

DOMESTIC MEDICINE,

&c. &c.

CHAP. I.

OBSERVATIONS ON DIET, PARTICULARLY THAT OF THE COMMON PEOPLE.

EXPERIENCE proves, that not a few of the diseases incident to the inhabitants of this country, are owing to their mode of living. The vegetable productions they consume fall considerably short of the proportion they ought to bear to the animal part of their food. The constant use of bread and animal substances excites an unnatural thirst, and leads to the immoderate use of beer and other stimulating liquors, which generate disease, and reduce the lower orders of the people to a state of indigence. To teach the poor man how to live cheaper and better, is the design of the following pages.

Though the common people of this country live at a greater expense than any where else, it does not follow that they live better. They are strong indeed, but by no means healthy; and it is found that, from an attachment to a particular mode of living, they are more liable to disease and death in foreign climates, than the inhabitants of any other country.

It is certainly proper that the poor man should be instructed in every thing that can make his little earnings go as far as possible, or which can add to the comfort of himself and family. Nor can economy in living be deemed a trivial virtue, in a country where the richer depend on the cheapness of labour.

It is alleged that the English are so much attached to their own modes of living, that no argument will induce them to make the smallest change. Habits are indeed obstinate things, especially those which relate to diet; but there are proofs that the English are not inflexible even in this matter. The mode of living among the lower orders has been greatly changed in my time, and I am sorry to say, not for the better.

The people of England have too much good sense not to listen to reason, provided due care were taken to instruct them. But here the people may be truly said "*to perish for want of knowledge.*" No means have been used to give them proper instruction. Hurtful customs have been suffered to prevail, till they have struck such deep roots that it will not be an easy matter to eradicate them. The difficulty, however, is not insurmountable. A few experi-

ments of reform would have the effect to render it as agreeable as it is salutary.

Adults have many old prejudices to overcome, but the case is different in regard to children. They may be taught to use any kind of food, and what they use when young, they will love when old. If I can introduce a different method of feeding children, my purpose will be answered. This alone will, in time, effect a total change in the general mode of living.

Particular attention has been paid to the substitutes for bread, as the scarcity of this article proves peculiarly distressing to the poor. It will appear from the following pages, that bread is by no means so much a necessary of life as is generally imagined, and that its place may, in many instances, be supplied by a variety of other farinaceous substances.

GENERAL OBSERVATIONS ON ALIMENT.

No creature eats such a variety of food as man. Intended for an inhabitant of every climate, he devours the productions of them all; and if they do not suit his palate, or agree with his stomach, he calls in the aid of cookery, an art peculiar to himself; by which many things that, in a crude state, would prove hurtful, or even poisonous, are rendered wholesome and salutary.

The obvious division of food is into animal and vegetable. To say that man was intended *by nature* for using either the one or the other alone, would be absurd. His *structure* and appetite prove that he was formed for both. Judgment, however, is requisite in adjusting the due proportion of each, so as to avoid the inconveniences arising from an extreme on either hand.

Though animal food is more nourishing than vegetable, it is not safe to live on that alone. Experience has shown that a diet, consisting solely of animal food, excites thirst and nausea, occasions putrescence in the stomach and bowels, and finally brings on violent griping pains, with cholera and dysentery.

Animal food is less adapted to the sedentary than the laborious, and least of all to the studious, whose diet ought to consist chiefly of vegetables. Indulging in animal food renders men dull, and unfit for the pursuits of science, especially when it is accompanied with the free use of strong liquors.

The plethoric, or persons of a full habit, should eat sparingly of animal food. It yields far more blood than vegetables taken in the same quantity, and, of course, may induce inflammatory disorders. It acts as a stimulus to the whole system, by which means the circulation of the blood is greatly accelerated.

I am inclined to think that consumptions, so common in England, are in part owing to the great use of animal food. Though pulmonary consumption is not, properly speaking, an inflammatory disease, yet it generally begins with symptoms of inflammation, and is often accompanied with them through its whole progress.

But the disease most common to this country is the scurvy. One finds a taint of it in almost every family, and in some the taint is very deep. A disease so general must have a general cause, and there is none so obvious as the great quantity of salted

animal food devoured by the natives. As a proof that scurvy arises from this cause, we are in possession of no remedy for that disease equal to the free use of vegetables.

By the uninterrupted use of animal food, a putrid diathesis is induced in the system, which predisposes to a variety of disorders. I am fully convinced, that many of those obstinate complaints for which we are at a loss to account, and find it still more difficult to cure, are the effects of a scorbutic taint lurking in the habit.

Improper diet affects the mind as well as the body. The choleric disposition of the English is almost proverbial. Were I to assign cause, it would be, their living so much on animal food. There is no doubt but this induces a ferocity of temper unknown to men whose food is chiefly taken from the vegetable kingdom.

Though these and similar consequences may arise from the excess of animal diet, we are far from discouraging its use in moderation. In all cold countries it is certainly necessary; but the major part of the aliment ought, nevertheless, to consist of vegetable substances. There is a continual tendency in animal food, as well as in the human body itself, to putrefaction, which can only be counteracted by the free use of vegetables.

With regard to the proportion of vegetable food to that of animal, great nicety is by no means required. It must vary according to circumstances, as the heat of the weather, the warmth of the climate, and the like. The vegetable part, however, where nothing forbids, ought certainly to preponderate, and I think in the proportion at least of two to one.

The excessive consumption of animal food is one great cause of the scarcity of grain. The food that a bullock affords bears but a small proportion to the quantity of vegetable matter he consumes.

I am no enemy to good fruit, as an article of diet; but the greater part of what is used in this country, by the lower orders of the people, is mere trash. Fruit should be eaten in the early part of the day, when the stomach is not loaded with food, and it never ought to be eaten raw till it is thoroughly ripe.

OF BREAD.

BREAD, or something resembling it, makes a part of the diet of all nations. Hence it is emphatically denominated *the staff of life*. It may, however, be used too freely. The late Dr. Fothergill was of opinion, and I perfectly agree with him, that most people eat more bread than is conducive to their health. I do not mean to insinuate that bread is unwholesome, but that the best things may prove hurtful when taken to excess. A surfeit of bread is more dangerous than one of any other food. *Omnis repletio mala, repletio panis pessima*. The French consume vast quantities of bread; but its bad effects are prevented by their copious use of soups and fruits, which have little or no share in the diet of the common people of England.

One important use of bread is to form a mass fit for filling up the alimentary canal, and carrying the nutritious juices along that passage in such a state, as to render them fit to be acted upon by the lacteal absorbents, which take up the nourishment, and convey

it to the blood. In this light, bread may be considered as a soil from whence the nourishment is drawn. I do not say that bread contains no nourishment, but that its use, as an article of diet, does not solely depend on the quantity of nutriment it contains, but in some measure on its fitness as a vehicle for conveying the nutritious particles through the intestinal tubes. Hence it follows, that the finest bread is not always the best adapted for answering the purposes of nutrition.

The richest food will not nourish an animal, unless the alimentary canal is sufficiently distended. A dog has been fed on the richest broth, yet could not be kept alive; while another, which had only the meat boiled to a chip, and water, thrived very well. This shows the folly of attempting to nourish men on alimentary powders and other concentrated food.

The great art, therefore, of preparing food, is to blend the nutritive part of the aliment with a sufficient quantity of some light farinaceous substance, in order to fill up the canal, without overcharging it with more nutritious particles than are necessary for the support of the animal. This may be done either by bread, or other farinaceous substances, of which there is a great variety, as will appear from the sequel.

Bread is one of the most expensive modes of using grain, and not adapted to the narrow circumstances of the lower orders of the people, as it is *burthened* with two heavy additional charges, in passing through the hands of *both* the miller and the baker. Besides, the former often grinds down extraneous matter with the wheat, and the latter as frequently bakes it up with the addition of lime, chalk, alum, and other pernicious substances. Since the articles of diet have become branches of manufacture, the public neither know what they eat, nor what they drink.

People imagine, as the finest flour contains the greatest quantity of nourishment, that it must therefore be the most proper for making into bread; but this by no means follows. The finest flour comes the nearest to starch, which, though it may occasionally prove a good medicine, makes bad bread. Household bread, which is made by grinding down the whole grain, and only separating the coarser bran, is, without doubt, the most wholesome.

The best household bread I ever remember to have eaten was in the county of York. It was what they call *meslin bread*, and consisted of wheat and rye ground together. I am not quite certain as to the proportion, but I think there might be two parts of the former to one of the latter. This bread, when well fermented, eats light, is of a pleasant taste, and soluble to the bowels. After using it for some years, I found that bread, made entirely of flour, was neither so agreeable to the palate, nor so conducive to health.

Bread is often spoiled to please the eye. The artificially whitened, drying, stuffing bread, though made of the heart of the wheat, is, in reality, the worst of any; yet this is the bread which most people prefer, and the poorer sort will eat no other.

All the different kinds of grain are occasionally made into bread, some giving the preference to one and some to another, according to early custom and prejudice. The people of South Britain generally prefer bread made of the finest wheat-flour,

while those of the northern countries eat a mixture of flour and oatmeal, or rye-meal, and many give the preference to bread made of oatmeal alone. The common people of Scotland also eat a mixed bread, but more frequently bread of oatmeal only. In Germany the common bread is made of rye, and the American labourer thinks no bread so strengthening as that which is made of Indian corn; nor do I much doubt but the Laplander thinks his bread made of the bones of fishes is the best of any.

Bread made of different kinds of grain is more wholesome than what is made of one only, as their qualities serve to correct one another. For example, wheat flour, especially the finer kind, being of a starchy nature, is apt to occasion constipation. Bread made of rye-meal, on the other hand, proves often too slippery for the bowels. A due proportion of these makes the best bread.

For the more active and laborious I would recommend a mixture of rye with the stronger grains, as peas, beans, barley, oats, Indian corn, and the like. These may be blended in many different ways: they make a hearty bread for a labouring man, and, to use his own language, they lie longer on his stomach than bread made of wheat-flour only. Barley-bread passes too quickly through the alimentary canal to afford time for conveying the proper nourishment; but bread made of barley mixed with peas is very nourishing.

When potatoes, or boiled grain, are used, bread ceases to be a necessary article of diet. During the late scarcity of bread, I made it a rule *not* to eat above one half the quantity I used to do, and I found no inconveniency whatever from the change. Nay, some told me, that for a considerable time they had left off the use of bread altogether, without experiencing any change in the state of their health.

A great part of the bread consumed in this country is by children. It is always ready, and when the child calls for food, a piece of bread is put into its hand, to save the trouble of dressing any other kind of victuals. Of many children this is the principal food, but it is far from being the most proper. Children are often troubled with acidities of the stomach and bowels; and it is well known that bread mixed with water, and kept in a degree of heat equal to that of the human stomach, soon turns sour.

During the late scarcity, many of the labouring men, and even artificers, could not earn as much money as was sufficient to keep their families in the article of bread only. It is certain, however, that on a different plan such families might have lived very comfortably. Many of the articles of diet are cheaper than bread, and equally wholesome. Above one half of the expense of living might be saved, by a due selection of the articles of diet.

The English labourer lives chiefly on bread, which being accompanied with other dry, and often salt food, fires his blood, and excites an unquenchable thirst, so that his perpetual cry is for drink.

But the greatest consumption of bread is occasioned by tea. It is said that the subjects of Great Britain consume a greater quantity of that herb, than the whole inhabitants of all the other nations of this quarter of the globe. The lowest woman in

England must have her tea, and the children generally share it with her. As tea contains no nourishment, either for young or old, there must of course be bread and butter to eat along with it. The quartern loaf will not go far among a family of hungry children, and if we add the cost of tea, sugar, butter, and milk, the expense of one meal will be more than would be sufficient to fill their bellies with wholesome food three times a-day.

There is reason to believe that one half the bread consumed in England is used to tea, without one hearty meal ever being made of it. The higher ranks use tea as a luxury, while the lower orders make a diet of it. I had lately occasion to see a striking instance of this in a family, that was represented to me as in distress for want of bread. I sent them a little money, and was informed that they ran with it directly to the tea-shop.

To a heavy, sluggish, phlegmatic man, a moderate use of tea may not prove pernicious; but where there is a debilitated stomach and an irritability of fibre, it never fails to do much hurt. With many it has the effect to prevent sleep.

Tea will induce a total change of constitution in the people of this country. Indeed, it has gone a great way towards effecting that evil already. A debility, and consequent irritability of fibre, are become so common, that not only women, but even men, are affected with them. That class of diseases, which, for want of a better name, we call *nervous*, has made almost a complete conquest of the one sex, and is making *hasty* strides towards vanquishing the other.

Did women know the train of diseases induced by debility, and how disagreeable these diseases render them to the other sex, they would shun tea as the most deadly poison. No man can love a woman eaten up with vapours, or washed down with diseases arising from relaxation.

It is not tea taken as a beverage after a full meal, or in a crowded assembly, that I so much condemn, though I think something as elegant and less pernicious might be substituted in its place. The mischief occasioned by tea arises chiefly from its being substituted for solid food. This is so much the case at present, that, had I time to spare, I think it could not be better employed than in writing against this destructive drug.

BOILED GRAIN.

THOUGH farinaceous substances, of one kind or another, make a necessary part of the food of man, yet there can be no reason why such substances should always assume the name and form of bread. Many of them are more wholesome, and not less agreeable, in other forms. Bread is often used merely to save the trouble of cookery; and, being portable, is the most convenient article of diet for carrying abroad.

It does not, however, admit of a doubt, that more grain is eaten boiled, though not in this country, than is made into bread; and that this mode of cookery is the most wholesome. Simple boiling precludes all adulteration, and is an operation much less laborious and artificial than baking.

The most general article of diet among mankind is rice. This may be made into a variety of dishes; but simple boiling is all that is required, to render it a proper substitute for bread. It may either be eaten alone, or with milk. In the east, it is used with meat, in the same manner as we do bread. The people of this country believe that rice proves injurious to the eyes; but this seems to be without foundation, as it has no such effect on those who make it the principal part of their food.

Many other kinds of grain will, when boiled, make good substitutes for bread. Even those which make a harsh and unpleasant sort of bread, are often rendered very palatable by boiling. This is the case with all the leguminous class of plants, as peas, beans, &c. Even oats and barley are more agreeable, as well as more wholesome, when boiled, than made into bread.

All allow that peas and beans boiled, when young, are a great luxury; but when old, they are equally wholesome, and when properly cooked, by no means unpleasant. There are few who do not relish peas-pudding, and even prefer it to bread. Beans are not so fit for this purpose; but they make an excellent ingredient in the poor man's broth, and whoever eats this broth will find little occasion for bread.

Peas and beans contain an equal quantity of sugar with wheat, oats, or barley, and at the same time a greater proportion of oil, consequently are more nourishing. *This fact is confirmed by daily experience.*

On those farms where peas and beans are raised in great abundance, the labourers are much fed on that sort of grain; but when removed to farms where they are fed with other kinds of grain, they soon complain of a diminution of strength, and request a supply of peas-meal as formerly.

Nature seems to have pointed out the propriety of the extensive use of peas and beans; it being a fact, that when crops of that kind are duly alternated with crops of wheat, barley, or oats, the fertility of the soil may be maintained, without rest or manure, for many years together. Whereas, if the latter be raised on the same soil for several years successively, they render it barren, so that, without rest or manure, its fertility cannot be preserved.

The people in England are but little accustomed to the use of boiled grain, though in many countries it is eaten as a luxury. Boiled barley is a great favourite with the Dutch, and is eaten with milk, butter, or molasses. It is the principal food of the Dutch sailors, who, in general, are both healthy and robust.

Barley is one of the best ingredients in soup. Count Rumford says, it possesses the quality of *lithing*, or thickening soups, in a superior degree to any other grain. We have reason, however, to believe that grits, or coarse oatmeal, will answer that purpose still better.

Oatmeal is frequently made into bread; but it is a much more wholesome, as well as agreeable food, when made into hasty-pudding, and eaten with milk. The peasants in many parts of Britain make two meals a-day of it, while their children almost wholly subsist on it; and it is well known that both old and young, who are thus fed, are healthy and robust.

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The opinion of oatmeal being heating, and occasioning skin diseases, is wholly without foundation. Bread made of oatmeal, when not leavened, will sometimes occasion the heart-burn; but this is no proof of its heating quality. Unleavened bread, of wheat or any other grain, produces the same effect on a debilitated stomach. Oatmeal thoroughly boiled seldom gives the heart-burn.

Persons who are fed on oatmeal-bread, or hasty-pudding, are not more subject to diseases of the skin, than those who live on wheat-meal. Cutaneous disorders proceed more from the want of cleanliness, than from any particular aliment. The French, so far from thinking that oatmeal is heating, speak of it as possessed of a cooling quality, and even the English give oatmeal, or grit-gruel, to lying-in women, and sick people of every description, which shows that they are inconsistent with themselves, in alleging that the blood is fired by the use of oatmeal.

A lieutenant of the army, residing at a country-village within a few miles of Edinburgh, with a wife and ten children, having no other income than his half-pay, fed the whole of his children with hasty-pudding and butter-milk only, from a conviction that it was the most wholesome and full diet that fell within the reach of his narrow circumstances. They grew apace; and it was the universal remark of the neighbourhood, that they were as sprightly, healthy, and robust, as other children, and at the same time perfectly free from all skin-diseases.

Children are seldom well, *unless when* their bodies are gently open. But this is more likely to be the case *when fed* on oatmeal and milk, than when their bellies are crammed with a starchy substance made of the finest flour; yet this in England is the common food of children. I have seen an infant stuffed four or five times a-day with this kind of food. There needs no conjurer to tell the consequence.

A late author, a man of learning, but the dupe of prejudice, has, by a ridiculous definition, endeavoured to represent oats as proper food for horses only. I wish the horses in England devoured a smaller quantity of that grain, and the people more. Few things would have a greater tendency to lessen the expense of living. The oats in North Britain are of a superior quality, and I hope the people will long have the sense to use them as an article of diet.

Indian corn is likewise said to make the best food when boiled. Count Rumford observes, that of all things it makes the best pudding, and that he has made a hearty meal of it, sauce included, for five farthings. What makes good puddings will make good dumplings, and these will, at any time, supply the place of bread. The Count also remarks, that the Negroes in America prefer Indian corn to rice; and that the Bavarian peasants prefer it to wheat; that it might be imported from North America at about four or five shillings per bushel; that, when made into flour, it would cost only one penny farthing per pound; and that it is highly nutritious, and the cheapest food known. During the late scarcity, a large quantity of this grain was imported; but such is the aversion of the common people of this country to every sort of food to which they are not accustomed, that they refused to

purchase it, and the merchants were very great losers by the importation. On the same principle the Germans, till within these few years, could not be induced to eat potatoes, though now they are become extremely fond of them.

The American, the Italian, and the German, all cook Indian corn, in the same way as the North Britain does his oatmeal, by making it into hasty-pudding. It may be eaten in a variety of ways. Some eat it with a sauce composed of butter and brown sugar, or butter and molasses. Others eat it with milk only. In either way it makes a good, cheap, and wholesome diet, by no means disagreeable to those who are accustomed to it.

The only other grain we shall mention, as best when boiled, is buck-wheat: it is of a very mucilaginous nature, and, of course, highly nutritious. In several parts of Europe it constitutes a principal part of the food of the lower people. In former times it was eaten in Russia; not by the lower classes only; even the nobility made use of it. Boiled, and then buttered, it was such a favourite of the great Czar Peter, that he is said seldom to have supped on any thing else.

BUTTER.

It has been said, that the English *have a thousand religions*, and but one sauce. It *must be* allowed that they use butter with almost every *kind of* food. Butter, though a good article of diet, may be used too freely, and in this country, I am convinced, that is the case. To weak stomachs it is hurtful, even in small quantities, and when used freely it proves prejudicial to the strongest.

Butter, like other things of an oily nature, has a constant tendency to turn rancid. This process, by the heat of the stomach, is greatly accelerated, insomuch that many people, soon after eating butter, complain of its rising in their stomachs, in a state highly disagreeable. Oils of every kind are with difficulty mixed with watery fluids. This is the reason why butter floats in the stomach, and rises in such an unpleasant manner.

Persons afflicted with bile should use butter very sparingly. Some sceptical authors doubt whether or not aliment of any kind has an effect on the bile. One thing, however, is certain, that many patients, afflicted with complaints which were supposed to be occasioned by bile, have been completely cured by a total abstinence from butter.

The most violent bilious complaints that I ever met with, were evidently occasioned by food that became rancid on the stomach, as the cholera morbus, and the like. Nor can such complaints be cured, till the rancid matter is totally evacuated by vomiting and purging.

But supposing butter did not possess the quality of becoming rancid on the stomach, it may, nevertheless, prove hurtful to digestion. Oils of all kinds are of a relaxing quality, and tend to impede the action of digestion. Hence the custom of giving rich broths and fat meats to persons who have a voracious appetite.

The free use of butter, and other oily substances, not only tends to relax the stomach, and impede its action, but to induce a debility of the solids, which paves the way to many maladies. In a country where two-thirds of the inhabitants lead sedentary lives, a debility of fibre must predominate. Whatever increases that debility ought to be avoided.

Children, without exception, are disposed to diseases arising from relaxation. Butter, of course, ought to be given to them with a sparing hand. But is this the case? By no means. Bread and butter constitute a great part of the food of children, and I am convinced that the gross humours with which they are frequently troubled are partly owing to this food. As children abound with moisture, bread alone is, generally speaking, better for them than bread and butter.

I have been astonished to see the quantities of butter eaten by gross women who lead sedentary lives. Their tea-bread is generally contrived so as to suck up butter like a sponge. What quantities of crumpets and muffins they will devour in a morning, soaked with this oil; and afterwards complain of indigestion, when they have eaten what would overload the stomach of a ploughman! Dr. Fothergill is of opinion, that butter produces the nervous or sick head-ach, so common among the women of this country. As a proof of this it is often cured by an emetic.

Oils, in certain quantities, excite nausea, and even vomiting. They must, of course, prove unfriendly to digestion. A Dutch sailor, we are told, can digest train oil. So may an English sailor; but it would be very improper food for a London lady.

To some of the leaner farinaceous substances, as the potato, and the like, butter makes a very proper addition; but eating it to flesh and fish, of almost every description, is certainly wrong. The meat eaten in this country is generally fat enough without the addition of butter; and the more oily kinds of fish, as salmon or herrings, are lighter on the stomach, and easier digested, when eaten without it.

Butter is rather a gross food, and fitter for the athletic and laborious, than the sedentary and delicate. It is less hurtful when eaten fresh than salted. Salt butter certainly tends to induce skin-diseases, and I am inclined to think, the free use of it at sea may have some share in bringing on that dreadful malady, so destructive to our brave sailors, *the sea-scurvy*.

There is a method of rendering salt butter less hurtful, but it seems not to be known in England. What I mean is, to mix it with an equal quantity of honey, and keep it for use. In this way it may be given to children with greater freedom. In North Britain, this method of mixing butter with honey is well known; and, from a common proverb, I take the custom to be very ancient.

Butter, in itself, is not near so hurtful, as when combined with certain other things. For example: bread made with butter is almost indigestible, and pastries of every kind are little better; many people almost live upon pastry, and it is universally given to children. It is little better, however, than poison, and it fails to disorder their stomachs. The fond mother cannot

pass a pastry-shop, without treating her darling boy with some of the dainties, and then wonders how he got the cough, or colic.

I have known a man seemingly in perfect health, who, by eating a pennyworth of pastry, as he passed along the street, was seized with such an asthmatic-fit, that he was obliged to be carried home, and had nearly lost his life. This occurred whenever he inadvertently ate any thing baked with butter.

Every thing that proves very injurious to health, ought, as far as possible, to be prohibited, by laying a high duty upon it. A duty on pastry would be serving the public in more respects than one. It would save many lives, and lessen some tax on necessities.

Cheese, as a diet, is likewise injurious to health. It should never be eaten but as a dessert. It occasions constipation, fires the blood, and excites a constant craving for drink. It is very improper for the sedentary, and hardly to be digested even by the athletic.

If men will live on dry bread, poor cheese, salt butter, broiled bacon, and such like parching food, they will find their way to the ale-house, the bane of the lower orders, and the source of half the beggary in the nation.

FRUITS AND ROOTS.

Fruits and roots form a large class of the substitutes for bread. The latter, being produced under-ground, are less liable to suffer from the inclemency of the seasons than grain. Men who wish to inflame the minds of the multitude may inveigh against the substitutes for bread; but reason and sound sense say, the more substitutes for bread, the better. When one fails, recourse can be had to another.

In warm climates the inhabitants have many substitutes for bread: and as their seasons are more uniform than ours, they can generally depend on the plant, or whatever it is, proving productive. The plantain-tree, commonly called the Indian fig, which has from time immemorial been cultivated in South America, bears fruit of a sweetish taste, which will dissolve in the mouth without chewing. It is eaten either raw, fried, or roasted. When intended to supply the place of bread, it is gathered before it is ripe, and eaten either boiled or roasted. The banana is nearly of the same nature, but its fruit is greatly superior both in taste and flavour.

The inhabitants of the South Sea, or Ladrone islands, are supplied with bread from a tree, which has been lately imported into our West India islands, and will, it is hoped, be found to answer the same purpose there. It has a slight degree of sweetness, but not much flavour. It resembles new bread, and requires to be roasted before it is eaten. Those who have tasted it, say, that it is in no respect superior to the potato.

In some of the West India islands the inhabitants supply the place of grain by making bread from the root of a shrub, called the cassada, or cassava. Though, to my taste, this bread is very insipid, yet the natives are fond of it, to such a degree, that I have known some of them eat it, during their residence in England, in preference to the finest London bread.

But the most general substitutes for bread in the West Indies are the yams. There are three different species of this plant, the roots of which are promiscuously used for bread. They are said to be very nutritious, of easy digestion, and when properly dressed, are by some preferred to the best wheaten bread. The taste is somewhat like the potato, but more luscious. The negroes generally eat them boiled, and beaten into a mash. The white people have them ground into flour, and make bread and puddings of them. They can be preserved for several seasons, without losing any of their primitive goodness.

Of all the substitutes for bread in Europe, the potato is the most extensively useful. This plant is a native of Peru, and has been in Europe above two hundred years. Like most other important discoveries, it made but slow progress, and is still far from being so generally cultivated as it deserves to be. It is indeed known in most parts of Europe, but its culture is best understood in Ireland, and the northern parts of England. At Harwich, however, the preference is given to the Dutch potatoes, brought over by the packets between that place and Helvoet-Sluys. There is a light sandy soil in Holland very favourable to the culture of that inestimable root.

As this plant thrives in every soil, and seldom suffers from an inclemency of seasons, we must blame ourselves if we suffer a famine to exist. Indeed no such thing ever can be, where due attention is paid to the culture of *potatoes*. A far greater quantity of farinaceous food can be raised on an acre of ground planted with potatoes, than sown with any kind of grain. It is not uncommon to have a return of forty for one. They are not so hearty a food as corn, but no man will ever perish for hunger who can have potatoes.

Potatoes abound with an insipid juice, which induces some to think that they are not very nutritious. Facts, however, are against this opinion. Some of the stoutest men, we know, are brought up on milk and potatoes. Dr. Pearson, who has bestowed some pains in analyzing this root, says, that potatoes and water alone, with common salt, can nourish men completely. They differ in colour and consistence, but not materially with regard to their nutritive qualities.

Some think the firm kind are the most nutritious; but the Irish, who must be good judges, give the preference to the mealy. The difference, however, depends much on the mode of cooking them.

More than half the substance of potatoes consists of water, and experience shows, that the mode of cooking, which most diminishes the moisture, is to be preferred. In London, they are drenched in water, and washed before they are brought to market, which accounts in a great measure for the bad quality of the London potatoes.

They are dressed in a variety of ways, but simple boiling or roasting seems to be all the cooking they require, to render them a proper substitute for bread. Some are fond of making bread of them. This, in my opinion, is marring both. Why manufacture any thing into bread, which requires only the aid of fire to make it such? Nobody thinks of making dough of the bread-fruit; but

the potatoe might with as great propriety be called the bread-root, as it is made into bread by the same process.

Stewed mutton and potatoes make not only a nourishing, but a very palatable dish. The excess of fat of the mutton, which, when otherwise cooked, sustains great loss, is thus preserved, by being absorbed by the potatoes. It is, however, to be observed, that when potatoes are used in broths or stews, they ought previously to be boiled, and the water thrown away, as it contains something deleterious. Simple boiling or roasting is sufficient to prepare potatoes to supply the place of bread, but when they are intended to serve as a meal, they require something of a softening nature, as milk, butter, or broth. What a treasure is a milch-cow and a potatoe-garden to a poor man with a large family, who lives in the country! Yet, with a little attention from landlords and farmers, almost every man might be so accommodated. What a source of real wealth and population! Men would multiply, and poverty, unless among the profligate, be unknown. Horses are sometimes fed with potatoes, and become very fond of them. With the addition of a small quantity of hay, they are found to be sufficiently nourishing.

I would beg leave to recommend, both to landlords and farmers, a careful perusal of Earl Winchelsea's excellent letter to Sir John Sinclair, on the advantages of cottagers renting lands. This humane nobleman takes up the matter in a *truly* patriotic light, and shows that farmers, *instead of* lessening the number of poor, do every thing they can to multiply them; and I am sorry to say, that so far as my observation goes, it agrees entirely with his lordship's.

Another letter relating to this subject has lately fallen into my hands, a copy of which I shall take the liberty to insert, as it contains in a few paragraphs the best practical illustration of the truths I have long been endeavouring to enforce. It was written by Sir JOHN METHUEN POORE to Sir WILLIAM PULTENEY; and is dated "Rushall, 4th April, 1801:—

"Sir,

"I can prove, not by theory but practice, the benefit of planting potatoes on fallows. In the parish where I reside, the whole of which, except five acres, is my property, there are thirty cottages, containing one hundred and thirty-one poor people. I have, for five or six years past, allotted, free from rent, four acres of land, intended to be sown with wheat, the following autumn, for the cottagers to plant with potatoes, by which means each raises from ten to fifteen sacks, equal to two hundred and forty pounds per sack, yearly, in proportion to the number of their children: each has not only sufficient for his family, but is enabled also to fat a pig. They declare, were I to give among them a hundred pounds, it would not be of so much benefit to them; and it is not one shilling out of my pocket, for I have as good, if not a better crop of wheat from this land, as I have from the other part of the field.

"The method I take is this: the latter end of November I plough the land; the frost during the winter mellows it: the beginning of March following, I plough it again, and harrow it; at both which times I have little to do with my horses: I then divide

it into lots; a man with a large family has a larger lot than a single person, or one who has only two or three children, allowing about five perches (of 16 1-2 feet square) to each in a family: they then plant it, and put over their potatoes what manure they have collected the year preceding (for every cottager has more manure than necessary for this from their fires, and a variety of other things,) and during the summer, after their day's labour is done, they and their wives hoe them; and as every man works more cheerfully for himself than for another, they do not suffer a weed to grow. In October they dig them up: and it is the most pleasant thing imaginable to see the men, their wives and children, gathering the produce of their little farms, which is to serve them the ensuing winter.—Were this plan generally adopted, the labourers would consume but little corn: which would supply the manufacturing towns, and we should have no occasion to import. As four acres are sufficient for thirty families, it would take but a small quantity of land from every farm in the kingdom. The way practised here is to plant the potatoes in furrows, eighteen inches apart, and a foot apart in the rows. The land about me is of different qualities; on the hills rather light; in the vale, near the parish, inclining to clay; but all fit for turnips: the potatoes are planted in the low land, being nearer home. The poor at present will not live entirely without bread, as many do in Ireland, though potatoes daily get into use more and more; and I am persuaded, were my plan generally adopted, in two or three years the labourers in the country would consume but little or no corn. Thirty years ago the poor in this part of the country would not eat potatoes, if they could get other roots or vegetables."

It is unnecessary to make any comments on this letter, every line of which is dictated by good sense and humanity, as well as by liberal and enlightened policy. I shall only add an earnest wish, that the example of the truly patriotic and benevolent writer may be followed by every man of landed property, and by every considerable farmer in the kingdom!

Some think that the potatoe, unless it be made into bread, will not keep. An accident taught me the contrary. Many years ago a friend of mine sent me a potatoe, after it had been roasted in an oven, on account of its singular figure. I laid it on a shelf among some other things of the like kind, and was surprised, on removing them many years after, to find the potatoe quite fresh, though as dry as a bone. On grating it down, it was perfectly sweet; and as fit for making soup as the day it was roasted. I apprehend that nothing made into bread would have kept so long.

Posterity will hardly believe that a scarcity of bread could be felt in Britain, at a time when it was known that a sufficient quantity of farinaceous food could be raised in one county for the inhabitants of the whole island. Let proper encouragement be given to the culture of potatoes, and set famine at defiance.

Many other domestic roots, sprouts, &c. are very wholesome, and may occasionally supply the place of bread. Of these Mr. Bryant of Norwich reckons above forty; but we shall only take notice, by way of specimen, of the most useful and productive. It is worthy of remark, that no nation can be very populous, which does not draw a great part of its food from under-ground.

The Jerusalem artichoke is a native of Brazil, but having been long cultivated in this country, it is too well known to need any description. From its taste, which is like that of artichoke-bottoms, it would seem to be nutritious, and is far from being unpleasant to the palate. Some reckon it windy, but this may be corrected in the cooking, by warm spices; and as the plant is very productive, we would recommend it to be used in the same manner as potatoes, and the other farinaceous roots.

Of the esculent roots in this country, the parsnip is reckoned the most nourishing. It is likewise of easy digestion, and is agreeable to most palates. Some, indeed, dislike it on account of its sweetness; but that is a proof of its nutritive quality, sugar being the most nourishing thing in nature. We are told that, in the north of Ireland, the poor people make beer from this root.

There is not any plant that affords a more striking proof of the benefits of culture than the turnip. In its wild state it is good for little or nothing; but when properly cultivated, it not only affords wholesome nourishment for man, but furnishes the principal winter-food for cattle. There is a species of this plant which grows in North Britain, called the yellow turnip, which is sweet, and of a superior quality to those produced in the south, particularly about London, which are bitter and stringy. The yellow turnip is the most nourishing, and also the most hardy in sustaining the winter. It is eaten with milk to cure the consumption and scurvy. Margraaf says, he *could* extract no sugar from the turnip, which affords ground to conclude, that it is not so nutritive as certain other roots. Not only the root of the turnip, but the tops, when young, make very pleasant greens. The sprouts, if gathered when very tender, make an excellent salad.

The carrot, like the turnip, is good for little in its natural state, being small, tough, and stringy. Manured, it grows large, succulent, and of a pleasant flavour. It ought, however, to be eaten young, otherwise it lies on the stomach, and is hard of digestion. It is an ingredient in several soups, and, being solid, may in some measure supply the place of bread.

Salsafy, skirrets, and the several kinds of beets, are all pleasant and nourishing. They are likewise of easy digestion, and may be dressed in a variety of ways. Margraaf has, by experiments, discovered, that both skirrets and beets contain a considerable quantity of sugar. Though the extracting a saccharine salt from these plants may be no object while we possess the West India islands, yet it serves to show that they possess a quantity of nutritious matter, sufficient to give them a rank among the articles calculated to supply the place of bread.

The onion, we are told, was a great favourite in Egypt four thousand years ago, and Dr. Hasselquist says, it is not to be wondered at, for whoever has tasted the onions of Egypt must allow that none can be better in any part of the globe. There, he says, they are sweet, though in many countries they are strong and nauseous. There they are soft, whereas in northern countries, they are hard, and their coats so compact, that they are difficult to digest. This very quality may, however, recommend them in countries where food is scarce. The Doctor observes, that the

Turks eat them roasted with their meat as we do bread, and are so fond of them that they wish to be indulged with this dish in Paradise.

From the Doctor's account one would be induced to believe that the onion used in Egypt was of a different species from ours; but I am rather inclined to think it may depend on the mode of culture, as well as on the warmth of the climate and the difference of soil, as we find in the southern parts of Europe they are milder than in the more northerly. In Spain they are very mild, and a root weighing two pounds will grow from a single seed.

Onions are dressed in a variety of ways, but, in regard of wholesomeness, there is no method better than simple boiling. By this method of cooking they are rendered mild, of easy digestion, and go off without leaving any disagreeable heat on the stomach or bowels. Many shun them on account of the strong disagreeable smell they communicate to the breath. Mr. Bryant says, this may be remedied, by eating a few raw parsley leaves immediately after, which will effectually overcome the scent of the onions, and likewise cause them to sit more easy on the stomach.

The leek is generally reckoned among pot-herbs; but as the root is the part chiefly used, the consideration of it comes under the present head of discussion. Indeed, it is properly a root as the onion, which grows chiefly above ground. The leek, as well as the onion, is said to be a constant dish at the table of the Egyptians, who chop them small, and eat them with their meat.

The leek is used as a pot-herb in most parts of Britain, especially in Wales, where the natives are said to be fond of it. In Scotland a full-grown fowl and small piece of salt beef, stewed with a large quantity of leeks, is a very favourite dish. In my opinion the leek is not so generally used any where as it deserves to be. There is no ingredient that goes into soup that is more wholesome, or that gives it a better flavour, than leeks. They are in many respects medicinal, and, to my taste, as an ingredient in soups, they are greatly superior to the onion or any other pot-herb whatever.

It is a fact worthy of observation, that the boiling of vegetable substances thoroughly, a thing seldom done in England, extricates a considerable quantity of air, and makes them less liable to produce flatulency.

I could mention a great many more esculent plants which might occasionally supply the place of bread, but the above specimen is sufficient to show how liberal nature is in supplying man with food, provided he will take the trouble of cultivating and cooking it. Mr. Bryant, in his history of esculent plants, enumerates above four hundred and fifty, each of which affords a wholesome nourishment, and may occasionally be used in place of bread.

BROTHS AND SOUPS.

THESE may likewise be considered as substitutes for bread. If properly made, they will serve both for bread and drink. Though broth is a dish of the greatest antiquity, and may be considered as extremely delicious, yet it is not a favourite in this country. Here

the people are fond of what they call *solids*; yet those very *solids*, they make into broth, by swallowing as much *drink* after them as they can get. The only difference is, the *foreigner* makes his broth in a pot, and the *Englishman* makes his in the stomach.

A very sensible anonymous writer observes, that in *England* a pound of meat makes simply a pound of food; whereas in any other country in *Europe*, that quantity of animal food, when stewed down with vegetables and *Scotch barley*, will produce an ample meal for half a dozen people. Hence he justly infers that, among the variety of schemes which may have been devised by the humane for relieving the distresses of the poor, a better and more extensive charity cannot be devised than that of instructing them in a new mode of cookery.

The same author adds, that the result of his experiments on this subject had exceeded his most sanguine expectations, and that each day gave him fresh proofs of the excellency of his plan for teaching the poor and needy to find themselves in a wholesome and palatable diet, at the cheapest rate, in which little or no bread was required. He concludes by asserting, that there is scarcely a place in this kingdom, where twenty persons may not have a wholesome, hearty, palatable meal, for three shillings.

This anonymous letter is followed by one from Colonel Poynter, two from Dr. Johnson, of the royal hospital at Haslar, addressed to Admiral Waldegrave, and one from the *Admiral himself*, written for insertion in a public paper. They contain a variety of receipts for making cheap, wholesome, and nourishing dishes for the poor. These dishes consist chiefly of broths, soups, and stews, or what they call pottage, and are calculated to make a hearty and plentiful meal without bread or drink.

I am inclined to pay the more attention to these letters, as they seem all to have been written by gentlemen of observation. The pamphlet is sold by Longman and Debrett, for a charitable purpose, at the small price of three-pence.

The writer who has paid most attention to the improvement of cookery, for the benefit of the poor, is Count Rumford. In his economical and philosophical essays, he has given such a variety of forms for making wholesome, cheap, and nourishing soups, stews, and other dishes for common use, that little more seems necessary to be said on the subject. I shall only observe, that the mode of living on broths, soups, hasty-pudding, and such like, so warmly and justly recommended by the Count, has been practised in the northern parts of this kingdom from time immemorial. There the food of the common people is hasty-pudding, with milk, for breakfast and supper, and broth, with vegetables and meat, for dinner. The poorer sort often make broth without meat; but they all use vegetables in great abundance, and sometimes they supply the place of meat with butter. As the hasty-pudding and milk make a complete meal, no bread is necessary either at supper or breakfast; nor is much required at dinner, as the broth is made thick with barley, cabbage, and a variety of other vegetables or pot-herbs. Cabbage is a favourite ingredient in a Scotchman's broth. It is seldom made without this article, which is not eaten so early as in *England*. It is there suffered to grow to maturity,

and, when that is the case, there is no plant more productive. This the Germans know well, and make it into *saur kraut*, one of the best antidotes against the scurvy with which we are acquainted.

This kind of diet not only saves bread but drink. The labourer who lives on hasty-pudding and soups, seldom has occasion for drink; while he who is burnt up with dry bread and cheese, or salt meat boiled, has a continual thirst, and spends the greater part of his earnings in liquor. This, by acting as a powerful stimulus, may make him do more work for some time, but it generally cuts him off in the middle of his days. The English labourer, who works hard and drinks hard, seldom lives long, and is an old man when he should be in his prime.

The roasting of meat is a wasteful mode of cookery, which ought to be avoided by the poorer sort of people, as much of the substance, and the most nutritive parts, are lost by scorching and what flies off by evaporation.

I know it will be said, that I recommend slops in place of solid food. They are such slops, however, as the greatest heroes of antiquity lived upon; and though I have visited most parts of the island, I know of no better men than those who live in the manner described above, nor are the people any where more healthy, or longer lived.

Broth is not only a dish of great antiquity, but one that can be made in a great variety of ways. It receives into its composition animal and vegetable substances of every kind that are used in diet, and it may be seasoned so as to suit every palate. Indeed people early accustomed to eat broths properly made, are generally fond of them for their whole lives.

It would be difficult to assign a reason why the inhabitants of South Britain should dislike a dish so much relished by other nations. Custom, no doubt, settles all these things; but how customs arise, is not so clear a matter. If an alteration in diet is to be introduced with effect, it must begin with children. Whatever men are accustomed to eat when young, they generally prefer for the rest of their lives. Were the children in South Britain taught to eat hasty-pudding, with milk, for breakfast and supper, and broth, with vegetables and meat boiled in it, for dinner, they would relish these dishes as long as they lived, would find little occasion for bread, and still less for drink; and would thrive better than on their present food.

What parents love themselves, they generally give to their children, without any regard to its being proper for them or not. I have seen a father, who was fond of strong beer, make his son, an infant, guzzle it at every meal; and the mother, who delights in tea, does not fail to give it to her daughter whenever she takes it herself. By this conduct the son becomes a tippler, and the daughter sips tea in place of solid food, until she is eaten up with vapours and other nervous disorders.

Count Rumford says, brown soup is the common breakfast of the Bavarian peasants, to which they occasionally add bread. This he avers is infinitely preferable in all respects to that pernicious wash, tea, with which the lower classes of the inhabitants of

this island, drench their stomachs, and ruin their constitutions. He adds, that a simple infusion of this drug, drank boiling hot, as the poor generally drink it, is certainly a poison, which, though it be sometimes slow in its operation, never fails to produce fatal effects, even in the strongest constitution, where the free use of it is continued for a considerable length of time.

The German on his *polenta*, the American on his *mush*, and the North Britain on his *hasty-pudding*, can make a hearty breakfast for a tenth part of what a tea-breakfast would cost, while it is infinitely more wholesome. It has likewise the advantage that no bread is necessary.

I have been often told, when recommending soups to the poor, that they had not time to make them, and that they could not afford fuel on account of its price, as it is dear in great towns. They can, however, find fuel twice a-day to boil a tea-kettle, and time to make the tea, which is a more tedious operation, by far, than making a mess of hasty-pudding. For a great part of the year even the poorest person must have a little fire; and it would require no more to make a comfortable mess of soup, which is always best when made with a slow fire.

The mode of living that I would recommend to the lower orders of the people, with a view to save expense and improve their health, is to substitute occasionally other farinaceous substances in the place of bread, as potatoes, &c. to give up in a great measure the use of roasted, baked, and broiled meats, and to supply their place with *broths*, soups, stews, and such like, made with a little meat and plenty of vegetables; to give it to children, and to grown people who will eat it for breakfast, milk-porridge, or hasty-pudding with milk, small-beer, or molasses. This will be found a more wholesome breakfast than tea, while it is much cheaper and requires no bread.*

REMARKS.

ALTHOUGH the place of bread may be occasionally supplied by farinaceous roots and other vegetables, yet we would by no means wish to discourage the culture of grain. The culture of grain is the culture of men. While the husbandman is raising

* The celebrated Dr. Hufiland, in his Art of prolonging Life, says the moderate use of soups is certainly not hurtful; and it is singular that people should imagine it tends too much to relax the stomach. Does not all our drink, even though cold, become in a few minutes a kind of warm soup in the stomach; and does not the stomach retain the same temperature during the whole day? Be careful only not to use it hot, in too great quantity at one time, or two watery. It is attended even with great advantages. It supplies the place of drink, particularly to men of letters, women, and all those who do not drink, or drink very little except at table, and who, when they give over soup, receive into their blood too little moisture. And it is here to be remarked, that fluids used in the form of soups unite much better and sooner with our juices than when drunk cold and raw. On this account soup is a great preventative of dryness and rigidity in the body, and, therefore, the best nourishment for old people, and those who are of an arid temperament. It even supplies the place of a medicine. After catching cold, in nervous head-aches, colics, and different kinds of cramp in the stomach, warm soup is of excellent service. It may serve as a proof of the utility, or at least harmlessness of soup, when I remark that our forefathers, who certainly had more strength than we have, used soup; and that it is used by rustics, who are still stronger than those in refined life; and that all the old people with whom I ever was acquainted were great friends to it.

food for his fellow-creatures, he is laying the foundation of health and longevity to himself and his offspring. Innumerable benefits are connected with the culture of grain. While the artificer is sitting in some awkward posture, breathing confined, and, perhaps, contaminated air, the cultivator of the soil rises with the sun, eats his wholesome meal of milk and farinaceous food, hies him to the field, where he spends the day in useful labour, inhales the fresh breezes, and at eve returns home with a keen appetite, to enjoy his simple repast and sound repose.

It has been said, as artificers can earn more money than those who cultivate the ground, that arts ought to be encouraged, and grain, if necessary, imported. No manufacture is equal to the manufacture of grain. It supplies food for man and beast, while the surplus, by being exported, enriches the nation. Nor is it subject to the uncertainty of other manufactures. They often depend on fashion and caprice, but the necessities of life will always find their value somewhere. Though I am convinced that some regulations are wanting for the encouragement of agriculture, I do not consider it as my province to dictate to the wisdom of the legislature. They know their duty, and I have reason to believe that they are inclined to pay it all due attention.

I will venture, however, to assert, that if proper encouragement were given to agriculture, Britain would at all times not only have a sufficiency of grain for her own consumption, but a surplus for exportation. This would contribute more to her real wealth, the happiness of her people, and the stability of her government, than either the increase of her trade, the flourishing of her manufactures, or the extension of her territory.

It is a matter of real regret and wonder that Britain, at a time when agriculture is cultivated as a science, should not be able to raise grain for the supply of her own inhabitants, but become every year more dependent on foreign states for even the necessities of life. Until an adequate remedy can be found for this growing evil, the free use of the various substitutes for bread, cannot fail to alleviate the calamities of the poor, and to reduce the price of labour.

The great consumption of animal food, and the immense number of horses kept in this country, are to be reckoned among the causes of the scarcity of grain. Mr. Mackie computes the number of horses in this country to be about two millions, and that every horse, on an average, consumes the produce of three fertile acres, consequently the produce of six millions of fertile acres is annually consumed by horses. These would produce a quantity of grain more than sufficient to maintain half the inhabitants of Great Britain. Two hundred and sixty thousand of these animals are kept for pleasure. I shall be told that they contribute to health. That I deny. Did our ladies of fashion and fine gentlemen make use of their limbs, instead of being dragged about in carriages, they would both benefit themselves and the public. I shall conclude these remarks with the advice of the humane and benevolent Thomson :—

"Ye gen'rous Britons! venerate the plough,
 And o'er your hills and long withdrawing vales
 Let Autumn spread her treasures to the sun.
 Luxuriant and unbounded. As the sea
 Far through his azure turbulent domain
 Your empire owns, and from a thousand shores
 Wafts all the pomp of life into your ports;
 So with superior boon may your rich soil
 Exub'rant Nature's better blessings pour
 O'er ev'ry land, the naked nations clothe,
 And be the exhaustless gran'ry of a world."

FOOD CONSIDERED IN A MEDICAL POINT OF VIEW.

UNDER this point of consideration, the most remarkable distinction of foods is into those which are already assimilated with the animal nature, and into those that are not. Animal substances, generally, are of the first kind, which, although not entirely similar, are nearly so to our nature. Of the second kind are vegetables, which, with much more difficulty are assimilated. But as the nourishment of all animals can be originally traced to the vegetable kingdom, it becomes evident that the principle of all nutrition exists in vegetables.

In the first edition of his *Materia Medica*, Dr. Cullen observes, that though there is, perhaps, no vegetable which does not afford nourishment to some species of animals or other, yet, with regard to mankind, a very considerable distinction is to be made. Those vegetables that are of a mild, *bland, agreeable* taste, are proper nourishment, while *those* of an acrid, bitter, and nauseous nature, are *improper*. We use, indeed, several acrid substances as food, but as *spices* or condiments, which answer the purpose of medicines, rather than any thing else; although, not unfrequently, acrid and bitter acrid vegetables are admitted as food. For instance, celery and endive are used in common food, though both are substances of considerable acrimony; but it must be observed, that when we use them, they are previously blanched, which almost totally destroys their acrimony. Or, if we employ other acrid substances, we generally, in a great measure, deprive them of their acrimony by boiling. In different countries the same plants grow with different degrees of acrimony. Garlic, for example, seldom, in this country, enters our food; but in southern countries, where this plant grows more mild, it is frequently used. The plant which furnishes casada, which, in its recent state, is of a very poisonous and acrimonious nature, affords an instance of the necessity of preparing acrid substances, even in hot countries; and there are other plants, such as the wake-robin, which, in their natural state, are so acrimonious, that they cannot be swallowed with safety; yet, when deprived of that acrimony by boiling, afford good nourishment.

DIFFERENCES BETWEEN VEGETABLE AND ANIMAL FOOD.

VEGETABLE differs from animal food in several respects. 1st, It has a greater tendency to acidity; whilst animal food of all kinds inclines more to alkalescency and putrefaction. 2d, With regard to their difference of solution in the stomach, heaviness, as

it is called, is seldom felt from vegetables, except from tough farinaceous paste, or the most viscid substances; while heaviness from animal food is more frequently noticed, especially when taken in any great quantity. 3d, With regard to mixture, there is no instance of difficult mixture in vegetables, except in vegetable oils; while animal food, especially the fatter meats, both from viscosity and oiliness, are in this respect refractory. 4th, When the putrescency of animal food has proceeded so far, it produces an active stimulus, causing diarrhœa, and dysentery. These effects are, however, but of rare occurrence; whereas from vegetable food and its acid, which, united with bile, proves a pretty strong stimulus, they more frequently occur; fortunately, however, they are of less consequence, if the degree of refrigeration be not very great. 5th, Wherever neither putrefaction nor acidity has gone to any great length, animal food keeps the belly more regular, &c. 6th, Vegetable food gives a greater proportion of succulent matter, and, when exsiccated by the stomach and intestines, is more apt to stagnate and produce slow belly and costiveness, than stimulating animal food, which, before it reaches the large intestines, where stoppage is made, it has obtained a putrefactive tendency, and gives a proper stimulus; thus, those who are costive from the use of vegetables, when they return to animal food, are considerably ameliorated in their natural bodily health. See "*NATURAL AND MEDICAL DIETETICON, or Practical Rules for eating and drinking, &c.*" By *J. S. Forsyth, &c.*, p. 63—67.

Independent of the preceding observations, it is generally pretty well known, that animal food is far more nutritive than vegetable, although they both produce a blood of the same kind but different in quality. The former affords a more dense stimulating elastic blood than the latter, which stretches and causes a greater degree of resistance in the solids, as well as excites them to stronger action.*

CHAP. II.

REMARKS ON SEDENTARY, STUDIOUS, AND LABOURIOUS OCCUPATIONS, &c.

THAT men are exposed to particular diseases from the occupations which they follow, is a fact well known; but to remedy this evil is a matter of some difficulty. Most people are under the necessity of following those employments to which they have been bred, whether they be favourable to health or not.

Chemists, founders, forgers, glass-blowers, and several other artists, are hurt by the deleterious air they are obliged to breathe; which is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston* as to be

* The inflammable principle.—A name given by Stahl to a principle which he imagined was pure fire, or the matter of fire fixed in combustible bodies, in order to distinguish it from fire in action, or in a state of liberty.