pint, eight oz. or half pint, four, two, and one oz.

29 Glass Measures graduated to ounces and drachms—two and one oz. Drop Measures.

20 Ditto graduated to cubic inches and decimal parts—four inches, three inches and under.

21 Glass Funnels—quart, pint, and half pint.

22 White Wedgwood or English porcelain Funnels—half pint, pint, and quart.

23 Do. Mortars and Pestles—No. 0, or quarter pint, No 1, half pint; No. 3, pint; No. 4, quart.

24 Ditto Evaporating Dishes or Pans, in nests of five each.

25 Ditto Tubes to pass through furnaces.

26 Small Test Tubes.

27 Mahogany Stands to hold six of the above.
28 Glass and Enamel Stirring Sticks.
29 Dropping Tubes.
30 Plain Retorts of white glass—quarter pint, half pint, pint, one and a half pint, and quart.
31 Ditto tubulated, quarter pint, half pint, pint, pint and a half, and quart.
32 Mattrasses or Receivers for do. of white glass and plain—three and a half inches diameter, four and a half inches diameter, six inches diameter, and eight inches diameter.
33 Ditto tubulated, two and a half inches diameter, four and a half inches diameter, six and a half inches diameter, and eight inches diameter.
34 Welter's Tubes of safety.
35 Woolf's Bottles with two necks, pint, quart, and three pints.
36 Ditto with three necks, pints.
37 Bent glass tubes to use with same.
38 Perforated Corks to use with same.
39 Cast Iron Mortars and Pestles.
40 Brass and bell metal do. turned.
41 Triangular iron Trivets, to support hot crucibles, retorts, &c.
42 Small flexible lead Pipe, for conducting gases.
43 Do. of flexible copper for do.
44 Filtering Paper, purified by boiling in distilled water.
45 Test Paper of Litmus, Tumeric, &c.
46 Bags of Caoutchouc or India Rubber.
47 Flexible weighing and levigating Knives of best kind.
48 White Tiles or Slabs of Marble and ground glass with Mullers

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ARRANGEMENT OF PARTICLES OF MATTER, CRYSTALLOGRAPHY, AND DEFINITE PROPORTIONS.

58 A Case containing fifty Cubes of Wood, differently coloured, and with names and other remarks upon them for explaining the Atomic Theory, and composition of all substances, as arranged by Dr. Green.

59 Sliding Scales of Chemical Equivalents, in which Oxygen is called eight, as taught in the schools of America.

60 Do. according to the notation of Berzelius, where it stands at ten.

61 Models in white wood of the six primitive crystalline forms,

62 Ditto of the four forms ascribed to integral atoms.

63 The above and many other forms of Solids and crystalline arrangements, cast in prepared Plaster of Paris.

64 Systems of wooden Spheres and Spheroids to explain Wollaston's hypothesis.

65 Dissecting Models in wood, for explaining the laws of decrement on the sides and angles of crystals, according to their size and intricacy.

66 Hauy's or Carangeau's Goniometer, for measuring the angles of Crystals.

67 Dr. Wollaston's Reflecting Goniometer, reading the angles to minutes in a mahogany case.

68 A pair of brass Plates with handles, for showing attraction of cohesion.

69 A pair of lead Plates for same object, with iron handles.

70 A Steelyard and Weight mounted in mahogany frame, for ascertaining the force with which these bodies are held together; serving also for the Magdeburg hemispheres.

71 Cork Balls of various sizes.

72 A pair of plate glass Planes, for demonstrating the ratio capillary attraction.

73 A set of six Tubes of different bores for the same.

74 The same mounted in a frame, with Reservoirs to hold different fluids.

CALORIC AND ITS APPLICATIONS.

84 Dr. Black's portable Furnace, of plate iron, lined with fire brick, with its accompanying apparatus, consisting of cast iron rings to diminish the aperture, a cast iron sand bath ten inches diameter, two muffles and trays, a box of cupels, two nests of Hessian crucibles, one ditto of black lead, two pieces of gun barrel, a poker, shovel, coal and crucible tongs, crucible earth stoppers for all the holes, and four feet of strong iron chimney pipe, complete for work.

This furnace, though portable, answers all the purposes, in a laboratory, of the most expensive brick construction. It will fuse the metals, work cupellations for assaying or enamelling, produce the gases that require heat, and is very convenient for passing them through heated tubes. It admits of a much larger sand-bath, if required, and produces very little radiant heat to annoy the operator. It weighs about two hundred pounds in its complete state; but when good fire brick and loam can be procured, it may be most advisable to have it in the skeleton form, and line it when fixed, which reduces its weight to sixty pounds.

85 A two-gallon copper Still, to fit into the above, with a worm tub, rendering it a most complete fire apparatus for any laboratory.

86 Knight's Portable Table Plate Iron Furnace: has all the apparatus and conveniences of the above, and the same articles attached to it on a smaller scale. It works with charcoal upon a table, but being much smaller will not produce so intense a heat. It weighs about forty pounds.

87 A Portable Blast Furnace, capable of producing immense heat; is made of three large sized lead pots, bound with iron. It is urged by a pair of double bellows, fixed in a convenient frame. The bellows apply to other purposes.

88 Black-lead Pot Furnaces, of all sizes.

89 Pokers, Shovels, Tongs, Gun Barrels, cast and wrought iron Grates, &c. for the above.

90 Cast Iron Cones for assaying.

91 Ditto Ingot and Button Moulds.

92 A pair of Brass Cupel Moulds.

93 The like made of boxwood.

94 Pure Bone Ashes for cupellation.

95 Crude red Argol for flux.

96 Anvils for assaying.

97 Black-lead, Hessian, English and Wedgwood Crucibles or Melting Pots, of all sizes, in nests.

98 Muffles, Muffle Trays, Crucible Stands and Covers. Skittle Pots and earthen Tubes.

99 Plain and tubulated earthen Retorts.

100 Lamp Furnaces, or Argand Lamps, with single wicks, of japanned tin and copper chimneys, with strong wire frames to support Retorts, Evaporating Dishes, &c., and one copper sand-pot or bath.

101 The like mounted on an iron stand, with three iron rings and adjusting screws.

102 The Stand alone, without the lamp.

103 A handsome japanned Argand Lamp on brass pillar and foot, with tin shade, glass and copper chimney, and three polished brass rings, with a copper sand-bath over same, forming an elegant parlour reading lamp, as well as one of great utility for chemical purposes, such as filtering with three funnels at once, as well as heating bodies, and supporting tubes and other apparatus.

104 The brass Stand with three shifting brass rings, but no lamp.

105 The three Rings with the Stand, in polished brass and iron.

106 Argand Lamps of any of the above forms, made with two concentric wicks.

107 Spirit Lamps of glass, with single tin burners.

108 Do. with screwed brass burners.

109 Ditto with ground glass caps, to prevent evaporation of the alcohol.

110 Spirit Lamps all of brass, with two burners and ground air-tight cap.

111 Ditto with three sets of burners, and three caps.

112 Blowpipe Lamps in tin and brass, of several constructions.

113 A Blowpipe Table of pine wood, with double bellows to work by the foot, and large tallow lamps for boiling glass, bending and sealing tubes, and many chemical operations.

114 Blowpipes, of brass, viz.; common jeweller's, Cronstadt's fixed ball, Accum's tin cone ; Pepy's screw ball, water guard and two jets ; Bergman & Gahan's with side sets ; Pepy's portable ditto, with pivot jet ; Dr. Wollaston's Portable Tube. The above are made all in silver, or with silver mouth pieces, and platina jets.

115 Tilley's Hydraulic Blowpipe and Lamp, in japanned tin—can be used with oxygen or common air, and is very convenient to such as cannot maintain a constant blast with the mouth.

116 Newman's Compression Blowpipe of copper, with condensing syringe, stopcock, bladder and lamp for oxygen gas, in mahogany case.

117 Gurney's Oxy-hydrogen Blowpipe, with safety apparatus.

118 Dr. Hare's Oxy-hydrogen Blowpipe, being the best and safest apparatus of the kind, and forming two convenient gas holders for using gas for other purposes.

119 Brass and steel Blowpipe Forceps, with platina points.

120 Silver and platina Spoons, Capsules, Foil and Wire for holding substances while acting upon by the blowpipe.

121 Thick wax Candles for the blowpipe: very useful to travellers.

122 Bladders with stopcocks, to supply blowpipes with oxygen, hydrogen, &c.

123 The Œlopile, or self-acting Blowpipe, worked by the vapour of boiling alcohol with the spirit lamp, safety valve, and variable jets, handsomely fitted up in brass work.

124 Cast-steel Hammers, for detaching fragments of minerals, to operate upon with the blowpipe, or for breaking specimens, of the forms recommended by Wollaston, Berzelius and M'Culloch.

125 Polished tin, copper, and silver-plated Concave Mirrors, mounted on stands, for showing the effects of radiating caloric, according to their size, mounting and finish.

126 Two Stands with iron ball, wire cage for ice, and a shelf to support a thermometer, to accompany the above.

127 Leslie's Radiator, or cube of tin, with black, white, polished and glass sides, on a pillar and foot, to show the radiation of heat from boiling water through these various surfaces.

128 Two arms and cups fixed to the above for holding bits of phosphorus.

129 Large Watch Glasses to freeze water by evaporation of ether.

130 Leslie's Apparatus for freezing water over sulphuric acid in exhausted receivers.

131 Dr. Henry's Freezing Apparatus by muriate of lime and snow.

132 Pepy's Freezing ditto.

133 Two Tubes to freeze water by boiling ether.

MEASURE OF FREE CALORIC.

143 Chemical Mercurial Thermometer, with hinged boxwood

scale, extending from the freezing point of mercury to 600° of Fahr.

144 The like, a naked tube, with the division engraved on the glass; to be used with strong acids.

145 Thermometers with a scale extending to 212° and upwards.

146 Sanctorio's Thermometer on a large scale.

147 Air Thermometer on the construction of Sanctorio reversed.

148 Leslie's Differential Thermometer, with stand and cover.

149 Self-registering, or day and night Thermometers, on one scale.

150 Ferguson's Pyrometer, for expansion of metals.

151 Dr. Green's Calorifitor, to show the unequal conducting power of substances.

152 Cylinder and Plate with hole in two forms, for showing expansion.

153 Bars of Brass and Iron attached to each other, to explain Compensation Pendulums.

154 Large Thermometer Tubes fitted with water, spirit, oil, &c. to show relative expansion, the whole being on one frame to dip into hot water.

155 Wollaston's Cryophorus.

156 Glass Boltheads and Flasks for experimenting upon heated fluids.

157 Candle Bombs or Crackers, for expansive power of steam.

158 Rupert's Drops, of green glass.

159 A Palm Glass to boil spirits by heat of the hand.

160 Pulse Glasses.

AIR PUMPS AND PNEUMATIC APPARATUS.

170 Double Barrel Table Air Pump—three sizes.

171 Ditto larger and very perfect, to stand on the ground.

172 Single Barrel Table Air Pump.

173 Syphon Guages for above. Barometer do.

174 Brass Stopcocks, three sizes.

175 Guinea and Feather Plate, with three drops.

176 Tall Glass for ditto.

177 A pair of three inch brass Hemispheres.

178 Bell to ring in vacuo—three constructions.

179 Lead Weights, and Bladder in frame.

180 Single Transfer Plate with Stand and Jet Pipe.

181 Tall Glass for same.
182 Double Transfer.
183 Brass Plates, with wire drawing through a collar of leather.
184 Glass quart Flasks to weigh air, answering also for electrical luminous bottle.
185 Plate and Cup for shower of quicksilver.
186 Ground Receivers for the air pump.
187 English Barometer Tubes.
188 Exhausting Syringe. Condensing ditto.
189 Glass Syringe to ignite amadou. Ditto in brass tube.
190 Copper Ball and condensed Air Fountain, with syringe and revolving jets.
191 Apparatus to fire gunpowder in vacuo.
192 Lead Weight to screw on a small exhausting syringe.
193 Air Mills, to show resistance of the air.
194 The Water Hammer, or water sealed in an exhausted tube.
195 Hand and Bladder Glasses.
196 The Torricellian experiment, with tall glass receiver to cover.
197 The Bacchus Experiment, for illustrating spring of air.
198 The Lungs Glass, with brass cap.
199 Glass Fountain, by spring of air.
200 Small Balance, with cork and bubble of glass and counterpoise.
201 Breaking Squares, fitted to act by spring or pressure, with brass caps.
202 The Glasses alone, to fit into caps.
203 Wire Cages to place over same, and prevent accidents in case of explosive experiments.
204 Plate, Stop-cock and Bent Pipe, with a tin lamp, for fire-damp experiment.
205 Double male Screw, adapting pieces for stop-cocks and other apparatus.
206 Double female do. do.
207 Brass Caps to fit stop-cocks, for cementing on to open-top receivers.
208 The like small, to cement to retort necks.
209 A set of large Models of Valves used in air and water pumps.
210 Square tin Frames of wire gauze of different fineness, for experiments on flame.

LIST

OF

FRENCH AND ENGLISH

CHEMICALS, &c.,

Imported

And always kept on hand at

Carpenter's Chemical Warehouse, Philad'a.

——:o:——

Acid, Acetic, No. 6, in 4 lb. bottles

This concentrated acid is six times the strength of the distilled Vinegar generally sold. One pint of this pure acetic acid, added to seven pints of water, instantly produces a pure vegetable colourless vinegar, of the proper strength for the use of Apothecaries and Druggists.

" Citric, Eng. white
" Oxalic, London
" Prussic, Scheele's 1 oz. vials
" " German do
" Tart. pulv. English, pure
" " " *American*
Ammon. Carbon. in jars and bottles
" " Aromatic, 1 lb. bottles
Antim. Pulv. Febr. 1 lb. bottles
" " 1 lb. papers
" Tartaris, pulv.
" " " 1 lb. papers
" " Crystals, English
" " " French
Aqua Rosæ, opt. in pint bottles
Antimony, Golden Sulphur, pure
Ammonia, Nitrate of, pure
Aventurine, white
" yellow
Acidulated Lemon Drops, London, 5 and 10 lb. cans
" " " ¼ lb. cans
" Rose, 5 and 10 lb. "
" " ¼ lb. "
Asbestos, in ¼ lb. boxes
Bird Lime, 1 lb. pots
Bolus Knives, cocoa handles, (best steel,) from 2½ to 12 inch blades
Boxes, Pill, (card,) London
" Tooth Powder, No. 1, 2, 3, (white wood) assorted, labelled, and varnished, London made and well seasoned
" Lip Salve, No. 1 and 2
Boxes, Steel, Tinder, plain
" " " engraved
" Pill, glazed paper, white edges
gilt " 2 sizes
Boxes, Fancy, (6 patterns,)
Boxes for Soda Powders,
" for Seidlitz "
" Phosporus, flat, tin
" " round, tin
" Plain round paper, 1 oz.
" Coloured, *French* Pill, high and low
" White Metal, Shaving
" Jeweller's Paper, in nests of 6
" Square Paper, in nests of 6, from 3 to 9 inches long
" for single Powder Puffs, embossed paper
Bougies, Wax
Black Drop, Howit's
" " Braithwait's
Brome, 1 drachm vials
Brucine, do
Barytes, pure,
" Muriate of
" Nitrate of
Boule de Mars
Bismuth, Metallic
" Oxide of, Pelletier's
Blow Pipes, to fill Otto Rose Vials
Beans, St. Ignatius, or Feve St. Ignace
" Tonqua
Brushes, London Tooth, common, silver wire,
" " " Trepanned
" " " marked "Youths' and Misses'"
" for Portrait Painters, Badger's Hair,
" " " Martins'
" " " Bristles,
" " " Camels' Hair, short
" " " Camels' Hair, long
Bronze, pale

Bronze, Yellow
" White
" Crimson
" Green
Balances, Salter's patent
Conf. Sennæ, 1 lb. pots
" Rosæ. Gall. 4 lb. pots,
Colchici. Vinum. 1 lb. bottles
" Tincture
" Sem. fresh
Calcis. Murias, 1 lb. bottles
Cheltenham Salts, efflorescent
Court Plaster, black
" " pink
Corn Rubbers, Prout's, (in great repute)
Corks. Vial, in bales of 100 and 400 gross
Chlorure d'Oxyde de Sodium, fr. Labarraque
Chalk, French, white
Cobalt, Oxyde of, pulv.
" blue
Carmine, in 1 oz. papers
" superfine Cochineal
Cinchonine
Cardamom Seeds, fresh
Calomel, London, genuine
Dragon's Blood, Reed, superior
Delphine, 1 drachm vials
Dentists' Composition Leaf
Emp. Adhesive, Eng. (linen)
" " " cotton
" Hyd. Ammon.
" Diachylon
" Adhesive
Ext. Colocynth, C.
" Sarsaparilla, C.
One ounce of this extract, added to one quart of water, instantly forms the compound decoction of Sarsaparilla, of the London Pharmacopæia.
" Hyosciami
" Conii, Eng.
" Belladona do.
" Aconite, do.
" Opium, dry, Pelletier's
" Angelica
" Balsam Copaiva, concent'd. Pelletier's
" Black Pepper
" Belladona, pure
" Nux Vomica, alcoholic
" Opium, demorphinized, pure
" Toxicodendron
" Aloes
" Black Hellebore
" Cicuta, 1st. and 2d. quality, French
" Dandelio, Pelletier's
" Fennel
" Kahinca, for the dropsy, by Pelletier
" Gentian
" Jalap
" Rhubarb, watery
" Rhatania
" Valerian
Eau Medicinale de Husson, for the gout
Ear Trumpets, of silver and natural shells
" " Pointer's patent Gum Elastic
" " double
Elaterium, Clutterbuck's
" Pelletier's
Emetine
Essence of Ginger, Oxley's
Evaporating dishes, 10 in a set
Formulary of the Paris Hospitals, in English, by Ratier
" Magendie's in English
" " French
Flacons, Toilet, painted and gilt porcelain, newest patterns
" glass, moulded, assorted forms

Flor. Spar.
Funnels, Wedgwood,
Gum Ammon. Colat. 1 lb. pots
Gold Beaters' Skins, London
Grains de Sante, Dr. Frank's, in boxes,
Gold, Muriate of, 2 drachm vials
" Oxide of, 1 " "
Gum Elastic Bougies
" " " hollow
" " Catheters
" " Rectum Bougies
" " " Catheters
" " Pessaries, round
" " " oval
" " Seton Tapes
" " Nipple Shields,
" " " " and boxwood
" " Stomach Tubes
" " Bougies, armed
" " Injection bags
" " " small
Gentianine
Gowland's Lotion, genuine
Hyd. Cum. Creta.
" Sulph. Nigr. 1 lb. bottles, English
Hat or Green Issue Cloth
Hydrometers for Spirits
Baumy & Carter's.
" Sirup
" Alum
" Borax
" Rochelle Salts
" Epsom do.
" Salt Petre
" Ether
" Oil of Vitriol
" Blue Vitriol
" Aqua Fortis
" Chlorates
" Beer or Sacharometers
" Concentrated Acids
Heads, Articulated, Human
" Sawed in vairous ways
" Doct. Gall's, marked
Horn Scoops, for Apothecaries' drawers
Issue Plasters, stamped, (Sandwell's)
Issue Peas, Orange, assorted
" Iris, do.
Iodine, 1 oz. phials
" Salts of, 1 oz. phials
Iron, Chlorate of
Jujube Paste, in neat glazed paper boxes, containing 1 oz. each, with directions and show bills
Jujube Paste by the pound
Jalap, Resin of
Kermes' Mineral, No. 1 and 2
Lake, Crimson, English, No. 00
" " " 0
" " " 1
" " " 2
" " " 3
" " " 4
" fine " " 2
" " " " 3
" dark " "
" Purple "
" Yellow "
Lancets, Laundy's genuine
" Simpson's "
" Evan's "
" " imitation
Lancet Cases, black shagreen, 2, 3, 4, and 6 holes
" " plain black paper
Lozenges, Eng. :—Horchound, Iceland, Ginger, Tolu, Coltsfoot, Anniseed, Ipecac., Fluted Lemon, Jujube, Paregoric, Rhubarb, Pontrefact, Otto Rose, Nutmeg, Squill, Aromatic, Chalk, Magnesia, Gum

Arabic, Cinnamon, Clove, Soda and Peppermint, Ginger and Soda, Bicarbonate Soda, and Bath Pipes

In neat oval bxs. eng'd labels, con'g 1 oz. each.
The same in bulk.

Lozenges, Peppermint, in boxes
" " per lb.
" Ching's Worm

Liq. Ammon. Concent. (1 lb. bottles)
This highly concentrated fluid is used in chemical experiments, and for imparting pungency to smelling bottles. It is about six times the strength of the Liq. Ammon. of commerce.

Liq. Ammon. Aromatic
" Arsenic, Fowler's, (1 lb. bottles,)

Lint, patent, No. 0, 1, 2, 3

Liquorice, refined English, (10 lb. cans)

Lycopodium

Lupuline, very superior

Leaves, Digitalis, French

Lime, Chlorate of, in crystals,
" Phosphuret of

Lunar Caustic, (45 per cent. silver)

Labels, gummed, for druggists, 200 in a box
" Death Head, for Prus. & Oxalic Acid

Magnes. Calcin. opt. in ¼, ½, and 1 lb. bott.
" " " in 5 lb. boxes

Mortars and Pestles, Wedgwood's pat. dur.

No.	*Diam. inch*	*Measure.*
0000	2½	2 oz.
000	3	2 "
00	3½	3½ "
0	3¾	6 "
1	4	8 "
2	5	12 "
3	5½	16 "
4	6½	21 "
5	7½	26 "
6	8	2 pints
7	8½	3¼ "
8	9	4¼ "
9	9¾	5½ "
10	10½	7¼ "
11	11	8 "
12	11½	9 "
13	12½	10 "

Mortars and Pestles, 1st. 2d. 3d. 4th. 5th. 6th. and 7th. sizes
" " " Bell Metal, 3 pints, 2 and 4 quarts, ½, 1, and 2 pints

Mercury, Cinnabar of
" Iodide of, (Proto)
" " " (Deuto)
" Cyanure of
" Phosphate of
" Prussiate of

Morphine, Sulphate of, 2 drachm vials
" Acetate of
" Muriate of
" Pure

Manganese, Oxide of, free from Iron

Mahogany Medicine Chests, fitted with bottles, and lined with silk velvet

Musk, in grain, half and 1 oz. vials
" in pod, 10 oz. canisters

Medical Spoons

Narcotine

Nickle, Metallic

Oil Cubebs, pure, English
" Pimento
" Roses
" Rhodium
" Almonds, essential, English
" " " French
" Laurel
" Ambergris
" Chamomile, essential
" Oil Carnation, (Œillet)
" Cochlearia
" Melisse, (Balm)
" Mille Fleurs
" Jonquille
" Orange Flowers, (Neroli)
" Sandalwood
" Toxicondendron
" Vanilla Beans
" Cardamoms
" Sarsaparilla
" Valerian, pure
" Violets
" Coriander
" Cedrat, (Citron Flowers)
" Jessamine
" Lavender, Garden, French
" " " English
" Limette, (Lime Flower)
" Bergamot
" Lemon
" Orange
" Origanum, (red Thyme)
" " (white ")
" Rue
" Rosemary
" Savin
" Sage
" Tuberose
" Cloves
" Cassia
" Anis
" Cajaputa
" Wormwood
" Wormseed
" Wintergreen
" Sassafras
" Carraway, English
" Juniper
" Succin. Rect. English
" Naptha, purified
" Croton, English
" " Pelletier's, in boxes
" Spurge, (Euphorbia Latyris)
" Sweet Almonds
" Bitter "
" Purified, Watchmakers', 1 oz. vials

Pipes, Ivory, for injection bags,

Pill Tiles, Wedgwood's, 7 by 9 and 8 by 10
" " graduated 8 by 10

Pill Machines, 1 to 5 grains, and 12, 18, 24, and 30 pills, according to size

Pills, Hooper's, stamped genuine
" Scott's, Anderson's do. do.

Pill Hydrarg. 1 lb. pots

Potassæ Carbon. 1 lb. bottles

Putty Powder, super, No. 5

Presses, Patent Portable, for making Tinctures, small size
" " " larger

Plaster Spatulas, No. 1

Plaster Cicutæ, French

Paste, Bragg's Chemical Polishing
" Hafford & Co.'s

Powder, Bragg's Plate
" Sago, new article, in tin 1 and ¼ lb. boxes

Drop Measures, for measuring from 1 to 100 drops

Latin Labels for bottles and drawers, very neat, for different size bottles, from 4 oz. to gallon

Proof Stoppered Vials, in Russia Leather cases, ½ oz. 1, 2, 3, and 4 in a case

Proof Stoppered Vials, in Russia Leather cases, 1 oz. 1, 2, 3, and 4 in a case

Vials, for Otto Roses,
" French ⅛ oz. glass stoppers

Vials, French ½ oz. glass stoppers
" " 1 " "
" " 2 " "
" " 4 " "
" " 6 " "
" " 8 " "
" " 12 " "
" " 16 " "
" " 20 " "
" " 24 " "
" " ¼ " large mouths
" " ½ " "
" " 1 " "
" " 2 " "
" " 4 " "
Powder Puffs, each in a gilt edge figured paper box
" " in gilt edge boxes of ½ dozen and 1 dozen each
Phosphorus
Pungents, Moulded, plated tops
" White and coloured
" Cut, plated
" " silver plated
" Col'd. "
" Flat col'd., new article
Potassium
" Cyanure of
Piperine
Picrotoxine
Platina Wire, for Dentists, assorted sizes
" Plates and Bars
" Sponge
Pocket Lights, round,
" " square
" " Matches, in boxes
Paper, Filtering
" " No. 2
" Assorted, coloured, glazed
Poor Man's Friend
Potash, Oxymuriate of, French
" Acetate of, or Sal. Diuretic
" pure
" Iodate of
" Hydriodate of, in 1 ounce vials
Paraguay Roux, for tooth-ache
Pectoral Gum, Regnault's
Porcelain Pots, ¼, ½, and 1 oz., 3 forms
Rouge, Jeweller's
Robinson's Patent Barley, in ½ lb. papers
" " Groats, do.
Rhubarb, Pulv. China, pure
" " Turkey do.
Rad. Mazerion
" Rhei, Turkey
" Valerian, pulv. pure
" Turbithe
" Polypode
" Pareyra Brava,
Rass. Cornu Cervi
Scales, flat beams, oak boxes, 5, 5½, 6, 6½, 7, and 8 inch
Scales, round beams, oak boxes, 5, 5½, 6, 6½, 7, and 8 inch
" " " no boxes, 5½ inch
" " " mahogany boxes, brass pans, 6 inch
" " " brass pans, 6½ & 7 inch
" " " glass pans, 6, 6½, and 7 inch
" " " glass pans, No. 2; 6, 6½, and 7 inch
" " " brass pans, No. 2; 6, 6½, and 7 inch
" Diamond
" Elegant brass, on mahogany stands
Scales, Nicholl's patent, London, a new and convenient article
" Nicholl's, on stands
" round beams, Japan Boxes, for medicine Chests
" flat beams, Japan Boxes, for medicine Chests
Scale Pans, glass
Saucers, Pink, small size, Reeves'
" Peach, " "
" Purple " "
" Blue " "
" Assorted colours, in a dozen
" large, same assortment of colours as small
Stanni, Oxyde, Ppt.
Salicine, new tonic
Scammony, Smyrna
Spunk, 1st quality
Strontian, Muriate
" Nitrate
" pure
Suspensary Bandages, cotton
" " silk
Skeletons on wire, male
" " female
" not wired
Strychnine
Sulphur, Hydriodate
Sulph. Quinine, Pelletier's
Sulphate of Rhubarb, (Rhubarbarine,)
Soda, pure
" Iodate of
" Hydriodate of
" Chlorate, Crystals
Sodium
Snuff, English, lb. and ½ lb. jars, 12 kinds
Sarsae, pulv. London
Saffron, Eng.
" Spanish
Scent Bottles on cards
Skins, French, No. 1
" English, No. 1, 2, 3, 4
" Split, French
Sal. Diuretic
" Acetosella
" Prunel. Glob.
Scillæ, pulv. London
Salts, Preston's, cork stoppers
" " glass stoppers
Sieves, Cyprus, in nests of 12
Soap, White Windsor
Thermometers, Pocket, red cases
" Cylinder do.
" Block Tin
" Brewers' Boxwood
Tweezers, English, on cards
Tin Foil, 12 sheets to the lb.
Twine, French, red
" English, white
Thrydace, or Lactucarium
Teeth, Human, eight front upper
" Mineral
Tannim
Tapers, in boxes of 90 each
Titanium, pure
" Oxide of
Tooth Wash, Hudson's Botanic
Ultramarine, (de Guimel)
Veratrine, 1 drachm vials
Varnish, fine French, Picture
Vaccine Virus Bottles, Dr. Plunket's in Russia cases
Vanilla Beans, No. 1,
" " 2,
" " 3,
Wafers, red, in 1 lb. bags, 1st. quality

Wafers, red, in 1 lb. bags, 2d. quality
" " " 3d. "
" " " 4th. "
" col'd. " 1st. "
" " " 2d. "
" black " 1st. "
" red in ½ lb. boxes 1st. "
" " in ⅛ " 1st. "
" col'd note, ½ lb. do. 1st. "
" black ½ lb. do. 1st. "
" red Notarial, 1st. quality
" transparent, Note
" Pea, red and coloured
" fancy coloured
Weights, Brass, solid, 1 lb. down
Weights, brass, cased, 1 lb. down,
" " solid 4 lb. "
" " cup 4 lb. "
" sunk in mahog. blocks, 4 lb. down
" drachm
" grain
" diamond
Wax, common red, for sealing bottles
Zinc, Cyanide of
Zinci, Acetas
Superior Porcelain Canopy Top Jars, Blue, Green, Fawn, and Cream colours, from 1 oz. to half gallon; a very neat and superior article.

G. W. CARPENTER'S

Compound Fluid Extract of

PINK ROOT,

(SPIGELIA MARILANDICA,)

The most effectual Worm-destroying Medicine yet discovered.

——:o:——

THERE is no disease of so extensive a character among children as worms, which aggravate all other diseases, and are the chief cause of fevers, bowel complaints, and chronic and nervous diseases incident to childhood, which are numerous and frequently fatal. It is a fact much to be regretted, that thousands of children are swept off, or are rendered feeble, pale and emaciated through the first stage of life, which leads on to pulmonary complaints, &c. &c. Most of the remedies made use of for this disease are strong drastic medicines of a poisonous character, which debilitate the stomach, and often materially injure the health of patients. The oil of wormseed, which has been recommended and is prescribed at present by the faculty, is so deteriorated by adulteration and mixture, or the product of inferior seed, that no dependence whatever can be placed upon it. The worm tea, as it is commonly called, composed chiefly of pink root, is made so very inferior, almost wholly of stalks and leaves, that it is nearly worthless; and there is no preparation in a convenient form of exhibition which is considered safe and approved of by the faculty. The pink root is considered by all who are acquainted with its properties to be one of the safest and most effectual remedies. There is, however, considerable of that which is sold almost

worthless, containing but a small portion of the root; it also requires considerable care and attention in extracting its properties, which is not generally done by those unacquainted with pharmaceutical preparations. Under these circumstances, G. W. Carpenter has thought it advisable to prepare an extract of the spigelia, combined with several of the vegetable remedies most approved of, for the convenience of the faculty, particularly those in the country, and feels assured he will be supported by them in the introduction of this article, whose composition is known and can be prescribed by them in safety and confidence, and will be the means of putting down the various nostrums introduced by the ignorant and inexperienced, and which are productive of serious evils to the community. This article will be carefully prepared of uniform strength, and can be administered with safety to persons under any circumstances.

There is no disease which produces so much disturbance in the system as worms. Not only do they aggravate ordinary diseases, but they give rise to a great variety of very alarming anomalous affections. The whole train of spasmodic and convulsive diseases may proceed from the irritation by worms in the alimentary canal. Cholera, epilepsy, catalepsy, tetanus, paralysis, mania, and convulsions, as well as a variety of other nervous and convulsive affections, are not unfrequently the immediate effects of this cause. Besides these diseases, worms have also been known to produce pleurisy, pains in the side, dysentery, remitting fever, dropsy of the brain, chronic and spasmodic cough, &c. &c. &c.

Among the symptoms which indicate the presence of worms, the following are the most common and striking:—A pale, leaden coloured, and occasionally flushed countenance; a bluish streak under the eyes; these are dull and heavy, the pupils are either dilated or much contracted; the lower eyelids and upper lip swell, especially during the night while sleeping; *great itching in the nostrils*, which causes the patient to *pick his nose; foul breath;*

disturbed sleep, during which the patient grinds his teeth, is apt to scream out and start up suddenly, as if frightened; tingling in the ears; giddiness; interrupted speech; palpitation of the heart; a *dry and spasmodic cough;* irregular and depraved appetite, which is either entirely suppressed or exceedingly voracious; the stomach swelled and hard; looseness of the bowels; costiveness; unnatural slimy stools; pains in the bowels, wasting of flesh, convulsions, fits, palsy; and, finally, death.

REMARKS.—January 1834.

It is now about one year since the introduction of this medicine, and the proprietor is pleased to find, after a full trial and extensive use of this preparation in the hands of the faculty, the most flattering accounts have been received of its decided anthelmintic properties. Numerous letters have also been received from distinguished members of the medical profession in various parts of the United States, all corroborating and substantiating the valuable properties which this medicine has justly acquired.

The highly valuable medicinal qualities of the spigelia is acknowledged by every medical writer of experience. Some foolish objections have been raised by ignorant people of supposed deleterious properties, which they imagine is contained in pink root, and hence pronounce it a dangerous remedy; some of them probably to give more claim to a favourite nostrum which the same fancy, or probably *interest* may have induced them to suppose better adapted. The following remarks of the distinguished medical author, Dr. Paris, will dispel these cobwebs of the imagination, and at once set the subject at rest, by exhibiting its true properties. He decidedly gave preference to spigelia over all other remedies, and considers it so safe and valuable that he recommends it to children even where there are no worms, and asserts its efficacy to be

conspicuous in abating the violence, and frequently in altogether subduing what is popularly denominated worm fever; a fever peculiar to children, and characterised by a very rapid pulse, dry hot skin, circumscribed flush on the cheeks, red lips, a peculiar mottled or speckled appearance of the tongue, owing to its being but partially covered by the dingy white slimy scurf upon it, constipated and distended bowels, with pungent heat externally, and excessive nervous irritability. This disease appears to be seated in the mucous membrance of the alimentary canal, and although it may arise from, or be connected with worms, it probably originates more frequently from other sources of irritation; in either case the spigelia, combined if necessary with some more actively cathartic medicines, is perhaps the best of all remedies for this species of fever. In relation to the small vine which is sometimes mixed with the spigelia, and to which narcotic and poisonous properties have been ascribed by these same deluded alarmists, the same distinguished author asserts to be entirely inert, as he demonstrated by preparing a strong infusion of it, and also, by eating freely of it without experiencing any sensible effects.—*See Paris' Pharmacologia, page* 315.

The following have been indiscriminately selected from a large number of letters received from physicians of the highest respectability, all expressing the most favourable opinion of this medicine, and ascribing to it the most safe and active anthelmintic properties.

Extract of a letter received from Dr. George Halberstadt a respectable physician of Pottsville, Pennsylvania:

Pottsville, May 31, 1834.

Dear Sir,—I have used all the compound extract of pink root which you sent me, in my own practice, and I have found it easy to administer to children, and a very active and highly useful

preparation to the country practitioner. I will thank you to send me four large bottles more of it with the medicines you are putting up for me.

Respectfully yours,

To Mr. Geo. W. Carpenter. G. HALBERSTADT, M. D.

Extract of a letter received from Dr. C. H. Jordan, of Person county, North Carolina:—

Person County, N. C. May 27, 1834.

Dear Sir,—I have used some of your compound fluid extract of spigelia since I received it with the most happy results. It was an extreme case, and worms were destroyed in considerable numbers until scores were brought away. I consider it a valuable remedy, and will continue to use it whenever opportunity occurs.

Yours respectfully,

To Mr. G. W. Carpenter. C. H. JORDAN, M. D.

Prepared and sold only by GEORGE W. CARPENTER, at his Chemical Warehouse, No. 301, Market Street, Philadelphia.

CARPENTER'S

CONCENTRATED COMPOUND

OF

SARSAPARILLA,

Cubebs and Copaiva.

The above preparation is a combination of the proximate principles of those substances, and are united in such proportions as are usually prescribed for gonorrhœa, gleet, strictures, &c. This preparation has superior advantages over the crude substances, the dose being very small, and not unpleasant to take. It is compounded in the most neat and eligible mode for the convenience of the faculty, being in a very portable and condensed form, and at all times ready for use, and will keep without injury any length of time. Full directions accompany the preparation.

This medicine has but very recently been introduced, and has already acquired a high degree of reputation; it is daily increasing in use among the faculty, and has given in all cases the highest degree of satisfaction. I select the following letter from a large number corroborating the statement of the writer of the present one here submitted.

Extract of a letter from Dr. John W. Lott, a respectable physician of Middlesex county, New Jersey, dated September 13th, 1833:—

Dear Sir,—I have cured several cases of the gonorrhœa with your compound of cubebs, sarsaparilla, and copaiva, and am now using it in three other cases. One was a case of only three or four days' standing. The symptoms were severe for a recent case;

I put him under the use of your concentrated preparation, and in the course of four days, with the assistance of injections, a complete cure was effected. The second case was a young man, about twenty-eight years of age, had been labouring under a gonorrhœa for some weeks, had been under the medical care during the time with but little relief. Called on me about the 1st of August; I gave him a bottle of your medicine, to be used according to your directions. He then had swollen glans penis, a discharge of a thick, yellow, greenish matter, occasionally tinged with blood, painful smartings in urinating, a frequent desire to urinate, and painful erections of the penis or cordee: I ordered only simple injections of water, that I might have a fair opportunity of seeing the full effects of your medicine, and after the use of four bottles, a complete cure was effected. In your medicine you have the virtues or active principles of the best medicines for the cure of gonorrhœa, besides a medicine rather pleasant than otherwise; my opinion is, taking into consideration the active properties of your medicine, with its pleasantness to take, there is no medicine in use equal to it for the cure of gonorrhœa.

JNO. W. LOTT, M. D.

To Mr. G. W. Carpenter.

Prepared and sold, only at G. W. CARPENTER'S Chemical Warehouse, No. 301, *Market street, Philada.*

CARPENTER'S

BEDFORD SPRING POWDERS,

FOR MAKING THE

Waters of the Celebrated Bedford Springs.

The water of the celebrated Bedford Spring, as a gentle aperient and tonic, is equal, if not superior to any native spring in the United States.

It is resorted to, annually, by numerous persons, in various parts of the United States, who have experienced the most salutary and beneficial effects from the use of it.

The difficulties which persons are subjected to in getting the bottled water at a distance, and the expense of visiting the springs, has confined its use to a much less number than would be pleased to enjoy the advantages of it. Under these circumstances, Geo. W. Carpenter, with much pleasure, announces the preparation of the above powders, containing all the *essential* substances with which these springs are impregnated, and by which the waters of the Bedford Springs are effectually imitated.

For the accommodation of the public, agents will be appointed in all the cities and principal inland towns in the United States, to give a general circulation to so useful an article throughout the country.

They are a safe and gentle purifier of the blood, and afford great relief to those of plethoric habits residing in crowded cities without sufficient exercise, and those who participate freely of the luxuries of life. From its mild aperient and tonic properties, it will be found particularly serviceable in dyspepsia and indigestion,

of which numerous persons have entirely recovered by the use of this water. Persons on sea voyages, or residing at a distance from the springs, and in warm climates, will at once perceive the great advantage of making use of these powders, which besides being more portable and less expensive than the bottled water, will keep without injuring any length of time.

☞ These powders are superior to the Seidlitz, inasmuch as they are equally aperient and agreeable, and at the same time possessing valuable tonic and chalybeate qualities, and are consequently better adapted for weak or debilitated constitutions than any other cathartic in use.

Manufactured and for sale only by G. W. CARPENTER, at his Chemical Warehouse, No. 301 *Market Street, Philada.*

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ERRATA.

Page 239, eleventh line for Dispensatory, read Dispensary.