THE GOOD CANADIAN;

OR,

HOUSEHOLD PHYSICIAN.

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

MILK, BUTTER AND CHEESE.

Much may be said both for and against these articles, as regards their qualities and of the adulteration of them also. I have heard of persons being cured of long standing diseases by exclusively living upon milk for a long time, and of the continued health and longevity of some who have made milk a regular beverage. In cases of consumption, new and wholesome milk is found very serviceable; yet particular care should be taken that the cow from which the milk is procured is not diseased, for if the animal be diseased, so must the milk in some measure be diseased also. In large crowded cities and towns cows are often subjected to the unnatural and unhealthy influences of bad air, want of exercise, and improper food. Cows are sometimes diseased through the improper vegetables given them to eat, whereas if left alone to choose their food upon a meadow, field, or green road side, they are not likely to eat any injurious herbage. It may well be conjectured that if the milk be from a diseased cow, butter and cheese made therefrom would not be wholesome. Many injurious adulterations are often practised by butter and cheese manufacturers. Anatto is used by some to color it with, and arsenic to impart an apparent freshness and tenderness. When such things as these and other injurious chemicals are used, there is no wonder at a sick patient not recovering under a regular use of what they ignorantly believe to be pure food. Persons who keep their own cow and have a good run of grass and wholesome herbage, have the ad

there is also an imperceptible perspiration regularly proceeding from the surface of the body, which has been computed to amount to several pounds in the course of a day. It must be evident, therefore, that if this waste was allowed to proceed but for a very short period, the body would soon be reduced to a state of complete decay. A constant supply of new material is therefore daily needed, to replace that which is wasted; and thus it has been supposed that a human body changes its whole materials many hundred times from the period of its birth till death; and that an individual, as regards his mere corporeal structure, is not at all the same at the period of manhood to what he was when a boy, nor in old age what he was in his prime. Although this change then is complete, even to the bones and most solid parts of the frame, it is brought about so gradually, and with the regular and minute substitution of one particle for another, that it is imperceptible; and even the marks of spots and blemishes, and the healing scars of wounds, are accurately preserved. Man has been called, with relation to his diet, omnivorous, from his being adapted to live on every kind of food, whereas most other animals are confined to one particular description. The carnivorous animals live on flesh alone, the gramenivorous on grass and green herbs, and the granivorous on grains and other smaller seeds. These animals never change their respective diets; nor, from the construction of their teeth, stomachs and intestines, were they ever intended to do so. But in man, it is plainly evident from his anatomical structure, that he was intended to feed on every sort of food promiscuously, or that he could adapt himself to either animal or vegetable fare, as habit or necessity impelled him. Man also differs from brutes in resorting to the arts of cooking, whereby the food is put into a state more fitted for digestion, and for yielding a sufficiency of nutritious aliment. The food being received into the mouth, is broken down and masticated by the teeth, which are of two kinds, the cutting teeth and the grinders. It is here also reduced into a soft pulp by the saliva, which flows into the mouth by the salivary glands; and thus being sufficiently broken down and softened, it passes into the stomach. The stomach has numerous glands situated on its inner coat or surface, which secrete a peculiar fluid called the

gastric juice, which is clear and colourless, with little taste, or smell, or sensible qualities. On this fluid depends the important office of digestion. It has the power of coagulating substances in the stomach, of preventing the contents of the stomach from passing into a state of fermentation or putrefaction, and of dissolving the whole into one homogeneous mass. When the stomach is first filled with food, it appears to remain there for a short period without undergoing any change; gradually, however, successive portions of the food, as they come into contact with the gastric fluid, are dissolved; till at length, in a shorter or longer period, the whole is collected into a thin greyish paste, called chyme. In the upper or left division of the stomach it would appear, from some recent observations, that the food is freed from its superabundant moisture, which drains off by some undiscovered means to the blood-vessels, and from thence to the kidneys. The chyme then, as it is gradually formed, moves to the other extremity of the stomach, called the pylorus, where it passes out to enter the intestinal canal. It would appear, also, that the pylorus, or lower mouth of the stomach, has a sensitive power, whereby it freely permits the digested chyme to pass out, but refuses exit to the undigested matter. The chyme having passed into the first part of the intestines, or duodenum, is then mixed with the bile from the gall-bladder, and with the pancreatic juice. Both these substances, especially the bile, seem essential for the convertion of the chyme into proper alimentary matter, but their peculiar action has not yet been satisfactorily explained. That the liver and bile ducts are of the utmost importance, however, cannot be doubted, from their magnitude, and the care by which they are supplied with numerous vessels, and from their being universally present in a great proportion of animals. The chyme having passed through the doudenum, and having been mixed with the bile and pancreatic juice, now changes its appearance and properties, and becomes the chyle, or nutritious matter destined to support the various parts of the system with nourishment. The digested mass is gradually passed along the course of the small intestines, urged forward by what is called their *peristaltic* motion, which is effected by a successive contraction of their fibrous coats. Here the minute mouths of the lacteal

vessels, opening on the inner surface of the small intestines, take up the chyle, and carry it, as has already been described, to the receptacle of the chyle, and from thence, by the thoracic duct, it joins the blood-vessels. The refuse of the aliment which has been taken up by these lacteal vessels, passes on through the large intestines, and at length is rejected from the body. It is conjectured that in the colon, or large gut which follows after the smaller intestines, the fatty matter of the body is secreted. Digestion is not brought about, as has by some been supposed, by any mechanical means, as by the grinding powers of the coats or sides of the stomach, nor by heat alone, nor fermentation, nor by the simple solution of the food in the fluid, but it is evident that it undergoes a series of chemical actions in the stomach and bowels, whereby its nature and properties are completely changed; and thus animal and vegetable substances, however different, are reduced to one peculiar kind of fluid, the chyle, which, though it may be found to vary slightly according to the kind of food, is, in its general properties, always the same. The gastric juice varies in different animals. In those which feed on vegetable matters, it dissolves those substances only; whereas grain and vegetables pass through the stomach of a carnivorous animal without undergoing any change. It has this singular property, too, that although it readily dissolves dead animal matters, and reduces them in a short time to a thin pulp, it will not usually act on the living fibre; so that, after death, the coats of the stomach have been found dissolved into holes, by the same juice, that, when living, had no such effect. A stomach of some kind or other is found in all animals; for it is by this organ that nutrition and growth are solely promoted. There are some very simple animals whose whole body consists of a membrane formed into an oval hollow bag, or stomach, with a simple outlet for the mouth to take in nourishment, and no other organ whatever. Of this kind, too, is the polypus, which has a mouth and hollow stomach, with several tentacula or arms, by which it seizes the worms and grubs on which it feeds; these it swallows, abstracts their juices, and then voids the remainder from its mouth. The common leech has its whole body divided into a number of small cells, like a piece of honeycomb; and these receive the water

and sometimes blood, on which it feeds. Flesh-feeding animals have a simple bag for a stomach, and their food is easily and soon digested. Those animals, again, that feed on grass, which is of more difficult digestion, have three and more stomachs, into which the food successively passes after it has been masticated or chewed a second time in the mouth. This is the case with cows, sheep, deer, &c. Birds that feed on grain have first a sap-bag, or crop, into which the food enters, and remains for a considerable time, mixed with a juice somewhat like saliva; here it is softened and rendered moist, preparatory to its passing into the true stomach, or gizzard, which is an extremely strong muscular bag; in this, with the assistance of a number of sharp-pointed pebbles, which such birds always swallow, it is ground down and acted on by the gastric juice. This compensates for the deficiency of teeth in fowls. Crabs and lobsters have no teeth in their mouths; but in their stomachs will be found three or more teeth, which assist in grinding down the tough sea-weed on which they feed. By domestication, the qualities of the gastric fluid may be so changed so that animals accustomed to live entirely on flesh will exist and thrive on a vegetable diet. This is the case with dogs and many birds.

PHYSIOLOGY OR NATURAL PHILOSOPHY.

[CONTINUED FROM PAGE 126.]

ELECTRICITY is a kind of attraction and repulsion of very light bodies alternately, by certain polished surfaces chafed or heated by rubbing or friction. Thus, glass, sealing-wax, amber and precious stones, attract and repel feathers, hairs, straws and other light bodies at considerable distances, as known by common experiments. Note.—If a glass tube be emptied of air, it loses its electrical quality.

MAGNETISM is another very surprising species of attraction, which that fossil called the load-stone is endowed with. Every one knows its strange power of attracting and repelling iron, and the virtue it communicates to the mariner's compass, whereby it is determined to point to, or very near the North Pole. Note.—The magnet loses its quality by being made red-hot in the fire.

Gravity is distinguished into absolute and specific. Absolute Gravity is that which every body has in itself simply considered. Specific Gravity is that which is considered in a body compared with the gravity of any other, and is said to be either greater, equal to, or lesser than it. Thus, if the gravity of fine gold be 11, and that of fine silver 6, the specific gravities of gold and silver are said to be to each other as 11 to 6. Note.—In spaces void of air all bodies gravitate alike; or a feather and a stone, being let fall together, descend with equal velocity or swiftness.

Mensurability is another universal property of bodies, for as all bodies are extended into the dimensions of length, breadth, and thickness, so it is possible for the contents or quantity of space included within those dimensions, or under the extremities of those bodies, to be compared, and the ratio or proportion between them found and determined, which is called the mensuration or measuring of bodies.

Inactivity or passiveness of matter, is its disposition to abide or continue in its state of motion or rest, till it is made to alter the same by the action of some external force. And from this principle are deduced those laws of motion, which are called the laws of Nature by Sir Isaac Newton, viz:

Law I. All bodies continues in their state of rest or motion, uniformly in a right line, till they are obliged to change that state by the impression of external forces. Thus, a wheel whirled round would always continue that circular motion, were it not for the resistance it meets with from the air, and friction of the axle.

Law II. All change of motion is proportional to the power of the force which causes it, and in the same direction with the said force. This law is as evident as that every effect is proportionable to its cause.

Law III. Re-action is always equal and contrary to action, for when one body acts on another, that other body re-acts with equal force upon the first, and in a contrary direction. Thus, when a sledge strikes the anvil, the anvil returns an equal stroke on the sledge, and makes it rebound. So when a horse draws

a stone with a rope, the rope being equally strained throughout, plainly argues the stone stretches it equally with the horse, and therefore draws the horse as much as the horse draws it; and therefore since these forces are equal and contrary, they would destroy one another, that is, neither horse nor stone would move, were it not that the horse obtains an additional force, by pushing or thrusting himself forward against the ground.

Ubiety is that affection of all bodies, whereby they necessarily take up and possess some place or part of space.

Space is a mere void, infinitely extended every way; or it is that part of the Universe in which nothing exists, or is entirely empty of all matter, and, though all bodies must occupy or fill some part of this infinite void of space, and which is called their place; yet, since matter is not infinite, it cannot fill infinite space completely, but there will be some interstices of empty space, which the philosophers call a vacuum, though the French (who have a superstitious philosophy as well as religion) are absurd enough to deny this most evident truth.

Durability, or duration of matter, may be reckoned another of its properties; since it is certain, that though the form and texture of bodies may be any how destroyed and changed, yet their substance cannot be destroyed, changed, nor diminished in the least; for to annihilate or reduce matter to mere nothing is as much an impossiblity, as to produce it from mere nothing; and both in the nature of things as absurd to suppose, as motion in an absolute plenum, or any other inconsistency imaginable.

The specific or accidental properties, which are called the qualities of natural bodies, are next to be considered, and are these, viz. (1.) Light. (2.) Colors. (3.) Sound. (4.) Density and Rarity. (5.) Transparency and Opacity, (6.) Hardness and Softness. (7,) Rigidity and Flexibility. (8.) Confidence and Fluidity. (9.) Heat and Cold. (10.) Humidity and Siccity, (11.) Elasticity. (12.) Odors and Sapors.

Light is the quality of that sort of matter we call fire, which renders all objects from whence it proceeds visible, as well as those which receive it. It consists of very small particles, which come from the luminous or radient body in right lines to

the eyes, with such an incredible velocity, that the light arrives to us from the sun in about seven minutes and a half, which is about 95,000,000 miles, which is near 200,000 in a second of time. The surfaces of most bodies reflect light, by which means they become visible and colored; for those which reflect none appear dark and black. Light in passing through any medium, as air, water, glass, &c., is refracted, or broke out of its strait course into another, which is medium; but farther from it, if into a thinner medium. And this refrangibility of a ray of light is different in the several parts of it, according to the different colors contained therein; of which I shall next speak.

COLOR is that quality of bodies whereby they appear of some certain hue or complexion; and which is better known than described. The colors of bodies are all of them from the rays of light originally, and exist therein in the following order; 1 red, 2 orange, 3 yellow, 4 green, 5 blue, 6 indigo, 7 violet. When light is refracted, as through a prism, &c., the red-colored rays fall lowest, and the violet the highest, the others fill the intermediate spaces; all of which are in respect of quantity, in musical or harmonical ratio; and bodies only appear red, yellow, blue, &c., rays than of others; and those bodies which reflect promiscuously all the rays which fall on them appear white; and those which reflect none appear black, as has been said.

SOUND is an effect caused by striking of a sonorous body; for the tremulous motion of the parts occasioned thereby agitates the air, and produces such undulations or pulses thereof as are like to waves in water; these striking the drum of the ear excite the idea of sound in the brain by means of the optic nerve. It is propogated in concentric spheres around the sounding body. The air is the medium of sound, since none can be produced in an exhausted receiver in an air-pump. Sound flies at the rate of 1142 feet in a second of time; and may be heard at the distance of 180 or 200 miles. Echo is the reverberation or repercussson of a wave or pulse of air from the surface of obstacles as vaults, &c., whence flying back, it strikes our ears with the same, but more obtuse sound than the first.

Of sounds, there is great variety of tones, tunes, or notes, with respect to acuteness and gravity; some of which being pleasant and agreable, are called concords, the others discords; from a various and artful composition of which arises the heavenly art of music.

Density and Rarity of bodies are commonly understood of their greater or lesser quantity of matter contained under the same bulk, and therefore the density of bodies is in a ratio compounded of the direct ratio of their quantities of matter, and a reciprocal ratio of their bulks. Thus, if A has 8 parts of matter, and 5 degrees of magnitude, and B has 2 parts of matter, and 10 degree of bulk, then the density of the body A will be to that of B, as 2×5 to 8×10, that is 10 to 80, or as 1 to 8. The density of bodies is increased by heat, which by dividing and expanding the particles of bodies, does attenuate and rarify them, and this is called rarification. On the contrary, cold, by uniting and combining the same particles, doth thicken and condense them, and this is called condensation, and in some cases coagulation.

Transparency is that quality in bodies whereby they transmit light through their substance, and by which means they become thoroughly enlightened, and objects are visible through them. Such bodies are said to be transparent, pellucid or diaphanous, as water, glass, crystal, &c.

Opacity is the opposite quality of bodies, and those bodies are said to be opake, whose substance is dark and not transparent, and is occasioned by the light being obstructed or deflected from a right passage through them.

Hardness is a quality of some bodies, arising from the mutual attraction of the most minute primogenial particles of matter, whereby they firmly cohere, and are consolidated so close together that they will not yield to the touch. And the nearer the figure of these particles approach to the five regular bodies, the stronger will be the attraction, and the greater their cohesion, and the firmity or hardness of the body thence arising.

(TO BE CONTINUED.)

FRUITS AND THEIR MEDICINAL PROPERTIES.

(CONTINUED FROM PAGE 115.)

PLUMS that are sweet, moisten the stomach and make the belly soluble; those that are sour quench thirst more, and bind the belly; the moist or waterish plums sooner corrupt in the stomach than the firm, which are the most nourishing and less offensive. The dried prunes, sold at the grocery stores, do in some degree loosen the belly, and being stewed, are often used, both in health and sickness, to procure appetite and gently open the belly, allay choler and cool the stomach. The juice of plum tree leaves, boiled in wine, is good to wash and gargle the mouth and throat, to dry the flux of rheum, which sometimes floweth to the palate or gums. The gum of the tree is good to break the stone. The gum or the leaves, boiled in vinegar and applied, will take away tetters and ringworms. The oil, pressed out of the stones, as oil of almonds is made, is good against inflamed piles, tumors, swellings and ulcers, hoarseness of the voice, roughness of the tongue and throat, and pains in the ears. Five ounces of the said oil taken with one ounce of muscadine, will expel the stone and help the cholic.

QUINCES, when they are green, help all sorts of fluxes in man or woman and choleric lasks; castings or whatever needeth astriction, by cooking them first, the juice, syrup or conserve thereof, is rather opening, much of the binding quality being lost by preparing, and if a little vinegar be added, it stirreth up a languishing appetite, and strengtheneth the stomach; some spices being added, it comforteth and cheereth the fainting spirits, helpeth the liver when oppressed so that it cannot perfect the digestion, and correcteth choler and phlegm. If you would preserve them with a purging quality therein, put honey to them instead of sugar, if you wish to be more laxative to purge choler, add rhubarb; to purge phlegm add turbith; for all watery humors, add scammony. To take the crude juice of quinces is held a preservative against the force of deadly poisons by the outward application of the oil or decoction of quinces, stayeth and cooleth hot fluxes, also strengthens the stomach or weakness of the sinews. The mucilage taken

from the seeds of quinces and boiled in a little water cooleth the heat, and healeth the sore breasts of woman. The same with a little sugar, is good for harshness and soreness of the throat and roughness of the tongue. The cotton or down of quinces, boiled and applied to any plague sores, healeth them, and laid as a plaster made up with wax, it causeth hair to grow on bald places, and keepeth it from falling off.

Pears.—Their physicial use are best discerned by their taste. All the sweet or luscious sorts, either manured or wild, tend to open the belly more or less; those that are sour and harsh, on the contrary, have an astringent quality. The leaves of each possess the same contrariness of properties. Those that are moist are in some degree of a cooling nature, but the harsh or wild sorts are much more so, and are frequently used as repelling medicines; they are very useful to bind up fresh wounds, stopping the blood and healing the wounds very quickly, and without inflammation; for which wild pears are best.

Grapes and Grape Vine.—The leaves of the vine being boiled make a good lotion for sore mouths, and if boiled with barley meal into a poultice it cools inflammations of wounds. The droppings of the vine when it is cut in the spring, which are called tears, boiled into a syrup and taken inwardly is very good for weak stomach. The tears of the vine, drank, two or three spoonsful at a time, break the stone in the bladder. But the salt of the leaves is held to be much better. The ashes of the burnt branches will make teeth that are black to become quite white, if you do but every morning rub them with it. The grapes are when well ripe a very healthy fruit, and should be much used in their season by persons who are delicate, and of weak stomachs. Pies made with grapes are delicious and serviceable. A nice drink may be made from the grape, either binding or relaxing in it properties, as follows, boil the grapes in water with the skins on, if you would have it with a binding tendency, or take the skins from them if you would have the drink to be of an opening quality. To rub the skin with the juice pressed out of grapes will remove pimples and remove the evil color of the skin.

(to be continued.)

BOTANY OR PHYTOLOGY.

(Continued from p. 119.)

Artichokes mentioned on page 116 and page 22, may now be enjoyed in their season.

MALLOWS.—The marsh mallow leaves are most generally used for loosening the belly gently, and is used in decoctions for clysters, to ease all pains of the body, opening the straight passages and making them slippery, whereby the stone may descend the more easily, and without pain out of the reins, kidneys and bladder, and easeth the torturing pains thereof. This beautiful herb, and as well, the other common mallows, are used by skillful hands in very important cases. The decoction of the leaves, drank in small quantities, procureth a store of breast milk in nurses when they are short; the leaves bruised and rubbed on places stung by bees, &c., taketh away the pains swellings, and redness caused thereby. The leaves boiled in olive oil is good to remove dandruff and dry scales from the head, and other parts, if rubbed therewith, and washing the head therewith preventeth baldness. The roots are mentioned on page 53. The class in which they rank, page 42 class XV.

BURNET is a most precious herb, it is called, also, sanguiforba, pimpinella, bipenula, and solibegrella. For general use the garden kinds are the best, they are friendly to the heart, liver and other principal parts of a man's body. They are of rather a drying and astringent quality, therefore available in all kinds of fluxes of blood and humors, and to staunch bleedings, both inward and outward, lasks, scourings, the bloody flux, whites and the choleric belchings and castings of the stomach. It is a singular wound herb for both head or body, either inward or outward, for old ulcers, running cankers, or moist sores—to be used either by the juice or the decoction of the herb, or by the powder of the herb, or root, or distilled water of the herb, or ointment by itself, or with other things of like nature compounded. The seed is no less effectual in stopping fluxes and drying moist sores, being taken in powder or the powder mixed with ointments. Of class, &c., see page 41 class X.

BORAGE.—The meaning of this word is oxtongue. This herb is a great cordial and strengthens of Nature. The leaves are

very good against putrid and pestilental fevers, to defend the heart, and helpeth to expel the poison of venomous creatures. The seed are of like effect, and the seed and leaves are good to increase milk in women's breasts. The leaves, flowers and seed are cheering to the mind, clarifying to the blood, and mitigateth heat in fevers. This herb is made up in various ways as cordials, and is good for those that are weak with long sickness, and to comfort the heart and spirits of those that are in a consumption, or troubled with often swooning, or passions of the heart; the distilled water thereof is no less effectual to all those purposes, and helpeth the redness and inflammations of the eyes, being bathed therewith. The roots are used to condensate thin phlegm, &c. See page 53; class answering as bugless same, page 42 class XIII.

(TO BE CONTINUED)

SEPTEMBER.

September, month of laden trees,
Peach, apples, pears, and ripe quinces,
And ground fruit too, of pumpkins, melons,
Cucumbers, marrows, and of citrons.

The month to gather in your fruits,
And some domestic garden roots,
May nothing perseverance hinder,
Of getting in a stock for winter.—V. B. H.

MISCELANEOUS RECIPES.

Two and a half lbs. of maple sugar, 1 pint of molasses, ½ lb. honey, ½ lb. tartaric acid, mix well together, pour two quarts of boiling water on them and stir well till disolved, when cold add ½ oz. of sassafras and bottle off for use; a small piece of soda may be placed in each bottle before corking. When used a few spoonsful of it, with ½ pint of water, maketh a good cooling drink.

TO CURE SCABS AND BREAKINGS OUT IN THE SKIN.—Bathe well every night with the water in which catnep has been boiled.

The juice of Beet root snuffed up the nose taketh away noise in the ears, and sometimes easeth toothache.

Aged persons who are troubled with weak and windy stomachs should now procure carraway roots and boil them, to be eaten as parsnips; they are very nice.

Dock leaves are plentiful, let it be known that a few dock leaves boiled with meat maketh it boil sooner and tenderer.

CORRESPONDENCE.

No letters can be answered in the ensuing number which are received later than the third Saturday in the Month. Letters to be addressed to V. B. HALL, Post Office, Hamilton. Private residence, Mountain View Cottage, Township of Barton, Hamilton.

T. C.—Take notice, next time you dry them for keeping, that they do not get damp, for that causes the mustiness. They should be dried in the sun for a day, and afterwards kept dry, for if they get damp once after, they are spoiled.

G., Ancaster.—It is not too late, but you will find the seed of them most virtuous now, or if you use the roots, use them from which the tops have decayed, they are perrenial.

A. N. G., Essa Crossing.—I have got preparations in bottle, prepared by myself, as tonics for the blood, and to strengthen the system; also a famous heart cordial for heart disease. I have a powerful worm expulsion, in bottle, containing nutritious and strengthening properties.

P.—The word Botane signifies herb in Greek, from which the word Botany is derived as a science.

W. A.—You will see them mentioned in March number.

These Magazines are now obtaining a good circulation in Dundas.
