

A practical treatise on the peculiar tonic & stomachic properties of the round-leaf cornel, (*Cornus circinata*) : particularly in cases of indigestion of weakly & elderly people, and for local and general debility, the consequences of excessive indulgence in spirituous or vinous liquors, savoury dishes, or a long residence in a tropical climate, and for the breaking up the system, termed the climacteric malady : with directions as to the choice of articles of diet, etc. etc. : to which is added, an account of the antispasmodic properties of the lobelia inflata, with directions for its exhibition in spasmodic asthma, hooping cough, St. Vitus's dance, etc. / by J.H. Robinson.

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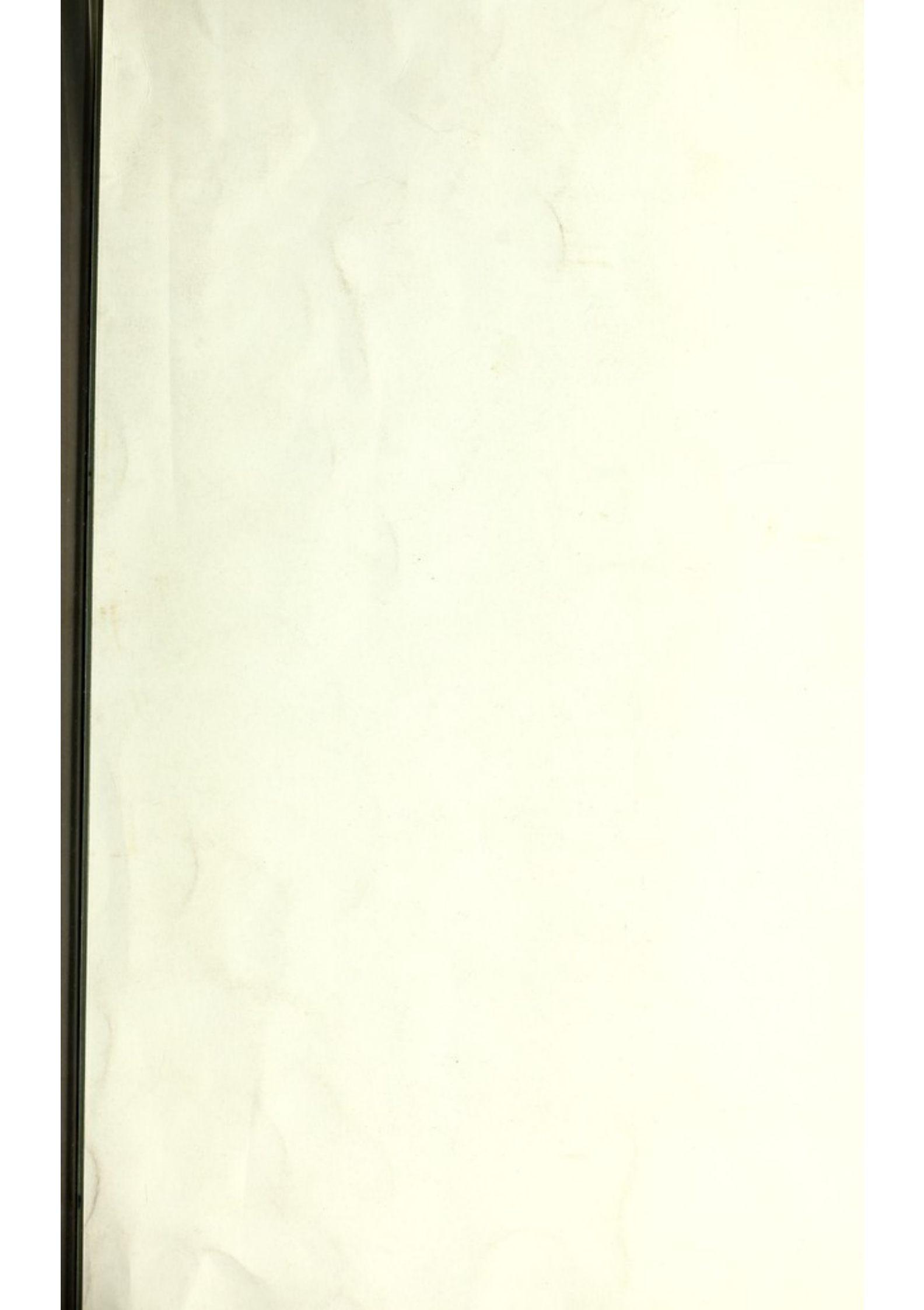
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(14.)
A

PRACTICAL TREATISE
ON THE
PECULIAR TONIC & STOMACHIC PROPERTIES
OF THE
ROUND-LEAF CORNEL,
(*CORNUS CIRCINATA*,)

PARTICULARLY IN CASES OF INDIGESTION OF WEAKLY & ELDERLY PEOPLE;
AND FOR

LOCAL AND GENERAL DEBILITY,
THE CONSEQUENCES OF EXCESSIVE INDULGENCE IN SPIRITUOUS OR VINOUS LIQUORS,
SAVOURY DISHES, OR

A LONG RESIDENCE IN A TROPICAL CLIMATE;
AND FOR THE
BREAKING UP THE SYSTEM, TERMED THE CLIMACTERIC MALADY:

WITH DIRECTIONS

AS TO THE CHOICE OF ARTICLES OF DIET, ETC. ETC.

TO WHICH IS ADDED,
AN ACCOUNT OF THE ANTISPASMODIC PROPERTIES
OF THE

***Lobelia Inflata*,**

WITH DIRECTIONS FOR ITS EXHIBITION IN SPASMODIC ASTHMA, HOOPING
COUGH, ST. VITUS'S DANCE, ETC.

BY

J. H. ROBINSON, M. D.

SECOND EDITION.

LONDON:

SOLD BY S. HIGHLEY, MEDICAL BOOKSELLER, FLEET STREET,
AND WEBB STREET, BOROUGH.

1829.

has been found very superior to any of the class of tonics in general use, for invigorating the digestive organs, and thereby improving the general health, and prolonging the lives of the debilitated, from age, intemperance, a residence in an unhealthy climate, or from any other cause.

I have the honour to be,

Sir,

Your very obedient Servant,

THE AUTHOR.

December 22, 1828.

P R E F A C E.

Those who are only acquainted with the class of medicines termed tonics, or stomachics, from the accounts given of them in books, will suppose that it is already sufficiently numerous; but those who have had the opportunity of fairly estimating their value by long experience, admit that they have often met with cases of debility in which they all failed; some by disordering either the stomach, intestines, brain, or some other organ. In giving publicity in Europe to the peculiar tonic properties of the round-leaf Cornel, which it has so uniformly evinced in cases of debility, in the practice of some of the most eminent physicians of the United States of America, the author is actuated by a desire to benefit those weakly and elderly people, to whom he is thoroughly convinced it will prove a great blessing. From a long extensive practice, in which he has witnessed

the effects of all the varieties of the cinchona, (Peruvian bark) used in medicine, the preparation of the bark, termed quinine, and the sulphate of quinine, cascarilla, colombo, angustura, quassia, &c., he can positively assert that it is, as a tonic and stomachic medicine, in the cases of debility described in the following pages, very superior to either of them. In noticing the cases of debility to which this peculiar tonic is applicable, the auxiliaries which in some cases may be necessary to expedite its general tonic effects on the system, or to remove local malady, in the description of the cases of debility, and in the directions as to regimen, with the view of promoting its effects and of rendering them permanent, the author has not been in the slightest degree influenced by any of the modern theories, as hepatic derangement, chronic inflammation of the mucous membrane of the stomach; but has been guided only by the knowledge he has acquired by long experience and observation. To the theories of medical men of little experience, frequently formed in the closet for the mere sake of notoriety, or of advertizing themselves as discoverers of the

cause or nature of some prevailing malady, many thousands have been annually sacrificed both in North America and in Europe. That the round-leaf Cornel may maintain its character as an efficacious and mild tonic, more congenial to the human frame than any of the class of tonics employed by the practitioners of Europe, or, as observed by one physician who had very extensively prescribed it, the "natural tonic of the human stomach," the author has intentionally repeated his opinions, cautions, &c. by way of elucidation; but notwithstanding such tautology, so anxious is he that its character may not suffer from an improper exhibition, as in cases of indirect debility, or indigestion from increased excitement of the nerves, &c. of the stomach, he again repeats, that it is only to be administered in cases of direct debility, or those of apparent excitement evidently arising from debility of one or all of the digestive organs. To those who, by excessive indulgence, or by a residence in a tropical climate, have impaired their constitutions, the author has no hesitation in asserting positively that it will prove a valuable tonic as well as to those whose systems are giving

way to the operations of time, in whose fabric some local dilapidation which so frequently precedes a general breaking up of the system, termed the climacteric disease, has taken place, its judicious employment will act as a powerful prop, and prolong life many years, by invigorating the stomach and brain. With the view of completing his object in England, the author has directed the American agent of Messrs. Reece and Co. of the Medical Hall, 170, Piccadilly, London, to send them a quantity of the extracts of the round-leaf Cornel, most carefully prepared by an eminent American chemist, and to desire him to supply the medical profession and other applicants with it, at the lowest price possible. After that quantity has been used, its character as a tonic will be so fully established, it will no doubt be regularly imported by the American merchants of London.

The author has omitted in this work the cases of debility in which the round-leaf Cornel was successfully administered by Professor Ives, Dr. Morson, Dr. Dubois, the editors of the Philadelphia and New York Medical Journal, and himself, because the patients, being residents of North America, his readers

in England must necessarily take them on his representation, and because in general such evidence in favour of a medicine is generally over-coloured or entirely fabricated; but those, who may wish to have a confirmation of the high character he has given it by cases, he refers to the New York Medical and Surgical Journal (which is regularly imported by Mr. Miller, American bookseller in Pall Mall, London) for further accounts of its peculiar tonic properties, to the American Pharmacopœia, and the American Pharmacologia, in which it is also highly recommended as a powerful and peculiarly mild tonic—i. e. strengthening the stomach without stimulating it.

Since the sheet of this work was printed which contains an account of the different preparations of the round-leaf Cornel, the Author has seen a beautiful preparation of it, termed the Essential Salt of the round-leaf Cornel, which contains in a concentrated state all the essential medicinal virtues of the round-leaf Cornel. The dose is from five to six grains, made into pills, two or three times a-day. Two drachms of this Essential Salt dissolved

in a bottle of good Sherry or Cape Madeira form a most excellent tonic wine, of which three-fourths of a glass may be taken two or three times a-day. This preparation is a more efficacious tonic and much more grateful to the stomach than the sulphate of quinine, or any other preparation of bark.—See page 99.

The author has added an account of the Lobelia Inflata, an article which has within the last two years been very successfully administered by several eminent physicians of New York and Philadelphia, in cases of spasmodic asthma, whooping cough, Saint Vitus's dance, and other nervous and spasmodic affections. Of its beneficial effects in asthma, the author speaks from experience, but in the other complaints for which it is recommended, he has not given it a trial. The composition of the herbs termed herb tobacco with the Lobelia Inflata, smoked in the same manner as tobacco, he has found much more efficacious in subduing the irritation and spasmodic constriction of the chest, in promoting expectoration, and speedily terminating the asthmatic fit.—See Lobelia Inflata, page 110.

March, 14th 1829.

ON THE
MEDICINAL AND CHEMICAL PROPERTIES

OF THE
CORNUS CIRCINATA,

OR
ROUND-LEAF CORNEL.

THE genus *Cornus* is distinguished by the following characters: Flowers, sometimes aggregated in a four-leaved involucre. Calix, four-toothed. Petals, four, small, broader at the base. Drupe, inferior, not crowned by the calix. Nut, two-celled, two-seeded.—*Nuttall*.

The following are the species: 1. *canadensis*—2. *florida*—3. *circinata*—

4. *sericea*—5. *asperifolia*—6. *striata*—
 7. *sanguinea*—8. *alba*—9. *paneculata*—
 10. *alternifolia*. Of this genus there are
 also two other species in Europe and
 Asia, and two which are common to the
 old continent and America.

The *round-leaf Cornel* is designated
 in many parts of America by the familiar
 appellations of *mountain willow* and
white-rind Cornel. It no doubt de-
 rived its name from the shape of its
 leaves, (*circinatus*, rounded) as they
 are more round than those belonging to
 the other species.

This species of *Cornel* appears, from
 the above description, to be connected
 with a numerous kindred of plants, be-
 longing to the class *tetrandia*, and order
monogynia. It is not remarkable for its
 dimensions or beauty. It inhabits the

sides of rivers ; but is partial also to elevated and mountainous situations. Its localities are pretty numerous ; it dreads, however, the coldest latitudes, as much as it dislikes the warmest. It may be found in many parts of that extensive tract of country, extending from Canada to Virginia. It is a shrub of eight or ten feet in height, and its foliage is not particularly thick. Its leaves are nearly round and broad, white and downy beneath, and waving at the edges. Its branches are rough and warty. About the middle of the year, it produces a small white flower, and berries of a blue colour. It is distinguished by Pursh in the following scientific language : “ *Ramis verrucosis, foliis lato-ovalibus, acuminatis, subtus albo tomentosis, cynus patentissimus.*”

The branches and stalks, when prepared for pulverization, have rather a quilled appearance, whitish internally, and possessing a dark epidermis. After the bark has been pulverized, it assumes a light yellow colour, has an aromatic flavour, and a pleasant astringent, and slightly bitter taste.

This species has not till within these few years attracted much attention from the Faculty. It is briefly noticed in the "Pharmacopœia" of the United States as a tonic, and is very cursorily alluded to in some of our most valuable works on *Materia Medica*. From various circumstances, with which I have become acquainted, in connexion with the history of this shrub, I am induced to believe that Professors Monson and Ives, of New Haven, are entitled to the credit

of having first introduced this valuable tonic into *general* practice. Recently, its tonic virtues have been noticed by the learned editor of “The American Pharmacologia,” and mentioned by him in the most decided terms of approbation. Like many of our most valuable medicinal agents, its properties were discovered by mere accident. The following interesting account of its discovery and early use is related by the worthy and much-respected professor of medicine in Yale College : “The *Cornus circinata* was formerly kept as a nostrum by a person from Canada, who used it with success in New Haven in 1795. A patient affected with a diseased liver was attacked with indigestion with diarrhœa, which it was not in the power of the physicians to cure. At the request of the possessor of this

nostrum, the physicians consented to give it a trial, and the complaint was very much relieved by its use." "These facts," continues Dr. Ives, "I had from Dr. Æneas Monson. From the use of the remedy in this case, Dr. Monson entertained a very high opinion of the article, and requested me to inquire for it. In 1803 I went several times upon the mountains, in quest of the shrub. By an old man upon the mountains in Hamden (a place in the neighbourhood of New Haven) I was directed to the spot, from whence it had been gathered by the empiric. I found the plant described in Willdenow, under the name of *Cornus circinata*. Its locality is on the Whenstone mountains, on the north western aspect, among the broken rocks, and is found in this situation upon

the east and west mountains in this place, (N. H.), locally associated with the *Sambucus pubescens*, and in abundance."

My own experience has afforded a very extensive knowledge of the therapeutic character of the *round-leaf Cornel*. In my own case, such was the beneficial operation of the remedy, and so high is the opinion entertained by several eminent practitioners of its tonic powers, that I shall never hesitate to prefer it to any other stomachic or tonic medicine, in all cases of indigestion and affections of the bowels, and other complaints arising from debility, and attended with obstruction in the liver, &c.

Shortly after my arrival in America from the West Indies, I was seized with a violent and distressing disorder of the

digestive organs, which, from the appearances of the evacuations, the state of my liver, and various other circumstances, I was induced to believe, originated in some derangement in the biliary apparatus. When the disorder of the stomach, &c. first made its appearance, I neglected all medical treatment ; but after some time had elapsed, I was obliged to resort to an extensive use of cathartics, alteratives, and tonics ; but they produced temporary alleviation only. In fact, the powers of the far-famed colombo and bark were never found more inefficient. My mind now became a prey to despondency, and my spirits began to lose their natural elasticity. From the sudden attacks of the disease, I could never enjoy any necessary recreation, or find any satisfaction in the society of friends. In this dread-

ful situation, I consulted Professor Ives, and was advised by him to try the alkaline extract of the *round-leaf Cornel*. I did so, and I am happy to state that the most satisfactory results attended its employment; for it speedily corrected the disordered condition of the biliary apparatus, and of the whole alimentary canal, and restored me to perfect health.

In other cases of a similar nature, the Doctor has used it with unvaried success. In cases of indigestion, either arising from debility of the stomach, derangement of the liver, or of the duodenum, or chronic looseness, to which those who have resided in the East or West Indies, or have indulged too freely in libations of wine or spirits, or in savoury dishes, and in other enervating excesses, the alkaline

extract of the *round-leaf Cornel*, in the form of pills, and the tincture made with it, have exhibited tonic and restorative powers very superior to any other medicine; and instead of producing a sense of fulness or nausea, the powder, decoction, alkaline or simple extract, and the tincture, are particularly grateful to the palate and stomach; and from this circumstance, and its uniform tonic or strengthening effects, it appears to be the “*natural* tonic of the human stomach,” not, like the stimulating tonics, forcing it into action by merely operating on the nerves, and which, by continued use, ultimately exhaust its powers, but by bringing into action the *motific* powers of its *muscular* fibres, and by promoting a healthy secretion of the gastric juice. The Doctor also gives the

preference to this article in the diarrhœa attendant on the last stage of pulmonary consumption, as well as in that which occurs in the latter stages of typhus, particularly in those cases which are liable to terminate in hemorrhage from the bowels.

This distinguished practitioner has derived considerable advantage from it in those chronic affections of the liver, accompanied with indigestion, flatulence, and swelling of the legs, when "thirst is present, and liquids oppress."

In rickets, and the relaxed or enlarged bowels of children, the same gentlemen have used it with decided benefit. Dr. Ives gives his testimony to the virtues of this remedy by observing, that "for a number of years he has used it in lieu of the Peruvian bark."

In dysentery, after the proper preli-

minary steps have been pursued to lessen the inflammatory state of the bowels, and when the disease has assumed a chronic character, the simple extract will be found highly efficacious. In confirmation of this, we possess the pleasing assurances of Dr. Ives, of New York. He remarks, with regard to its general exhibition in his practice, that "his experience in the use of the *round-leaf Cornel* has been sufficient to persuade him that it is a pleasant and powerful tonic, and that there are cases in which it is preferable to any other vegetable belonging to the class of tonics."

Being under the conviction that it possesses highly tonic properties, and feeling satisfied that it can be retained more easily upon the stomach than the Peruvian bark, or the sulphate of

quinine, I conceive that it may be used with superior advantage, as a substitute, in the various forms of fever to which that heroic medicine may be suited. This remark is particularly applicable to the cases of children, for the reasons which I have just assigned.

In erysipelas, when marked by a feeble and typhoid state of the system, I have no doubt this bark will prove serviceable, especially in this country, as the disease frequently proceeds from the depraved habits of debauchees and drunkards. From these causes the stomach is generally found extremely irritable; and as this species of Cornel possesses a more aromatic flavour than the Peruvian bark, I have uniformly found it to sit more pleasantly on the stomach.

In cases of debility, or relaxation of

the uterus, or vagina, attended with a sensation of falling down of the uterus, or with actual prolapsus, or fluor albus, the tincture made with the alkaline extract is a most valuable remedy; and it is particularly worthy of notice, that from what is termed its deobstruent effects on the womb, *i. e.* its cleansing quality on the walls of the organ, its effects are not only durable, but they clearly prepare it for impregnation, and by improving at the same time the general health, it is an excellent remedy for barrenness.

In cases of dropsy it is a very valuable tonic, to accompany diuretic and purgative medicines.

But the *round-leaf Cornel* has not evinced remedial effects merely when exhibited internally. Dr. Ives, of New

Haven, assures me, that he has used it “as an external application for gangrene in preference to the Peruvian bark, and for ulcerated and spongy gums.” In such cases, the Doctor adds, “it has in my hands succeeded better than any other article.”

Through the friendly exertions of Mr. Carpenter, a scientific chemist of St. Croix, and a gentleman well known to the medical faculty from his interesting analyses of various substances, I have been enabled to obtain a knowledge of the constituent parts of the *round-leaf Cornel*. From his note of the analysis, the following observations have been culled :—

With *water*, the bark produces a deep red colour.

Proof spirit forms with it a beautiful

tincture, and dissolves the largest portion of the active principles: it may consequently be considered as its best menstruum. The tincture furnishes, on evaporation, a *dark red extract*, which possesses, in a concentrated degree, all the bitterness and astringency of the bark.

To *alcohol* it imparts the same appearance as to water. The alcoholic solution, when concentrated by evaporation, is rendered milky by the addition of water, and a precipitate is formed. The *extract* digested in ether is partially dissolved, and the solution, on evaporation, furnishes a compound of resin, oil, and a small portion of a peculiar saline matter. This compound appears, from its sensible characters, to constitute the most active portion of the article.

The extract, made by evaporating the cold infusion either of the root or of the small branches of the *round-leaf Cornel*, in water, by steam, or *in vacuo*, contains all its medicinal virtues in great perfection, and, as a tonic medicine, is more efficacious than the sulphate of quinine, or any other preparation of bark; and dissolved in the compound spirit of orange-peel, forms a very grateful and most valuable tonic medicine.

The *watery infusion* reddens tincture of litmus. Muriatic acid forms a yellow flaky precipitate with it. Acetate of lead in solution occasions a quick and copious precipitate. A solution of tartar emetic was rendered turbid, and slowly precipitated. Sulphate of iron rendered it turbid, and immediately afterwards changed it to a bluish-black colour, and produced a very light precipitate. With

lime-water a very copious precipitate was formed, leaving the supernatant fluid almost colourless. Sulphuric, nitric, tartaric, prussic, and acetic acids were severally tried, but evinced no action on the infusion. The solution of ammonia caused no precipitate, but the infusion assumed a deeper red colour.

It will be perceived that the action of the above reagents is the same on the *round-leaf Cornel* and Peruvian bark; but a difference is apparent, when the solution of galls or isinglass is used; the latter being copiously precipitated by either, whilst no change is produced on the infusion of the former.

From the above statement it is clear, that the constituent proximate principles of the *round-leaf Cornel* are, tannin, gallic acid, resin, gum, mucilage, oil, and a peculiar saline matter,

which differs from the salt discovered in the species *florida* (*cornus florida*) in possessing less bitterness, and more astringency.

From the examination of the *round-leaf Cornel*, I am induced to believe that the simple and alkaline extracts will prove a very valuable addition to the class of tonics.

The dose of the alkaline extract of the *round-leaf Cornel* is from five to ten grains, in the form of a pill, or dissolved in good sound Cape Madeira.

The dose of the tincture of the *round-leaf Cornel*, is from two tea-spoonfuls to a table-spoonful, in about two table-spoonfuls of water, which in cases of general or local debility, may be taken twice a-day ; or if the habit be leucophlegmatic three or four times a-day.

The dose of the simple extract is the same as that of the alkaline extract.

Three drachms of the simple extract dissolved in a bottle of sound wine,* forms a very excellent tonic medicine, of which a small wine-glassful may be taken twice a-day, *i. e.* about two hours before dinner, and four hours after dinner, in cases of local or general debility.

* From the examinations I have made of the white wines used in the United States and in England, *good* Cape Madeira appears to me superior to either Sherry, Madeira, or any other white wine, being better fermented, and consequently more free from saccharine matter or acid. I say *good* Cape Madeira, because I believe what is generally sold in England is mixed with what is termed home-made wine, or cider, which is very unwholesome, in consequence of being imperfectly fermented. Wine which has not gone through a proper vinous fermentation, contains a portion of saccharine matter which rapidly runs, advances to the acetous stage in the stomach, and thus proves more injurious by interrupting digestion, and by its producing fixt air, than wine taken in a state bordering on, or indeed slightly advanced into, the acetous stage.

The following are Copies of the Prescriptions of the Physicians who have given the *round-leaf Cornel* the most extensive trial :—

For Indigestion from debility of the stomach, or derangement of the biliary apparatus, or of the duodenum.

No. I.

Take of the alkaline extract of the
 round-leaf Cornel, $1\frac{1}{2}$ drachm ;
 Jamaica ginger,
 Dried sub-carbonate of soda, of
 each 10 grains.

Mix, and divide into 24 pills ; two or three to be taken about two hours before dinner, and three hours after, with a small wine-glass of water.

The practice of taking an aperient medicine, as Lady Webster's pills (composed of aloes and gum mastic) and others, as a "*dinner pill*," about an hour before dinner, or during dinner, is

unquestionably bad ; for by hurrying the contents of the stomach into the duodenum before the first process of digestion is complete, (chymification) the second process, which is performed in the duodenum, (chylicification) must necessarily be imperfect ; and although a person may find relief from its effects on the stomach, or from its preventing accumulation in the intestinal canal, the secretions—as urine, perspiration, bile, &c.—will be found to be unhealthy, and the system predisposed to disease, in consequence of the blood being supplied with unhealthy chyle.

If the patient should have a dislike to medicine in a pillula form, or if he should be of a languid habit, advanced in life, or subject to flatulence, he may substitute the following mixture for the above pills.

No. II.

Take of the alkaline extract of the
 round-leaf Cornel, 2 drachms ;
 Tincture of ditto, 6 drachms ;
 Distilled water, 7 ounces.—Mix.

Three table-spoonsful to be taken three times
 a-day.

*For general debility attended with œdematous
 swelling of the legs, paucity of urine, &c.*

No. III.

Take of alkaline extract of the
 round-leaf Cornel, 2 drachms ;
 Comp. spirit of juniper, 1½ ounce ;
 Comp. spirit of ammonia, 2 drachms ;
 Tinct. of squills, 2 drachms.—Mix.

Three table-spoonsful to be taken three times
 a-day.

For Diabetes, or general debility.

No. IV.

Take of simple extract of the round-leaf
 Cornel, 2 drachms ;

Tincture of ditto, 1 ounce ;

Nitric acid, 2 drachms ;

Distilled water, 7 ounces.—Mix.

Three table-spoonsful to be taken three times
 a-day.

For Indigestion attended with general nervousness, depression of spirits, &c.

No. V.

Take of alkaline extract of the round-leaf
Cornel, 2 drachms ;
Tincture of the seeds of the Hibiscus
Abelmoschus, 2 ounces ;
Comp. spirit of Ammonia, 2 drachms ;
Camphorated mixture, 6 ounces.

Mix.—Three table-spoonsful to be taken three times a-day.

For Rickets, or enlarged bowels of children.

No. VI.

Take of simple extract of the round-leaf
Cornel, 1 drachm ;
Infusion of Roses of the London
Pharmacopœia, 6 ounces ;
Simple syrup, 4 drachms.—Mix.

From one to two table-spoonsful to be taken three times a-day.

This mixture is so pleasant to the palate, that children generally take it in preference to wine.

For fluor albus, prolapsus of the uterus or of the anus, inability to retain or expel the urine or the fæces, &c.

No. VII.

Take of alkaline extract of the round-leaf

Cornel, 3 drachms ;

Tincture of ditto, 1 ounce ;

Musk-seed (*hibiscus abelmoschus*)

1½ ounce ;

Compound Spirit of Ammonia, 3 drachms ;

Camphorated mixture, 5 ounces.

Mix.—Two table-spoonsful to be taken three times a-day.

From the foregoing account of the medicinal properties of the *round-leaf Cornel*, it will appear, that it is a most valuable tonic and stomachic medicine. By the term *tonic*, I mean a medicine which increases the motific powers of the body, or in other words, brings into action the muscular powers. Some

medical men suppose that a tonic medicine strengthens the system, *only* by invigorating the stomach, so as to enable it to perform its important office in the animal economy, viz. the process termed digestion, and that the blood being in consequence supplied with healthy chyle, the whole body is nourished ; while others imagine that the peculiar essential quality of a tonic medicine almost immediately enters the circulation, and is rapidly diffused throughout the muscular system ; and others fancy the tonic effects on the stomach is, by sympathy, communicated to the arterial and muscular systems, and from the almost immediately invigorating influence of a tonic medicine taken into the stomach, in augmenting the motific or muscular powers of the body, I am disposed to

attribute the *general* effects of tonic medicines, not entirely to their operation on the stomach, but much to the diffusion of the tonic principle as well as to sympathy. By the term *stomachic*, I mean a medicine which improves the condition of the stomach, so as to put it into a state to perform its functions, or, as generally considered, a remedy for indigestion. Indigestion is a complaint, from the consequences of which a great majority of the inhabitants of this island more or less suffer ; indeed, very few are those who are entirely free from some of its products or consequences,—as flatulence, acidity, irregular bowels, morbid urine, head-ache, &c. Indigestion, or imperfect digestion, it is obvious, is not a *primary* malady, but the consequence of some disordered condition

of the stomach, and the disorder may again originate in the stomach, or be sympathetic of some disorder or disease in a part of the digestive apparatus,—as the liver, duodenum, &c.—or of some part of the body with which the stomach may directly or indirectly sympathize,—as the brain, the rectum, bladder, uterus, &c. The primary disorder of the stomach may be simple, *i. e.* without any structural mischief or disorganization; or it may be the consequence of it. In the former case it is termed *disorder*, in which the mucous membrane, nerves, glands, or muscular fibres, are in a state of preternatural irritation or excitement; and the latter is termed *disease*, a distinction which, in a *practical* point of view, is of great importance; for when the *disorder* is

the consequence of diseased structure, it must appear obvious that medicines should be employed, not only to correct the disorder, but a plan of treatment steadily pursued to remove the disease, or structural mischief which produces it. When indigestion is the consequence of an increased excitement, or morbid sensibility of the nerves of the stomach, cooling medicine,—as nitre, carbonate of soda, the saline mixture in a state of effervescence, mild sedatives, and saline aperients, which are the opposite to the class of tonics, are the proper stomachics, and in such cases, a *direct* tonic, although it sometimes affords immediate relief, will ultimately prove very injurious, in simple cases of disorder from increased excitement, by occasioning structural mischief, and when organic mischief in

its first stage exists, by hastening its progress. When the derangement of the stomach is sympathetic of disorder, simple or attendant on diseased structure, or of inflammatory action either of the liver or a more remote part, it is obvious the attention of the practitioner should be directed to the *primary* affection ; but even in such case, equal attention must be paid to the condition of the stomach and intestinal canal, because the disorder of the stomach re-acts on the primary affection, and by disturbing the brain and nerves, and increasing arterial action, it produces a state of the whole system favouring its progress. I have introduced these remarks to enable my readers to make a proper distinction between the complaint termed indigestion, arising from increased excitement of the nerves,

&c. of the stomach, the consequences of which are unhealthy secretion of the gastric juice, and the fermentation of its contents from increased temperature, the products of which are acidity, flatulence, &c. &c., in which, whether the disorder be primary or sympathetic, simple, or complicated with diseased structure, a direct *tonic* medicine would prove injurious. The cases of indigestion from debility, like the variety from increased excitement, or morbid sensibility, may originate in the stomach, or be the consequence of some debilitating disease, situated in a contiguous or remote part, or of whatever may diminish the natural energy of a vital organ—as distension of the venous sinuses of the brain, or the blood-vessels of the lungs, which, in elderly people, are

common consequences of debility of the heart, or ossifications of the large arteries of the chest, &c. In such cases of debility a *tonic* medicine is absolutely necessary to support the vital powers, and to promote digestion, so as to supply the blood with healthy chyle, in order to enable that power termed *nature* to repair the dilapidations and strengthen the stamina. In such cases of debility it is scarcely necessary to observe, the cooling or sedative stomachics would hasten the patient to his long home. I have made these remarks to point out the distinction that ought to be made between tonics and stomachics, which are very generally considered synonymous, and to impress on the minds of my readers the importance of ascertaining the condition of the

stomach, in order to adopt a proper mode of treatment, which, at a time it is become fashionable to attribute *every case* of indigestion either to inflammation or ulceration of the mucous membrane of the stomach or intestines—a theory to which many a debilitated subject has been sacrificed, is particularly necessary. In the United States, as well as in England, *primary* debility of the stomach is a common consequence of long continued excitement from the abuse of vinous and spirituous liquors, an indulgence in high-seasoned dishes, and in certain abuses which cannot with propriety be enumerated in a work that is likely to fall into the hands of unprofessional readers. Imperfect digestion, or a disinclination to take solid food, is frequently the first symptom of the climacteric period of

life, termed breaking up of the constitution. In subjects born of healthy parents, and without any predisposition to disease, and who have lived regularly, this period rarely commences before the age of sixty-eight, and sometimes not till eighty or ninety; but in those who have led dissipated lives, or born weakly, or whose parents were unhealthy, (having been subject to gout or asthma, or who were scrofulous or consumptive) it often takes place during the period of manhood. In such cases, it must appear obvious, that it is of importance to invigorate the stomach by a tonic medicine; for however particular a person may be in selecting nutritious food, unless it be properly digested, so as to produce good chyle, it will fail to nourish the body.

From the observations I have made, my readers will, I hope, understand that the *round-leaf Cornel* is recommended for the variety of indigestion, or dyspepsy, which is the consequence of debility, either when confined to the stomach or occasioned by causes which reduce the vital energy of the body, or when the system has nearly run its natural course, or when the vital powers can only be kept up by invigorating the digestive organs. Among debilitating causes may be noticed, chronic disease or torpidity of the liver, residence in a tropical climate, frequent attacks of gout, indulgences in spirits, wine, savoury dishes, &c. The symptoms of debility which particularly indicate the use of such a tonic, are a flaccid state of the abdomen and of the muscles of the extremities ; relaxation,

paleness and diminished temperature of the skin; edematous swelling of the legs; an inability to empty the rectum or bladder effectually; an inclination to take only savoury dishes or an increased desire to take spirituous or vinous liquors in preference to solids. In such cases, the extract or tincture of the *round-leaf Cornel* is a most valuable tonic; and I have no hesitation in asserting, from my own experience in an extensive practice, from its beneficial effects on myself, and from the reports of all the physicians with whom I am acquainted who have given it a fair trial, that it is very superior as a tonic medicine to the Peruvian bark, cascarilla, columbo, or any *tonic stomachic* that has been discovered; and from its uniform grateful effects on the palate and stomach, it seems to be,

as M. Dubois observes, “the *natural* tonic for the human stomach,”—an opinion which I think worthy the attention of the profession; for assuredly, among the numerous remedies the mineral and vegetable kingdoms afford, many, from their powerful effects on the human body, although very freely prescribed by some of my cotemporaries in England, France, and Italy, were intended for the use of the brute creation.

For certain cases of local debility, into the remote and immediate causes of which, from motives of delicacy, I shall not enter, the mixture of the *round-leaf Cornel*, No. 5, page 24, is a most valuable remedy.

In the 21st, 23d, 24th, and 25th pages, I have given several prescriptions for the exhibition of the *round-leaf*

Cornel in cases of indigestion from debility, primary or secondary, and cases of local and general debility, or the complaints of old age, in which a tonic medicine is requisite, viz. general debility with a disposition to dropsy, diabetes, fluor albus, debility of the sphincter muscles of the rectum and bladder, prolapsus of the uterus or anus, rickets, gleet, &c. &c.

Some of my readers, after going over all the formulæ I have there introduced for different diseases of debility, may suppose, that however highly I have spoken of the *tonic* powers of the *round-leaf Cornel*, it requires powerful auxiliaries. I would not insult the understanding of my readers to recommend a single remedy for the cure of so many diseases; and I wish them particularly

to understand that the tincture and extracts of the *round-leaf Cornel* are recommended as *tonic* medicines, for the purpose of invigorating the stomach of debilitated subjects. By enabling this important organ properly to prepare the food for the last process of digestion, viz. the production of chyle in the duodenum, it must appear obvious that it is a most valuable remedy for the diseases for which I have recommended it; but the experienced practitioner, who is desirous speedily to restore his patient to health, will, in the different diseases of debility, combine it with such articles the local affection or the general state of the system may indicate, or which are likely, under different circumstances, to promote its tonic or restorative effects. If the digestive organs be so far strengthened as to be equal

to the performance of their office, so that the blood be supplied with healthy chyle, it must be obvious that the general health will be improved, and the local complaint, sooner or later, cured. By such practice, the *vis medicatrix naturæ*, or conservative power of the body, is supplied with the means of repairing an impaired body, or any local dilapidation from excesses, noticed page 33, or the effects of time ; but the practitioner, who is more anxious to gain fame than wealth, will employ such auxiliaries as the case may indicate to expedite the cure ; for instance, in a case of general debility attended with symptoms of dropsy from inactivity or debility of the kidneys, he will prescribe such adjuncts as will accelerate its restorative powers, by increasing the action of the kidneys. (See prescription

No. 3, page 23.) If the dropsical swelling of the legs should continue after the mixture has improved the general health, (the stomach and kidneys properly performing their office,) the experienced practitioner will invigorate the skin, and the absorbent vessels, by the application of a roller to each leg, which generally complete the cure; but when the digestive organs and kidneys do not properly perform their important functions, the practice of rolling dropsical legs generally proves very hurtful, serum being in consequence effused in the cavity of the abdomen, and sometimes of the chest. The practice of making an outlet for the serum collected in the cellular substance of the legs, by blisters, scarrifications, or punctures, is very hazardous,

unless the digestive organs and kidneys have been previously invigorated by a tonic and diuretic medicine. If the substance of the liver, the spleen, the stomach, or any other part of importance, either in the abdomen or chest, be loaded, or if structural mischief has taken place in either, although a tonic medicine, by promoting digestion, and thereby supplying the blood with healthy chyle, may succeed in removing the local disease, a judicious practitioner will also employ a remedy, as the blue pill or calomel, which, by acting more directly on the absorbent vessels of the part, will accelerate its restorative effects. The *round-leaf Cornel*, in cases of debility of the stomach, generally manifests almost immediately its tonic influence; but if it be discontinued before the whole

abdominal viscera be brought into a state of health, or if an article be not employed, as the blue pill or calomel, during its use, with the view of bringing the abdominal vessels of the part speedily into action, so as to remove any deposit that has taken place in the substance of the liver, or spleen, &c. the good effects of a tonic on the digestive organs will be very temporary. The blue pill or calomel, in all cases of debility, I have uniformly found very serviceable, in rendering the stomach, the intestines, and muscular system, more susceptible of the action of a tonic medicine. In cases of retention of fæces in the colon or rectum, from diminished peristaltic motion, a common attendant on debility or advanced age, the blue pill, administered in the small

dose of five grains every night, for the course of a week, is a most valuable auxiliary to a tonic medicine. This mild preparation of mercury should not be hurried through the intestines by the exhibition of a "black draught," or any aperient medicine the following morning; for unless it enters the system, the effect will not be permanent. In all cases of debility of long standing, its exhibition, after the expiration of ten days, for the period of a week will be proper. The introduction of a little mercury into the system in this manner, renders the kidneys more susceptible of the action of a diuretic, the internal membrane of the wind-pipe and air-vessels of an expectorant, the membrane of the urethra and vagina of a corrective, as the balsam copaiba, and, as I have

observed, the muscular system of a tonic; but when the nervous system is preternaturally irritable, mercury generally proves injurious.

When the vital powers are considerably reduced, the muscular coat of the stomach is sometimes unsusceptible of the action of a tonic medicine, unless the nerves of the stomach be also roused by a stimulus. Some practitioners consider all stimulants to be tonics; but the term tonic I employ as signifying an article capable of increasing the tonicity, or what is professionally termed the motific power of muscles—a power which is independent of nerves. When the motific powers of the stomach and intestines are considerably reduced, it will be necessary to employ a stimulating or cordial medicine, with a tonic, to invigo-

rate the nerves, as No. 7, page 25. In such cases, the galvanic fluid, applied to the eighth pair of nerves, to the region of the liver, stomach, &c. has proved a most valuable auxiliary to a tonic medicine. My readers will understand from the foregoing remarks, that I consider a tonic medicine only to act on muscles, and that its salutary effect on the nervous system is the consequence of its invigorating the digestive organs, so as to supply the blood with healthy chyle, and consequently improve the general health. When the nervous system is in a very debilitated state, or too readily disturbed by mental impressions, or atmospherical changes, the stomach and the muscular system being at the same time in a state of debility, then what is termed a nervine

should be employed, with a tonic, as the formula, No. 5, p. 24. I have stated, page 34, that in the climacteric disease, or breaking up of the corporeal fabric, the *round-leaf Cornel* is a most valuable remedy ; but when the nervous as well as the muscular system is in a state of great debility, the general breaking up often commences in the brain, (the root of the nerves,) as is evident by loss of memory, mental debility, diminution of the senses of vision, hearing, smell, then a tonic medicine should always be combined with a nervine and stimulant, as No. 5, p. 24. It is common for practitioners to condemn the use of stimulants and tonics during the last climacteric period, when the patient occasionally experiences giddiness, or when the venous sinuses of the brain

are so far overloaded as to occasion symptoms of impending apoplexy. Under the idea that the congestion arises from an increased afflux of blood to the brain, it is common to enjoin an abstemious diet, and frequently to recommend an abstraction of blood, with an active purgative. Such congestion, to which more than one half of the aged people of the United States and England fall a sacrifice, is not the consequence of increased afflux of blood to the brain, but of a diminution of the power of conveying the venous blood through the sinuses. This diminution is the consequence of debility of the heart, and, of course, of the arteries; and to remove the cause, the powers of the heart and arteries should be increased by a combination of a tonic with

a stimulant, as No. 7, p. 25. This variety of apoplexy is a common attendant on ossification of some part of the heart, or of the large arteries; and surely it is absurd to suppose that the congestion in such case, or even during advanced age, is the consequence of *increased energy* of the heart, or that the heart under such circumstances can perform its office with greater force than when no such structural mischief exists, or during the period of manhood when its power is in its full vigour. Abstraction of blood from a vein, and an active purgative, often prove beneficial, the former by diminishing the resistance in the venous system to the propelling powers of the artery, and the latter by stimulating the heart and arteries; but when blood be taken from an artery, or

by cupping, the patient very rapidly sinks, frequently to rise no more. In cases of congestion of the venous vessels of the brain, threatening venous apoplexy, or of the veins of the lungs, the latter of which is a common cause of the death of elderly people, the exhibition of a tonic in conjunction with a stimulating aperient, long experience has convinced me to be good practice.

The fauces, gullet, and the stomach of elderly or debilitated subjects, are often much loaded with phlegm, from relaxation of the membranes, which is sometimes very viscid and distressingly abundant. Although in such case the *round-leaf Cornel* is a most excellent remedy, still, when the quantity of phlegm is considerable, it should be

occasionally removed by an emetic,* or an active purgative, in order that the tonic remedy may come more in contact with the relaxed membrane. A French writer (M. D'Aubenton) recommends a grain or two of ipecacuan powder to be taken every night, which, by irritating the mucous membrane, occasions it to throw off the superabundant slime. When the vital powers are not much reduced, I have found this practice very beneficial; but in cases of great debility, it generally proves very injurious, in

* The best emetic in cases of debility is ipecacuan, which, when the prostration of strength is considerable, should be administered with an aromatic, as mustard-flour or peppermint-water, and its operation should be promoted by drinking freely of camomile-tea, after it has once operated. To antimonial preparations, as the emetic tartar, and antimonial wine, there is a great objection in such cases, on account of their secondary debilitating effects on the whole system.

consequence of the stomach not recovering from its nauseating effect. An active stimulating purgative, as the following composition, I have found in every case to succeed in carrying off the slime more effectually than ipecacuan powder, and in most cases to supersede the use of an emetic.

Take of the watery extract of aloes,* 1 drachm;
 Balsam Peruv. 10 drops;
 Oil of carraway-seeds, 10 drops;
 Powdered Aleppo Scammony, half
 a drachm.

Mix, and divide into 20 pills; 2 or 3 to be taken occasionally.

Although I have highly extolled the *round-leaf Cornel* as an excellent re-

* The *watery* extract of aloes acts more efficaciously on the intestinal canal than the extract sold under the name of *aloes*, and has the very great advantage over the latter of not irritating the rectum.

medy for rickets, (See No. 6, p. 24,) the practitioner who is desirous to hasten the recovery of his patient will recommend friction over the tumefied joints and bowels, with exercise, and even employ rollers when the joints are considerably enlarged, or the bones of the legs much bowed. If the bowels be considerably enlarged, or the mesenteric glands obstructed, which is generally the case in rickets, he will also give the blue pill, as directed page 43, and occasionally empty the intestinal canal by an active purgative, as the basilic powder.

Some physicians of New York and of Philadelphia prescribe the *round-leaf Cornel* in all cases of indigestion ; and many cases of the variety arising from increased excitement, or nervous feverishness of the stomach, have been pub-

lished, in which the alkaline extract had proved very beneficial.

It has also been by some recommended for the diarrhœa attendant on pulmonary consumption ; but my readers will I hope understand, from the cautionary remarks I have made, that I recommend its use only in cases of indigestion from direct debility of the stomach, or general or local debility, in which it is necessary to invigorate the digestive organs. In cases of indigestion, morbid excitement of the stomach, a very common variety both in the United States and England, it may on some peculiar constitutions have a beneficial effect ; but even in such cases the benefit I have uniformly found to be temporary, and is frequently followed by some serious mischief ; indeed, when general debility does not

prevail, a forced condition of the vital energies, by a generous diet and vinous or spirituous liquors—a system of living which is but too prevalent in the higher classes of society, and among the students in our Universities—or by taking a tonic medicine two or three times a-day when the state of the general health does not require it, either brings on some local disease of the brain, lungs, heart, or some viscus of the abdomen, or premature breaking up of the system, termed the climacteric disease, in which the most powerful tonic or stimulating medicine will have little if any effect. For the looseness attendant on pulmonary consumption, when the circulation is too rapid, or the system in a state of feverish excitement, it is more likely to prove injurious than otherwise; but

when the pulse is languid, the skin cold and relaxed, and the legs edematous, the extract of the *round-leaf Cornel*, administered in an infusion of roses, as directed No. 6, p. 24, is a valuable remedy.

Having given what I consider to be full directions for the exhibition of the *round-leaf Cornel* in cases of debility, I shall make some cursory remarks on diet, &c. with the view of directing my readers to the adoption of such a regimen as is calculated to promote and not counteract its local tonic or general effects on the stomach. Within the last twenty years, many volumes have been published on diets, which contain nothing new; and from the liberty some have taken with the works of their predecessors, I presume these book-makers were remunerated more by the quantity

than the quality of the matter. A person of common sense, when in a state of health, or even when afflicted with a chronic malady, will not reject an article of diet that evidently agrees with him, merely because it is condemned as unwholesome or hard of digestion, by a writer, or by his medical adviser, unless he can assign some sound reason for his objection to it. The old saying, "What is one man's food is another man's poison," should, in the choice of articles of food, be kept in mind. Generally speaking, what is agreeable to the taste sits pleasantly on the stomach, and is easily digested; and not taken in excess, is proper during health, or in cases of chronic affections, in which it is of importance to keep up healthy digestion. The readers of books on diet should

consider that writers on diet are no doubt more or less influenced in their opinions of an article by the effects it has produced on themselves; and the same may be said of physicians when they give advice respecting diet. The person who studies the "wholesomes," and is governed by the opinions of writers on dietetics, I have uniformly observed to be, either in body or mind, unhealthy. The food that is properly digested proves most wholesome, and a small meal, well digested, affords more nourishment to the system than a large one, even of the same food, when digestion is imperfect. Peculiarity of stomach must therefore, in the selection of articles of diet, be always taken into consideration. Every person desirous of maintaining a state of health should

bear in mind that the first process of digestion is performed in the mouth, the second in the stomach, and the third in the duodenum. It must appear evident that in order that the stomach and duodenum may do their office, the first process should be well performed. This process consists in masticating the solid food, so as to break down or separate the fibres of meat and of vegetables, and well blending the whole with the saliva, a secretion which evidently, like the gastric juice, possesses a solvent property.* In elderly people, who have not the power of properly masticating,

* In answer to a question, put by a lady of distinction to the late Dr. Baillie, whether she might venture to take a few oysters, the Doctor, whose patience was worn out by her numerous questions relative to diet, replied, "Oh, yes, shells and all, if you can *properly* masticate them."

it is of great consequence that the fibres of meat should be well broken down and divided, by previously bruising and chopping it; after which, it should be well squeezed between the gums, in the same manner as chewing, in order that the mass may be mixed with saliva. The fibres of meat being rendered hard by too much roasting or boiling; the interior of roasted, broiled, or boiled mutton, beef, or venison, containing red gravy, should be preferred. The meat of young animals, as veal and pork, and of poultry, as of the barn-fowl, the goose, duck, &c. requires to be more cooked.

I shall briefly notice the articles of the two kingdoms of nature, which constitute the *materia dietetica* of civilized man. Some physicians have contended that man was destined to live entirely

on vegetables ; but as it is evident, from his canine teeth, and length of the intestines, and from animal food, when properly masticated, being more grateful to the palate, and more easily digested than vegetables, that the Creator intended he should derive at least part of his support from the animal kingdom, it is absurd to attempt by sophistry, or by ransacking the works of the ancients, to prove the contrary; or, in other words, to oppose plausible sophistry and prejudices to the results of long experience and common sense. I have generally found those who have been advocates for the vegetable system of diet, demi-maniacal; and those who take a greater proportion of animal than vegetable food, most healthy.

ANIMAL FOOD.

With elderly or debilitated subjects, lamb, veal, pork, and venison, are more easily digested than beef or mutton. The meat of *young* animals requires to be more roasted, boiled, or broiled, than that of the sheep or ox; indeed, *tender* beef and mutton, when underdone, or the interior of roasted, boiled, or broiled tender beef or mutton, so as to contain what is termed "red gravy," is as readily converted by the stomach into chyme, as the meat of young animals when over-cooked. By much boiling or roasting, the fibres of all meat are rendered more or less tough, and when stewed, the broth is so loaded with gelatin, as to oppress even the stomach of a robust person; and if it were not

well spiced, few stomachs, even of the most healthy, would be equal to the digestion of it. The practice of commencing the dinner-meal with a gelatinous soup is, therefore, decidedly bad. The flesh of the hare, partridge, pheasant, woodcock, rabbit, young pigeon, the barn fowl, turkey, and other poultry, cooked as most agreeable to the palate and stomach, is also proper food for debilitated invalids. Onion sauce, bread sauce, and stuffing of herbs, &c. in general, render all kind of animal food more difficult of digestion, probably by slightly disordering the stomach. Cayenne, and black or white pepper, and salt, generally agree with the stomach, and promote the digestion of animal and vegetable food.

Cows' milk, when fresh, generally

agrees with elderly and weakly subjects; but a little vegetable jelly diffused through it, as arrow-root, biscuit, sago, &c. by preventing separation of hard curd, renders it more digestible and salubrious. Cheese of any kind, whether old or fresh, is decidedly bad for weakly or elderly people. The idea that generally prevails, that old cheese digests every thing but itself, is erroneous.

VEGETABLE FOOD.

The productions of the vegetable kingdom, which civilized man selects for food, are divided into five orders.

The *first* embraces certain grains, as wheat, rye, barley, oats.

The *second*, peas and beans.

The *third*, salads and pot-herbs.

The *fourth* roots, and the *fifth* fruits.

The articles of the first class being very farinaceous, afford considerable mucilage, and of course are very nutritious. The flour of wheat forms a strong mucilage, and although it is very nourishing, it does not afford that substantial nourishment without the cortical part of the grain termed bran as it does with it; its tendency to constipate the bowels is also obviated by it. The firmness of the mucilage of wheat is much diminished by the degree of fermentation it undergoes in making dough, and were this process not checked by baking, it would in a few hours become sour; and even after it has been well baked, if moistened with a little water and placed in a temperature even much below that of the stomach, it will rapidly run into

the acetous fermentation. Bread therefore, although termed the staff of life, is only fit for a healthy stomach ; a good biscuit or a mealy potato is, in cases of indigestion, very preferable to it. Much has been said against bakers' bread, but although alum and potass may be used by bakers, I prefer it to the home-made bread, on account of its being lighter, better fermented, and in general better baked ; and as to the articles which are employed to make it lighter, and to accelerate fermentation, or rather to diffuse more carbonic acid gas throughout the mass, to render it unnecessary to continue the fermentative process till the nutritious quality is considerably diminished, I am satisfied they add to its salubrity. Rice is very nourishing, and when properly boiled,

or baked with a spice, as cloves, nutmeg, or lemon-peel, it is easily digested. For the prejudice against rice, on the supposition that it injures the sight, there is no foundation whatever. The natives of India, who almost entirely live on rice, are a very healthy and robust race. Virmicelli and macaroni are preparations of the flour of wheat, and do not differ from the sea biscuit.

Of the articles of the second class, viz. pease, beans, lentils, &c. they sometimes, with pepper and salt, agree very well with debilitated subjects, but they often occasion an unpleasant sense of distension; and when not properly digested, they fill the whole intestinal canal with gas. The circumstance of their passing undigested through the intestinal canal, even of healthy subjects, proves that they are

not easily converted into chyme. Tender bacon, when well cured, seems to promote their digestion.

To the third division, as cabbage, spinage, &c. the same objections may be made as to the second. All green articles, in a raw state, I have uniformly found to disorder the alimentary canal of elderly or debilitated invalids.

The fourth class, which embraces the succulent and sweet roots, as the turnip, the carrot, the parsnip, the beet, the Jerusalem artichoke, celery, onions, and radishes, I have uniformly found to oppress the stomach of elderly or weakly invalids, even when well peppered and salted. The radish, onion, and celery are very apt to disorder the stomach, particularly of gouty subjects. A good mealy potato, cooked by steam or roasted,

and well mashed with a little butter, salt, and black pepper, in general passes pleasantly through digestion, and affords substantial support to the system. Some of the most healthy and strong subjects in different parts of the United States and of Ireland live almost entirely on potatoes.

As to the fifth division, viz. fruits, the most mealy, when ripe, are most likely to agree with a debilitated stomach. A roasted *mealy* apple, taken with a little butter and a grated clove, cinnamon, or nutmeg, generally agrees with the stomach, and when the intestines are sluggish, often succeeds in obviating costiveness. When the bowels are very irritable, or disposed to looseness, fruits, either roasted, baked, or boiled, or in a raw state, as well as all acids, are improper.

Of condiments, the only ones I can recommend to weak persons are the pickled capsicum and ginger.

Pastry of every kind is bad.

WINES.

Many volumes have been published on the varieties of wine, and the writers on diet make a most imposing display of scientific acquaintance with their constituent principles, and salubrious or insalubrious qualities. I have devoted much time to the examination and effects of the various wines that are principally drank in America and England, and the results are so few, and differ so little from each other, that an account of them may be given as satisfactorily to a person of common sense in

a few pages as in a large volume. The salubrity of a wine must greatly depend on its having been properly fermented, so as to decompose nearly the whole of the saccharine matter of the juice of the fruit. When the saccharine matter is considerable, or, in other words, the juice very rich, the fermentative process should be continued for a longer time than when there is a deficiency of saccharine matter; and the strength of the wine, which depends on the quantity of the spirituous principle, will of course be in proportion to the richness of the juice. If a wine has not been properly fermented, it will rapidly advance into the acetous fermentation in the stomach; and such wines are much more unwholesome than wines that have a little advanced into the acetous stage, so as to

be acid, or what is generally termed *pricked*; hence the insalubrity of home-made wines, which being imperfectly fermented in America and England, contain much sugary matter, in consequence of the climates being unfavourable for the process of fermentation. Every wine is not, however, to be condemned as insalubrious because it is sweet; for the saccharine matter of some grapes seems to be of so firm a nature as part of it to resist the process of fermentation even in a climate favourable for it; and such wine, with elderly or weakly people, I have uniformly found to agree. Of this class are calcavella and muscat, both of which contain a proper proportion of spirit. A distinction should be made between the native acid of the grape and the acid which is the consequence of the process

having run into the acetous fermentation, both of which I consider wholesome. All *new* wine containing more or less saccharine matter, no wine is fit for use until it has been kept well secured in a close vessel, that it may become in a sound vinous state. By being kept closely corked, the tartaric acid, which is apt to disorder the stomach or intestines, is deposited or decomposed. It is common for manufacturers of wine to add a quantity of brandy to their wines for exportation, with the view of preserving them in a vinous state on the voyage ; by this practice, in my opinion, wines are rendered more salubrious for those elderly people who take it, as it ought to be taken, merely to warm the stomach, but, to the inebriate, the addition renders it more injurious.

Some wines not only differ in degree of soundness, and in the quantity of the spirit, but also in the astringent principle. Some wines are entirely free from this principle, as sherry, madeira, teneriffe, and indeed all the white wines with which I am acquainted; and all the red wines, more or less, contain it. The white wines are therefore stimulant only, but the red wines are both stimulant and astringent; and on this account are preferred by some medical men to the white wines, in cases of debility. The red wine which is most generally used in England is port wine, which contains a greater proportion of the spirituous and astringent principle than any other red wine; but I have, even in cases of debility, generally found it not to agree with the stomach so well as a sound

white wine, often becoming acid. The fact is, the astringent principle is not derived *entirely* from the grape; for the merchants add both logwood and rhatany root to increase its astringency, and also a quantity of spirit to preserve it on the voyage to England, and to please the English palate. The red wines of Spain, of France, and the Cape, are all more or less astringent, and, containing tartaric acid, are too cold, when new, for the stomachs of elderly or debilitated subjects.

Champagne contains very little spirit, but on account of the quantity of fixed air that is disengaged from it in the stomach, a glass or two generally agrees with elderly or weakly subjects.

MALT LIQUORS.

The remarks I have made on fermentation in the preceding article equally apply to the malt liquors, which are, in fact, the wine of malt, preserved by the bitter principle and aroma of the hop. The salubrity of all malt liquors depends greatly on their having been properly fermentated, and properly impregnated with the bitter principle and essential oil of the hop, to preserve them in a vinous state. They require to be kept closely bunged for some weeks after they have been what is termed worked, to get into a proper vinous state, and to become fine. New malt liquor, like new wine of the grape, is very apt to run into the acetous fermentation, even in the stomach

of a healthy person, in consequence, as I have observed in the preceding article, of the vinous stage not having been completed. On this account it is more unwholesome than when it is become acid; for certainly vinegar, which in a small quantity acts as a stomachic, does not in a greater quantity so much disturb digestion as the fermentation of new beer, and its conversion into vinegar in the stomach. I therefore prefer what is termed *stale* beer to *new* beer. The practice of bottling beer when the fermentation is complete is a good one; not only because the fixed air, which is disengaged from it in the stomach, acts beneficially, but because when the quantity in a cask is much reduced, the beer becomes flat, and consequently not so refreshing to weakly stomachs as

when fresh. Porter is more wholesome than ale, on account of not containing so much mucilage and saccharine matter, the two latter being considerably diminished in consequence of the malt having been highly dried. Much has been said against the malt liquor of brewers, and in favour of the home-brewed. I certainly have no reason to suppose that public brewers do make use of any other article than malt and hops in making malt liquors ; but of this I am certain, that the malt liquors of brewers are much better fermented than the home-brewed, in consequence of the great quantity which is fermented at one time. Of the home-brewed, I never met with any that did not contain much saccharine matter and mucilage, from imperfect fermentation. Such ale oppresses

the stomach, and those who drink it are generally much troubled with flatulence. In the choice of malt liquors, as well as of wines, every person should be guided by habit and by peculiarities of the stomach. The ale made in America and in Scotland is better fermented than that made in England, or on the Continent. The Burton ale, which is much drank in England, is too much charged with mucilage and saccharine matter to be wholesome; and I have generally observed that those who continued to take it regularly, generally die, often at the age of forty, of diseased bowels or brain.

SPIRITS.

An opinion generally prevails among medical men, that the alcohol obtained from all wines does not chemically differ, and therefore it is of no consequence from what wine a spirit is obtained, so that it be pure. This idea I can say, from numerous experiments, to be erroneous. The alcohols of different wines differ in specific gravity, and in rawness, volatility, and pungency. The spirit from malt is coarse and very stimulating, and specifically heavier than any other spirit with which I am acquainted. It acts powerfully in corrugating the animal fibre; and when taken into the stomach, disorders the brain and nervous system. Unwholesome as this spirit decidedly is, it is

much drank, in one form and another, in America, England, Ireland, and Scotland. In the two latter countries, when flavoured with the burnt articles employed in rectifying it, it is sold under the name of whisky, which is a slow poison. Almost all the cordials of America and England are made with it, and also the spirit flavoured with juniper, termed gin. The spirit of the rice (arrack) is nearly of the same specific gravity as the malt spirit, but although apparently milder, it acts more injuriously on the brain and nervous system ; and it has been observed that those who drink freely of it are short lived. The effect of arrack punch on the brain is well known.

The spirit of the sugar-cane (rum) is more mild than that of malt, but its specific gravity is less. It acts in general

injuriously on the stomach, and, what is particularly worthy of notice as peculiar to it, it is very apt to become sour in the stomach, and to disorder the whole system when taken in excess.

The spirit of mead (fermented honey) is the mildest and most wholesome spirit I know. It is more volatile and specifically lighter than any of the spirits in common use.

The spirit of the wine of grapes, termed brandy, is somewhat lighter than whisky or rum, and less stimulating. It is not so mild as the spirit of mead, but it generally agrees as well with the stomach, and does not disorder the head like arrack, rum, or whisky. It often succeeds in allaying irritation or spasms in the stomach more speedily than any other spirit or stimulant.

The spirits of cider and of perry are lighter and less stimulating than whisky or rum, and are grateful to the stomach, and very rarely disturb the brain and nervous system ; and it has been observed, that intoxication produced by them is seldom followed by headache or disorder of the stomach. In many parts of America this spirit is much drank, and was formerly so in the cider counties of England, when the farmers were at liberty to distil the dregs of their cider and perry.

GENERAL REMARKS ON SPIRITS.

The effects of the different spirits I have briefly noticed on the human body are those which are generally produced by taking such a quantity as is taken by

the prudent man, to exhilarate and not intoxicate. A spirit when taken as a beverage should always be diluted with water. The addition of sugar tends to blunt its acrimony, and thereby prevent its acting injuriously on the mucous membrane of the stomach ; and the practice which some adopt of adding a little gum arabic, doubtless renders it still less pernicious. Some sweeten brandy and water with barley sugar, which is perhaps better than common white sugar, and renders the addition of gum arabic unnecessary. Spirit undiluted should be taken only as a medicine, when the stomach requires to be stimulated to enable it to digest its solid contents, and expel gas, or in cases of spasms in any part of the alimentary canal. All spirits are rendered more wholesome by the

addition of a mild aromatic, and hence the practice of grating a little nutmeg into brandy and water is a good one. For elderly or weakly people, brandy diluted with water is, in my opinion, preferable to any wine. If water or very weak brandy and water be taken cold during dinner, a little warm brandy and water with barley sugar and nutmeg taken about three quarters of an hour after dinner will greatly promote digestion. A mixture of spirit and water taken cold is less likely to injure the stomach than when taken warm; but in making a choice, a person must be guided by habits and peculiarities of stomach, &c. I shall now proceed, by way of impressing what I consider the principal points of the foregoing remarks respecting diet, on the mind of my readers,

to specify the articles which a person advanced in age, or whose vital energies have been reduced by abuses of any kind, or whose constitution is naturally weak, should adopt for each meal, leaving him or her to make such alterations as habit, temperament, or peculiarity may indicate. In general, three meals a-day are as many as the stomach can properly digest, and certainly afford as much nourishment as the body requires. Some writers recommend a little and often, and if a debilitated subject finds this practice to agree better with him than going six hours without any refreshment, he will do right to adopt it; generally speaking, I have found three meals a-day to agree best.

BREAKFAST.

This meal should not be taken till the teeth have been cleaned by some smooth and corrective powder, as the levigated areca charcoal, and the mouth rinsed out with an astringent lotion, as the simple tincture of rhatany, with water, in the manner recommended by Mr. Hertz, in his Treatise on the Management of the Teeth, &c.* About half an

* Whoever considers the important office of the teeth, in performing the first process of digestion, will see the necessity of attending to their health. In no article have greater impositions been practised on the public than tooth-powders. I have met with some compositions containing ingredients capable of scratching glass: they succeed certainly in removing what is termed tartar, and for a few months they give satisfaction; but by continued use they abrade the enamel of the teeth, and thus occasion caries. I recommend the use of a tooth-powder and a lotion before breakfast to remove the deposit which takes place on the teeth and surface of the mouth, par-

hour after this operation the stomach will be in a proper state for the reception of food. Some elderly and weakly persons take this meal in bed, and when subject to rheumatic pains, irregular gout, chronic cough, or asthma, the practice, by increasing the action of the skin, is a good one. A little exercise before breakfast, however, is very beneficial, by calling the stomach into action, and promoting the circulation in the extremities.

ticularly the tongue, which would be otherwise mixed with the food and conveyed into the stomach. After removing it, an astringent lotion acts beneficially on the gums, the whole surface of the mouth, and on the salivary glands, which often in weakly subjects are in a relaxed state, and the saliva in consequence is not sufficiently abundant, or unhealthy. Its tonic effects on the mouth are extended, by nervous influence and sympathy, to the stomach itself. As this is an important subject, I recommend Mr. Hertz's valuable Treatise on the Management of the Teeth to the attention of my readers.

Articles proper for Breakfast.

Cocoa or chocolate.

Bread and butter, or a thin slice of broiled bacon or ham in lieu of butter.

One egg, boiled only three minutes, with a little black pepper.

Broiled bacon is preferable to butter on account of gently stimulating the stomach. Breakfast, more than any other meal, requires a mild stimulant, and if bacon be not adopted, some mild aromatic should be employed. The sassafras nut cocoa is as nutritious as cocoa or chocolate, and preferable to either, on account of being at the same time slightly aromatic. When the stomach is oppressed after breakfast, which is a common occurrence in weakly subjects, about three quarters of an hour after the meal, a little friction with the

warm hand over its region, or the application of the warm hand over it for a few minutes, is generally very beneficial. The propriety of taking fresh meat at breakfast must depend on habit and temperament. If the person be of a leucophlegmatic temperament, and if meat taken at this meal does not oppress the stomach more than the articles I have specified, it may be allowed. The lean part of broiled mutton or pork, with pepper and salt, or roasted or boiled fowl, I should prefer to any other. The practice of taking raw vegetables, as watercresses, &c. during this, or indeed any other meal, which prevails in France and Italy, is a bad one for weakly subjects, such articles being very indigestible.

DINNER.

For this meal, for weakly or elderly people, thick or glutinous soup, fish, with sauce, green vegetables, pastry, all sweetmeats, fruit of firm texture, as apples, pears, &c. are improper.

Fish, with cayenne pepper and salt, as the turbot, sole, cod, and whiting, may be taken, but it is not so easy of digestion in a weak stomach, or so nutritious as the interior of boiled, roasted, or broiled mutton, beef, venison, hare, or partridge ; roasted, boiled, or broiled fowl, veal, pork, lamb, with very little if any fat. Raw oysters are easy of digestion, but when boiled, or scoloped, or dressed in any manner by heat, are very tough, and consequently hard of digestion.

Mashed *mealy* potatoes with a little pepper. Biscuit, or well-baked bread rather stale. If fish be taken, the meal should be finished with only one of the meats above specified; and if no fish, a meal of one meat should suffice.

Some condemn the use of any liquid during dinner, but without it solid food is very apt to lodge in the gullet; and I have met with instances of the gullet being so loaded as to endanger life. An occasional draught of sound small beer, or very weak brandy and water, or two glasses of sound white wine, as cape, or East India madeira, or vidonia, or bucellas, should be taken. The idea that drinking during a meal is injurious, by diluting the gastric juice, is erroneous; for, on the contrary, by separating the fibres of meat, &c. it exposes a much

greater surface to the action of the gastric juice, and consequently promotes its conversion into chyme. The quantity of food must be regulated by habit, and the *natural* demand of the stomach. Some constitutions certainly require a greater supply of solid food than others, but a desire of taking a beverage in excess is, I am fully persuaded, a morbid demand, and should not be gratified. If the stomach be oppressed after dinner, a dessert-spoonful of undiluted brandy may be taken ; but if not, a tumbler of weak brandy and water may be taken about three quarters of an hour after dinner. The reader will bear in mind that I am now giving advice to invalids, whose state of general health renders it necessary to keep up the vigour of the stomach.

If a person becomes drowsy after taking a little brandy or brandy and water, he should indulge in a nap, in a sitting posture, for a few minutes ; I say sitting position, because in a recumbent position the nap is apt to continue too long, and the vessels of the brain to become overloaded with blood. Drowsiness is very apt to occur during digestion, probably in consequence of the great demand of nervous energy and blood by the stomach ; and certain it is, that during a short nap after the dinner meal, digestion goes on properly.

It is scarcely necessary to observe, that taking fruit of any kind, or sweet-meats, raw vegetables, as celery, water-cresses, &c. immediately after dinner, is very improper.

The practice which prevails generally

throughout Europe of taking coffee almost immediately after dinner, or tea two or three hours after dinner, is also very pernicious. The introduction of a warm diluent with fermentable articles, as sugar, milk, &c. soon after dinner, or before digestion is completed, must necessarily disturb the process. These articles generally produce, by warming the stomach, a pleasant refreshing effect, but it rarely lasts more than half an hour. The fermentable articles rapidly pass into the acetous stage, (which the temperature accelerates) the consequences of which are distension of the stomach and bowels by gas, often to such an extent as to disorder the brain and whole nervous system. When tea or coffee is the last meal, which is often the case after a late dinner, instead of

experiencing sound and refreshing sleep, the mind is wandering the whole of the night, sometimes distressed by nightmare; or if the mind does not get into a wandering state, the system becomes fidgetty and restless till it really exhausts itself, when the subject falls asleep. Tea or coffee is therefore not only an unnecessary meal, but a very pernicious one.

SUPPER.

This meal should be light and easy of digestion. With weakly subjects I have found a little minced meat, with black or cayenne pepper, with toasted bread or biscuit, and a draught of porter, to agree very well. In no meal is it more necessary to attend to habit and

peculiarity of stomach than to supper ; for nothing tends more to disorder the general health, or reduce the vital powers, than disturbed sleep. A few raw oysters, with a little vinegar, pepper, and fresh butter, well-baked bread, and porter, form an excellent supper ; but boiled or scoloped oysters are, as I have already observed, very hard of digestion ; the same may be said of cheese, either new or old, in every form, particularly when toasted.

For very old people, milk *slightly* thickened with arrow-root, or biscuit-powder, with a little brandy and nutmeg, is a very excellent supper.

Having enumerated what I consider the *essentials* of regimen for *debilitated subjects of every description*, I have only to add, that to my readers who may be

disposed to give the *round-leaf Cornel* a trial, I have directed a quantity of the alkaline and simple extract of it, carefully prepared by an eminent American chemist, to be sent to the Medical Hall, 170, Piccadilly, London, that the medical profession, &c. of England may be supplied with it, at the most reasonable rate. I have ordered it to be sent in pots, containing from two ounces to a pound. The tincture, which is easily made with either of the extracts, as I have directed, may be procured at the same place. When the virtues of the *round-leaf Cornel* are known to British practitioners, it will no doubt be regularly imported by the American merchants in London, Liverpool, and Bristol.

Since the preceding pages were printed, I have found the preparation of the

round-leaf Cornel, named the *Essential Salt of the round-leaf Cornel*, to contain in a concentrated state all its peculiar tonic properties in great perfection ; this article I shall more particularly notice in the 9th page of the Preface.

OF THE LOBELIA INFLATA.

This species of the genus of plants *lobelia*, termed by Linnæus *lobelia inflata*, has lately been found very beneficial in cases of spasmodic asthma, by several respectable physicians of the United States, after other popular remedies, as the *stramonium datura*, meadow saffron, the foetid genus, &c. had failed to afford the slightest relief. Dr. Cutler, an asthmatic who has been subject to

paroxysms nearly ten years, after observing that he had taken all the antiasthmatic remedies of the ancient and modern writers he considered entitled to a trial, with little or no benefit, (except a species of the genus *pothos*, termed *fœtid*, from which he sometimes received considerable relief,) states, that in the autumn of 1827 he had the most violent attack he ever experienced. It commenced about the first of August, and continued eight weeks. The doctor had recourse to the saturated tincture of the *lobelia inflata*, which almost immediately terminated the disease. Dr. Drury also gave it a trial, during a violent asthmatic paroxysm, and he says, it instantly relieved him, and that he has remained ever since free from the malady. In a case of severe fit, in which the difficulty

of breathing was extreme, the doctor administered a tea-spoonful of the saturated tincture, which, in the course of three minutes, terminated the paroxysm. On the expiration of ten minutes another tea-spoonful was administered, which occasioned a slight degree of sickness. After another ten minutes, the same dose was repeated, which excited gentle vomiting, and a pricking sensation in the skin; and since these trials, the patient has remained free from the disease, with a much improved state of his general health. Dr. Barton notices a case of violent asthma, for which he prescribed a tea-spoonful of the saturated tincture of the *lobelia inflata*, to be taken every two hours, with speedy and complete success. Dr. Stewart asserts, that he has witnessed very extraordinary

cures of asthmatic paroxysms by the saturated tincture, many of which were almost instantaneous. Dr. Cutler has also found it to quiet the cough of consumptive patients, particularly in those cases which are attended with considerable irritation in the membrane lining the windpipe. Dr. Eberle has successfully prescribed it in croup. This plant grows in a wild state, in great abundance, in several parts of North America. The leaves and capsules are very acrid; the powdered leaves, in the dose of ten grains, produce considerable nausea, and in the quantity of fifteen grains generally excite vomiting, which is frequently followed by a considerable reduction of strength, and profuse perspiration. It also often produces an aperient effect. Dr. Bridault de Villiers

recommends the plant to be collected in the month of August. It appears by the American physicians, that its peculiar medicinal virtues reside in all the parts of the plant, but that the root and capsules are the most potent. The American physicians prefer the saturated tincture of the root and capsules, to the powdered root or leaves, on account of its being more convenient for exhibition, and of its virtues not being diminished by keeping.

The tincture is thus made:—Take of the *lobelia inflata*, two ounces; proof spirit, one pint; after digesting ten days, filtre the tincture through paper. The ordinary dose of this tincture is from thirty to sixty drops, in a table-spoonful of water, two or three times a-day, or a large tea-spoonful when symptoms

occur, indicating an approaching paroxysm.”

The following account of this plant, by Dr. John Andrew, an eminent physician of Glasgow, is taken from the *Glasgow Medical Journal*:—

“The way in which I became acquainted with this remedy in asthma, was the following:—In the autumn of the year 1818, returning from Campbeltown, Argyleshire, I found we had on board the steam-boat a man who was asthmatic, and who had been seized with a paroxysm just before the vessel sailed, at five o’clock in the morning. He was with some difficulty brought on board, and laid in the steerage. I was requested to visit him. The paroxysm was very severe. As there was no medicine on board, at least that I knew of,

and we had left the harbour, and were proceeding on our way, I ordered a little gin toddy, which the patient said had sometimes given him relief. The relief afforded was only momentary; for his sufferings soon returned, and he struggled hard for breath. A gentleman on board learning the circumstance, politely offered me some medicine, which he said had been of singular benefit to himself, and others afflicted with asthma. I wished to know what it was; but he requested me to give it first, and he would tell me afterwards, when I had seen what it could do for the poor man. I gave it as he directed, and in less than forty minutes, the poor fellow was completely relieved from the distressing paroxysm. The gentleman then told me that it was an herb which grew plen-

tifully in the place where he came from, and which, made into a tincture with brandy, and administered in doses of a tea-spoonful every twenty minutes, gave almost immediate relief. He pulled out his pocket-book, and showed me the receipt, which he had got from an American practitioner, and kindly offered me a copy of it, and a quantity of the tincture; and said, that as he was going to sail in a few days for America, and had a quantity of the plant on board the ship he was to sail in, he would give me what remained of it, so that I might prepare the tincture for myself.

“ I became convinced that it was of great use in asthma; so much so, that after I had used all that I had received from my American friend, I tried often to procure it from Baltimore, where he

said he had found it. It was not, however, till about eighteen months ago, that I was so fortunate as to obtain a fresh supply. An intimate friend, who was going out to New York, when I mentioned the plant to him, promised to bring some of it with him on his return, which he did.

“I have used the *lobelia inflata* in the worst forms of whooping cough, with decided advantage to the little sufferers, in all relieving, and, with the exception of one, curing the disease. There is no medicine with which I am acquainted, that so effectually relieves the bronchial vessels of their viscid mucus as the lobelia. It is emetic and antispasmodic.

“In an obstinate case of Saint Vitus’s dance, where purgatives, antispasmodics, and tonics, had been used without

benefit, I ordered forty drops of the tincture to be taken three times a-day, which in four days completely carried off the convulsive motion of the limbs. The patient, a girl of fourteen years, soon got well.

“In pulmonary consumption, it is useful in relieving the cough and difficulty of breathing.”

The following are the forms in which I have found it most beneficial :—

Take of tincture of lobelia inflata, from 30 to 40 drops ;

Compound spirit of sulphuric ether,
half a drachm ;

Camphorated mixture, one ounce.

Mix.—To be taken two or three times a-day.

When the patient is much oppressed by gas in the stomach or intestines, or of a

languid habit, I substitute forty drops of the compound spirit of ammonia for that of the sulphuric ether. I have never prescribed the *lobelia inflata* when the patient is aged or weakly. In cases attended with general debility, I would recommend a tonic, as the mixture of the *round-leaf Cornel*, for nervous debility, to accompany its use.

The ethereal tincture of the *lobelia inflata*, made by infusing the herb for some weeks in the compound spirit of sulphuric ether (instead of brandy) in the dose of half to three quarters of a tea-spoonful in a small wine-glass of cold water, has been much extolled as a remedy for the asthmatic paroxysm. On some patients its effects were so quick and complete in terminating the paroxysm, that it seemed to act as a charm.

The leaves of the *lobelia inflata*, mixed with the compound of herbs sold under the name of “herb tobacco,” smoked in the same manner as tobacco, in the evening, an hour or two before the expected attack of asthma, has uniformly succeeded in preventing the fit. In this manner it allays the spasmodic excitement about the pharynx, wind-pipe, air-cells, &c. and brings on copious expectoration. This compound I particularly recommend to my asthmatic readers.

FINIS.

