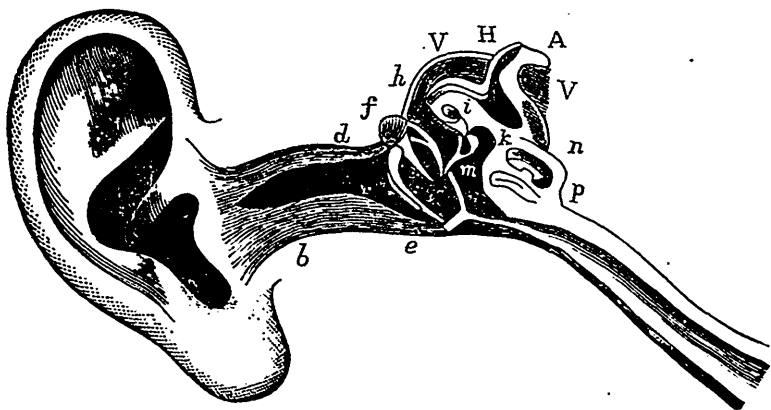


THE GOOD CANADIAN ;

OR,

HOUSEHOLD PHYSICIAN.

Happy the man who by Nature's laws, through known effects can trace the cause.



ANATOMY OF THE EAR.

The meatus externus is detached from the bone at *b* ; the oblique direction of its internal end shown at *d*, *e* ; the membrana tympani (or drum of the ear) stretched on its bony ring and bulging inwards ; *f*, *g*, *h*, the malleus ; *f*, the handle or process attached to the membrana tympani ; *g*, the long process ; *h*, the head ; *i*, *k*, the incus ; *i*, the short leg or process ; *k*, the long process ; *m*, the stapes ; *V*, *A*, *H*, the curved labyrinth ; *n*, *p*, the cochlea ; *n*, its beginning ; *p*, its termination ; this is followed by the vestibule ; *V*, the bony case of the an-

terior, or smaller of the semicircular canals; H, the posterior, or largest semicircular canal; A, the outer, or smallest canal.

Hearing is simple in its arrangement, and beautifully adapted to the purposes of life, and contributes remarkably to some of our most exquisite and refined enjoyments. The organ of hearing consists of a nerve, gifted with peculiar qualities, upon the surface of a delicate membrane; there is also connected with this a piece of cartilage, in the form of a funnel, leading to the internal parts. The bottom of this tubular cartilage is truncated obliquely, and its aperture closed by a firm membrane stretched across it, which separates this external part of the ear from the middle portion of the organ. Beyond this membrane we meet with a small cavity hollowed out in bone, which is termed the barrel of the tympanum. There are several openings into it, but there is one most important to us here: it is the inward aperture of a tube, the only extremity of which opens at the hinder part of the nose, behind and above the palate, through which the air is admitted with an equality of force to the pressure of the atmosphere on the opposite side of the membrane. Across the cavity there is extended a series of small bones, the exterior of which is attached to the membrane we have just mentioned. The most internal of them (four in number) is firmly connected with another membrane, which together shuts up the entrance to a deeper cavity called the labyrinth. This last hollow—excavated as it were in the solid bone—consists of a middle portion, irregular in appearance, from which different channels proceed in various directions, and finally return, with the exception of one only, to the same chamber. All these passages are lined by a membrane on which the extremity of the auditory nerve is expanded in different shapes; from these it is collected into one trunk, and goes on to a particular part of the brain, thus completing the communication between the external agent and the sensorium. The four small bones of the tympanum which help the hearing are as follows: First, the malleus or hammer; the upper part of its round head rests upon the concavity of the tympanum. This bone has several muscles, which move it in different directions and cause it to stretch or brace the membrana tympani when we wish to hear with accuracy. Connected

with the malleus is another small bone called the incus, or anvil, which is connected with another called the stapes, or stirrup, (from its shape). These two bones are connected by a small oval shaped bone, called os-orbicularis, placed between them; the whole forming a chain of bones which are the smallest in the human body. The stapes or stirrup has its end of an oval form, which fits a small hole called fenestra ovalis, in the labyrinth of the ear. There are many anatomical parts of the ear not likely to interest the general reader, which I shall omit. There is, however, one part which should be described, namely: the Eustachian tube, so called from Eustachius, an anatomist who is said to have first described it. This tube opens by a wide elliptical aperture into the tympanum behind the membrane, the other end of which gradually grows wider, opens into the cavity of the mouth, by this canal the inhaled air enters the tympanum to be changed and renewed. It likewise serves some important purposes of hearing, for if a watch be placed in the mouth and the ears stopped, its ticking may be distinctly heard; also persons partially deaf can hear better by a piece of wire being placed between the speaker and the hearer, with one end between the teeth of each person; the vibration of the sound is carried along the wire into the mouth, and so helpeth the hearing by the Eustachian tube. Also by placing a piece of wood or wire, with one end upon a musical instrument and the opposite end between the teeth whilst it is being played, it may be sometimes heard by people who are totally deaf to outward sounds. Much might be said of the muscles, nerves, and cartilages of the ear, which probably I may mention another time. I shall now mention some simples and their curative effects on the ears.

Syringing the ears in the morning with a warm solution of soap and water, is very servicable in all cases of deafness.

For deafness, distilled waters of Shepherd's purse, plantain, and marjoram, the same quantity. Mix, and drop a few drops into the ears upon going to bed, or a strong decoction of the same herbs (continued with) will have the same effect.

The juice of the herb Agrimony dropped in the ears, helpeth impostumes and foulness therein.

The juice or distilled water of wood betony, dropped in the ears, cureth running sores in them and easeth pains in them.

The juice of cleavers will also ease pains in them.

The juice of figs will sometimes procure hearing in cases of slight deafness.

The juice pressed from the green leaves of knot grass, will cleanse ears that are foul and have running matter therein.

A piece of baked onion is an admirable remedy for pains in the ears, by placing a piece in them.

The oil of peach or juice of peach leaves, will remove pain in the ears.

The distilled water of walnut wonderfully helpeth deafness.

Those who have been born deaf, must of necessity be dumb also; for as they know not what sound is, they cannot copy it.

ROOTS AND THEIR PROPERTIES.

Parsnip root is exceeding good and wholesome, though rather windy. It fatteneth the body—If frequently used, it is servicable to the stomach, and to provoke urine.

Parsley roots, if boiled and eaten as parsnips, greatly provoke urine, and openeth the body also, and is very useful to expel wind in aged persons. It openeth the obstructions of the liver and spleen, and helpeth to expel the dropsy and jaundice by urine.

Caution! Mistakes hath been made by persons taking the herbage of hemlock for parsley, or the root instead of parsnip, (as they bear a great resemblance to each other), causing phrenzy and the stupefaction of the senses. I mention this that persons might be careful.

If such accident should take place, a good draught of strong vinegar would be a present remedy.

Carraway root is a better food than the parsnip, and is pleasant and comfortable to the stomach, helping digestion; and if

eaten as parsnip they strengthen the stomach of aged persons exceedingly, and no need to make a whole meal of them neither. They are fit to be planted in any man's garden ; they are a most admirable remedy for those who are troubled with wind.

Carrot root—garden carrot—is said to break wind, but experience teacheth that it breedeth wind first, and we must thank Nature for expelling it, not they. Wild carrots doth expel wind, provoketh urine, helpeth to expel and break the stoney gravel ; it helpeth the cholic and obstructions of the kidneys.

Turnip roots are comforting to the stomach and cooling, digesting easily, and may be reckoned a wholesome kind of food. A syrup for coughs may be made of them. See page 14.

Horse radish—the distilled water thereof—mixed with honey and a small quantity taken, helpeth sciatica, jointache, and the hard swellings of the liver and spleen. The root bruised and applied outwardly to the place affected, will greatly help.

The garden radish is eaten as a salad in summer time, but if too much used, tendeth to corrupt the blood ; yet, for such as are troubled with the gravel, or stone, or stoppage of urine, they are good physic. They should be made into a syrup for the purpose, as follows : Slice the radishes thin and place them in a deep stone jar, with honey spread upon the slices ; let them stand for about ten hours and then strain off for use.

The later large radish has a better effect on the blood, and more suitable toward the fall of the year in cleansing and opening obstructions of the inward parts.

Beet roots are of a cleansing, digesting quality, (the white beet more so than the red ;) they are good for the headache and swimming therein, and complaints of the brain ; it helpeth burning if used without oil ; they loosen the belly ; the juice of them received into the nostrils occasion sneezing. If gently boiled and eaten with vinegar, they procure an appetite, and suppress choler in the stomach. The root boiled in vinegar and water, and the head bathed therewith, healeth the running sores and cleanseth away dandruff, and scurf, and dry scabs, and rendereth some help to baldness and shedding of hair.

Hartichokes, or Artichokes, if used much, purgeth by urine ; but if prudently used with other food, tendeth to strengthen the body much, and are well adapted for use in some peculiar cases.

Onions are flatulent or windy, yet they do ease the bowels. The juice of onions is counted good for scalds or burns ; and used with vinegar, taketh away all blemishes, spots and marks in the skin ; and dropped in the ears, easeth the pain and noise therein. If onions are beaten together with figs, they help to ripen and cause suppuration in imposthumes. Onions, if bruised and mixed with salt and honey, will destroy warts. Onions steeped in water all night, and the water taken from them in the morning and given to children fasting, will destroy worms in them. The juice of onions received into the nostrils, purgeth the head ; yet the too frequently using of them causeth the headache.

Leeks participate of nearly the same quality as the onions. Being boiled and applied warm, they help the piles.

Potatoes are windy in general, but according to their kinds ; also their effects are different in persons, which their own experience teacheth them, therefore, as food, little need be said. Potatoes eaten raw are good for the scurvy ; also to make a decoction of the peelings and wash the surface therewith, will remove scurvy ; also spots and freckles in the face, &c.

Garlic. The same may be said of this as of onions ; but in addition, garlic resisteth putrefaction. It is antidotal against the effects of wolfbane, henbane, and hemlock, or other poisonous herbs. It is exceeding good for jaundice, cramps, convulsions, and other cold diseases. Caution ! Melancholic persons should be very careful in using it, for its heat is vehement, and tendeth to confound the idea with strange visions and fancies, conveys ill vapours to the brain, and in choleric cases addeth fuel to fire.

Ginger is warming to the joints applied outwardly, and of a healing, drying quality, taken inwardly, warming the bowels and stomach in cold complaints. If used with some carraway seeds

and a little aniseed, it disperseth the wind comfortably. I consider ginger should be used in sauces for winter more than it is.

Having mentioned some of the most common and well known roots of domestic use, and their principal effects, I shall next collect a number of useful Medicinal roots that are well known and treat upon their principal effects in the next Magazine.

THE VOICE OF NATURE.

In Nature the simplest remedies are found to produce the most salutary effects; and in earlier times when the art of Medicine was less obscured, and practised more from motives of benevolence, the world was less afflicted with disease, and the period of human life less contracted. The laboratory of nature, were it but consulted, furnisheth ample remedies for every curable disorder incident to mankind; for notwithstanding the parade of compound medicines, the art of healing consists not so much in the preparation, as in the due application of the remedy.

Hence it happens that persons without education or ability, by the help of a simple herb gathered in its full strength and virtue, will sometimes perform very extraordinary cures in cases where the regular bred physician is absolutely at a loss how to treat them.

I would not here be understood to cast any unworthy reflections upon those exalted characters, who have made physic and the alleviation of human infirmity the principal study of their lives. The many invaluable discoveries added to the pharmacopœia, both from the vegetable and mineral worlds, are strong arguments of the necessity of regular practice, and of professional education in forming the physician; but, were these gentlemen to regulate their prescriptions according to nature and the patient's constitution, and depend on herbs, &c., that is the vegetable kingdom, only, for internal use, rather than follow a systematical list of prepared medicines and their appropriations, I am persuaded more immediate and lasting relief would

be in most cases afforded the sick and languishing patient. Too often doctors are so intent upon dosing the patient that they forget to instruct the patient concerning diet and habits, which is of the most importance.

It is not, however, the humane and liberal professors of physic whose practice deserves censure, but that mercenary tribe of catch dollar pretenders to physic, who pervade the country, and, like a swarm of locusts from the east, prey upon the vitals of mankind, these creatures in the shape of men with hearts callous to every sentiment of compassion, have only fees in view, or the sale of some mock preparation said to cure all kind of diseases. Governed by this sordid principle they sport with life, unmoved amidst the bitter anguish and piercing groans of the tortured patients, whom, when too far gone for human aid to restore, they abandon to despair and death. To prevent the growth of this imposing traffic, it requires that the practice of physic, instead of being clothed in a mystic garb, should be put upon a level with the plainest understanding, and the choice and quality of our medicines be rendered as obvious and familiar as our food. Instinct in the brute species furnishes this discrimination in the most ample and surprising manner; and in the primitive ages of the world, when men were blessed with length of days and were rich in years, it was their custom to consult individually their own complaint and their own cure. The knowledge of which lies open to the wayfaring man, it grows in every field and meets us in all our paths; and was mercifully given to alleviate the pangs of disease, to irradicate the pestilential seeds of infection—to invigorate the constitution, and strengthen nature—eventually reducing the perils to which we are exposed and making rosy health the companion of our lives.

Nature hath her laws of action
 Wisely planned, infallible,
 Teaching by a knowledge of them,
 All diseases curable.

She declares a mild prevention
 To be better than a cure,
 Select your food with that intention,
 And your healthiness is sure.—V. B. H.

MISCELLANEOUS RECEIPTS FOR GENERAL USE.

A CEPHALIC MEAD.—Take Valerian root, two ounces; rosemary or sage, three ounces; mustard seed, six ounces; Virginia snake root, two ounces; place them in a bag, then boil $1\frac{1}{2}$ lbs. of honey in ten gallons of water, skim off the top and put in the bag of herbs and boil gently together for a whole day, then it is fit for use.

The above Mead is good against Epilepsies, Apoplexies, Palsies, and all diseases of that kind, it is also of use in almost all nervous complaints, especially such as arise from too great moisture and cold.

A COMMON DECOCTION against gripes, and cramps, and such diseases as are caused by heat of urine, also to be used for lotions and emollient clysters; may be made thus:—Take of mallow leaves and camomile flowers, each two ounces; water two quarts; boil till one quart of the liquor is wasted, then strain the remaining Decoction for use.

A POULTICE to dissolve hard impostumes and assuage inflammations, may be made thus:—Barley meal, vinegar, honey and a few dry figs boiled together and applied.

A POULTICE to cure swellings under the ears, throat, neck and such like—Barley meal and onions boiled together with a little water, and applied.

BOILS.—Linseed pounded with figs is good to bring to a head, boils and other swellings.

HOARSENESS OF THE THROAT AND VOICE.—The fruit or kernel of cocoa-nut is very good if eaten at night.

BOTANY.

BOTANY OR PHYTOLOGY DEFINED.

Botany (or Phytology) is a science which hath for its subject herbs, plants or vegetables of all kinds: the word Botany being derived from the Greek word Botane, which signifies an herb

in that tongue. Hence a treatise on this subject is called Botany. The book which gives an alphabetical account of the names, nature and uses of plants, is called an Herbal; and a person well skilled in this science is called a Botanist, Herbalist or Simpler.

THE GREAT PARTS OF THIS SCIENCE.

A Treatise of Botany should contain four great parts, viz:—
 (1.) A general theory of Vegetation, explaining from the principles of reason and experiment, the nature and manner of the life and growth of plants and vegetables. (2.) A just and orderly distribution of herbs and plants into their several general kinds, and a particular enumeration of the species and individuals contained in each. (3.) A division of plants into their natural component parts, as Roots, Stalks or Trunks, Branches, Leaves, Flowers, Fruit, &c., with observations on the variety and differences of each part, in the various kinds of plants. (4.) A declaration of the various affections of plants and vegetables, as their place of growth, time of blooming, their several qualities and uses in medicine, and other affairs of life. This latter part is the subject of an Herbal, and so cannot be expected here at large. I shall give the best account of all these particulars that I can come at, and shall begin with the definition of a Vegetable.

A Vegetable is a body organically formed, adhering to some other body by some part of itself; by which part it attracts and receives the matter of nutrition and increase, which is called Vegetable Life. Such are all Plants, Shrubs and Trees.

Vegetation is the way of growth, or increase of bulk, parts and dimensions, by means of a proper disposition of organical parts or instruments receiving nourishment or nutritious juices; and which thereby circulates through all the substance of the vegetable, and is the immediate cause or principle of Vegetative Life.

In a perfect theory of vegetation, therefore, we must have regard to three things: (1.) The Original or Genesis of a vegetable substance or plant. (2.) The Mechanism or organical disposition of parts necessary to vegetative life. (3.) Then

what the vegetative Principle is, or what those nutritious juices are by which the vegetable is made to grow and increase in bulk.

By the Original or Genesis of a vegetable is not here understood the common generation or propagation thereof by seed; but what that is in the seed which primarily gives form and essence to the plant, or how it comes to be or appear what it is. On this head the learned say much; and all, of late, agree that God, when he created the various kinds of vegetables, did even then also create and form every individual future plant belonging to every sort or kind, and included them in proper cases or seed one within another; so that the *original seed did really and formerly* contain in it all the future plants of its kind in inconceivable smallness or *miniature*: and therefore when any seed is planted, we are not to expect the production or creation which was not before in being, but only that the *Embryo* plant hath, by this means, power to vegetate, or to unfold and unravel its parts, to burst its matrix seed, to become visible, and to increase its bulk to its appointed dimensions.

This doctrine of generation of plants seems to be intimated by Moses, when he says, *And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after its kind, whose seed is in itself upon the earth.* But it is abundantly confirmed by microscopic observations and reasoning thereon; for not only all sorts of grain and fruit appear in due form and proportions of parts, by the Microscope, even in the bud, before the blossom is seen, but in the very seed, while yet on the plant; by the help of the microscope the plant of next year may be seen. For instance: take a full ripe bean, and view the *germen* with the glass, and you will plainly perceive it to be nothing but the stalk, leaves, &c., of the next year's plant in miniature. If therefore the plant of this year produces seed, and in that seed we descry the plant of the next year already formed, it is reasonable to suppose the seed of that small plant also contains another to be disclosed the second year, and that another for the third year, and so on *ad infinitum* or to to the end of things.

The modern Philosophers have not only established a new Theory of the generation of vegetables, but have moreover found that there is such a thing as sex in plants as well as in animal nature. And hence the distinction of male and female, as well as Hermaphrodite plants is become very familiar: for the vegetable female require impregnation by the male vegetables in order to generation, as much as animals; nor will the seed produced by the female plants, if sown, grow without it, any more than eggs will produce chickens, which were laid by hens not impregnated: but since the parts serving to generation in vegetables are indeed the flowers, notwithstanding they are so beautiful, so gay, and so much admired; I shall have occasion to say more of this matter when I come to treat of that part of a plant.

The next thing to be considered in vegetation, is the mechanism or system of organs or vessels in a plant, by which a circulation of alimentary juices is carried on through the plant, and its vegetation effected. In order to this there is found to be two series or orders of vessels in vegetables. First—Such as receive and convey the alimental juices from the root to all the parts of the plant. These answer to the arteries, lacteals and veins in animals. Second—Trachææ or air vessels, which are long hollow pipes, wherein air is continually received and expelled, *i. e.*, inspired and expired. Within these air-pipes, Malpigbi (the discoverer of this vegetable mechanism), shews all the former series of vessels are contained.

Hence it appears that the heat of a year, a day, yea single hour or minute, must have an effect on the air included in these trachææ, *i. e.*, must rarify it, and consequently dilate the trachææ, whence arises a perpetual spring or source of action to promote the circulation in plants; for by the expansion of the trachææ, the vessels containing the juices are pressed, and by that means the juices contained are propelled and accelerated, and also comminuted and rendered more and more subtile, and so enabled to enter vessels still finer and finer; the thicker part of it being at the same time secreted and deposited into the lateral cells or vesicles of the bark, to defend the plant from cold and other external injuries.

The juice (or what is vulgarly called the sap), having thus gone its stage from the root to the remotest branches, and having, in every part of its progress, deposited something both for ailment and for defence, what is redundant passes out into the bark, the vessels whereof are inoculated with those wherein the sap mounted; and through these it re-descends to the root, and thence to the earth again; and thus a circulation is effected.

The third and last part of the theory of vegetation, is a true knowledge of the vegetative principle, or that which is the immediate matter of the growth or increase of the plant. 'Tis certain this is a juice furnished by the earth, and imbibed by the absorbent vessels in the roots of the plant; this is circulated through the substance of the plant, and, in part, is assimilated thereto; and thus by the constant addition of new matter in every circulation, the plant is made to grow or increase its bulk; but more particularly, originating as follows:—

This nutritious juice is imbibed from the earth, and therefore must contain some fossil parts, other parts derived from air and rain, and others from putrefied plants and animals, &c., and consequently in vegetables are contained all kinds of salts, oil, water, &c., if not mineral particles too. This juice enters the root in form of a fine and subtile water.

THE STATE OF THE SAP IN ITS DIFFERENT STAGES OF CIRCULATION.

In the root then it is earthy, watery, acid, poor, and scarce oleaginous at all. In the trunk and branches it is further prepared, though it still continues acid. In the germs or buds it is more concocted, and, entering the vessels of the leaves, causes them to unfold and shew themselves. From hence it proceeds to the leaves of the flower, where it is still further digested; these transmitted to a greater degree of fineness to the stamina; these again to the farina or dust in the apices, where, having undergone a further maturation, it is shed into the pistil or style, which receives it in the manner of a womb, where it acquires its last perfection, fecundates the seed, and gives rise to a new plant.

The sap in plants performs the same office as the blood in animals, viz., to be a vehicle to convey the food or aliment to the

several parts of the vegetable by circulation. This vegetable aliment is (according to Dr. Woodward), a certain terrestrial matter contained in all water, and is of two kinds, viz., the one properly a vegetable matter, the other of a mineral nature. The former of these is principally the matter by which the vegetable is nourished. That this is more than probable, and that the plant owes little or nothing of its growth to earth or water, is made evident by divers experiments.

Thus Mr. Boyle raised a plant of 3 lb. and after that another of 14 lb. was produced from a quantity of earth watered with rain or spring water, and which being carefully weighed dry at first and last, was found to have lost scarce any thing of its weight.

Again: Van Helmont dried 200 lbs. of earth, and therein planted a willow weighing 5 lb., which he watered with rain or distilled water only; and after five years he weighed the tree, with the leaves it had borne in the time, and found the weight thereof to be 169 lb. 3 oz., but that the earth had lost only 2 oz. of its weight; so that the increase of the plant was 13,113½ times more than the expense of earth, and consequently earth has but a small share in vegetation.

That water likewise conduces but little thereto, is evident from Dr. Woodward's experiments. He took a plant of common spearmint which weighed 27 grains, and placed it in a vial of water for the space of 77 days; in which time it drank up 2558 grains of spring water, and then being taken out, weighed 42 grains; so that its whole increase was but 15 grains, which was but 170th part of the water expended.

He took another plant, weighing 127 grains, placed it in water for 56 days, when it weighed 255 grains, and the water expended was 14,190 grains, which was 110 times more than the increase of the plant. From these, and many other experiments, 'tis plain that water also has but a small share in vegetation, and that therefore it must proceed from a peculiar vegetable matter in water and the moisture of the earth, as before observed.