

Working bulletin for the scientific investigation of Cascara sagrada (Rhamnus purshianus) / issued in pursuance of a system of collective investigation of new drugs established and conducted by the Scientific Department of Parke, Davis & Co. ; analytical chemistry under charge of A.B. Lyons, pharmacology under charge of F.E. Stewart, botany H.H. Rusby.

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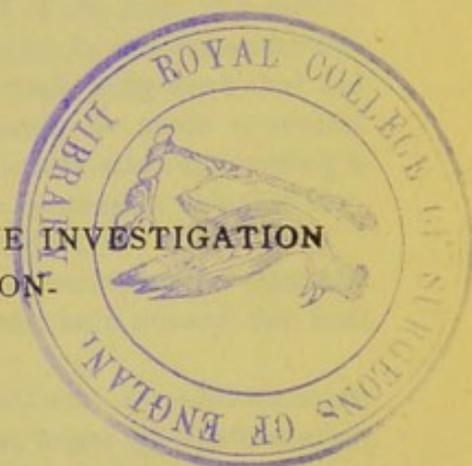
WORKING BULLETIN

FOR THE SCIENTIFIC INVESTIGATION OF

CASCARA SAGRADA,

(RHAMNUS PURSHIANUS.)

ISSUED IN PURSUANCE OF A SYSTEM OF COLLECTIVE INVESTIGATION
OF NEW DRUGS ESTABLISHED AND CON-
DUCTED BY THE



SCIENTIFIC DEPARTMENT OF PARKE, DAVIS & CO.

ANALYTICAL CHEMISTRY · Under charge of A. B. Lyons, A. M., M. D.
PHARMACOLOGY: Under charge of F. E. Stewart, M. D., Ph. G.
BOTANY; H. H. Rusby, Curator of Herbarium.

1885.

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CONCERNING THE COLLECTIVE INVESTIGATION OF DRUGS BY THE WORKING BULLETIN SYSTEM.

This method of investigation consists of sending specimens of the drug to be investigated, either in the crude form or a preparation of the same, as the case may require, to a large number of practitioners scattered over the land, to the hospital service of the country at large, and to the various scientific centers connected with our leading medical and pharmaceutical colleges, with a sketch of the drug, stating the condition of existing knowledge concerning it, classified under the various heads of the pharmacology and known as a "Working Bulletin." The Bulletin is accompanied with a printed list which those concerned are requested to answer from their observation, after having submitted the drug to careful test. This information is then to be re-classified and published in the form of a report, which will be deposited, with a sample of the drug and its preparations, in the pharmacological department of the National Museum at Washington. It has been suggested that the National Museum, under the auspices of the Smithsonian Institute be made a central repository for knowledge concerning drugs, so that anyone wishing information concerning a medicinal agent may obtain it by applying there for it. This we consider a valuable suggestion, and take this means of contributing our quota toward this object.

We do not claim that information collected in this way is conclusive, but that the method is a very valuable one for collecting evidence, and is a great help toward the final solution of the problem: What is the true value of the drug?

The information in our final report will be classified as follows: 1st—Information from unscientific sources; 2d—Information from the profession at large; 3d—Information from hospital practice; 4th—Information from scientific experts engaged in more extensive research in the physiology, chemistry, pharmacy, etc., of drugs. The last class of information may probably be regarded as the more scientific, although each class has its comparative value, and probably in the order of the above arrangement. Our first knowledge of nearly every medicinal plant officinal in the pharmacopœia was obtained from Indian medicine men, ignorant natives, quacks, and old women. Information from unscientific sources, therefore, has its value. Information from the profession at large, though not to be regarded as conclusive evidence, is of still greater value. Higher still in the scale are the results of hospital practice, for here greater opportunities are given for careful observation; but, as has been pointed out by the Medical and Surgical Reporter (Dec., 1883, p. 635—"Methods of Investigation"), the observations of one logical mind, founded on extensive research, are probably more important than the "collective unanimity" of the medical profession at large—though even such results have too often been set aside by more recent investigations, to be regarded as infallible. Until some method has been discovered more scientific than anything yet in vogue, we must depend upon information gleaned from all these varied sources, for our knowledge of the *materia medica*.

It is our method, when a drug, which has in it the promise of therapeutic worth, is introduced to our notice, to first have its physiological properties determined as thoroughly as may be through experiments on animals, after which, if it shall appear to have activity, it is subjected to chemical analysis with a view to the discovery of the nature and precise seat of its active principle. This done, a pharmaceutical preparation is made of it, which is distributed to the hospital service of the country and to physicians in private practice, so that its therapeutic merits may be thus practically and definitely tested.

INQUIRIES FOR THE COLLECTIVE INVESTIGATION OF CASCARA SAGRADA IN THE TREATMENT OF HABITUAL CONSTIPATION.

Definition.—Habitual constipation, as a term referred to in this working bulletin, may be defined as a functional inactivity of the intestines, the result of various morbid conditions of the system. This excludes constipation due to mechanical obstruction.

Question 1.—*What is the cause of the constipation?* “Habitual constipation is produced by various causes. It may be brought about by the peculiar nature of the diet. It may depend upon a deficiency or a faulty composition of the intestinal secretions, or upon disorders of those neighboring glands which pour their secretions into the intestines. It may result from impaired power of the bowel to propel its contents, the consequence either of some mechanical interference with its action, or of nervous influences, or of exposure to the poisonous effects of certain substances, as of lead.”—Da Costa.

Question 2.—*What are the patient's habits as to amount and quality of food and drink?* Cases of constipation frequently occur from insufficient food or drink, or because of food deficient in the elements of waste. Proper attention should be paid to these important points in the employment of Cascara Sagrada in the treatment of habitual constipation.

Question 3.—*Does the patient take a proper amount of muscular exercise?* It is a well-known fact that “when the voluntary part of the muscular system is inactive, the involuntary is apt to sympathize, and a general stagnation is apt to follow.”

Question 4.—*Is the patient suffering with anæmia or general debility?* Impoverished blood is not capable of generating that amount of nervous energy sufficient to carry on the functions of the alimentary canal. Anæmia and general nervous debility will often account for habitual torpidity of the bowels.

Question 5.—*Is the patient engaged in absorbing mental occupation?* It is a physiological law that continuous employment of one organ will deprive other organs of their proper supply of blood and nervous energy, and thus result in impaired function. This is specially true with regard to the brain in its relation to the alimentary canal.

Question 6.—*What is the condition of the liver and its secretion?* So much stress has been laid upon deficient bile as a cause of habitual constipation that a thorough investigation of this point is desirable.

Question 7.—*What is the habit of the patient in regard to defecation?* A habitual neglect of the calls of nature is one of the most prolific causes of constipation, and a regular habit should be established if a cure of the condition is expected.

Question 8.—*Is the patient subject to profuse perspiration, excessive urination, or other discharge of the fluids of the body in undue amount?* Any cause depriving the secretions of water will result in constipation.

Question 9.—*Is the patient suffering with any organic disease, and if so, state what?* Organic diseases of various kinds are prolific causes of constipation by their drain on blood and vital force. An organic disease of the stomach, resulting in impaired digestion is a cause to be carefully noted.

Question 10.—*Atonic dyspepsia is a frequent cause of constipation. Is it in the case you are treating?*

CASCARA SAGRADA.

(RHAMNUS PURSHIANUS.)

Definition—The Bark of *rhamnus purshianus*.

Synonyms—*Cascara sagrada*; *cascara sagrada*; *sacred bark*; *sacred tree bark*.

Natural Order—*Rhamnaceæ*.

Botanical Origin.—Natural Order—*Rhamnaceæ*. Tribe—*Rhamneæ*. *Rhamnus purshianus* (*cascara sagrada*) is a small tree indigenous to the Pacific coast of North America. Its name was given in honor of the renowned Prussian botanist, Frederick Pursh, who, in 1814, first gave it such a description as fixed its place in botany, his investigations being made on specimens received by him direct from the habitat.

The plants of this species of the *rhamnus* attain dimensions of from ten to twenty feet in height, measuring through their trunk from six to nine inches. The leaves are ovoid in shape, from three to five inches in length, by about half an inch in their greatest width. They are borne on leaf-stalks about an inch in length. The margin of the leaf is regularly dentate with numerous small, serrate teeth, except at the base. When young, the leaves are covered with a dense pubescence on the under surface, but when old they become glabrous and bright green. The flowers are small and white, and appear after the leaves have matured, being disposed in close, umbellar clusters, on pubescent peduncles, slightly longer than the leaf stalks. The fruit is a plain, round, black berry, about a quarter of an inch in diameter, and contains three seeds.

Rhamnus purshianus differs from other species of the *rhamnus* family in that it is a larger tree and bears a larger fruit. The difference is peculiarly marked as between it and the *rhamnus catharticus*, with which species it has been often confounded.

The following statement, compiled from a report of Messrs. Parke, Davis & Co., of Detroit, who were prominent as the introducers of the drug to the notice of the medical profession, contains besides an account of a controversy which excited considerable professional interest, some points touching on a certain obscurity which surrounded the botanical origin of the drug on its first introduction:

Several of these plants attracting the attention of Dr. J. H. Bundy, physician residing at Calusa, Cal., were employed by him with much satisfaction in his practice. One of these plants, *cascara sagrada*, became the subject of much controversy. Dr. Bundy (since deceased) was a man of scholarly attainments, and withal a very successful practitioner, though not belonging to the school



Cut showing gross appearance of
Cascara Sagrada Bark.

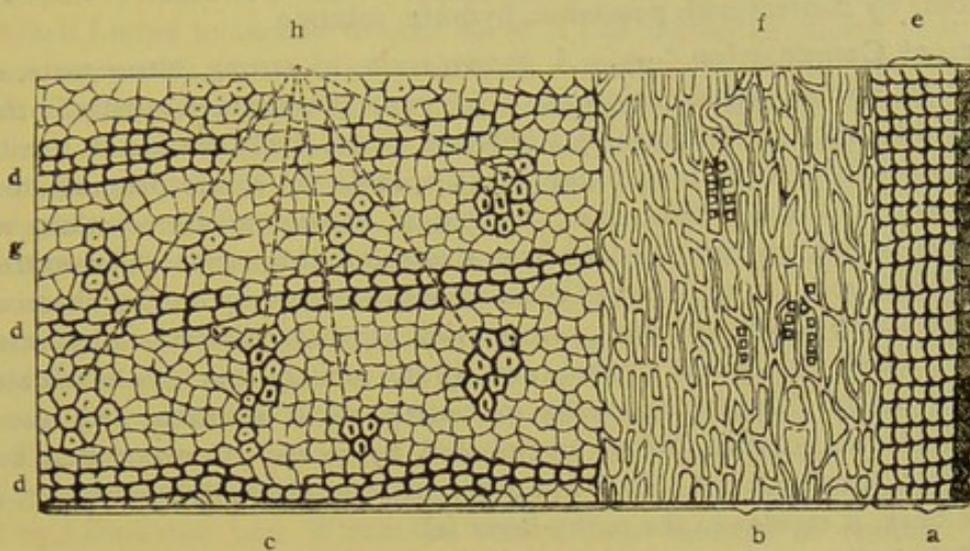
designating themselves "regular." As a successful "irregular" physician, Dr. Bundy excited much professional jealousy among the rival schools in the neighborhood of his abode. Another drug was introduced to the notice of the profession at about this time (*grindelia robusta*) by a gentleman, prominent in position as a member of the "regular" school, and living in the adjoining town of Alameda. Every condition essential to a bitter rivalry between these two gentlemen was by these circumstances engendered. Rivals in school, rivals in business, and rivals in the special work of their choice in the introduction of new drugs, there was born an animosity which culminated in an attack on Dr. Bundy, by Dr. Gibbons, and led to a very acrimonious feud. At this time we were attracted also by the reports of the great value of *Rhamnus Purshianus*, and determined to introduce it more generally to the notice of the medical profession. The first information we received in regard to the drug was from Dr. Bundy, and through his agency we were enabled to obtain a limited supply. Tests in the practice of careful observers in all parts of the country confirmed our belief in the peculiar virtues of the plant, and a large demand, created by our distribution of Dr. Bundy's literature, finally necessitated our sending an expedition to investigate the habitat of this new drug, to obtain, if possible, a sufficient supply to meet our increasing orders. A new factor was thus added, by our association in the matter, viz.: business rivalry, and a dispute arose which extended to the medical press and scientific circles all over the United States. The pivot on which turned all this controversy was a name. *Rhamnus Purshianus* was introduced by Dr. Bundy under the common Spanish name, *casacara sagrada*. This not being the botanical name of the plant, and the botanical name not being known to its introducer, it was not published. A nidus was thus formed woven from professional and trade jealousy in which reposed an egg which hatched into vituperative crimination. Dr. W. G. Gibbons, of Alameda, read a paper before the Alameda County Medical Society, making a severe attack upon Dr. Bundy, the spirit of which was: First, that Dr. Bundy was an eclectic; second, that any remedies that he had introduced were for this reason unworthy the attention of the medical profession; and third, that certain remedies, among which was *casacara sagrada*, did not exist under any such name on the Pacific coast, and were, for that reason, evidently intended to be used as an imposition upon the medical profession. This paper, afterward published in the October, 1878, number of the *Pacific Medical and Surgical Journal*, was used by our competitors to carry the impression to the medical profession that we had ourselves been engaged in some dark scheme for taking advantage of our patrons. Attempts were also made to throw the drug itself into disrepute as being of no particular value, and only placed on the market to secure the transient demand created by flashy advertisements. Dr. Bundy stated distinctly in his introductory paper, which appeared in "New Preparations," January 15, 1878: "A description of the *casacara* I am unable to give at this time, but suffice it to say it is a shrub. In due time its botanical name will be known." And in another communication, "that the shrub is a native of the Pacific coast. Dr. Gibbons, in his paper, said: "There is no such plant known to any botanist on the Pacific coast." The question then was one of veracity between Dr. Bundy and Dr. Gibbons, and not a question in which we were involved at all, except from the fact that we introduced the drug more generally under its Spanish name for want of something better. The point at issue was finally settled, however, by the *Pacific Medical and Surgical Journal*, which stated editorially, January, 1879: "*Casacara* (bark) *sagrada* (sacred) is the common Spanish name of *rhamnus purshianus*, and means simply, sacred bark." And in regard to the virtues of *casacara sagrada*—*rhamnus purshianus*—it is only necessary to refer to the great and lasting demand for this drug from professional sources, and the universal testimony of the medical profession throughout the United States.

Full information in regard to the controversy about the name and botanical origin of

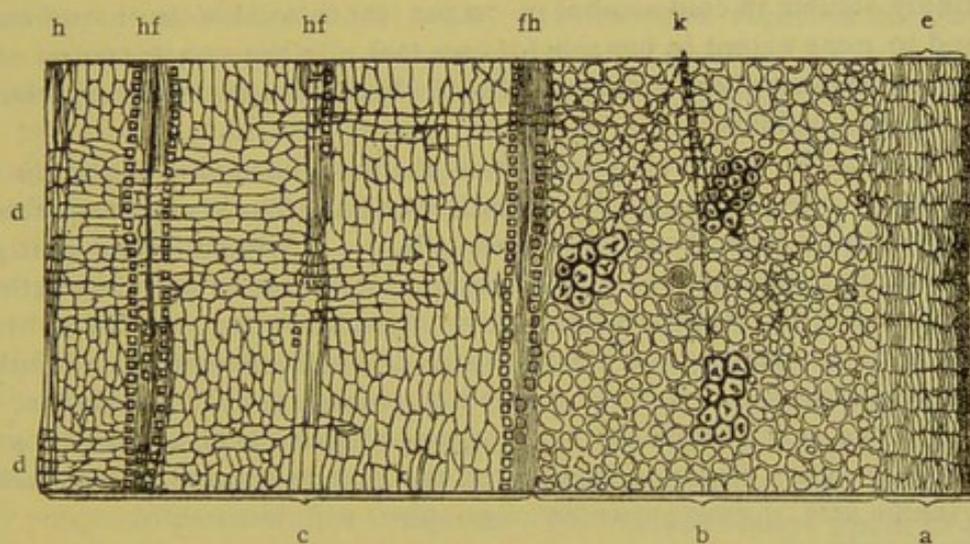
Rhamnus Purshianus will be found in the library of the Smithsonian Institute at Washington, under the caption of "United States Professional Court, W. P. Gibbons vs. J. H. Bundy.*"

Microscopical Structure.†—The examination embraced (1) the structure of the bark, and (2) the chemical constituents of the bark.

(I.) The structure of the bark. The corky layer (*a*). This consists of the outer epidermis of dark-brown withered cells, then several rows of cells filled with a dark red coloring



TRANSVERSE.



LONGITUDINAL.

Microscopical Structure of Cascara Sagrada Bark.

matter (*e*), and in the more recent bark, a row or two of cells containing chlorophyll. The red color (*e*) is soluble in ether, alcohol, potassium hydrate solution (with dark-brown color), insoluble in acetic acid.

(II.) The middle bark (*b*) is made up of parenchymatous cells, which are filled with small starch grains. There are visible, also, in the transverse section, several groups of cubical

* A copy of this pamphlet will be mailed to any address upon application.

† New Preparations, February, 1879, p. 27. Albert B. Prescott, M. D., Professor of Organic and Applied Chemistry and Pharmacy, University of Michigan.

crystals (*f*), and, in the longitudinal section, groups of very thick-walled yellow cells (*k*). These cells (*k*) are not noticeably affected by the ordinary reagents.

(III.) The inner bark (*c*) consists principally of yellow medullary rays (*d*), separated by bast parenchyma (*g*), through which are scattered numerous yellow bast fibres (*h*). As seen in longitudinal sections, these fibres (*h*) are frequently surrounded by small cubical crystals (*f*), which appear not to be affected by hydrochloric acid.

Almost the entire inner bark (III), and parts of the middle bark (II), are turned cherry-red color by contact with potassium hydrate solution.

Chemical Composition.*—1. A brown resin, of strong, bitter taste, colored vivid purple-red by potassium hydrate solution. This resin is contained mostly in the middle and inner layer of the bark. It is sparingly soluble in water, freely soluble in alcohol and dilute alcohol, scarcely soluble at all in absolute ether, soluble in chloroform, soluble in benzole (of coal tar), and in carbon disulphide; soluble in caustic alkali solution, with splendid color above mentioned, and precipitated from this solution by acids. Concentrated sulphuric acid colors it blood-red. It is removed from alcohol solution by animal charcoal.

2. A red resin, nearly tasteless, colored rich brown by potassium hydrate solution. It is insoluble in water, soluble in alcohol and dilute alcohol, not freely soluble in ether, or chloroform, or carbon disulphide; soluble in caustic alkali solution, with the brown color above mentioned, this solution being precipitated by acids. Concentrated sulphuric acid deepens its color, brownish-red. It is not removed from alcoholic solution by animal charcoal. In the bark, it resides in the corky layer (*a*).

3. A light yellow resin, or natural body, tasteless, colored bright red-brown by sulphuric acid, not colored by potassium hydrate solution. It is insoluble in water, soluble in hot alcohol, sparingly soluble in cold alcohol of 70 per cent., soluble in chloroform, in carbon disulphide, and to some extent in benzole (of coal tar). In the concentration of its solution, it deposits in pale orange yellow granules. Its alcoholic solution gives negative results with the general tests for alkaloids.

4. A crystallizable body, obtained from absolute alcohol solution, in white double pyramids, and some other forms of the dimetric system. The crystals melt and then sublime, at a temperature a little above the water-bath, the sublimate being partly crystalline. This substance is not appreciably soluble in ether, chloroform or petroleum ether; is slowly soluble in absolute alcohol, slightly soluble in 70 per cent. alcohol, soluble in benzole (of coal tar). It is neutral to test papers, and is not dissolved by potassium hydrate solution, by acetic acid, or dilute sulphuric acid. It is not colored by potassium hydrate solution, concentrated sulphuric acid, nitric acid, Frøehde's reagent, or sulphuric acid, followed by dichromate. The alcohol solution gives negative results with the general test for the alkaloids.†

5. A tannic acid, giving brownish-green color, with ferric salts.

6. Oxalic acid.

7. Malic acid.

8. A fat oil, of yellowish color.

9. A volatile oil, not abundant, bearing the characteristic odor of the bark.

10. Wax.

11. Starch, in abundant quantity.

The proportional quantity of the resins, 1, 2 and 3, is indicated pretty nearly by the

* Prof. Albert B. Prescott, M. D., Professor of Organic and Applied Chemistry and Pharmacy, University of Michigan, in *New Preparations*, February, 1879, p. 28.

† The crystals of this substance were repeatedly obtained as follows: The alcohol extract of the bark (previously exhausted with ether) was dissolved by water, this solution precipitated by lead acetate, the washed and drained precipitate suspended in absolute alcohol and the lead removed.

quantity of resin extract as follows: An acidulated alcohol solution of the bark was neutralized (with ammonia), and evaporated, the residue dissolved in dilute potassium hydrate solution, this solution precipitated by dilute hydrochloric acid, and the precipitate drained and dried by gentle heat. (The filtrate contained some resin, 1, and the precipitate retained, of course, the dissolved substances not washed out.) This crude resin extract (chiefly bodies 1, 2 and 3), was about ten per cent of the weight of the bark.

The substances numbered 3 and 4 appear particularly to deserve further chemical investigation, which I hope to be able to give them. The chemistry of the rhamnaceæ is of decided interest, especially within a few years past. *Rhamnus frangula*, the European buckthorn, or black alder, has been reported by Lieberman and Waldstein (1876) to contain emodin, a well determined constituent of rhubarb, allied to chrysophane, and chemically a derivative of anthracene. Further, the investigators just named find it nearly, or quite certain, that frangulin is capable of ready change to emodin, by glucosic fermentation. This may be associated with the well-known fact that the bark of the *rhamnus frangula* changes in therapeutic properties by storing. It has both emetic and purgative action in the first year after gathering, but when two years old retains only the purgative power—one much like rhubarb—so that some authorities positively direct that it be not used until two years after gathering. The glucosic fermentation of frangulin into frangulic acid has been known for some time, but the like formation of emodin, a constituent of rhubarb, seems a step nearer some chemical explanation of the change of medicinal power characteristic of the bark. The material worked by Lieberman and Waldstein was a large quantity of residual extract of a large quantity of *frangula* bark worked by the manufacturer Merck.

The chemical constituents of *rhamnus purshianus*, though not determined in this analysis to be, in any compound, identical with constituents of *rhamnus frangula*, yet show several similar reactions, especially in the case of "brown resin, 1." The rhamnaceæ very probably contain, in different species, allied bodies, some of them related to others as parent and product, but having practically distinct medicinal powers. These powers, of course, are known only by physiological and therapeutic trial.

Dose of Cascara Sagrada and Eligible Formulæ for its Administration.—

The dose of fluid extract cascara sagrada as a laxative is from five to 30 minims, increased, if necessary, twice a day, night and morning. The minimum dose should be commenced with and gradually increased until the stools are softened by it, and then the administration should be continued in that dose for several months before it is discontinued, which should be done in gradually decreasing doses. In the treatment of constipation by means of cascara, patience is an element of success. The patient must be impressed with the fact that the object of treatment is rather to permanently remove the cause of the constipation than to temporarily remove the symptom. The remedy should never be increased to cause catharsis. When for any cause a cathartic may be deemed necessary or desirable, there are others, as, for instance, rhubarb, or some resinous cathartic, which are to be preferred.

ELIGIBLE FORMULÆ.

IN HABITUAL CONSTIPATION.

R Fl. ext. cascara sagrada,
Syr. sarsaparilla comp.
Glycerine, ℞ ℥j.

M. Sig. Teaspoonful three times daily.

Dr. J. H. Bundy, who first introduced cascara sagrada, was accustomed to use, with gratifying success, the following formulæ:

CONSTIPATION WITH DEFICIENT SECRETION.

℞ Fl. ext. cascara sagrada.
Syrup.
Water, ℥ss ℥i.

M. Sig. A teaspoonful three or four times a day.

DYSPEPSIA WITH CONSTIPATION.

℞ Fl. ext. cascara sagrada, ℥i.
Fl. ext. berberis aquifolium, ℥i.
Syrup (or ext. malt), ℥ii.

M. Sig. One teaspoonful three times daily.

CONSTIPATION WITH GASTRIC IRRITABILITY.

℞ Fl. ext. cascara sagrada, ℥ss.
Fl. ext. berberis aquifolium, ℥i.
Acid. hydrocyanici dil., i. ℥.
Syrup (or ext. malt), q. s. ad. ℥iv.

M. Sig. Teaspoonful after meals and at bed time.

CONSTIPATION WITH DEFICIENT MUSCULAR TONE OF STOMACH AND BOWELS.

℞ Ext. cascara sagrada, ℥i.
Ext. of malt, ℥ii.
Syrup, ℥ii.

M. Sig. Teaspoonful three or four times daily.

This list of combinations might be made very extensive, as cascara sagrada has few incompatibles.

THERAPEUTIC PROPERTIES.

Reports from Private Practice.

REPORT 1.*—At a recent meeting of a prominent London medical society, Dr. Reid read a paper upon the value of cascara sagrada. After discussing the opinions of different writers on the subject, and commenting on the fact that very little had been written about the action of the drug, Dr. Reid gave the opinions he had formed of it from analysis of 33 cases, in which he had taken careful notes. He found, 1. That the result was all that could be desired in 27 cases of obstinate and habitual constipation, complicated in many cases by various forms of dyspepsia, and in people usually of sedentary habits, most especially females.

2. That the effect was most beneficial in three cases of hæmorrhoids.
3. That the drug was of no service, even in very large doses, in one case of obstinate constipation, although it did not cause pain.
4. That it had to be discontinued in two cases on account of its causing pain and sickness.

The conclusions arrived at were as follows:

1. Cascara sagrada was a most useful remedy, both regarding its immediate effects and after-results in obstinate and chronic cases of constipation.
2. It was better to prescribe it in continuous small doses rather than in occasional large ones.
3. Cases were met with in which, even in large doses—at any rate, in the form of the fluid extract—the drug had not been of service.
4. No rule could be laid down by which one could ascertain whether the drug would suit or not; but, when pain was produced, in all probability it was owing to too large a dose being given.
5. It was of great service in cases of hæmorrhoids, when other aperients had failed.

REPORT 2.†—The fluid extract is the most reliable preparation of cascara sagrada; it acts upon the hepatic secretions, and circulations, the whole gastro-intestinal canal, stimulating its morbid condition, and the neighboring glands to healthy action. As a cholagogue it is invaluable. In chronic constipation its action is good, producing full, easy, pleasant stools, without any tormina, tenesmus, or nausea. The liquid extract, combined with the tincture of iodine painted on the hypogastric region, daily, until the bowels are moved easily, has given the same result after repeated trials on patients suffering from habitual constipation. As a remedy for dyspepsia it is superior to many others of its class, being pleasant to take, and producing no nausea.

REPORT 3.‡—The tincture of cascara sagrada, prepared from the bark of rhamnus Purshianus, indigenous to Oregon and California, produces perfectly normal and solid stools without irritating the intestinal mucous membranes. Its action is prompt and harmless even after a protracted use. The dose is half a teaspoonful for an adult, twice or three times daily, if a moderate action only be required. It is scarcely sufficiently bitter to call for a flavoring vehicle. Its proper place in the pharmacopœia is between rhubarb and senna, but it has the advantage of acting in smaller doses than either of them.

REPORT 4.§—Of all the remedies, rhubarb will, doubtless, continue to hold a first place among the comparatively safe and certain anti-costive medicaments (the tincture and infusion being the most useful preparations), while among the new, cascara sagrada seems growing in credit and favor, if we may trust its testimonials; not to refer to the large use now made of the rhamnus purshianus in this country. It is an American plant, obtained on the Pacific coast, and was first introduced into practice in 1878. It has lately been made the subject of experimentation on the continent, and has proved to be of singular efficacy in the treatment of constipation, if we may credit the favorable report of Dr. Eymeri, of Val de Grâce, who has recently published a pamphlet on the subject. Eymeri regards it as a cholagogue as well as an intestinal stimulant; by its resins and volatile

*British Medical Journal, April 11, 1885.

† Dr. H. C. Glanville, in the London Lancet, May 9, 1885.

‡ Dr. Senator, in the Wiener Med. Bl., Jan. 8, 1885.

§ Editorial in the Boston Medical and Surgical Journal, March 26, 1885.

oil, it seems to act on the entire secretory apparatus, as well as on the muscular fibre. The above mentioned writer reports numerous cases in hospital and private practice, most of them coming under his own observation, where cascara sagrada, given in the form of a powder, or as a fluid extract (the latter form being preferred), gave most gratifying results. He concludes that this medicine should have the preference over cathartic medicaments, as being less liable to do harm if its use is long continued, as being tonic as well as aperient, as causing neither griping nor nausea and diarrhoea in its action. These conclusions are substantially the same as those formulated by Bundy, who is credited with the introduction of cascara into this country. Making all due allowance for exaggeration, we have, doubtless, in the sagrada a valuable addition to the materia medica, though it does not always prove a certain remedy, any more than any other drug.

REPORT 5.*—Although the various species of rhamnus contain nearly the same active principles, they differ in their medicinal action. *Rhamnus frangula*, administered in the form of a decoction, is very popular as a mild laxative. The common buckthorn, or *rhamnus catharticus*, is much more active, rather drastic in its effects, and is regarded as a hydrogogue cathartic. Intermediate between these in medicinal activity stands the species *R. Purshianus*, or cascara sagrada. Its action as a laxative is always prompt and without the least tendency to cause "griping." Indeed, we have no remedy which can be relied upon, where vegetable laxatives are indicated, to act as efficiently as cascara sagrada without causing disagreeable disturbances or engendering undesirable symptoms requiring a constant resort to purgatives. Its value is especially apparent when administered to correct these symptoms (termed "habitual constipation") in small and repeated doses. In common with other drugs of similar character cascara sagrada has frequently been discarded as an unreliable agent, because failing to act in special cases where any other vegetable cathartic would also have failed to be of service. To obtain the best results from the remedy the bark must be neither too young nor so old as to bear an excess of cork, and must be of comparatively recent collection. A great deal of cascara sagrada as found in the market is almost worthless. Preparations from the bark, the fluid extract for example, should be prepared with menstruum sufficiently aqueous to extract the principles soluble in water, and yet at the same time of sufficient alcoholic strength to extract the resins soluble in alcohol, and to prevent these from precipitating in the finished extract. From the fact that the constituents of the bark are so complicated, liquid preparations from it frequently precipitate, and their activity correspondingly diminishes. A concentrated preparation in the dry form may possibly be prepared from it, bearing the same relation to the drug and produced by the same method as in resin of podophyllin. This would be a very desirable preparation, and may be termed *rhamnin*, which, we think, would be more appropriate than "cascarin."

REPORT 6.†—In presenting this paper on cascara sagrada as almost a specific in that most frequent and subtle malady—constipation—it will be necessary for me to refer to the causes of it, and reason how this agent is curative in that direction. Habitual constipation is the only form to which I shall direct attention, as that phase which arises as a symptom of other difficulties, such as obstruction, etc., has no bearing on the subject in hand.

The nature of the diet; deficiency or a faulty composition of the intestinal secretions; disordered glands that pour their secretions into the intestines; impairment of muscular power, which leads to deficiency in their propelling power, which may result from nervous or mechanical influences; congestion of the portal circulation; normal secretion of intestinal juices interfered with; deficiency in biliary secretions of a healthy character; congestion of mucous membrane of intestines, and last and the most frequent causes—resisting the calls of nature from carelessness, or circumstances that prevent the obedience at the proper time, etc. The constant habit of taking cathartics is a source of much mischief, and were we treated in the manner that the gastro-intestinal tract generally is, we, too, would fail to work, and find ourselves prostrate. I employ a fluid extract of the cascara, using one ounce in a four ounce mixture, in combination with other remedies, or alone, as the case may require. It acts upon the sympathetic nervous system, especially upon the solar plexus, stimulating the nutritive and assimilative forces, increasing the digestive processes generally. It acts upon the secretory system in a marvelous manner, especially where the secretions are deficient and perverted; and this seems to be one of its

* Editorial in the *Western Druggist*, June, 1885.

† Dr. J. H. Bundy, of Calusa, Cal., in *New Preparations*, January, 1873, p. 1.

special indications. When you have a case in which the constipation depends upon the above condition:

R Fl. ext. cascarae sagradæ.
Syrup simplicis (or ext. malt).
Aquæ, ℞ ʒj.

M. S. A teaspoonful three or four times daily is all that is wanted to perfectly regulate the want of, and to change the perverted secretions. It acts upon the hepatic secretion and circulation peculiarly, but more positively than anything I ever gave before; peculiarly, because it produces no impression upon the system in the way of nausea (or derangement of any other function), pain or inconvenience whatever, and my patients speak of it in the highest terms, as being as nice to take as it is pleasant in its action. Constipation dependent upon defective, or perverted or excessive action and secretion of the liver, as above stated, yields at once to its action. It acts as a tonic with the most marked effect upon muscular tissue generally, but more especially upon the stomach and bowels, remarkably increasing the tone and activity of the above secretion. It is the remedy where the tone, as stated, is deficient, and where it has been produced by constantly taking pills to relieve the constipation, which only is increased by such a measure. This condition is readily changed, and a healthy action set up; muscular power and tone restored, and this done, the propelling power or force is regulated. It changes the character of secretions by regulating the action of neighboring visceral glands, as well as those of the upper portion of small intestines, overcoming congestion of the mucous membrane of the bowels and stomach, completely restoring their tone and muscular power. To cure cases of constipation, the result of carelessness, requires perseverance on the part of the practitioner, and a strict course prescribed as to avoiding cathartics, and attention to calls of nature promptly.

A description of the cascara I am unable to give at this time, but suffice it to say it is a shrub, and in due time its botanical name will be known. I combine it, in hepatic troubles, with nux vomica in proper doses, also with nitro-hydrochloric acid, dilute, in suitable quantities, but more generally give it alone. In bad cases of dyspepsia with constipation:

R Fl. ext. cascara sagrada, ʒj.
Fl. ext. berberis aquifolium, ʒj.
Syrup (or ext. malt) ʒij.

M. Sig., one teaspoonful, three times daily. In dyspepsia, where the food and everything else is thrown up:

R Fl. ext. cascara sagrada, ʒss-ʒj.
Fl. ext. berberis aquifolium, ʒj.
Acid hydrocyanic dil., ʒj.
Syrup (or ext. malt), q. s.

to make a four ounce mixture.

M. S. A teaspoonful after meals and at bed time. It may be combined in many ways with different drugs, which the practitioner will soon see if he studies the pathological conditions carefully, and I need say no more on this point. It will act as a cathartic if given in one- or two-drachm doses; but this should never be resorted to if you wish to cure constipation. The dose I have given above does sometimes act so, but I invariably order at first a less dose. When it does not, after five or six days, seem to start the peristaltic action, give a little more.

I have written this paper in reply to the many letters received from physicians, asking how cascara may be used, and those who read carefully will find full information. I have not given cases from the fact of their being so numerous, and constipation so prevalent. Will write further hereafter.

Cascara, as a remedy for dyspepsia and constipation, will never have an equal. Those who understand the action of the gastro-intestinal tract—considering it as a whole, the digestive tract—need but little in the way of explanation, and probably will ask few questions. Have you a case of constipation in which the patient has taken "Ayer pills," or some other pills of the same kind, until they have destroyed all the muscular tone of the bowels and the stomach also? I prescribe:

R Fl. ext. cascara sagrada, ʒj.
Ext. of malt, ʒij.
Syrup simplex, ʒij.

M. S. Teaspoonful three or four times daily, and wait upon the bowels twenty minutes at least, every morning and evening, as the case may be, and you will have no trouble in curing any case of constipation caused by abuse or destruction of tone from cathartics.

Have you a case of constipation occasioned by want of secretion from the gastric follicles? Give:

℞ Fl. ext. cascara, ℥j.
Fl. ext. berberis aquifolium, ℥j.
Ext. malt, ℥ij.

M. S. Teaspoonful three or four times daily.

If you have a case of indigestion in which your patient throws up everything taken, give:

℞ Fl. ext. cascara, ℥j.
Ext. of malt, ℥ij.
Fl. ext. berberis aquifolium, ℥j.
Acid hydrocyanic dil., ℥j.

M. S. Teaspoonful directly after meals, or oftener if there is pain or distress, with belching of gas or wind from the stomach. If there is simply constipation, give the cascara alone. If with any of the above symptoms there seems to be a sluggish liver, give nux vomica in proper quantity, if the cascara does not seem to influence it properly. I speak of nux vomica as simply a resort if need be, but nine times in ten you will not resort to it. If the dose of cascara recommended does not produce the desired effect, or produces too much action, it is expected that the physician himself will and must exercise some judgment in its administration, as in all drugs, and that he will carefully watch its action in every particular. The subject under consideration is one of great importance, and one that more frequently, perhaps, baffles the skill of the best physicians than any other malady, and one that the doctor is generally more willing to let pass by than any other, from the fact that somehow he does not succeed in his treatment, and the patient becomes tired of constantly being physicked now and again for the torpid condition of the liver and bowels, but wants something that will restore the general tone of the bowels without cathartics, and in the cascara, with the above combinations, no practitioner will be disappointed, if he observes the pathological indications carefully, and in no other way need the practitioner expect to succeed with any remedy.

To sum up, as a whole, the action of cascara, let me say that it is indicated where there is laxity, or a want of tone in muscular power or glandular secretion, and that of the mucous membranes also. Many letters I have received from different portions of the United States confirm my own statements in its regard.

REPORT 7.*—Having had my attention called to cascara sagrada, by my friend, Dr. Bundy, I have been using it in a number of cases, with the following results:

Case 1.—A gentleman, about 35 years of age, generous liver, but entirely temperate; had been affected for years with inactive liver and constipation, with very stubborn ulceration of the rectum. His skin was sallow, strength feeble, etc. He has been having constant and varied treatment, without relief. I prescribed cascara alone, with directions to use one teaspoonful once or twice a day until the bowels opened, then in reduced doses sufficient to secure a natural action, but to fall short of producing catharsis. He being a stock broker, I sent to him not long after, on some business connected with a mine. After answering the business, he added: "Send me another bottle of that medicine; there is more money in it than in the mine." He continued the use of cascara a little longer, and is now gaining flesh, skin clear, bowels regular, liver active, and the ulcers of the rectum very much better, and steadily improving.

Case 2.—A lady in San Francisco, middle-aged. Has had constipation so stubborn that for years she has had no action of the bowels without an injection of water; hemorrhoids and prolapsus of the bowel so bad, that this action was always secured just before retiring at night, in order to have the benefit of a recumbent position, to allow the bowels and tumors to resume their natural position. I prescribed cascara alone, with directions as in the other case. After the use of two ounces she sends me word that she has not been so well in years; bowels regular, and the hemorrhoids and prolapsus so far relieved as to render her comparatively comfortable.

* S. E. Pearse, M. D., Oakland, Cal. in *New Preparations*, July, 1878, p. 57.

I have prescribed the remedy in quite a number of other cases, with results which have led me to the following general conclusions:

1. In cases where there is torpor of the liver, with an atonic condition of the stomach and bowels, it is the very best remedy I have ever tried. 2. That the more concentrated the remedy, the more active it is, even though the same amount be given. Indeed, I have in several cases, when the constipation has been but moderate, given it in a diluted form, and have found that it greatly increased the difficulty; but the administration of a concentrated preparation gave relief. It seems to be one of those remedies that have two opposite effects, according to the amount given, and especially according to the dilution of the preparation. 3. Combined with the properties indicated above, it has a manifest tonic influence on the liver, the stomach and the bowels. In my opinion, it possesses, in addition to its curative effects in constipation, all the properties of the wild cherry, but in much greater intensity. I am inclined to think, also, that it possesses decided cholagogue properties. I esteem it a very important addition to our materia medica.

REPORT 8.*—Although in these days of nostrums I have somewhat of a conservative feeling, I procured, through John T. Fink, of New York, a small supply of cascara sagrada ex. fl., and having given it a fair trial in several cases, desire to report progress. My testimony is, that the introduction of this medicine is a boon to the profession, Dr. Bundy claiming for it no more than its actions justify.

As a cholagogue, I have had a personal experience; find it just as certain, but a little slower, than the blue mass, for which I am glad to find an efficient substitute, free from the harshness of podophyllin, etc. In chronic constipation it is invaluable; its action good, producing full, easy, pleasant stools, without any tormina, tenesmus, or nausea. In dyspepsia it is superior to many other remedial agents, in that it is pleasant to take, and produces no nausea. In such cases I prefer to give it without the syrup, substituting glycerine.

REPORT 9.†—I have tried Parke, Davis & Co.'s fluid extract of cascara sagrada in a very marked case of dyspepsia and constipation. In this case there was a deficiency of secretory power in the liver and glands of the alimentary canal, indicated by constipation, scant, dry stools, flatulency and indigestion. I gave 40 drops of the above fluid extract twice a day, and the first day it produced two or three soft, bilious stools, with increased appetite, and improved digestion. In a few days the patient was relieved of the constipation and dyspeptic symptoms. I have not found any remedy that acts so promptly. It at once arouses all the secretions. It has the most direct power over the liver of anything I have ever used. It is the remedy par excellence in constipation, if given in small doses, say 30 to 40 drops; if given in large doses it will purge, and is rather inclined to gripe, but it operates mildly as an aperient in small repeated doses.

I am of the opinion that it increases the action of the pancreas and gastric glands, as well as that of the liver. There is nothing that more powerfully improves the digestive power than small doses of the cascara sagrada. Dr. Bundy has conferred an inestimable blessing upon the profession, and the sick, by introducing this, as well as some other new remedies.

REPORT 10.‡—I have never used any kind of treatment that has acted so grandly, if I may use the term, as cascara sagrada has in my practice. I have prescribed the same in over half a dozen cases of obstinate constipation, with the best of success, restoring a healthy action in every case.

REPORT 11.§—Mr. C., professional man, 30 years of age, has been troubled with obstinate constipation for over 6 years. He attributes the cause to close sedentary habits while a student. He states that his bowels were regular before he entered upon the arduous duties of student life. He tells me that he has tried every medicine for constipation, from podophyllin down to "Simmon's Liver Regulator," without finding a cure. I put him upon cascara sagrada doses, three times daily. He has now been taking the medicine over three weeks; he reports that he feels decidedly better, that his bowels are regular, and that he feels that he is on the high road to recovery. The future of cascara sagrada is flattering in the extreme. I deem it the greatest known remedy for constipation we have at the present day. I esteem it a very important addition to our materia medica.

REPORT 12.||—In reading of cascara sagrada, which is so highly recommended through

* George W. Smart, A. M., M. D., in *New Preparations*, July, 1878, p. 58.

† I. J. M. Goss, M. D. in *New Preparations*, July, 1878, p. 65.

‡ C. C. Dellenbaugh, M. D., in *New Preparations*, July, 1878, p. 67.

§ Alex. M. Cheek, M. D., Nashville, Tenn, in *New Preparations*, October, 1878, p. 80.

|| J. G. Sutton, M. D., in *New Preparations*, October, 1878, p. 83.

your journal, I concluded to try it in that much dreaded disease, constipation. Accordingly I ordered some of Parke, Davis & Co. I tried it in a number of cases, in which it worked well, and in one case, which was especially interesting to me, it did more than I expected. I was called to visit Mrs. S., who had been sick for the last three years, in the last two of which she had not had a natural evacuation of the bowels, always being compelled to use an enema, which often failed to produce the desired effect; sometimes she would pass three or four days without an evacuation, although using an injection every day. She had taken cathartics without any benefit from a half dozen physicians from all schools, had adopted hygienic measures and carried them out well, but to no effect. I gave her:

R Fluid extract cascara sagrada, ℥j.
Fluid extract berberis aquifolium, ℥j.
Syrup, ℥j.

and ordered her to take a teaspoonful four times a day, until her bowels acted freely (as I had forgotten to state, her bowels had not moved for four days when I first began its use), then but three times a day; the desired effect was soon produced. The dose was diminished one teaspoonful per day, and before she had taken the second prescription, she said she needed no more medicine, and now she appears natural in that respect.

REPORT 13.*—When camping in a little valley at the foot of Mount Shasta, about a year ago, I was consulted by Mrs. S. She had been a sufferer for five years, she said; had been to all the springs, and tried all the doctors in the country, without obtaining more than temporary relief. Her case was plain enough: sallow complexion, general emaciation, broad, flabby tongue, coated with a thick, yellow fur, foul breath, cardialgia, headache, a feeling of faintness and drowsiness, relieved for a short period by eating; habitual constipation, etc., all denoting a bad case of atonic dyspepsia. On examination I found the liver enlarged, regular in outline, with considerable pain on pressure over the left lobe, evidently due to congestion. Uterine functions but slightly disturbed, and no visible organic lesion. I could find no fault with her diet or general mode of living, and concluded, on the whole, that I had a very stubborn if not hopeless case. On my return home I forwarded her ℥iv cascara sagrada, directing her to make a tincture with a quart of whiskey, and to take a teaspoonful of the mixture undiluted directly after eating. I saw her again about a month ago, a well woman. She had experienced relief within a week, and the improvement had been steady and uninterrupted. I report her case, because I consider it typical of a large class commonly met with, and often a source of great annoyance to the practitioner. The cure I attribute to the stimulating properties of the whisky, and the action of the cascara in restoring a healthy tone to the gastric and intestinal glands and follicles.

Before closing I must speak of the cascara in hemorrhoids. When the disease is due to obstructions in the alimentary canal, it certainly acts like a charm; while other cathartics increase the trouble by irritating action on the mucous membrane, the cascara is soothing and effective at the same time, and if taken persistently in small doses, will cure the disease entirely in the majority of cases.

REPORT 14.†—Not long ago I received through a friend a sample bottle of the above named drug in the form of a fluid extract, manufactured by Parke, Davis & Co., Detroit, Michigan, and was requested to give it a fair trial in torpidity of the bowels. I happened to have on hand at the time several cases that I thought would be favorable subjects for such a trial, and to which I at once administered the article. To avoid any uncertainty of the effects, I withdrew all other remedies, and gave the drug simply diluted with half glycerine and aromatic water, in teaspoonful doses, thrice daily. To my surprise and delight, I found that my patient soon began a rapid improvement, and continued to do so even after I had withdrawn the medicine for some time. It seemed to act as a special tonic to the gastro-intestinal tract, and increased to a marked degree the glandular secretions.

The noticeable improvements in these cases while using cascara sagrada may be a simple coincidence, but I hardly think so, for I had them under observation for some time before administering the drug, and when withdrawn for a time and then repeated, the same effects were observed.

*C. W. Hansen, M. D., in *New Preparations*, Oct., 1878, p. 84.

†D. M. Wick, M. D., in *Arkansas Medical Record*, reprinted in *New Preparations*, October, 1878, p. 101.

I shall not offer any theory as to its action, but may do so at some future time, when I have had further experience, and will then give my opinion as to its utility.

If cascara sagrada will but approach the expectations of those who have thus far tried it, and what is claimed for it, it will at no distant day become one of the standard preparations and a favorite with the profession—for the number of individuals who are troubled with constipation is very large, and apparently on the increase—as a result of immoderate use of active purgatives.

It has the advantage of being comparatively pleasant to take, and the dose required is but small, which is strongly in its favor.

REPORT 15.*—Since the history of man this morbid condition (constipation) has annoyed and discomforted innumerable individuals, while in a great many it has become the source of great mischief, and in not an inconsiderable number it has actually been the cause of death.

The subjects of constipation have been, and still are, the subjects of much bad treatment, either at their own hands or at those of quacks, and sometimes of even regular practitioners. Usually, the sufferer first tries home remedies after which, in this country, he goes to the drug store, and either subjects himself to the advice of an ignorant druggist, or buys a patent medicine. These means failing, he consults a physician, and here, in too many instances, he is turned off in a few moments with a "favorite prescription." Generally all the physician inquires after is how long the patient has been constipated, and how often he or she has an alvine evacuation. The question of making a correct physiological, pathogenic or pathological diagnosis is entirely ignored. When one remedy fails another is tried until the whole therapeutical implements of attack are gone through with.

While infrequent evacuation, or constipation, is very prevalent, all who are thus affected should not be considered in a pathological condition. There are, doubtless, many individuals who have alvine evacuations only once in two, three, four, or even more days, and yet are in the realms of a physiological condition. Two individuals may have the same number of passages, and one be constipated while the other is not. Hence it will be seen that care should be used before prescribing to see whether we have to do with a normal or abnormal condition, and this is not always the easiest thing in the world to determine. It is often difficult to say where the physiological process ends and the pathological begins. This much may be said, however, that physiologically inactive bowels are much more prone to take on pathological action than where there is no such torpidity.

Now, it should be remembered that what may be designated pathological constipation is not a disease in and of itself, but only a functional derangement of the alimentary canal. The causes and diseases on which this derangement depends are very various. The quantity and variety of food, the process of digestion, the quantity and quality of the secretions which are poured into the alimentary canal, muscular contractility of the intestines, abdominal walls and diaphragm, nervous enervation, quality and quantity of the blood, condition of sphincter ani, habit, etc.—these, with all general and organic troubles that may influence the proper and timely expulsion of the alimentary refuse, should be brought into view before prescribing.

The conditions I wish more particularly to call attention to in this article are muscular sluggishness of the intestines, and an improper and insufficient supply of secretions. It is well known that, in order to effect the timely expulsion of the refuse material in the intestines we must have sufficient muscular contractility, and that the faecal mass must possess a certain amount of moisture on its surface, or the intestine must itself be bathed with a moisture or secretion in order that the mass will glide along easily. If either one of these conditions fail the faecal mass will certainly have great difficulty in making its passage, and its progress will finally be arrested in the large intestines. The bad effect of this arrest on the general system is well known to all medical men of any experience. The digestion must become impaired, and so with assimilation. The noxious materials, absorbed from the faecal mass materially and seriously affect the whole nutritive process and produce innumerable abnormal nervous phenomena.

Before giving my experience with cascara sagrada, I wish to relate two cases of obstinate constipation, as showing what serious trouble may be produced, and how easily the difficulty was overcome by what I consider rational treatment, after every effort for several weeks previous had failed.

Case 1. Mrs. X., æt. 34, nervous temperament, was confined of her fourth

*F. Gundrum, M. D., in *New Preparations*, January, 1878, p. 2.

child sometime in December, 1870. She made a tolerable recovery, but was very costive for three months following. A month before I saw her in consultation, only a few small scybala passed her bowels once in four or five days. Her abdomen became flatulent, she lost her appetite and strength, and when I saw her with Dr. C., she was confined to her bed. On exploring the abdomen I found in the left iliac fossa an oblong, hard, painless swelling, of about the size of a small child's head. Nearly, if not all the laxative, hydragogue and drastic cathartics had been used with much more persistency than success. I advised warm fomentations to the abdomen, manipulating the abdominal walls, and injection of warm water by long rectal tube while patient was partially inverted. By this method we succeeded in bringing away quite a quantity of dry, hard fæcal matter; but this treatment failed to improve our patient. There was but little change in her general condition, and the tumor diminished but slightly. It was during the second year that I had branched out on my own responsibility, and this case gave me the usual anxiety of a young practitioner's first difficult case. My library was as meagre as my funds, consequently I had to rely on my wits. I prescribed for this patient one pint of good olive oil and one-sixth grain strychnia in fractional doses during twenty-four hours. By this treatment, provided my patient would retain it, I expected to soften up the hard fæcal mass and give tone to the muscular tissue of the large intestine. The result surprised us all. On the fourth day our patient began to have alvine evacuations. Their character was more like pieces of sealing wax nicely oiled than anything I could think of. These evacuations continued in large quantities each day until the tumor entirely disappeared, and the patient rapidly recovered to health.

Case 2. Mr. F. was habitually costive for some years, but during the last of November, 1873, he became worse. About the middle of December he took to his bed and employed an "S. S. Curantur," who treated him homœopathically in every respect. He put him on low diet and opiates. The patient himself had noticed that there was a swelling forming in the right iliac fossa. He called the doctor's attention to it, and received the assurance that "That'll be all right." He was troubled a great deal with flatulency, and the doctor prescribed that the patient, several times a day, should reverse ends and give the gas in the bowels the advantage of gravitation. But this prescription failed. Another and regular practitioner was called in, and three weeks later I was called as counsel. Patient had become much reduced, and was unable to be out of bed; had flatulent distension of abdomen, loss of appetite and very offensive breath. In the right iliac region there was a large tumor, nearly round, hard, painless and immovable. The attending physician had diagnosed it fæcal impaction in the cæcum, in which opinion I concurred. The treatment ordinarily recommended in several of our best text-books had been used with good skill and perseverance, but little benefit resulted. The olive oil and strychnia were prescribed with like happy result as in the first case.

The treatment prescribed for these two cases is original with me, and the result was all that could be wished.

Case 3. I have had under my care for the last three or four years a young lady who has been leading an absolutely sedentary life—not being able to walk a step. She has been the subject of obstinate constipation for many years, owing in all likelihood to poor health and sedentary habits. I had exhausted everything in the materia medica with but temporary benefit. During the early part of last spring I saw, through some source which I do not now remember, a few reports of cases of constipation having been treated by cascara sagrada. I had been deceived by several new therapeutic agents, either owing to misrepresentation of the physician who lauded the remedy, or being unfortunate in getting hold of a bad or spurious article of the drug, and was loath to try this. But as there was nothing more for me to try, I resorted to it. I ordered the fluid extract cascara sagrada in half-teaspoonful doses with some water or thin syrup three times a day, with the instruction, should this fail to regulate the bowels, to gradually increase the dose. In two weeks I saw my patient. She looked well, had gained flesh, complexion was clearer than I had ever seen it, and she had a daily evacuation of semi-solid and molded fæces. Cascara sagrada has acted beyond my expectations on this unfortunate girl, and so far has not disappointed me in relieving the constipation when it took place.

Obtaining such decided and happy results from a remedy, I concluded to give it an extended trial, which I have done. The cases are too numerous to report, and I can only give the general result of my observations. I have tried it in the young babe, in the child, adult and aged, and in nearly every case with good results—better than with any other remedy or combination of remedies I have ever used. I have generally given the remedy

by itself, so that I might know what cascara sagrada would do, though I have associated it with other remedies to advantage.

I have given this remedy to infants from half to a month old in doses of three to five or six drops, once, twice or three times a day, with good results.

The beauty of the action of the remedy is, that it produces no griping and no exhausting effect, *e. g.*, patients do not feel as if they needed toning up after experiencing the effects of the medicine.

I have not, as yet, seen an attempt at explaining its mode of action by anyone. So far as my individual opinion is concerned, I consider it a special tonic affecting both nervous supplies, the pneumogastric and sympathetic, of the intestinal, if not of the whole alimentary canal. One seems to wield a decided influence over the secretions, while the other over the motion. Be this as it may, I shall consider this medicine as a special tonic to the intestines, and a great addition to our materia medica, until the contrary is proven by the experience of the profession or myself. I do not vaunt it as a panacea, but assert that it is one of the best, if not *the* best, of remedies for constipation we possess.

The dose varies. In moderate cases I usually begin with fifteen or twenty drops two or three times a day, and gradually increase till the desired effect is produced. In more obstinate or severe cases I begin with a half drachm. I usually give it before meals.

I have used the fluid extract manufactured by Parke, Davis & Co., which has proved reliable every time.

I also use cascara sagrada as a cathartic in preference to the usual remedies. It acts gently, promptly, and without griping.

REPORT 16.*—During the past year I have had ten cases of chronic constipation under treatment, aggravated by the almost constant use, for years, of compound cathartic pills, and these so-called "liver pills," whose stereotyped testimonials of "marvelous cures" are so freely displayed and advertised among the masses, and occupy so prominent a position on the counters of the drug stores in our midst. A few of these cases I desire to report to you, and the beneficial results derived from the use of P., D. & Co.'s fluid extract cascara sagrada.

Case 1. Mrs. M. for years has suffered from rupture of perineum at birth of her last child, falling of the womb, and obstinate constipation, which has increased in its pernicious results upon her system during the past few years, until life was rendered miserable. In July she came under my observation, and I immediately put her on the following:

R Fl. ext. cascara sagrada, ℥j.
Syr. simp., water ℥ss.

Sig. One teaspoonful after meals.

This treatment was continued for six weeks, when such favorable results appeared that the dose of one teaspoonful at bed-time was sufficient, and now she reports herself as only needing the remedy about twice per week. Her digestion has wonderfully improved, and her strength has returned, and she says she feels like another woman.

Case 2. Miss B. had been under homœopathic treatment for two years before she came under my care in August. For years she had suffered from dysmenorrhœa, dyspepsia and constipation, and was regarded by her friends and attending physician as in a state of rapid decline. I put her on the prescription of cascara sagrada as above mentioned in case of Mrs. M., and to-day she reports herself well. She has felt no symptoms of dyspepsia for more than one month, and the condition of constipation has entirely disappeared, and what to my mind is more gratifying, the dysmenorrhœa has yielded promptly to treatment, due chiefly to the general tonic effects of the cascara sagrada. She walks the street with firm step, and the bloom of health upon her cheek. She is elated with the result of the treatment, and her friends rejoice in having her restored to them in such perfect health.

REPORT 17.†—This is a shrub found in California, and introduced through the house of Parke, Davis & Co., by J. H. Bundy, M. D., of California. It is almost a specific in habitual constipation. Its action on the secretions and circulation is positive, and, without producing either nausea or other disturbances, it stimulates and improves digestion. Experience has demonstrated its action to be principally through the sympathetic nervous system,

* Dr. C. M. Galloway (New Preparations, January, 1879, p. 10).

† Extract from report read by J. G. Harvey, M. D., before the District Medical Society of Central Illinois, Oct. 29, 1878; reprinted in New Preparations, February, 1879, p. 31.

and especially the solar plexus. The reports of its use from a large number of physicians, and from different parts of the country, strongly confirm the statements of Dr. Bundy as to the good results obtained by its use in habitual constipation, and it will doubtless take its place in our materia medica as a valuable therapeutic agent.

REPORT 18.*—As a gentle cathartic, I have come to conclude that we have few remedies better than the rhamnus purshianus. Since its first appearance on the market, I have continuously made use of it in my practice, especially in female cases

Constipation is a factor in nearly every one of the individuals of this sex that apply for treatment for trouble incident to their uteri, and it is a symptom that needs immediate attention, should we hope to speedily benefit the general and special health of our patient.

My usual combination is with potassic bromide, ergot, nux vomica and belladonna, and it makes an excellent cathartic (I do not think it is especially alterative) adjunct to this utero-sedative and tonic mixture. The formula is based somewhat as follows, of course lessening or increasing the amount of the individual remedies as circumstances may require:

R	Rhamni pursh., fl. ext.....	32		00
	Ergotæ, fl. ext.....	32		00
	Potassii bromidi.....	16		00
	Belladonnæ, fl. ext.....	4		00
	Nucis vomicæ, fl. ext.....	6		00
	Aq. camphoræ, q. s. ad.....	128		00
M. S.	Teaspoonful in water after meals.			

Oftentimes I give a dose at bed time if the bowels are more than ordinarily indifferent to laxatives. In this class of cases there seems to be a sort of semi-paralysis of the intestinal nerves, thus inducing that wind-bloating of the bowels so frequently seen in these uterine cases. The nux vomica, by toning up the indifferently acting nerves, increases the peristaltic movement of the intestines, thus producing a more natural action of the bowels, and so, soon renders so large a dose of the cascara unnecessary. Sometimes, too, 16 grammes of the fluid extract in a 128-gram mixture is plenty to secure natural movements; especially is this the case in weakly-conditioned ladies. Still, as a rule, in all of my cases of uterine troubles I have found some sized dose of the cascara as indicated above of great benefit. It is a remedy, too, that I think can be taken for a long time with impunity; leastwise my patients, after securing a regular action of the bowels, have not been thrown back into their former bowel-lethargic condition on the withdrawal of the laxative.

As a simple cathartic, given in doses of a quarter teaspoonful (about one gram) of the fluid extract before breakfast, in a little cold water, it will be found excellent. It has the advantage, too, of being pleasant to take, having none of that peculiar mawkish taste of rhubarb that sickens so many, or of the ordinary salts (epsom).

REPORT 19.†—When the new laxative, cascara sagrada, was given to the profession by Dr. Bundy, the claims which he made for it were so extravagant that I was inclined to be suspicious of it. But as he fortified his assertions with cases that were apparently authentic, I concluded to ascertain for myself the value of the remedy. I accordingly procured from Parke, Davis & Co., eight ounces of their preparation, and with a courage possibly akin to rashness, I experimented first upon myself; for, as a result of long years of the sedentary life of a student, constipation had been established, and was an enemy I had never been able to dislodge. On the first trial of the medicine I was struck with the similarity of its taste to the buckthorn (rhamnus frangula), a fluid extract of which prepared by Metcalfe & Co., of Boston, I had long used, and I said to myself, surely this must be some variety of the buckthorn. The recent announcement of its botanical name, rhamnus purshianus, confirms this opinion. In my own case I found the medicine an agreeable laxative, producing in moderate doses a free semi-solid evacuation of the bowels without catharsis, or tormina, or disturbance of any sort; occasionally the dejections were somewhat frothy, as if soap had been mixed with the fæces. It did not impair the appetite, nor derange in any way the digestive functions, and after using it for some time I gave it to my patients. Now, after nearly two years trial of the remedy, and in nearly one hundred cases, I am satisfied that it is a valuable addition to our materia medica, but the claims which were first made for it as *curative* of constipation have in no one instance been substantiated.

* C. Henri Leonard, M. D., in Michigan Medical News (New Preparations, February, 1879, p. 42).

† E. S. Dunster, M. D., Professor of Obstetrics and Diseases of Women and Children, University of Michigan, in New Preparations, March, 1879, p. 56.

I have invariably found it is well borne, and that it has no tendency, even after months of continuous use, to destroy appetite or derange digestion. A laxative that will do this is certainly well worth having and using even if it cannot cure the constipation. The attacks recently made upon the remedy are too absurd to warrant notice, for, as has been well said, it will move the bowels just as readily under its local name cascara, as it will if you call it rhamnus purshianus. But lest these attacks should have some influence in preventing the profession from employing it, I think those who have used it should make public their experience with it, so that a really valuable remedy may not fall into disrepute. As to the modes of using it, either alone or in combination with other substances, I have nothing to say at present, my only object now being to fulfill what I conceive to be a simple duty in calling attention to the value of the remedy.

REPORT 20.*—A remedy given to the medical profession by Dr. Bundy, of California, for constipation, coming under my notice and being highly extolled by various physicians throughout the country, I was induced to give it a trial. It is a common saying among many in the profession, the longer we practice the more skeptical we are in regard to the *modus operandi* of medicine. This loss of confidence is produced from various causes. 1st. We must consider that medicines are nothing but relative agents; that the action of medicine upon the organism gives us merely a chain of facts, when given, merely to remove certain morbid conditions, or exalt or diminish certain physiological functions; that the greater the number of satisfactory results observed, the less progress will theoretic skepticism make; that this loss of confidence in medicine often arises from certain medicines giving unpleasant secondary symptoms, although the primary action of the medicine excites admiration and increases confidence, but not sufficient to prompt the incredulous to further perseverance; hence, a medicine is often cast aside and falls into disuse.

In a practice of 17 years, I have had many forms of stomach and bowel indigestion, and have tried many remedies for the same, with varied results, but never had such satisfactory results as I have had in the use of cascara sagrada. It has peculiar effects upon the alimentary tract that should give it prominent distinction among the many old and reliable remedies of the pharmacopœia. In our search for instruction on any department of medicine we should not be in haste in accepting conclusions for fear we might establish a *post hoc* for a *propter hoc*. Especially is this caution necessary in the *modus operandi* of medicine. But, as Emerson says, "the knowledge of having done the thing before increases courage."

A Miss T., of this city, 18 years of age, consulted me concerning what she considered a too frequent menstrual flow. I found that she had in conjunction with this, chronic pelvic peritonitis, which, I think, is a common occurrence in this country. Loath to move the bowels for fear of disturbing the peritoneum, as she was exceedingly constipated—stomach digestion apparently not disturbed—but a "colonic indigestion" very evident, I prescribed thirty-drop doses of cascara sagrada, fluid extract, to be taken thrice daily, as a test, ordered quiet, and to remain in a recumbent position. Saw the patient four days afterwards, when her mother, an intelligent lady, told me that the pain had gone mostly, and her bowels had moved, and without giving any disturbance to the neighboring viscera. This I would scarcely have expected from any laxative or cathartic in the pharmacopœia. The desideratum often desired in medicine is to avoid unpleasant secondary effects, although we are very anxious for primary results. There were none developed in this case nor in any of the several cases I have since used the medicine in. I painted the hypogastric region daily with the tincture of iodine, continued the cascara sagrada until her bowels moved daily and easily. This case was an unique or unusual one to experiment on with what was, to me, a new remedy; but from my knowledge of cascara sagrada, at this present stage I unhesitatingly say it can be used under any circumstances where there is general lethargy of the bowels. I now frequently prescribe it in "colonic dyspepsia," with good results. Patients do not object to taking it; it is followed by no secondary symptoms. I can most safely say it is a most valuable remedy in constipation. As to its *modus operandi* on the alimentary canal I shall not now stop to inquire, but content myself with the knowledge of the fact that Parke, Davis & Co. have introduced a boon to the medical profession for constipation. One thing I might say in regard to its action, that I believe it stimulates the entire mucous tract to action, and moves the bowels by virtue of the force it gives to secretion.

REPORT 21.†—Case 1. I was first induced to try the new remedy as a last resort in a case of habitual constipation.

November, 1878. Miss K., æt. 24, of regular habit, called complaining of abdominal

* A. O'Neill, M. D., Meadville, Pa., in *New Preparations*, June, 1879, p. 140.

† J. W. Van Winkle, M. D., Rochester, N. Y., in *New Preparations*, December, 1879, p. 299.

distention, pressure or weight in the perineum, urine scanty, complexion sallow, skin harsh and dry, frequent attacks of headache, with severe paroxysms of neuralgia, the act of defecation occurring once in three or four days, and requiring violent straining, the excrement being pale, clay-like and very offensive, and patient complaining of a hemorrhoidal protrusion after defecation.

I prescribed first, after arising, citrate of magnesia, followed by a breakfast of oat-meal, or cracked wheat and milk, with lime water and a cup of tea or coffee. For dinner, fish, mutton or poultry with few vegetables and no pastry. A light supper, consisting principally of milk, following each meal with lacto-pepsine, bismuth and soda aa grs. ij , directing the patient to take regular exercise in the open air, to make regular sittings at stool every 24 hours. The following pill was also given:

- ℞ Ext. aloes, gr. xv.
 Ext. nucis vomicæ, gr. ijj .
 Ext. hyoscyami, gr. x.
 Pulv. ipecac, gr. j.
 M. Fiat pills No. x. S. One pill at bedtime.

After a week of this treatment a rest was taken and the constipation immediately returned as severe as ever, when an enema was resorted to. I then prescribed:

- ℞ Ferri carb. "Vallet's."
 Quiniæ sulphatis, ss 3 ss;
 Ext. nucis vomica, gr. v;
 Ext. colocy. comp., ss j.
 Ext. gentianæ, 3 ss.
 M. Fiat pills No. xxx. S. One pill half hour after each meal.

This also failed and I afterwards tried many of the common remedies of the day for constipation, which as often resulted in failure, and after four months of this kind of treatment I found my patient discouraged, and myself perplexed and disheartened. In my desperation I resolved to try cascara, and after reading all the literature on the subject I could find in New Preparations, I prescribed, April, 1879:

- ℞ Fl. ext. cascariæ sagradæ, ss j.
 Fl. ext. berberis aquifol., ss ss.
 Syr. pruni Virginiani, ss jss.
 Ext. hyoscyami, fld., 3 ss.
 M. S. Teaspoonful three times per day.

After a few days the dose was gradually diminished, until only a teaspoonful was taken at bedtime, and one repetition of this prescription cured my patient entirely of constipation, headache, and neuralgia, and only a few days ago she informed me that she had not taken a particle of medicine since April; that she was now able to satisfy her appetite as to variety of food without inconvenience, and that she never felt better in her life.

Case 2. Mr. M., a farmer about middle life. Habitual constipation with marked palpitation of the heart. I prescribed:

- ℞ Fl. ext. cascariæ sagradæ,
 Fl. ext. berberis aquifol.,
 Elix. simplex, ss 3 i.
 Tinct. nucis vomicæ, gtts. xxjv.
 Tinct. digitalis, 3 j.
 M. S. Teaspoonful three times per day.

It was not necessary to follow this treatment long. In less than a week the dose was reduced to one teaspoonful in 24 hours, and the recovery seemed complete.

Case 3. An old German saloon-keeper living in one of the worst malarial districts of this city. Diagnosis, chronic cirrhosis of the liver, with gastro-enteritis.

- ℞ Fl. ext. cascariæ sagradæ, 3 ij.
 Fl. ext. berberis aquifol., 3 ss.
 Syr. pruni Virginiani, 3 j.
 Acidi hydrocyan. dil., 3 j.
 Morph. sulph, grs. ij.
 M. Sig. Teaspoonful three times per day.

This treatment was continued for several weeks with the best of results, and the patient discharged much improved. But I doubt the possibility of bringing about a perfect cure in this case with any remedy without a change of location and the diminution of the daily allowance of stimulants.

Case 4. Mr. Geo. W., a railroad conductor aged about 55. Chronic varicose ulcer on posterior surface of the left leg about one inch above the ankle joint, an old ulcer of 20 years' standing, with a gangrenous appearance, the induration of tissues about an inch in diameter, with a cup-shaped cavity, and very offensive odor. Mr. W., during the past 20 years, has been under the care of some of our ablest surgeons, with but little benefit, owing, doubtless, largely to the fact that his occupation keeps him upon his feet most of the time. Prescribed:

- R Fl. ext. cascarae sagradae, ℥ij.
 Fl. ext. berberis aquifol., ℥j.
 Syr. pruni Virginiani, ℥jss.
 Sol. acidi arseniosi, ℥ss.
 M. S. Teaspoonful three times per day.
- R Fl. ext. eucalypti globuli, ℥ss.
 Vaseline, ℥ij.
 M. Ung. S. As directed.

After filling the cavity of the ulcer with this ointment and covering it with the absorbent cotton and a light bandage, I directed the patient to repeat the application night and morning, and return in one week.

The result was beyond the expectation of either patient or physician. The offensive odor had all disappeared and the whole appearance of the ulcer had changed. Healthy granulations were now forming, and the patient's general health had commenced to improve.

This treatment is still being continued with the most gratifying results.

REPORT 22.*—We had our attention called to cascara sagrada a little over a year ago by a physician in one of our neighboring towns, who was then prescribing it; although we had heard about cascara prior to that period, we had never given it a trial, thinking it might be one of those much-lauded remedies without any particular virtue; but have since prescribed it in quite a number of cases where its use seemed to be indicated, particularly in that most frequent and subtle malady, constipation, for which it is invaluable, its action being decidedly better than anything we have heretofore used.

It produces full, easy, pleasant stools, without any tormina, tenesmus or nausea; neither is it very unpleasaant to the taste. Twenty to thirty drops of the fluid extract two or three times daily is all that is wanted to perfectly regulate the want of, and to change the perverted secretions. It acts upon the hepatic secretions and circulation more positively than anything we ever gave before; constipation dependent upon defective and perverted action of the liver, as above stated, yields at once to its action. It acts upon the whole gastro-intestinal canal, stimulating its morbid condition, bringing back vitality, and stimulating the neighboring glands to healthy action, completely restoring their tone and muscular power. Given in small doses it is a valuable remedy in dyspepsia, increasing the appetite and giving tone and vigor to the stomach.

In bilious, intermittent and remittent types of fever cascara sagrada, combined with gentiana quinqueflora, in doses of from ten to fifteen drops each, administered every few hours until a good action upon the bowels is produced, then at longer intervals, will generally effect a cure in a very short time.

There is a large amount of cascara in the market which is unreliable. Our best results have always been obtained from that manufactured by Parke, Davis & Co., of Detroit, Michigan. We regard cascara sagrada as an important addition to our materia medica.

REPORT 23.†—We are continually having new remedies urged upon us. Some of them are good, others are good for nothing. Cascara sagrada is one of the most useful remedies that has been put upon the market for a long time. Who is it that has not felt the want of some drug that would gently but surely move the bowels and keep them regular without materially disturbing the stomach or other parts of the system? This want is felt most in the case of children. They can't take pills; castor oil is exceedingly disagreeable, and is generally followed by constipation. The fluid extracts of podophyllum and leptandra nauseate and produce griping, besides they are exceedingly bitter, and children take them with reluctance. But the cascara is clear of all these objections. It does not taste bad, and when given in appropriate doses, no nausea and but slight uneasiness is experienced from its use. The fluid extract may be combined with cordial, extract of malt or simple

*From the Medical Summary. (New Preparations, July, 1879, p. 183).

†American Medical Journal. (New Preparations, July 1879, p. 104).

syrup, to neutralize the taste. For children, 1 oz. of the fluid extract may be added to 3 ozs. of any of the above articles, and the combination given in teaspoonful doses, every two or three hours, till the bowels move, then two or three times a day to keep the bowels regular.

This is a pleasant remedy; and while it is a pleasant one to take as an efficient cathartic or laxative, it seems to increase the glandular secretions generally, especially that of the liver. We can rely upon the cascara where anything of this class is demanded, and country practitioners can hardly get along without cathartics. While we do not prize them so highly as some people, we do find cases where they are demanded; then the cascara is appropriate. And I wish to impress it upon the reader, that this remedy has a tendency to *cure* constipation, a habit of local lethargy suffered by so many people.

REPORT 24.*—The medical profession have long felt the need of a proper remedy in constipation. Whether it has been discovered in the new remedy cascara sagrada, yet remains to be more thoroughly tested. I have now been using it in my practice for some five or six months with the most complete success; in fact I have got the first failure to make in relieving my patient. I have treated some very obstinate cases of constipation, one in particular, a lady who had used injections for years as her only relief, but each one yielded readily to the remedy. Whether in any of these cases I have effected a permanent cure, I will not venture to say. This much, however, I can state, several of my patients have discontinued it for several weeks and are still regular in their habits and have to all appearances completely recovered. I usually prescribe the following formula:

R Fl. ext. cascara sagrada, cc. gm. 30.
Syr. rhei, ar., cc. gm. 90.

M.

I direct my patient to commence taking a teaspoonful three times a day, gradually decreasing the dose, just using sufficient to keep the bowels in a soluble condition. I find as a rule that, in the course of a week or ten days, one teaspoonful per day of the above prescription will suffice to keep the bowels regular, and direct my patient to continue it for four to six weeks. Of course I do not always confine myself to the above formula, I sometimes combine the cascara sagrada with extract malt, lactopeptine or other drugs, as the case may require, always instructing my patient to be regular in his habits, also giving him careful instructions as to diet, etc.

REPORT 25.†—In regard to cascara sagrada, I should not wish to practice medicine in a malarial district like ours without it. Its power over the secretions of the liver as well as the small intestines make it particularly adapted to those cases of bilious forms of constipation so often met in practice. The constipation of elderly people readily yields before it when followed by strychnia. The after effects in no case have been unpleasant. I have a high esteem for the new remedy.

REPORT 26.‡—I have used fluid extract cascara sagrada in cases of habitual constipation with excellent results. By administering a mixture of cascara sagrada and syrup, equal parts, in doses of a teaspoonful, three times a day for three or four weeks, and then gradually and regularly decreasing the dose, I have been able to establish a habit of regularity, and eventually to effect a permanent cure. In no case have I been obliged to increase the dose after the first few days.

REPORT 27.§—I have used fluid extract of cascara sagrada (*rhamnus purshianus*) in several cases of constipation, with very satisfactory success. In a case of paralysis which I treated in the Troy Hospital, where the patient was badly constipated, I found the cascara an efficient and pleasant laxative.

REPORT 28.||—This comparatively recent addition to the medical armamentarium, has attracted much and deserved attention as a peculiarly valuable "new remedy." Being well aware of the proneness of American physicians to "ephemeralism" in medicine, I nevertheless am constrained to add my observation and experience regarding the remedy in that troublesome and widely prevalent disease commonly known as habitual constipation. I may premise that the positive, and perhaps, to some, extravagant, statements I may make, receive their emphasis from the experience I have had with this medicine in my own person—

*W. A. Buchanan, M. D., Paris, Ill., in *New Preparations*, August, 1879, p. 196.

†A. W. Alvord, M. D., Clinton, Mich., in *New Preparations*, Sept., 1879, p. 225.

‡Wm. Faulkner, M. D., Erie, Pa., in *New Preparations*, Sept., 1879, p. 226.

§A. T. Van Vranken, M. D., West Troy, N. Y., in *New Preparations*, Oct., 1879, p. 253.

||Geo. W. Cook, M. D., Syracuse, N. Y., in *New Preparations*, Dec., 1879, p. 303.

an experience which has paved the way for the use of cascara sagrada in a number of cases in practice.

A brief history of my malady may not be wholly uninteresting, as going to show the prominent features of a typical case of habitual and confirmed constipation with its attendant and induced complications.

I am fifty years of age, and for more than a quarter of a century have been in the active practice of my profession. When a school boy, and hardly well on my second decade, I found that I was more or less troubled with constipation, and that this difficulty increased with the lapse of time until the efforts to evacuate the bowels were attended with pain, the stools being streaked with blood. Then followed pain and hemorrhage, intensified while at stool, and soon, pain for several minutes, and eventually for hours, afterwards. Following this condition came positive impaction of fæces in the rectum and then hemorrhoids, which became so engorged, so inflamed and so painful as to be almost unendurable. I need not add that with all these were obstructed portal circulation, retained and regurgitating bile, gastric and intestinal irritability, flatulence—in short, confirmed dyspepsia, with more or less abdominal pain, cerebral congestion and a sallow, muddy chloasmic skin.

Thus the malady continued, and steadily progressed until the colon became so torpid as to be unable to propel its contents into the rectum, and for years the latter was but a depository instead of a passage way.

The residua of the ingesta were habitually lodged above the sigmoid flexure of the colon. The muscular coat and the sympathetic nerves of the colon had well nigh suspended their functions and refused their interposition unless goaded to action by laxatives, cathartics in increased quantities and frequency, or deluging enemata.

Of course the retained fæces engendered flatulence, and the flatulence caused enormous distension of the colon, attended with all degrees and intensity of colic—of confirmed colalgia—hope this word is not a neologism, if it is, is so because no legitimate term can sufficiently express my misery.

But during many of these long years I was continually confronted with the taunt so encrusted with age, "Physician, heal thyself!" but obedient to the injunction I have ever striven so to do, and am still my own champion, veteran patient, and am, thank God, at last a hopeful convalescent.

I have resorted to diet, to systematic exercise, to laxatives, to cathartics, to cerebro-spinal stimulants, such as nux vomica, which latter I have taken almost to tetanism, to belladonna, until nearly blind, to podophyllum, until my throat was as dry as Cullen's "Nosology," to rhubarb, until my stomach seemed to be given over to acrobatics. Finally, and for more than 20 years last past, as a matutinal resort, I have employed large enemata of cold water, which served to temporarily excite the action of the muscular and nervous forces of the large intestine, and which, therefore, became my only means of relief.

Without the enema, notwithstanding a full cathartic had been taken to contribute to the twinges of my "true inwardness," it was as impossible for me as it would be for Greenough's statue of Washington, to have an evacuation of the bowels.

Of course, it is not pleasant, perhaps not in good taste, for one to parade his own infirmities before the world, but "other hearts must ache," and "there is a balm in Gilead" for them too, and, thanks to Dr. Bundy, I have found it in a physical and important sense, and under the name cascara sagrada.

In June, 1878, while in attendance at the session of the American Medical Association, in Buffalo, I was presented with a sample bottle of the fluid extract of cascara sagrada, with a circular embodying the observations and comments of different practitioners regarding its therapeutical effects.

I examined its sensible properties, and regarding it only as a modification of the rhamnus catharticus—a dose of which latter, if it in the least transcends the limits of a laxative, will seem to turn one inside out—I laid it aside. But at a session of our New York Medical Association, in this city, in May last, I obtained another sample of the medicine from the same source, and resolved to give it a fair trial. I at once prepared a mixture after the following formula:

℞ Fl. ext. cascara sagrada.
Simple syrup, ℥ss ʒj.
Ext. malt, ʒij.

M. Sig. A teaspoonful before meals. Immediately I began the use of this prescription, and without any other aid, I had regular and comfortable morning evacuations of the bowels.

The morning lavements were discontinued, and have been ever since. The action of the medicine continues to be prompt, certain, painless, and the above dose, even but once a day, to this time, perfectly effectual.

I regard cascara sagrada as a peculiar tonic of the whole digestive apparatus, affecting in due proportion the muscular and nervous forces of the primæ viæ, correcting the hepatic and gastric secretions, as well as restoring normal and necessary mucus to the colon and rectum, thus lubricating and promoting the movements of the fæces. Its action, in proper doses, is essentially laxative, producing mushy or moulded stools tinged with the normal bilious hue.

And now, after a careful trial of this, to me, invaluable agent, I am in better flesh, health and strength than at any time before for the last thirty years. I am rejuvenated. I am physically happy!

It will be readily inferred, in view of this experience in my own person, that I should resort to cascara sagrada in my practice, and although not meeting such prolonged and pronounced cases as my own, still I have not as yet been disappointed; and if this paper, hastily prepared at times snatched from the pressure of other duties, shall be the means of inducing other physicians to give the remedy a fair trial, it will prove a blessing to many fellow-sufferers.

REPORT 29*—Having for several years been greatly troubled with constipation, I was induced to try the cascara sagrada. I began the use of it as follows:

℞ Fluid extract cascara sagrada.
Simple syrup, ℥i ʒj.

M. Sig Take one teaspoonful three times per day, and I must say that it acted like a charm. It was but a short time until I had to take two drops only per day, and again only one, when finally I concluded I was cured, and stopped it altogether; but after a few months I had to return to it, but one dose per day now is sufficient. I have prescribed it in numerous other cases, and it has universally given satisfaction. It is now a staple in our drug stores.

REPORT 30.†—There has certainly been no lack of literature on this subject, and, doubtless, there is not a physician in the land who is not familiar, either from reading or from experience, with the properties of the drug. The reports have been so almost universally favorable as to create the impression that failure is impossible. Infallibility, however, is a rare property, whether of men or things, and our failures are frequently as instructive as our successes. The failure in a given case, of a drug whose success has been so uniform, should lead to investigation which would establish more thoroughly the condition of success, for all success is conditional. The report of the following case has had such an object in view: Mr. C. has suffered for five years from obstinate constipation and its train of accompanying disorders. I first gave him a mercurial purge which relieved the headache and lassitude, due to the retention of cholesterine. Following this he was put on quinine, iron, strychnia, arsenic, and aloes, given in combination and in the form of capsules. This combination failing to secure the desired evacuation, I resorted to cascara sagrada, with which I had previously treated some ten cases of constipation very successfully. The commencing dose was fifteen drops, three times a day; this having no apparent effect, the dose was steadily increased until a teaspoonful, three times a day, was given; but still, though continued in the latter dose for over a week, no action was secured. This single failure has by no means destroyed my faith in the drug, but has clearly demonstrated that there may be conditions present, idiosyncrasy or something else, which render it, in common with all other remedies, inoperative.

REPORT 31.‡—About a year ago I reported decided success with cascara sagrada and berberis aquifolium. The lapse of time and repeated trials have only served to strengthen my faith in their usefulness. During the winter of 1876-7, having but recently recovered from a severe attack of pneumonia, I was greatly troubled with constipation. I procured a sample of cascara sagrada and began taking it; after using ten or twelve doses, taken carelessly and at irregular intervals, I was much surprised to find myself cured. For a year after this my bowels were as regular as need be; soon after this a slight return of the old trouble called for a correspondingly slight exhibition of the cascara, since when I have been sufficiently "regular" to enable me to "throw physic to the dogs."

* E. W. Boyles, M. D., Clay City, Ill., in *Therapeutic Gazette*, 1880, p. 42.

† F. D. Thompson, M. D., Sherman, Texas, in *Therapeutic Gazette*, 1880, p. 43.

‡ H. H. Baker, M. D., Cleveland, Ohio, in *Therapeutic Gazette*, 1880, p. 71.

REPORT 32.*—I have used fluid extract cascara sagrada in habitual constipation caused by torpor of the muscular structure and deficient secretion, and in every case it has fulfilled my most sanguine anticipations. It is particularly good in the constipation of pregnancy, and, in small doses, in the constipation of children. I have recently used it with excellent results in a case of torpor of the bowels, following a severe attack of gastrodynia. In fine, it has furnished me the elegant and reliable remedy for habitual constipation that I have long sought for in vain, after using aloes, podophyllin, *et id genus omne*.

REPORT 33.†—This statement may not be anything new, but still I am constrained to say, that in my experience, cascara sagrada does all that is claimed for it. It has become a standard remedy with me, and indispensable. In duodenal indigestion, I combine it with malt extract and nux vomica, and have found that when this condition is associated, as it usually is, with constipation, flatulence, headache, cold hands and feet, vertigo, etc., that the combination never fails of bringing relief.

REPORT 34.‡—Mr. P., merchant, called to see me in regard to the state of his health, saying he had consulted several physicians, all of whom treated him for dyspepsia. After talking with him for some time, and learning that his bowels were seriously constipated, and that he suffered greatly from sour eructations, I determined to test the virtue of cascara in his case. He stated that he seldom had an action without resorting to an active dose of medicine, or using a warm water enema, and frequently passed as many as seven days without an action of the bowels. I prescribed one drachm fluid extract cascara in water three times a day. Several days after he called again, and said that after the second day his bowels had acted from two to three times a day, and asked if I designed the medicine to act so freely. I directed him to take 20 drops three times a day in the future, and if the medicine seemed too active, to still further reduce the dose. Two weeks after he came to the office, and reported himself cured, having an action every day from taking 20 drops at bedtime. After some advice to him I prescribed:

R Cascara sagrada, fluid extract, ℥j.
Nux vomica, fluid extract, ʒij.
Aquæ, ℥v.

M. Sig. A tablespoon'ul morning and night.

From this time on he has experienced no trouble with his bowels; his stools are regular and healthy, the sour eructations have ceased, and he says he feels himself a new man. Indeed, his general appearance proclaims him such. To use his expression, "this is a wonderful medicine." He says it is strange so small a dose should work such a change after taking so much medicine and in such large doses.

I have tried the cascara in only a few cases, but with uniform success. The above is the most striking of the number, hence I present it. I am greatly pleased with the medicine.

REPORT 35.§—Of the merits of this drug as a remedy in constipation, it would be superfluous for me to speak. No article of the materia medica has a place more fixed in therapeutics than this. I apprehend, however, that it is not generally supposed to be curative of the opposite condition to constipation—diarrhœa. The following case will show that it does relieve diarrhœa, and that it is not impossible that it may yet become to be regarded as a valuable remedy against this condition. My own daughter was taken last October with a severe attack of cholera morbus with dysenteric symptoms. After the acuteness of the attack subsided, she was left with a diarrhœa which, in spite of the usual remedies, continued until February. At this time I received a sample of cascara sagrada from my friend, Dr. R., of Knoxville, who advised me to try it in an obstinate case of constipation I had on hand. The doctor's views of the *modus operandi* of the drug induced me to give it a trial on my daughter. If it cures constipation by imparting tone to the muscular fibre of the intestine, might it not also relieve a diarrhœa which was evidently due to depreciated tonicity of the mucous and muscular tissues of the bowels? I accordingly gave ten drops of the fluid extract, which I repeated each night for three successive nights. The relief was remarkable for its promptness and its completeness. The discharges, which before had been mixed with a white mucus and were extremely offensive, at once changed to their natural color, and soon to their natural consistence.

* Thomas H. Urquhart, M. D., Hastings, Neb., in *Therapeutic Gazette*, 1880, p. 71.

† F. E. Daniel, M. D., Jackson, Miss., in *Therapeutic Gazette*, 1880, p. 125.

‡ J. R. Blackerby, M. D., Milford, Ky., in *Therapeutic Gazette*, 1880, p. 126.

§ W. W. Morrison, M. D., Rockford, Tenn., in *Therapeutic Gazette*, 1880, p. 153.

I report this single case to direct attention to what may prove a very valuable property of this drug. My observation will certainly lead me to have recourse to cascara in the next case of this nature I may be called upon to treat.

REPORT 36.*—My attention having some time since been called to this drug as a gentle peristaltic stimulant and regulator of the bowels, I was induced to accord it a trial. I wanted a remedy which would act in this way, but had never succeeded in finding it. My trial of cascara sagrada has been attended with such marked success as to draw from me this expression of my high opinion of it. Its success has been especially marked in certain obstinate and chronic cases of constipation for which I had despaired of finding such a means of relief as was desired.

If my experience with the remedy continues as it has up to the present, I shall take great satisfaction in recommending it to my medical class.

REPORT 37.†—The right of cascara sagrada to a prominent position in the ranks of our advancing therapeutical science, as a remedy *par excellence* for chronic constipation no longer admits of argument.

It is rare indeed that a remedy even under the most favorable circumstances meets with a tithe of the success accorded this from its introduction, and taking into consideration the malicious persecution and misrepresentations of which it has been the subject, one is forced to the conclusion that its inherent virtues and the success attending its administration by practitioners have alone preserved it from that bourne from whence so many so-called specifics ne'er return—oblivion.

Two or three years have sufficed to bring it into general use and to acquire for it a name as far in advance of the old "peristaltic persuaders" as our present therapeutics excel those of a century ago. The almost invariable success that followed its use in the treatment of many of the functional affections of the stomach and intestines, especially in chronic constipation and its concomitant train of symptoms, induces me to speak of it thus highly, for I feel confident that a fair and impartial trial of its virtues will remove these diseases from the class considered *opprobria medicorum* by the profession.

I have used the preparation since its introduction and in very few instances has the effect produced failed to be beneficial to the patient. In many cases idiosyncrasies have been met with where combinations with nux vomica, ergot, belladonna, etc., have assisted in attaining the desired end; but as a rule the following simple prescription has answered all purposes:

℞ Ext. Rhamni Purshianæ, fl. ʒss.
Syrupi et aquæ ʒʒ ad ʒ ij.

M. Sig.—Teaspoonful three times a day.

In many cases I have found less than the above quite as beneficial as the larger dose, in fact, I have found ten or fifteen drops administered three times a day, bringing the system gradually under the influence of the medicine, preferable to producing a marked impression by means of a drachm or more at the outset. I have found it excellent as an anti-periodic and hepatic in ordinary chill fever and have met with flattering success in the treatment of hæmorrhoids caused by portal congestion, its action as a hepatic freeing the ramifications of the venæ portæ and lessening the hepatic engorgement.

Have also found it serviceable in cases of chronic gastric catarrh. In cases of acute or chronic dyspepsia with failure of the digestive and assimilative forces from nervous enervation, its action upon the ganglionic system stimulating the secretions of the liver, bowels, and entire alimentary canal, renders it a valuable addition to our list of tonics.

I have selected the following from many cases as exhibiting varied functional disorders, especially indicating the rhamnus purshiana line of treatment.

Case 1. S. B., æt. 42, chief engineer large manufacturing establishment, corpulent, habits sedentary. Was called to see patient January, 1879. For twenty years had been subject to exceedingly severe attacks of cephalalgic paroxysms once or twice per month; had been treated by many physicians, but had never succeeded in obtaining more than temporary relief. He informed me he only looked for relief, as the hope of being permanently cured he had resigned, considering himself the victim of an irremediable malady.

His liability to lose several days at a time from this cause, made a factor in all his

*H. M. Field, M. D., Newton, Mass. (Therapeutic Gazette, 1880; p. 155.)

†J. E. Clark, M.D., Professor of Physics and Medical Chemistry in the Michigan College of Medicine, in a paper read before the Wayne County Medical Society (Therapeutic Gazette, 1880, p. 186).

business engagements, frequently causing heavy pecuniary loss. Examination during paroxysms gave temperature normal, surface of body cool, abnormal sensitiveness to light and sound, anorexia and nausea, with a history of inveterate constipation of the bowels. The sclerotic and orbital region showed a well marked icteric tint.

Placed patient upon rhamnus purshiana, and succeeded in producing one evacuation per day. No paroxysms in February, March, April, and May. A slight attack in June, attributed by patient to failure to take the medicine.

Oct. 1. No attack since June; taking one-half the amount required last January.

Nov. 23. Called for medicine. Had taken none for five weeks; feared an attack.

Jan. 1, 1880. No violent attack since first dose of medicine. Patient satisfied he has found a specific, and a goodly sized Christmas box delivered at my office marks his appreciation.

Case 2. C. D., a hysterico-hypochondriacal female, with history of uterine trouble, and gynæcological investigations. Said she believed if she could procure a free evacuation from the bowels once per day, the exciting cause or most of her affections would be removed.

May 3. Acting upon her suggestion as to an evacuation each day, I put her upon a mixture of:

R Ext. rhamni pursh. fl., ʒj.
Ext. belladonnæ fl., ʒj.
Tr. nucis vomicæ, ʒij.
Syrupi et aquæ, ℞ ad. ʒiv.

Sig.—Teaspoonful thrice daily.

At first medicine produced slight catharsis. Reduced dose to teaspoonful twice a day, and on June 20 to one teaspoonful each morning at 10 a.m., she claiming this sufficient to produce the necessary evacuation.

Dec. 10. She informs me that she has not been better in ten years. Taking one teaspoonful per day.

Case 3.—Clinic Michigan College of Medicine: E. F., female, æt. 21, complained of hæmorrhoids dating from the period of gestation some 18 months since. Had been treated for more than a year with slight temporary relief.

A well-marked case of portal congestion with history of dyspepsia and chronic constipation. I directed 15 drops of the extract to be taken three times per day for one month, at the end of which time she reported entirely cured.

Have administered it to a number of cases at my clinic during the past three months, and the record shows that in no case where patients have reported have the effects failed to be beneficial.

REPORT 38 *—Mrs. B., æt. 62. Was called to see her March 6th. Found patient much emaciated and low-spirited, having been in the hands of several practitioners without obtaining any benefit. Her last physician, a homœopath, had diagnosed inflammation of stomach, gave "little pills," and ordered diet of "cabbage and boiled onions" to the exclusion of almost everything else. In getting the history of the case, I found that it began with obstinate constipation, about six months ago. The constipation was a more or less prominent symptom throughout her illness. I found great flatulent distention of stomach, the greater curvature reaching to within 2½ inches of the pubis. There was considerable tenderness of abdomen, and fæcal accumulation in ascending colon. The tongue was heavily coated, breath foul, temperature normal, pulse 76, weak and compressible. She complained much of heat and burning in her throat, and eructations of gas from her stomach, and often vomited her food (cabbage and onions). Besides she had much palpitation of the heart and fullness in chest, and, as she said, "ball in her throat the size of a goose egg." Her bowels had not moved in eleven days; she was very apprehensive, declaring she was going to die anyway.

Looking the case over very carefully, I concluded that the whole difficulty depended upon the condition of the bowels, and giving a favorable prognosis, ordered large injections and a tablespoonful of the following every four hours until the bowels should move:

R Sodii bicarb., 4.00.
Pulv. rhei., 16.00.
Spts. menthæ pip., 8.00.
Syr. rhei. arom., q. s. ad., 125.00.

M. Ft. sol.

*Dr. Med. Karl V. Ruck, Norwalk, Ohio, in Therapeutic Gazette, 1880; p. 259.

March 7th and 8th the bowels remained confined. March 9th ordered:

℞ Hydr. c. cretæ ʒ 75.
Pulv. podophyllin ʒ 05.

M. One dose, also an injection of an infusion of aloes.

Next night she had one stool and felt better. I now ordered the rhubarb mixture to be continued and the following pill at bed time:

℞ Pulv. aloes soc. ʒ 10.
Extr. nucis vom. ʒ 03.
Extr. bellad. ʒ 01.
Pulv. ipecac.
Pulv. saponis, ℞ ʒ 02

M. One pill.

In spite of this, and occasional change to mercurials, saline and vegetable cathartics, in full doses as well as copious injections and the best regulated diet, her bowels remained confined for seven days, and moved only upon administration of:

℞ Hydr. c. cretæ, ʒ 25.
Pulv. podoph., ʒ 20.

M. One dose.

Smaller doses given before had no effect. Continued same for two days in half doses, with no effect. On March 19th gave again hydr. c. cretæ ʒ 30, pulv. podoph. ʒ 25, with no effect. March 20th ordered castor oil emulsion, when she vomited. It would occupy too much space to give the details of the treatment for the next nine or ten days, during which she had no passage at all. I resolved now to again try cascara sagrada, though I had been disappointed in its use in several cases. I must, however, in justice, remark that the preparation used was one made by a New York house. I obtained a sample vial of Parke, Davis & Co., Detroit, and, April 1st, discontinued everything else except 5 grains of lactated pepsin three times a day with milk; I ordered:

℞ Ext. rham. pursh. fl. (P., D. & Co.'s.)
Syr. rhei arom., ℞ ʒ 60.00

M. Dose, 5 grammes after each meal and ten grammes at bedtime.

April 2d, she had two free and easy passages from her bowels and said she relished her food a little more. Continued treatment. April 3d, again two passages, other symptoms improving. Continued treatment. April 4th, had four passages, still improving otherwise; decreased the dose after this, so that the bowels moved once or twice in 24 hours until April 20th, when she took only half a teaspoonful of the mixture at bed time, and was discharged cured, having had no distress of any kind since the first few days after beginning with cascara sagrada. She gained over twenty pounds of flesh in a short time.

I have records of several other cases of a similar nature in which cascara sagrada succeeded equally well.

REPORT 39.*—There being already several species of the genus *Rhamnus* used in medical practice, viz., *Rhamnus catharticus* and the *Rhamnus frangula* and others, all acting as purgatives of greater or less activity, it might be expected that this member of the family would possess cathartic properties, and experience has now shown that it does so in an eminent degree; and if anything were wanted to prove the usefulness of a knowledge of systematic botany to medical men, it would be the fact that is here exhibited of a plant being used empirically and by illiterate persons and proved to be useful, which, when brought to the knowledge of properly educated men, is by them at once accepted and tried, because they on learning that it belongs to a family of plants botanically known, are prepared to believe it may possess such virtues as those ascribed to it, and trying it, soon discern its peculiar merits.

We find by our laboratory experiments that the preparations of *Rhamnus* contain Rhamnin, a pale-yellow cauliflower shaped crystalline substance, Rhamnotannic acid, in green-yellow amorphous pieces of a bitter and acrid taste, fusible and easily broken, readily

*S. M. Curl, M.D., Fellow of the Linnean Society, England, Rangitikei, New Zealand, in *Therapeutic Gazette*, 1880, p. 313.

soluble in alcohol and in ether, and an uncrystallizable substance, Rhamnus cathartine, a friable yellow powder, giving out a peculiar odor on being rubbed, has an unpleasant taste, bitter and acrid, fuses by heat to a yellow oily-like fluid, dissolves readily in water, not in ether. Also Rhamnoxaniline, a citron-yellow crystalline mass of silky lustre without taste or smell, sublimes in golden-yellow needles, is not soluble in water, but slightly in alcohol and ether. There are several other interesting bodies, which I have not had time to examine, in the preparation of the rhamnus. But we know enough to see that it is likely to be very useful in an atonic state of the bowels leading to habitual constipation, as these proximate elements contained in it act upon the nerve centres and set up peristaltic action of the intestinal tube, as proved in the physiological laboratory, and when prescribed in appropriate cases, I have found it to act very beneficially on patients suffering from all those states of ill-health brought about by insufficient action of the bowels.

REPORT 40.*—It is questionable whether in the life of the general practitioner, a more troublesome and annoying complaint is met with than chronic constipation, producing, as it does, a train of evils to which the sufferer either wholly succumbs, or seeks such temporary relief as may be offered by the regular physician, the strolling charlatan, or the innumerable pills and nostrums advertised so freely in the various newspapers throughout the country. Is it not without deep chargin that the man who writes M. D. after his name, acknowledges all his laudable efforts at relieving, with any degree of permanence, this *bete noir* of medical practice, are virtually failures? Such, at least, had been my experience, and I am free to confess it, until the remedy, the name of which heads this article, appeared. Since that time, however, I have felt very little, if any, uneasiness in taking charge of such cases, as the results have always been satisfactory when my directions were carried out with any degree of accuracy. Still, in spite of the invariable success which followed the administration of this drug, I hesitated to give my confidence wholly into its keeping until a test of two years or more, among a varying class of cases, has proven beyond a shadow of doubt its capabilities. I therefore take great pleasure in adding the weight of my experience to the already over-heaped pile of testimonials in favor of this new and invaluable addition to our materia medica.

I have used the drug now continuously in my practice for more than two years, to the exclusion of almost all other remedies belonging to its class, and I have yet to record a single failure in obtaining a cure sooner or later. I have used it alone and in combination with other remedies, as, for instance, extract of malt, berberis aquifolium, compound tincture of gentian, elixir of calisaya, compound tincture of cinchona, simple syrup, syrup of tolu, and glycerine. The berberis aquifolium was added in cases associated with rheumatic pains of the joints, scrofulous swellings or ulcers, and in simple debility; the addition of the bitter tonics were in all cases to invigorate digestion and increase the appetite in patients requiring such treatment, and how often one finds loss of appetite, impaired digestion, mal-assimilation, with consequent debility, both general and local, associated with chronic constipation; in cases of that kind I always have found the addition of gentian, calisaya or cinchona excellent adjuvants. The extract of malt is added when a combined nutrient and digestive stimulant is desired—then, too, the large proportions of diastase renders preparations of malt most effective in those forms of disease originating in imperfect digestion of the starchy elements of food, a condition frequently found among a people subsisting almost wholly on a diet of vegetables.

It is not necessary that I enumerate cases cured by cascara sagrada, with which I am cognizant; their name is, I might almost say, legion; and to select from this number any case worthy of special mention would be quite as fruitless, for they are all of equal interest to me. I can only say, in conclusion, that if there be any of your readers who have not given this new remedy a fair trial, I should advise them to do so at once, feeling assured that the results will exceed their most sanguine expectations.

REPORT 41.†—*Case 1.* The first case I have to report is that of a lady æt. 67. Paralysis of the right arm. Obstinate constipation, and left foot badly scalded, the result of an accident prior to the attack of paralysis. Constipation, however, was of long continuance—what might, with propriety, be termed chronic. Was called to see her on the 12th of December. Commenced the treatment by giving her cascara sagrada ʒj, tincture nux vomica 10 gtt, to be repeated every three hours during the first 24 hours; afterwards four times a day. Visited her again on the 14th, and to my astonishment found the constipation entirely overcome. Duplicated the prescription, and repeated the dose three times a day. Visited her again the 16th and continued this course. On my fourth visit, the 19th, found her in a

* Jno. E. Brackett, M. D., Professor Materia Medica, Howard University, Washington, D. C., in the Therapeutic Gazette, February, 1881, p. 49.

† H. C. Shipley, M. D., in the Therapeutic Gazette, 1881, p. 49.

decidedly convalescent condition, and up to this date, 15 days since, she is entirely well. It is proper to remark that the only dressing used for the foot was ʒ ij grindelia robusta to a tumbler full of water, which had to be duplicated twice of three times.

Case 2. My second case was a lady æt. 17; married. Was confined Nov. 7th. Was attended from that date up to the 9th of December by a pretended doctor, when I was called to see her. This pretender had pronounced her a case of hysteria, and was using tr. ferri chlor. 10 drops three times a day, with five grains of pulv. rhei. at night. I found the patient with tongue heavily loaded with a dark and very tenacious coating. Sordes on the gums, teeth and lips, an exhausting diarrhœa, pulse 120, small and wiry, anxious expression of countenance, features pinched, skin shrivelled and shrunken, extreme tenderness over the region of the womb, excessive soreness of the vulva, extending upward into the vagina—soreness so great that I could not make a satisfactory digital examination; patient also very anæmic. I diagnosed it as a case of typhoid diarrhœa, with endometritis. Prescribed:

℞ Cascaræ sagradæ, ʒ iʒss.
Berberis aquifolii, ʒ ij.
Piscidiæ erythrinæ, ʒ ij.
Syrup symp., ʒ iij.

M. Sig. A teaspoonful every three hours.

Local applications to vulva, ʒ ij grindelia robusta to half pint of warm water to be repeated every hour.

December 11th, my second visit, found marked improvement in all the symptoms. Continued the above course except to substitute the rhus aromatica in the same quantity for the cascara and four times a day instead of every three hours.

December 13th. At this visit found her sitting up with tongue and mouth perfectly clean, pulse nearly normal, countenance sprightly and cheerful, pain, tenderness and diarrhœa gone, and her only inquiry was to know what she could eat. On the 15th, through the overwhelming assiduities of her friends she ate pretty freely of "kraut" and pickled pig's feet; result, relapse. Was sent for again on the 16th, when I found her with all the entire list of untoward symptoms. Being determined to give these highly lauded remedies a fair test, I must confess that it was with some misgivings that I again resorted to their use, fearing that at this critical juncture, a confirmed relapse as I feared, and of a form of disease that has always been considered as dangerous, they might fail me. However, I duplicated my first prescription and directed a teaspoonful every three hours, and to my great and agreeable surprise on the 17th I found her all right, at which time I gave her ʒ ij eucalyptus in ʒ jv water, as a tonic.

M. Sig. Teaspoonful four times a day.

Recovery rapid and eminently satisfactory. The result of my experience in the two cases, being so satisfactory I am still testing them in some others, and especially in some old chronic ones, the result of which I will report hereafter if agreeable.

REPORT 42.*—Much has been said and written about the wonderful effects and properties of rhamnus purshianus (cascara sagrada), it is true, but I have had considerable experience in the use of it, getting such very satisfactory results from its administration, I feel that it should be kept prominently before the profession as a great and never-failing remedy for constipation, and those diseases of the system which depend upon a constipated condition of the bowels, lack of secretory action, etc. As to the *modus operandi*, I agree from my experience with it very fully with Dr. Goss, "that it exerts a direct effect upon the sympathetic nervous system, especially upon that of the solar plexus, stimulating the nutritive and assimilative functions directly. It powerfully stimulates the digestive process, increases the activity of the secretory organs, especially where the secretions are deficient and perverted; hence perverted or deficient secretion is the special indication for this very great remedy. In constipation depending upon deficient secretion, the fluid extract given in doses of 20 to 30 drops three or four times a day, will regulate the bowels. It increases the action of the liver without nausea or other inconvenience." In my hands it has particularly proven to be a tonic to the muscular tissues generally, but especially upon that of the stomach and bowels, and at the same time it increases the secretions. In cases of indigestion, where the patient throws up everything taken, Dr. Bundy's formula is most admirable, in which he combines the hydrocyanic acid dilute with the cascara, berberis and malt. There is one case in particular from which I got the most satisfactory, as well as very remarkable results with the cascara. It was a married lady, nearly 50 years of age, who had suffered many years with constipation, inactive

* W. R. Alexander, M. D., in the Therapeutic Gazette, 1881, p. 84.

liver, dyspepsia, and hemorrhoids. You can imagine this lady suffered from the above maladies. She had consulted many physicians, and had pursued many plans of treatment. Never had any operations for several years without either using medicines or injections for that purpose. When her husband first consulted me in regard to her, she was under the treatment of one of the most reputable physicians in this city, and as he had exhausted everything in the materia medica upon her, I had to acknowledge I could do nothing for her, and she continued for several months more under the doctor's treatment, until at last despairing of relief from, and being disgusted with all medicines, she determined to try the virtues of some of the popular watering places. Her husband, knowing I had some familiarity with a mineral spring he desired to send his wife to, consulted me as to the propriety of her trying it. By this time I had, from literature I had received, heard of the cascara, and told him of it, and insisted upon his trying it with his wife before he took her away. Thinking everything had been given her that possessed any efficacy, he at first declined. I read him some of the high encomiums from different and prominent medical authority, and thus induced him to at least try it. Her condition at this time was as follows: Sallow complexion, general emaciation, broad, flabby tongue, coated with a thick, yellow fur, foul breath, cardialgia, headache, habitual constipation, liver enlarged, with considerable pain on pressure. I ordered two preparations of it from a druggist in this city, who had gotten some for my special use. The first was Dr. Bundy's preparation, which I intended should meet the dyspeptic condition of her system, and is as follows:

℞ Cascara sag. fl. ext. (P., D. & Co.'s) ℥i.
 Acid hydrocyanici dil., ℥j.
 Malt extract, fl., ℥ij.
 Berberis aquifol., fl. ext., ℥j.

M. Sig. Teaspoonful after meals, or oftener, if there is pain or distress with belching of gas or wind from stomach. In addition to above I ordered the second, as follows:

℞ Cascaræ sag., ext. fl. (P., D. & Co.'s), ℥ij.
 Syr. hypophosphit. co., ad ℥jv.

M. Sig. Teaspoonful at night when the bowels fail to move during preceding day.

I heard nothing more from this patient for nearly a month, when she called in person looking like another being altogether. She said the medicine had acted like a charm; under its influence her bowels had moved every day, her appetite was good, her digestion much improved, that the medicine, unlike other similar preparations, caused no pain to hemorrhoidal tumors, that it left the bowels lax, as she had only to take it once or twice a week. She had given up her trip to the springs. She left the office with a prescription for four times the quantity of formula No. 2, given her at her earnest request, as she said she wanted to keep plenty of it in the house in case she needed it again.

I consider the above very remarkable, the case a bad one, the remedy a powerful and sure one, as she had tried all else without even relief. I have had no failures from cascara sagrada where the article was a genuine one. I would, however, warn the profession against spurious and cheap preparations. There is a house in the west, and one in the east, that make and sell cascara sagrada much cheaper than Parke, Davis & Co., but it has failed me in its action, having no comparison whatever to Parke, Davis & Co.'s preparation. I have warned my druggist against any cheap preparation of it, telling him I would rather pay higher prices and get the best. I repeat, that from my experience with it, I cannot believe that a genuine article of it will ever fail to relieve constipation or lack of glandular secretion, laxity or want of tone in muscular tissue, and in inflammatory conditions of mucous surfaces.

REPORT 43.*—I can sincerely say that I have never met with a safer remedy than this for constipation. I have adopted it in my practice, and think as much of it as I do of any officinal drug. It could not be bettered. I admit that when I first took it up there were doubts in my mind as to its utility, but I have submitted it to the best tests, and it stands proven good. It is recommended in constipation where the secretions are deficient, but I employ it whenever I have a case of constipation to deal with. One case among many in which I used it was as follows: A., æt. 20, housekeeper. Had been constipated for several years. Gave cascara, a teaspoonful every morning on an empty stomach. Result, after taking six ounces, re-establishment of perfect action of the bowels. No return of the constipation.

* Willard H. Morse, M. D., Hinsdale, N. H., in Therapeutic Gazette, 1881, p. 83.

REPORT 41.—*There has probably been more written about cascara sagrada than any other new remedy introduced within the last decade. Since the drug came into general notice a few years ago, it has won a multitude of friends by its mild, pleasant and faithful action. Thousands of persons reclaimed from the miseries of habitual constipation will say that the name cascara sagrada is not a misnomer, for truly it is a bark held sacred by them.

With this encomium as a preface, I beg to intrude a few remarks in a general way with regard to this remedy. But before entering upon the subject I shall, with due respect to the contributors of this journal and with the permission of the patient editor, offer the following strictures: It has always been a lamentable feature of the Gazette to contain reports of experiments written not only before the investigator had tried a given remedy in a sufficient number of cases to enable him to draw an intelligent, trustworthy conclusion, but before the tests had been carried to an issue in any case. For instance, in a hasty, premature report of a case we frequently read at the close: "The patient is still under treatment and is doing well;" or, "There has been marked improvement, and I believe the patient will ultimately recover." What medical science demands are facts, which in most instances, and particularly in therapeutics, cannot be furnished until after a long-continued, patient, and pains taking investigation, extending, perhaps over a period of years, and would include in the material for the fact the accumulated results of many hundreds of carefully tabulated cases.

I am loath to confess it, but it is evidently true that many physicians are not satisfied with the notoriety secured to them by the practice of their profession, but are impelled, by some innate *vis a tergo*, to rush into print whether they have anything to say or not.

Hoping thereby to gain the confidence of my critical readers, for I know every word is carefully and justly weighed by hundreds of silent men, I will state that I have been prescribing cascara sagrada for two years, and this is the first article I have prepared for publication relative to my experience with the preparation.

From the numerous cases that have come under my observation, I can cite but one in which the remedy failed. It is not claimed for the preparation that it is infallible, but it is an indisputable fact that it is reliable. I shall now mention a few reasons why the drug occasionally fails to cure or relieve, at least the explanations I shall assign will hold good in the majority of instances where it does not succeed. Not as a champion or defender shall I mention them, as there is no occasion, but hoping to furnish additional information for the busy practitioner who needs all of the practical suggestions that can be offered, I shall designate a few causes for dissatisfaction:

In the first place, when cascara sagrada is prescribed, it should be aided by all of the collateral measures within reach. A favorite case with many for a trial of the remedy is one of twenty-five years' standing, and due to a severely sedentary life. If the prescription is not followed by a complete and permanent recovery after a trial of a very few weeks, the preparation is declared to be of no value. In the name of common sense I ask who could justly demand a cure without a removal of the cause, the administration of adjuvant remedies and the adoption of various obviously necessary remedies?

One physician says that "It (cascara sagrada) seemed to have a cumulative effect, which was very injurious. But when it broke loose it did so with a vengeance." It is evident in this case that the management was very much at fault, and contrary to the course that would have been pursued had our worthy brother been better informed as to the physiological action of the drug. The profession should be thoroughly impressed with the fact that its principal action is that of a tonic to the bowels, and that as such it produces the results observed.

Producing its effects by means of its tonic action, it is evident that preparatory treatment is indicated in most cases, and how frequently is it employed? The most essential measure in this preliminary course is, probably, the administration of a saline cathartic. By this means the bowels will be prepared for the prompt and full action of the remedy.

The doses given are generally too large, and this fact is worthy of emphasis. I am frequently brought in contact with competent medical gentlemen, men who stand high in the profession, and the experience of all coincides with my own, viz.: that the best results are obtainable when the fluid extract is given in doses of ten to twenty drops, which course is clearly indicated by the recognized physiological action of the drug.

* Ray R. Mitchell, M. D., Millersburg, Ohio, in Therapeutic Gazette, 1881, p. 285.

In many cases where the remedy does not succeed it is prescribed at a time when it cannot best serve the purpose. Observation has shown that it is best to administer the preparation one-half hour before each meal.

One fruitful cause of failure is that imitations of the genuine article are palmed off by designing, conscienceless parties as the true cascara sagrada. It may be asked, "Who is responsible for the introduction of these vile stuffs?" It must be charged in great measure to the heedlessness and carelessness of wholesale druggists. With very many of these the handling of a preparation hinges upon the question of profit rather than upon that of purity and reliability of manufacture. They will claim that they are under no obligations to discriminate in their purchases; that their business is to keep what may be in demand. But is this true? Surely they should bear their share of the responsibility. In justice to their patrons, the people, they can only keep that which is unquestioned and unquestionable. Since they are the first to take the product from the manufacturer, they should be the first to challenge its rights to notice and confidence. This, in the majority of instances, they do not do.

Retail druggists, placing confidence in the wholesale dealer, purchase without thought or question as a rule, and supply the physician. It is asserted that it is the doctor's business to see that he procures reliable medicines. That is very true, but how can he recognize the false if he does not have access to the true? The latter for obvious reasons is very frequently withheld from him. The gains are not so great in buying and selling the worthy article.

But I do not wish to defend the practitioners' culpable gullibility. I have known physicians who gave no thought as to the name and character of the manufacturer, or to the reliability of the preparation. But if it had the regulation color it was prescribed unquestioned, and if failure ensued, the same was credited to the violence of the attack or to the downward tendency of the disease. These very men are generally the first to cry down new remedies introduced by reliable manufacturers after they have been recommended by able men in the profession to be preparations of special therapeutic value.

The only remaining cause of failure to which I wish to call special attention, is that too much is expected of it, or any other new remedy, by many of the more conservative physicians. The test by which they propose to determine the relative value of a preparation is extreme, and therefore unjust. The article is prescribed in a very few cases, perhaps but three or four, and if it does not give complete satisfaction in every instance, it is condemned to probably unjust retirement. While under trial the medicine is necessarily subjected to the numerous disadvantages surrounding a new arrival and a stranger. It is obliged to compete with the old, well-tried, favorite remedies with which the profession is familiar, and whose properties and peculiarities they understand so thoroughly. They will not admit it, but many practitioners will require the recently introduced preparation to cure where the old favorite has failed. How manifestly absurd are such inconsistencies.

REPORT 45.*—The broad and universal grounds which we, as practitioners of medicine, occupy, stimulates us to push our researches in every direction, in order to extend our area of therapeutical knowledge. In no way can our efforts be spent to better advantage, than in that of trying to enlarge our list of efficient remedies. It is our privilege and duty to use all means, whether physical or moral, which the indications of science or the test of experience point out as the most successful in the removal of disease. Of the physical means, we, as regular physicians, have the privilege of selecting anything which the material world affords. We may use a substance of any form, whether solid or fluid, or from whatever kingdom of nature it may be derived, whether animal, vegetable, or mineral.

The article that I have selected, and concerning which I propose to make a few suggestions, is cascara sagrada, the new and valuable remedy for habitual constipation. This remedy, which has been brought prominently before the profession by Parke, Davis & Co., of Detroit, Michigan, and its remedial properties tested by several eminent physicians of the west, has not received the attention which its merits deserve. The use to which I think it is especially adapted is as an aperient, or in larger doses, cathartic, not interfering with digestion, in habitual constipation and its resultant evils. The numerous symptoms of abdominal congestion which are frequently produced, or at least maintained, by constipation, and the after effects on individual organs—liver, spleen, stomach, etc.—are found by experience to be not infrequently remarkably improved when the constipation is removed, but entirely cured. For this purpose the cascara sagrada is found to be an invaluable remedy.

In a country like ours, where perhaps three-fourths of all the diseases which we are

* I. A. Moody, M. D., Junction City, Ohio, in *Therapeutic Gazette*, 1881, p. 370.

called upon to treat, are derived, either directly or indirectly, from a morbid condition of the liver, it would be well to pay the strictest attention to every remedial agent which may, in the least, promise to be serviceable in those cases depending upon torpidity of the liver and habitual constipation. I do not expect that the cascara sagrada would meet successfully many of the symptoms growing out of the retention of biliary matter in the circulation; but that it will remove that distressing condition of system caused by habitual constipation, to my mind will scarcely admit of doubt. As to its mode of operation, I do not think it acts directly on the liver, as mercurials, podophyllin and some others do, but by its acting as a healthy stimulus upon the mucous membrane of the duodenum, thus exciting the liver to increased action through the medium of its excretory duct. Other theories might be advanced concerning its mode of action, but the limits of this paper will not permit. Not wishing to occupy too much space in your valuable journal, I will conclude my remarks by reporting a case, in which I used the cascara sagrada with most satisfactory results:

Mrs. C., aged about 50 years, light complexion, medium height, and a resident of our village, has been for years a constant sufferer, from constipation of the bowels, to such an extent as to be under the necessity of taking physic every few days. The bowels would remain without motion for a whole week, unless a purgative was used, in which instance an unusually large dose was required. All the cathartics were tried that seemed to promise any good in removing the costiveness. She would use one article until the system lost its susceptibility of being acted upon by it, and then she would resort to another with the same result. Thus she continued until she applied to me for treatment, February 10th, at which time I commenced the use of cascara sagrada. On the day she took the first dose, she had had no operation for three days. In the afternoon of that day she took a teaspoonful of fluid extract cascara sagrada, and repeated it in four hours. The last dose was followed in a short time by a free evacuation of the bowels, to the great joy and satisfaction of the patient. She continued to take a teaspoonful night and morning, until the most complete regularity of the bowels was established. The pain of stomach and bowels entirely subsided, and her general health is much improved. She is of the opinion that the cascara sagrada is almost a specific in habitual constipation, and she keeps a supply of it in the house to use as occasion requires. This is one of several cases of the kind, in which I have used this remedy with the most satisfactory results. I will close this paper by merely expressing my ardent wish that members of the profession will not forbear making a test of the merits of this drug.

REPORT 46.*—This is not intended to be a treatise on constipation in general; therefore I shall not take up space in enumerating its various causes and forms. My object is simply to communicate my experience in the treatment of this common trouble in its most common form. As we generally meet with it in practice it is due to no one of its etiological causes singly or separately, but to their combined action. Whether originally due to muscular torpor of the intestine or to suppression of the habit of regular evacuation of the bowels, or to deficient glandular secretion, etc., at the time the physician is consulted, all three of the above principal causes are generally in full operation, with sometimes one or the other slightly predominating, but not commonly to such an extent as to call for isolated treatment. The latter must therefore of necessity be directed against all of them. And since both muscular and glandular torpor are due to deficient innervation, it is plain that by increasing the latter and inducing patients to correct neglectful habits we ought to succeed in curing chronic functional constipation. And yet what disease is there that more obstinately defeats our endeavors? We prescribe for our patient a combination of drugs carefully selected for their specific physiological effects, long since fully proven by experiment and accumulated experience. Then we await results. At first the report is excellent. The disease seems completely under control of our remedies. The functions of the bowels are performed faultlessly, and our patient's general health improves *pari passu*. But disappointment soon follows. The patient soon discovers that he is not being cured, and that the effect of the medicine is but transient. As soon as he omits the medicine he relapses into his former condition. Nay, worse! He finds that from time to time he has to permanently increase the dose in order to obtain the wonted effect until finally he is converted into an inveterate pilulophage, a miserable slave to his pill. Am I wrong in saying that this is the history of the great majority of patients that have become subjects to chronic constipation? Forensic reasoning seems to be entirely at fault, and the patient himself, without the doctor's aid, soon plunges into the wildest experimental empiricism, trying every patent medicine within his reach, and generally with no better luck. I could speak of no more cheerful

*Ralph D'Ary, in Therapeutic Gazette, Sept. 1885.

success in the matter of treatment until I had had some experience with cascara sagrada. At first I was much disappointed in its use, for I could see no advantage over older and better-tryed drugs, and several decided disadvantages, especially the slowness of its action and the peculiar soreness of the bowels caused by it, and which is often quite persistent. It would be useless to detail my numerous experiments, and I will simply state that I became convinced that cascara, alone and uncombined, in my practice had no very decided results. Its action somehow always seemed to fall short of the desired end. Gradually I came to the conclusion that its action was truly elective of the bowels, but that it ended there, and that in order to make a complete remedy of it, it needed to be combined with other drugs that would act principally through the nerve-centres, and thus give both a central and peripheral impulse of innervation of the intestinal canal until normal function was established. The following formula was the final result of my experiments:

R Ext. cascara, gr. iv;
 Ext. nux vomica, gr. $\frac{1}{2}$;
 Ext. Belladonna, gr. $\frac{1}{4}$;
 Resin euonymus,
 Resin xanthoxylum, \mathfrak{ss} gr. iii;
 Oleoresin capsicum, gr. $\frac{3}{4}$;

Make fifteen pellets.

These fifteen pellets were intended to represent the ordinary maximum dose if taken at once. I have now prescribed it over three years. Part of my experiments were conducted with a combination of fluid extracts of the above drugs of corresponding strength of dose. The object of subdividing the ordinary maximum dose into fifteen pellets was a two-fold one: firstly, to allow the patient to find as nearly as possible the exact strength of dose needed, and, secondly, to allow of a very gradual lessening of the dose. For I am happy to say that in the above formula I have found the cathartic or laxative that would admit of gradual lessening instead of the usual tendency to increase the dose. And herein lies its whole value and my excuse for calling attention to it. By its use, where not contraindicated by some form of spinal or other disease, one may look forward confidently to a permanent cure of chronic functional constipation. We are not always privileged to retain patients under observation for the length of time necessary to complete a course of treatment, even where the latter is faithfully persisted in by an intelligent patient, and sometimes because the patient gets tired of prolonged systematic attention to his own case, and drops or hopelessly neglects the treatment. For these reasons many of my patients for whom I prescribed the above formula escaped my prolonged observation, and I am left in the dark concerning the effect of my prescription; but I can truthfully say that of those who under my observation completed their course every one was cured. Failures, no doubt, will not lack in the future, and may have been in the past; but the latter have not come to my knowledge, and I therefore regard this method of treatment as a success. I generally give the following directions to the patient: Take five pellets at night only, increasing the dose by one or more pellets every night until the action is sufficient. Then continue to take this number (whatever it may be) every night for one week, if possible. For the next week lessen your dose by one pellet, and so forth, lessening the nightly dose by one pellet for each succeeding week. If at the end of this course constipation still persists, begin again with about five pellets less than at first, going through with the same gradual decrease. A cure may confidently be looked for.

I will now give a few selected typical cases:

Case 1.—Mrs. —, aged 26. Constipated since early childhood. Never remembers having had a passage more frequently than once in five or six days, and generally with much pain, causing tears.

Diagnosis: Functional constipation.

Complications: Prolapsed uterus, with retroverted fundus, lying in curve of rectum, causing mechanical obstruction. Hepatic torpor.

Treatment: Pessary and uterine tonics. Euonymus for liver. No improvement of constipation after one month's treatment, although all symptoms referable to uterine displacement have disappeared, some of them having been of uncommon severity. Now I prescribed the cascara formula. The patient began with ten pellets. Was cured in ten weeks. This was in July, 1882. Patient has remained well since that time, with occasional relapses, not more than six times, necessitating one, two, or three small doses.

Case 2.—Young lady; age, about 24. Obstinate constipation for several years. Confirmed invalid for the last two years, having spent seven months consecutively in bed. Now

just able to sit up, resting the body sideways in a rocking-chair. Able to walk, but sways from side to side, causing her to run against people or off the sidewalk. Had been treated all along for "rheumatism" of the back. After careful examination, on Nov. 20, 1882, when she first applied to me, I made the following

Diagnosis: No rheumatism. Advanced caries of lumbar vertebræ, causing deep lumbar lordosis, with compensatory kyphosis superiorly. Prolapsed and retroverted uterus, lying on rectum.

Treatment: Pessary and plaster jacket; tonics. One month later patient's general condition much improved, except the constipation, which is very obstinate. Prescribed F. E. cascara and berberis aquifol. Patient objected that she had taken the cascara for months in increasing doses without any benefit, except very irregular temporary effect. This patient was a very intelligent lady, seconding my every endeavor, and patiently trying everything prescribed. I therefore thought this a good opportunity to test my idea that in most cases the cascara needed a *vis a tergo* of innervation, starting from the nerve-centres. In order to make sure, however, that satisfactory results were not due merely to her generally improved health, and to removal of the obstruction caused by the pressure of the uterus on the rectum, I first persuaded her to give the cascara another fair trial. This she did persistently for one month without benefit. It did not even produce satisfactory effect from dose to dose, although as much as forty minims of the fluid extract was taken regularly at night. Now I prescribed the above pellets. The result was all that could be wished for. In spite of her very sedentary mode of life, that of dress-making, which she had resumed after wearing the plaster corset for a while, she had satisfactory action of the bowels, which continued under gradually lessening doses of the cascara compound formula. She wore plaster jackets for seventeen months, when she discontinued them on my advice, as she was then cured. She had to resort to cascara compound several times on account of relapses, but is now completely cured. Discontinued the cascara compound pill long ere the caries was cured.

N.B.—I have repeatedly prescribed the above cascara compound with the best possible results where cascara alone had been well tried and set aside by patients as unsatisfactory.

Case 3.—Gentleman about 50. A case of male hysteria, complicated, or perhaps I should rather say caused, by some obscure central affection of the nervous system. History unreliable, because of the patient's morbid inclination to magnify every trifling feeling of malaise until it hysterically grew into seemingly formidable attacks, which, however, generally passed away without materially prostrating the patient. Every attack, however, was ushered in by an attack of constipation. Then suddenly complete apepsia would set in, with vomiting of the ingesta, maniacal excitement, loss of vision, insomnia, etc. Once hæmaturia occurred during an attack. These attacks lasted sometimes thirty-six hours. In order to avert them I several times administered two $\frac{1}{2}$ -grain pills of croton oil, which seemed to have no effect whatever, evacuation occurring in about twenty four hours, and not at all as thoroughly as one would expect from the dose. The intestinal torpor seemed at those times absolute, the bowels not moving until after the attack in general had passed away. Sedatives and narcotics in heroic doses seemed as useless as the croton oil. The warm bath was not attainable in the patient's circumstances. I finally came to the conclusion that if I could exert a continuous influence over the intestinal functions the attacks would gradually disappear. The cascara compound formula was given him. He began with ten pellets, following directions faithfully and anxiously. The result was a regular normal action of the bowels, with disappearance of the severest symptoms at once. In a couple of months the patient was able to resume his avocation (designing and pattern-making), which he had been unable to follow for over a year. The number of pills had been reduced to two, when the patient passed from my observation. I strictly enjoined him to continue taking two pills at night, in order to keep his mind busy with them, as he regarded them as his panacea.

Case 4.—Retired farmer; age, 65. Very debilitated from alternate obstinate constipation and violent diarrhœa, from the action of cathartics used by him to relieve the former. There was no medium for him, no matter how he tried to arrange his doses or what he took. Had suffered in this way for several years. I found no complications except that of equally irregular hepatic action, stools being alternately clay colored and dry or grass-green and copious, ushering in the attacks of diarrhœa.

Diagnosis: Functional chronic constipation from perverted intestinal innervation, causing lack of tone and extreme irritability on excitation by drugs.

Treatment: Tried cascara alone, in small and cautiously increased doses. Result

was very satisfactory, the patient being delighted that he had at last found a remedy that would give him a natural evacuation. Complained of soreness of the bowels, but said he did not mind it. Continued the cascara for one month, then began to decrease his dose,— 15 minims nightly of the F. E. When he had come down to 8 drops the constipation set in as obstinately as before. Put back on $\frac{1}{4}$ drachm, as before, decreasing more slowly, and taking six weeks to reduce the dose to 8 drops. Again the same unsatisfactory result. Now I gave him the above pellets, with usual directions. Eight weeks later he presented a markedly bright and vigorous appearance and pronounced himself cured. Yesterday (July 23, 1885) I saw him, six months after he had taken his last dose. He reported that he felt well, and bowels regular without relapse. Is laboring on his farm, which no doubt helps to keep his alvine functions normal.

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