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## SUNLIGHT AND SOLARIZATION IN HEALTH AND DISEASE.

By E. C. ANGELL, M.D,, New York, (from the *Sanitarian*, Oct. '78.)

According to Plutarch, when the youthful Alexander visited Diogenes at Corinth, he found the famous cynic tranquilly lying in the sun. The warrior affably saluted the philosopher, and asked him if he could do him any service.

"Only stand a little out of my sunshine," replied Diogenes. This incident occurred when this renowned Athenian had reached the age of "three-score and ten"—long past the eccentric days of his life in a tub, and his daylight lantern searches for an honest man; and there is good reason to suppose that he really valued the invigorating solar rays more than any boon Alexander could give. Nor was he alone in his devotion to sunshine, for, as we learn from Pliny, it was a common practice in Greece for old men to recruit their energies, both mental and physical, by exposing themselves naked in the sun—a fact which Hippocrates might had in view when he wrote: "Old men are double their age in winter, and younger in summer."

Among the Romans, the two Plinys accustomed themselves quite as much to sunshine as did the sensible and shrewd Diogenes. Pliny the elder, a man of acuteness and extraordinary intelligence, would employ his leisure after dinner in summer, lying in the sun. His nephew, the younger Pliny, who relates this fact, had himself, at both his country seats, gardens bordered with thick hedges, where he could walk completely nude, thus immersing his whole body in the solar blaze. In fact, the love of sunshine was a marked feature of old Roman life, the dwelling being generally provided on the roofs or southern walls with balconies or terraces, termed *solaria*, where the occupants, sitting or reclining, could sun themselves at their ease.

This use of light and heat was rather prophylactic than remedial. The therapeutic efficacy of sunshine, however, was by no means unknown to the ancients.

Gorræus, as cited in Main's "Expository Lexicon," puplished in London in 1860, says that *heliosis*, or exposure to the rays of the sun,

was a remedy among the ancient physicians for many affections of the body, and he mentions particularly dropsy, inflammation of the kidneys, and paralysis.

Hippocrates, in prescribing for a fever with chills, directs that the patient warm himself in the sun. Aurelianus and Celsus also refer incidentally to the advantages of sunshine, the latter recommending for those of weak digestion, a house "well lighted, having the winter sun"; and he further observes that for patients of this class, exercise in the sun, if the head can bear it, is better than exercise in the shade. It should be noted also that Celsus warns these same dyspeptics against the "meredian sun," and that both he and Galen comment on the evils that may result from excessive insolation, or exposure to the solar rays.

To come to more modern times. In 1815 Jean Francois Cauvin presented to the Faculty of Medicine at Paris, of which Duopuytren and Pinel were then members, a thesis on the benefits of insolation.

The effects of sunlight on animal life were also discussed by J. C. Ebermier, E. P. Girard, E. Horay, and others, prior to 1820."

In 1837 we find Dresig putting forth at Leipsic a lattin dissertation entitled "Solication; or the Insolation of the Ancients," and ten years later, at Gottingen, Richter gave the medical world another dissertation in the same language on "Insolation, or the Power of the Sun on the Human Body."

Since then curious and interesting experiments and observations have been made by Becklard, Becquerel, Draper, Edwards, Gardner, Hunt, Landgrebe, and others, and yet a learned French authority, in the "Encyclopedic Dictionary of Medical Sciences," in process of publication, speaking of the action of light upon the animal organism, frankly says: "We do not know, in short, what is the exact effect produced by light. Does it act directly, or is its only effect to modify the intensity of certain functions, such as respiration? this is what we do not know."

So much for our solar scientific physiological knowledge, or rather ignorance. As to the practical therapeutics of the case, there has been, perhaps, until very recently, no real scientific advancement since Dr. Jonathan Perreira, of London, completed in 1848, the revision of his admirable "Elements of Materia Medica and Therapeutics," in which he recognizes both solar light and solar heat among the "physical, but imponderable," remedies. Of solar light he remarks that it acts as a "vivifying and vital stimulus," promoting "development and nutrition," and he further says: "In maladies characterized by imperfect nutrition and sanguification, as scrofula, rickets, and anæmia, and in weakly subjects with ædematious limbs, free exposure to solar light is sometimes attended with the happiest results."

As to solar heat, after observing that the ancients were well acquainted with its "salutary influence" on the human system, and frequently made therapeutic use of it, he adds: "Exposure to the solar rays, or as it is termed, insolation, may be employed as a stimu-

lant to promote circulation and warmth to the old, debilitated and paralytic." "It is also valuable in anæmia and scrofula, and as a restorative after lingering and painful maladies."

It is not necessary to quote further at this point to establish the fact that sunshine has been for upwards of two thousand years a therapeutic agent of acknowledged efficacy and value. Nevertheless, it remains indisputable, incredible as it may seem, that so far as this remedy is concerned, we are still on the threshold as regards both practical and scientific knowledge. The reason of this is not far to seek. In exhibiting the solar ray the medical practitioner deals with an agent of dangerous potency, of unusual clusiveness, and of great complexity. All physicians are more or less familiar with sunburn, and not a few are acquainted with sunstroke, and none need to be told that the sunbeam has power like a swift poison to reach with disastrous effect the very seat of life, as well as to work various minor physical evils. As to clusiveness, the quantity and quality of sunshine depends so closely on the season and the passing changes of the weather, that it is a matter of doubt, whether, on the average, a solar prescription can in our latitude be satisfactorily filled in nature's great pharmacy during more than four hours out of the twenty-four, or more than four months out of the twelve.

And finally, to appreciate the complexity of the agent in question, we have only to recall the fact that the sunbeam is resolvable into rays of various colors, mysteriously embodying in different proportions the two great forces of light and heat, and the third subtle form of energy known as actinism, which is essential to the chemical miracles of photography or solar art, and not improbably may yet be found quite as miraculously potent in heliosis, or solar therapeutics.

It is one of the current facts of popular knowledge that the sun has been, and not without reason, practically deified by the highpriests of modern science as the god of force, the Hercules of the nineteenth century. As the enthusiastic Tyndall, eloquently writes: "There is not a hammer raised, a wheel turned, or a shot thrown that is not raised, turned, or thrown by the sun." And he might have added: There is not a seed quickened, a plant nourished, or an animal perfected, that is not nourished, perfected and vitalized by the sun.

Nevertheless, this system of things is so poised, that like the lightning's flash or the sweep of the tornado, this great power may become a destructive curse, and the seed may shrivel, the plant wither, the animal perish from excess of the very force without which it could not exist. With human beings the trouble generally is that the pernicious effects of an excess of solar light and heat are so sedulously avoided that we err in the opposite direction, and it is quite safe to assert that in civilized countries three persons out of every four are suffering more or less from insufficient solarization—which convenient term may be employed to denote the total beneficient action of the sun's rays on the human system.

Heat, whether hygienically or therapeutically considered, is an agent of great efficacy and value; nevertheless the profession at large

do not look upon solar heat, individually considered, as particularly worth special attention, for the reason that its chief benefits seem equally derivable from artificial heat, which is generally much more readily obtained, and because it is this element of caloric which is often injurious to the very person most in need of the salutary influence of the sun.

It is, in fact, one of the great problems in solar therapeutics to so regulate the thermic force as to avoid annoyance or injury from its effects upon delicate constitutions, while receiving the full benefit of the luminous, and particularly of the actinic element in the sunbeams. These elements are of the utmost importance, and so far as their beneficial effects upon the human organism are concerned, they are practically unobtainable from any artificial source.

It should be observed here that in this discussion I am leaving out of the question entirely the relations of light to the eye as an organ of special sense, and also the use of solar heat by means of burning glasses for cauterization and other processes pertaining to surgery more properly than to therapeutics. The question I wish to press home to the conscientious and intelligent medical practitioner is simply this: Do my patients receive enough of the peculiar vitalizing influence which is lodged in the solar rays, and if not, how can it be most easily and safely administered?

There is no doubt that many physicians who are quite ready, in theory, to admit that sunshine is a valuable remedy, are, in practice, deterred from resorting to it through apprehension of some of the undesirable, and often serious evils which in ordinary life it too often occasions. The annoying cutaneous eruptions or irritations resulting from excessive insolation, the hepatic disorders and general debility caused by prolonged residence under tropical skies, the sudden fatality or lingering blight of sunstroke, all serve to prejudice them against the remedial use of the solar rays. They observe almost daily, during the hot season, various minor disturbances produced by exposure to a blazing sun; they read perhaps in Dr. Wood's monograph on sunstroke of the celerity with which he killed rabbits by submitting them in closed boxes to the sun's action; they find Esquirol and other celebrated alienists tracing causes of insanity directly to insolation; and they resolve to have as little as possible to do with so dangerous an agent; preferring to view it solely from a pathologic and not at all from a therapeutic point of view. Such a course, however, is very far from wise. As soon should the physician think of banishing opium from the *materia medica* because of the deaths for which laudanum is responsible, and the long train of miseries arising from the opium habit. He simply prescribes it with increased care, and taxes his inventive powers in contriving means to secure its benefits and avoid as much as possible its deleterious effects. Precisely this policy should be pursued with reference to the rays of the sun, and the observer in this direction may inspire himself with the thought that if he or his patient should chance to acquire the "sunshine habit" it will prove as advantageous as the opium habit is destructive.

The therapeutic use of the solar rays practically resolves itself into a question of the exhibition of sunlight in such a way as to eliminate any objectionable excess of heat and light, and to secure as much as possible of the actinic force.

As to the general beneficial effects of sunlight, and the injurious consequences that result from any prolonged deprivation of it, there is abundant testimony, to say nothing of the evidence furnished to every man of experience by personal observation.

Dr. Forbes Winslow, in his suggestive volume on "Light, its Influence on life and health," thus summarizes the pathological effects of a marked deprivation of solar light: "It may be enunciated as an indisputable fact that all who live and pursue their calling in situations where the minimum of light is permitted to penetrate, suffer seriously in bodily and mental health. These pathological phenomena are principally observed among those confined in dark mines and collieries, holds of ships, factories, prisons, narrow streets, garrets or cellars. The total exclusion of the sun's beams induces an impoverished state of the blood, muscular debility, dropsical effusion, softening of the bones, nervous excitability, irritability of the heart, loss of appetite, consumption, physical deformity, stunted growth, mental impairment, premature old age. The offspring of those so unhappily trained, are often deformed, weak and puny, and are disposed to scrofulous affections."

This is a formidable catalogue of ills, but the facts are confirmed by investigations carefully made as to the health of the miners in Belgium and other European countries. It was shown thereby, for instance, that in the arrondisement of Chémay, where part of the inhabitants are employed in the fields, and the rest in the coal-mines, the field labourers readily furnish their proper quota of military recruits, while among the miners it is rare to find a man who is not ineligible from army duty through arrested physical development or positive deformity.

It is true that these morbid conditions may be largely ameliorated or entirely removed by a free and constant exposure to light, especially if the remedy is applied while the sufferer is still young.

Fourcault, in his "General Causes of Chronic Maladies," gives a striking illustration of this in the case of a number of orphan girls suffering from chronic diseases, whose condition was greatly changed for the better by simply doing away with the shade of several large mulberry trees, which had prevented the free exposure of their school room to the full light of the sun.

In commenting on the inestimable value of sunlight to children, Dr. Winslow says: "It is systematically ignored at the period of life when it is of the highest importance it should be brought to bear upon the purification of the blood, and consequent healthy development of organic structures. Children, even at an early age, should not be excluded, particularly during the warm periods of the year, from the genial and charming influences of the sun. Great benefit," he further says, "would accrue from giving children solar air baths—that

is, permitting them to lie naked upon the bed or floor, free from the encumberance of clothes, so that their bodies may be thoroughly brought under the influence of good air and bright sunlight. The children of savages, as well as negroes, who are often allowed to run about in the open air, freely exposed to the influence of the light, have finely developed muscular structures, and generally enjoy robust health."

The testimony of Alexander von Humboldt affords additional confirmation of this fact: "Deformities and deviations from healthy physical development are exceedingly rare in certain races of men, especially those who have the skin strongly colored, and who wander about naked under the brilliant light of the tropical regions. These have muscular, fleshy bodies, rounded contours, and present none of the deformities so frequently observed among the inhabitants of other climates."

No one who has remained long at Constantinople can have failed to observe the strong, ruddy appearance of the *hammals*, or porters, who are also the firemen of the Turkish metropolis. These men wear nothing above the belt during the summer season, and I have certainly never seen elsewhere so many model athletic forms as are gathered together by an alarm of fire at this gem of the Orient. Much advantage is no doubt derived by our oarsmen from the practice of rowing stripped to the waist, thus exposing a considerable surface of the body to the invigorating action of the sun as well as the wind.

A curious confirmation of the value of light in the development of the growing animal organism was afforded by the experiments of Dr. W. F. Edwards, made something more than fifty years ago in France. He found that the development of frogs' eggs was almost completely prevented by placing them in darkness, and that even a tadpole kept in a dark place, though it attained an unusual size, did not change its form; a result since verified by Dr. Hammond, who found that while the transformation was delayed for an indefinitely long time by confinement in darkness, the creature became a frog in a few days when supplied with light.

Among the disadvantages of deficient sunlight may be noted an increased susceptibility to contagious diseases. Sir David Brewster observes that in cholera years it was invariably found that the deaths were more numerous in narrow streets and northern exposures, where the salutary beams of light and actinism had seldom shed their beneficent influences.

In view of the deplorable effects of the deprivation of sunlight upon the normally healthy, the consequences of a like privation in the case of the sick may reasonably be supposed to be very serious. On this point Dr. Hammond says, in his treatise on hygiene: "I shall never forget the appearance presented by the sick of a regiment I inspected in Western Virginia. They were crowded into a small room, from which the light was shut out by blinds of india-rubber cloth. Pale and exsanguined, ghost-like looking forms, they seemed

to be scarcely mortal. Convalescence was almost impossible, and doubtless many of them died who, had they been subject to the operations of the simplest laws of nature, would have recovered." In the same treatise Dr. Hammond further says: "In chlorosis, scrofula, phthisis, and in general every disease characterized by deficiency of vital power, light should not be debarred the patient. In convalescence from almost all diseases it acts, unless too intense or too long continued, as a most healthful stimulus both to the nervous and physical systems. The evil effects of keeping such invalids in obscurity are frequently very decidedly shown, and cannot be too carefully guarded against by the physician. The delirium and weakness which are by no means seldom met with in convalescents kept in darkness, disappear like magic when the rays of the sun are allowed to enter the chamber. I think I have noticed that wounds heal with greater rapidity when the light is allowed to reach them than when they are kept continually covered."

(*To be continued.*)

## DINNERS AND DINING.

During the month the event of the day, says *The Doctor*, has asserted its importance in a sanitary sense, for two medical weeklies have devoted considerable space to the art of dining—an art not likely to be forgotten, but capable of much improvement. 'A Dinner-out' has filled between two and three pages of the *Lancet*, while the *Medical Examiner* has devoted a leader to the hygiene of the dinner-table. With regard to the admiration shown for foreign dishes, it may be said that simplicity—the one good point about English dinners—is thereby imperilled. What is wanted most of all is good cookery—that means intelligent and even reasonable cooks. Where are they to be found?

We take a few passages from the recent contributions, beginning with our 'Dinner-out.' He says:—Now, in the ordinary dinner of every-day life in the middle class and the lower middle class the importance of a fair proportion of soup, fish, and vegetables is lost sight of, too much stress being laid on the joint, which is supposed to be the one necessary. If regard be had to the conditions under which men now-a-days work, we consider that a man who has been toiling all day in his shop or office is not usually in a fit state, on his arrival at home, to sit down to a heavy meal, or even to one consisting of a single dish, and that of meat. There is probably not a man but who has in his life experienced the distressing sensations of sitting down to dinner with a ravenous appetite, and feeling before five minutes were gone, that his stomach was distended, and that he was completely done up. When a man is wearied, fatigued, or anxious, his stomach is not in a fit condition to receive a heavy meal, and, whilst at his dinner he ought to be resting. Now, if he preface his meal with some light gravy soup and a piece of

stale bread, he will not experience the unpleasant distension, for the fluid will be rapidly absorbed, and distribute a feeling of warmth, comfort, and strength throughout the system. If he next partake of fish, properly cooked, he will feel fresher and lighter, and be quite ready for the reception of a moderate amount of meat; and I venture to say that the man who has taken such a meal will not only feel, but will be better than he who has consumed half-a-pound of solid meat by itself. The one will be able to amuse himself for the rest of the evening, whereas the other will seek his sofa, or fall asleep in his arm-chair.

Then, again, in the country, vegetables and fruit are taken but sparingly, relatively to the bulk of food consumed each day. Not only should vegetables be eaten with meat, but I hold that they ought to constitute a separate 'plat' after the meat, as in France. Nothing can be better than a potato with the joint, and afterwards peas or asparagus served as a clean savoury dish. What can be nicer, more economical or nutritious, when but few vegetables are in season, than a dish of 'haricots blancs' properly cooked? Then, again, why cannot we, in this country, finish our dinner, as in France, with a dish of 'maccaroni au gratin,' which would be a cheap, nourishing, and savoury substitute for the many indigestible messes which go by the name of puddings and pies? No Frenchman would consider his dinner comple without a salad—a thing too rarely seen on an English dinner table. One of the reasons, no doubt, why the salid is not enjoyed here as it is in France is that there are few cooks who know how to make a salad, but I consider it is just one of the things that every English lady ought to know how to do. In this country the salad is steeped or soaked in water before it is sent up, so that it arrives at table a sodden, uninviting mass, whereas, in France, a salad is never washed, but each leaf is separately wiped with a damp cloth, so that it goes to table a crisp and elegant dish. It would do an English cook good to see the way in which her French representative handles a salad, fondling it as gently as if it were a new-born babe.

If paterfamilias could always have his cold mutton prefaced by some soup or fish, and then served up with a delicious salad, he would probably find it more agreeable than when it constitutes, as at present, a constantly recurring dish in so many households. Nothing is more hateful to the stomach than a repetition of the same dish day after day. If a man were fed daily on patridges and champagne, the time would come when he would almost loathe the sight of them, and would turn with relish to a crust of bread and cheese, to be washed down by a glass of small beer. The present generation has probably forgotten that in days gone by the indentures of the Gloustershire apprentices contained a clause to the effect that they should not be required to eat *salmon* more than thrice a week.

There are two radical faults in the construction of the *menu*. The host draws it up with the intention of allowing his guests to *select* their dinner from a large variety of dishes, but his wishes are entirely

frustrated by his waiters, who dole out the dinner on the supposition that each guest wants to taste a little of *every* dish on the card. If, for example, a guest should elect to make his dinner off three or four dishes he would go away hungry, for he would have meted out to him little more than a mouthful of each dish, and etiquette would entirely forbid him from asking for more. The inordinate length of the *menu* makes waiters help very sparingly of each dish. Within the past few years dinners have been made more simple, and the *menu* greatly contracted. It is, however, still too long, and dinners are thereby rendered wearisome.

It may be said of most dinners that you have put before you a great deal of what you do not want, and that you miss something which you would like. Some things look very well in a confectioner's shop, but they do not sit very well in a guest's stomach. At how many houses do you get oysters and turtle soup? The real fault is that the *menu* is often the production of the cook or confectioner, the connoisseur's art being conspicuous by its absence. What is required is quality rather than quantity. For instance, no dinner is complete without the delicious bivalve if it be in season.

Two soups generally appear on the *menu*, a thick and a clear. I look upon it as a piece of barbarism to preface a good dinner with a basin of thick soup. A thick soup with a junk of bread is itself a dinner, and its appearance on the *menu* suggests the idea, which is of course erroneous, that the host is imitating the practice of certain schools in which the pudding is for obvious reasons served up before the meat. No connoisseur would ever commence a good dinner with a basin of thick soup, and if we are told that it is put on the *menu* because some one would prefer it, the answer is that if the guests don't know what is good for them the host had better not allow them any choice. Nothing but a clear soup ought to be tolerated; for the winter, clear turtle, and for summer, some light gravy soup with some vegetables in it.

Fish is not usually sufficiently represented on the *menu*. Of all dishes, there is nothing so light, elegant and harmless as fish, which is far more nourishing than people credit it with being. Of variety there is no end, and the ways of dressing it are many. Indeed, fish ought to constitute a very large portion of the dinner. As the dog days approach, a judicious interpolation of cold dishes is desirable —for instance, hot salmon is well replaced by a dish of the same fish served up as a mayonnaise iced. *Entrèes* to be acceptable and digestible, ought to be very light, whereas as a rule, they are somewhat heavy and stodgy.

I now come to the removes, as represented by the joints. The appearance of a joint on the *menu* is a barbarism little known, happily, outside this country. One would have thought that an Englishman would have had quite enough of the eternal joint at home without wishing to see one at his host's table. There seems to be a popular fallacy in this country to the effect that a man cannot be said to have dined unless he has partaken of the joint, and

hence a joint is *de rigueur*, except at a dinner given by a connoisseur at his club. Look at an Englishman's plate when lamb is in season. Can anything be more unsightly? Meat, potatoes, asparagus, or peas, all mixed up in one unsightly mass, rendered sodden and unsavoury by the unhallowed combination of mint-sauce and melted butter, thereby spoiling the flavour of two good thing—the lamb and asparagus. Now, if the lamb had been served up, not as a joint, but as cutlets, with green peas or asparagus, we should have had a delicate and elegant dish; and if the asparagus had been dished up as a separate "plat" at the head of the *entrèmets*, as in France, we should have had an exquisite delicacy which is never so enjoyable as when taken by itself. The great advantage of not allowing a joint at dinner is, that instead of a mangled piece of meat we have a savoury, sightly portion cut and dressed by the cook at her leisure. Take for instance, a sirloin of beef. Why not cut from its choicest part, the fillet, and serve it up elegantly in the shape of fillets, with mushroons or olives? A bird usually figures as the "roast," and care ought to be taken to select one which, like the plover or snipe, has a bitter flavour, for a guest might as well eat a barn-door fowl as a partridge or pheasant at this stage of the dinner. The salad ought now to make its appearance. It can either be eaten with the roast, if there be no vegetables with it, or it can form a separate and delicious "plat" by itself as a lobster salad.

On looking at the *menu* of our host, we can at once see whether the dinner is sent out from the confectioners or not. The confectioner always rides his hobby to death, and makes what ought to be very slight interposition a veritable *pièce de rèsistance*, hence his dinner is marked by the inordinate number of the *entrèmets*, for, to use a common expression, "he is great at sweets." I say that the fewer sweets that appear in the dinner the better for the reputation of the host and the welfare of his guests' stomachs. At most of the dinners given at London Clubs, the sweets are conspicuous by their absence, and it would be well if the good example were more extensively followed. At the end of a good dinner a mass of sweets and pastry are most objectionable. All that is required is a plain wine jelly, which is cool and refreshing to the palate. I look upon ices as calculated to do good to only portions of the community—the dentist—for nothing can be more injurious to the enamel of the teeth than inserting in the mouth a substance which reduces the temperature from blood heat to freezing point.

What the *Medical Examiner* says about the dinner *hour* we propose to give in the next number of this JOURNAL.

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A MILK TEST.—A German paper says *The Proceedings* Brooklyn N. Y. gives a test for watered milk, which is simplicity itself. A well polished knitting needle is dipped into a deep vessel of milk, and immediately withdrawn in an upright position. If the sample is pure some of the fluid will hang to the needle; but if water has been added to the milk, even in small proportions, the fluid will not adhere to the needle.

## MARRIAGE AND HEREDITARY DISEASES.

That marriage, by which, in civilized countries, families and races are propagated, is a subject of the greatest importance, few of our readers will deny. Some of our exchanges are discussing it in relation to heredity.

On the great subject of marriage, writes *The Doctor*, 'with its vast influence on society, doctors as well as other classes, often have something to say. In some few cases they are even consulted by individuals as to the propriety of entering into the married state, but generally these unions are managed on other than medical or sanitary considerations; and we are not sure it is as well they should be. Marriages of convenience may be forbidden by doctors with success, but when love has entered the lists, prudence can scarcely make her voice heard. Still the medical aspects of marriage are important, and of late years have been freely discussed in various directions.

'The horror inspired by insanity, cancer, consumption, and some other diseases, tends to restrict their propagation, though there are not a few who, even with their eyes open, will not hesitate to marry the person of their choice at the risk of transmitting to their offspring an inheritance the full sadness of which they can scarcely realise. Medical men have so many opportunities of witnessing the results of such marriages that it is not surprising they should lead the protests against them. At the same time it must be observed that Society does not exist for the sake of producing a higher degree of physical robustness in a population, nor is the improvement of the race—in the stock-breeder's sense—the chief end of civilization. . .

'The person who marries a cancerous or consumptive individual may be prepared to meet the dread possibility of losing the beloved through the inherited disease—to nurse, and tend, and soothe, by constant and unwavering affection, the afflicted companion of life. And after all, if we must die, it is of little moment of what disease; and, in spite of all calculation, how often does it happen that the one expected to die first, follows the other to the grave. So far, then, little can be said to check such marriages; but then arises the probability of transmitting the disease to the offspring. For this reason many hold that such marriages should be interdicted. They would forbid matrimony to all who are tainted, even in a remote degree, with hereditary disease. In the case of insanity this doctrine has obtained a wide-spread approval. The popular terror of cancer has imposed some restrictions, but consumptive and scrofulous people have been less frequently prevented from marriage. In these and many other cases, no doubt, cautious people will decline the risk, but youth does not calculate; Cupid is blind, and love-matches will be made in spite of diseases, and in opposition to the advice of cooler friends, even when supported by medical authority.

Dr. Gibbons, the elder, expresses himself with much energy on the side of love-matches, in the *Pacific Medical and Surgical Journal*. He says: 'whether persons of consumptive tendency should marry

is a question of interest and importance ; the parties, however, generally settle it for themselves. Marriage, among young people, at least, is not commonly the result of deliberate selection. The first step is one of accident, and when a mutual attachment is once established the question of health is ignored. Rarely has the prospect of disease and premature death broken the chain of love ; on the contrary, it is more apt to awaken sympathy and rivet the links. How often do we see the betrothed rush with transport into each others arms, and seal the compact in the very presence of the angel of death ! As spectators and friends we pity them, but they do not ask our pity, for they are but fulfilling the destiny of mortals, and finding in sorrow a deep and holy joy. I have never been able to appreciate the sanitary law which would cut off from the privileges and enjoyments of married life all individuals of consumptive tendency. Consumption very often selects for its victims the brightest and best, the flower of the flock ; females endowed with the noblest qualities of the heart, and fitted to make the most affectionate wives and the most devoted and exemplary mothers. And why should those whose hearts are the special depository of the affections, whom nature has made more than others capable of loving and being loved, why should they be arbitrarily excluded from that blessed union and companionship which may be essential to their happiness and to the perfection of their character ? The only answer is that progeny is likely to inherit disease. But what if they do ? Is it not a part of the general plan ? Who knows but that society will derive moral benefit more than sufficient to compensate for the apparent physical evil ? Death is never demoralising. We pronounce it sad and sorrowful when youth is cut down in the early Spring. But the house of mourning is more congenial to virtue than the house of joy. Sorrow softens, and chastens, and refines the soul. The memory of the dear departed is a fountain of joy to the bereaved. To recall their fond image, to look back at their lives, to sit again with them in the family circle, to take to our arms their shadowy forms, to visit their graves and strew them with flowers—oh ! there is virtue, there is happiness, there is religion, in communion with the dead.

'Besides, the inheritance of disease from consumptive parents is by no means inevitable. A large proportion of children born of parents only one of whom has the pulmonary taint, escape the transmission. More particularly is this the case when the family is governed by sound hygienic laws. Nay, I have known more than one instance of complete and permanent immunity from pulmonary disease in the offspring of parents, both of whose families were almost exterminated by disease of the lungs. On the other hand, how often do we see the disease developed where it cannot be traced to inheritance ! If the purpose of marriage were to develop the physical form and vigour of the race, or, in the plain language of the farmyard, to improve the breed, as animals, then it would be well to single out certain classes of subjects and consign them to celibacy. But bodily health and vigour is no guarantee of either intellectual or

moral superiority. On the contrary, the virtues are more wont to dwell with corporeal frailty. Pulmonary consumption is not a disease of the inmates of the State prison. Inducements and proclivities to crime are not associated with the tubercular diathesis. If sexual restrictions are to be imposed for the benefit of future generations, let the prohibition begin with the slaves of appetite and sensuality.'

For the most part we fully agree with the sentiments in the above extracts. But though 'Society does not exist for the sake of producing a higher degree of physical robustness,' nor, 'to develop physical force and vigor—to improve the breed.' Yet it should be the aim of society to produce a higher type of manhood and womanhood, mental as well as physical. Mental and physical development should go hand in hand together. As sweet and charming melody results only from skillful playing on a well-tuned instrument of good construction, so a sound mind, and a brain of good development and quality, served by well developed organs of nutrition, excretion, etc., are essential conditions of healthy, vigorous mental action and perfect self control, which again are essential to perfect religious and moral life.

Legislation can hardly go so far as to enact, who shall and who shall not marry, but proper and judicious education may do much in this way. A full knowledge of the probable consequences of those with strong hereditary taints entering the marriage state would prevent many such marrying. Those less tainted, who would marry, by proper regard to nature's laws, both as regards themselves and their offspring, might raise up healthy fairly developed children. Perverted processes—diseases, appear to be subject to limitation in transmission, and there is a tendency to revert to natural perfect type under improved and favorable conditions.

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## THE AMOUNT OF FOOD NECESSARY TO SUSTAIN VIGOROUS LIFE.

D.r J. J. Mulheron, of Detroit, writes on this subject in the *Michigan Medical News*, as follows: It is popularly supposed that as food generates strength, the more one eats the stronger should he grow. The fallacy of such reasoning is, however, patent to the physiologist. The fact is that all that is taken into the stomach in excess of what is necessary to maintain a normal condition of the solids and fluids of the body, in other words, to repair the waste to which they are subject, is not only not necessary, but positively injurious. Numerous experiments have at different times been made with a view to determining just how much is necessary to supply this waste. Of course, individual peculiarities make it impossible to lay down any hard and fast rule which shall say how much, in avoirdupoise, man shall eat. Enough has been determined, however, to convince us that, with very rare exceptions, all men eat too much. Aberne-

thy was of the opinion that of the large quantity of food a man swallows one-fourth supports him and the remainder he keeps at his risk. The continued strain on the stomach in digesting superfluous matter, and on the excretories in the unsuccessful effort to rid the system both of its normal waste and of its surcharge of nutriment, is not only a constantly operating cause of disease in these organs, but also wears them out prematurely. Nature does not contemplate any additional effort of the system to that requisite to the throwing off the effete products of decay, and just in so far as she is called upon to perform this additional labor is she overtaxed. The experience of any physician will convince him that the great bulk of his practice grows out of the eating and drinking usages of society. The truism that men are themselves the authors of the miseries that befal them has no more striking exemplification than in the derangements directly attributable to excesses at the table. It is not in the matter of intoxicating drinks alone that men are intemperate. Truly has it been said that 'dyspepsia is the remorse of a guilty stomach,' and dyspepsia does not embrace a tithe of the misery that follows in this wake.

The abstemious man is the healthy, clear-headed and long-lived individual. It is, therefore, every man's duty to determine, as nearly as he may, just how much it is necessary for him to eat and drink, and then rigidly to conform to rules of diet which he may legitimately deduce from such knowledge.

It will astonish most men to find out just how little food compared with their usual habits, is actually necessary to sustain life at its maximum. A Dr. T. L. Nichols, of Malvern, England, has recently been lecturing in London, and giving the results of experiments upon himself, with a view to determining this important question. During the first week he lived on bread (and its equivalents, wheatmeal, oatmeal, rice, etc.,) milk, fruit and vegetables (he ate no flesh meat). His habits of life were regular, his excess being that of overwork. The total weight of ingesta (solid) for the first week was 3 lbs. 9½ oz., being a daily average of 8¾ oz. The second week he ate "Food of Health," milk and fruit—total weight 4 lbs. 4½ oz, a daily average of 9¾ oz. He reports at the end of the second week that nothing could be better physiologically than the effect of the diet upon him. His digestion was perfect, and the actions of all the various organs was as good as it was possible to desire. During the third week he discontinued milk as unnecessary, and took of solid food 3 lb. 2 oz., an average of 7¼ oz. per day. The fourth week, his food being similar, weighed 3 lbs. 6 oz., a daily everage of 8 oz. He now added soups pudding, eggs, etc., and the fifth week his food weighed 3 lb. 12½ oz. For the sixth week it weighed 3 lb. 15 oz., or 9 oz. per day. He had taken this diet without stimulants, and had experienced constant increase of health and strength and power to work, and his weight had remained at about 170 lbs. He concluded his lecture with the following sentiment. 'The diet question is at the root of disease. Pure blood can only be made of pure food in proper quantity. Pro-

per attention to diet would reduce the rate of infant mortality and remove many diseases. If the drink of a nation were pure and free from stimulating qualities, and the food were also pure, the result would be pure health.'

Truly the amount of food wasted and of energy in the efforts of the system to throw off this waste is something prodigious.

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## THE YELLOW FEVER EPIDEMIC.

With the terrible epidemic, in its most terrible form, destroying the lives of thousands of our fellow creatures, with scores, if not hundreds of physicians, on this continent, the subject becomes painfully interesting. There is little danger of its importation into Canada, especially at this season of the year, and yet a study of its etiology might teach a wholesome lesson to Canadians, where so little attention is given to public health. There have been cases of it at Gallipolis, Ohio, and some families have left that city.

In England they are not without some fears regarding the disease. The *Medical Times and Gazette* of Sept. 28th says: "It is satisfactory to find that the Government has not been unmindful of the possible consequences of the present epidemic of yellow fever in America, but has issued the following circular through the Local Government Board to the port sanitary authorities :—" I am directed by the President of the Local Government Board to state that, in view of the epidemic of yellow fever which is now prevailing in certain parts of America, it appears to him desirable to draw the attention of port sanitary authorities in England and Wales to the possibility of the importation into this country of cases of this fever.

The disease, like all epidemics, rages with greatest virulence in localities which are in the worst sanitary condition.

Dr. J. M. Woodworth, Surgeon-General Marine Hospital Service, has issued a circular to the officers in reference to the disease, from which the following is an extract: "The weight of scientific evidence seems to warrant the conclusion that yellow fever is induced by an invisible poison, capable of self-multiplication outside of the human organism, which it enters through the air passages. The poison germ, or miasm, is the product of the tropic. In this country yellow fever has prevailed in most of the Gulf and Atlantic cities, and in many of the towns along the Mississippi river. In some instances it has been carried inland with the people fleeing from the infected localities, but it has never shown a disposition to spread epidemically at points remote from the continuous water-roads of commerce or to lodge in high, salubrious places. The cities of the Great Lakes have always been free from the disease. Yellow fever cannot be said to be endemic in the United States, from the fact that in some years it does not appear, though the imported germ undoubtedly survives the mild winters. It appears to have about as much resistance of cold as the banana plant. When the banana

stalk is killed down by the frost the yellow fever does not recur until again imported. The germ is transmissible. It is capable of being transported in the clothing or personal effects of passengers and sailors, but its spread from one city to another is chiefly accomplished by vessels, their damp filthy holds and bilge water being its favourite lurking places. Confinement, moisture, and high temperature favour the multiplication or virulence of the poison. When a wharf, or spot of ground, or a house, becomes infected, the poison at once commences to spread, creeping slowly in all possible directions, continually enlarging the area around the centre of infection, unless checked by disinfection, as has undoubtedly been done by the use of carbolic acid, in New Orleans, in former outbreaks. Yellow fever is not communicated from the sick to the well, the sick and well being dangerous only as possible carriers of the poison germ or miasm. In support of this assertion it may be stated that at quarantine hospitals, where the effects of yellow fever patients are burned, if otherwise thoroughly disinfected before the admission of the patients, the attendants do not contract the disease. This has been demonstrated many times. All well persons whose effects have been disinfected, may be considered harmless after six or seven days have elapsed from the time of leaving an infected district or vessel, as the period of incubation of the disease lasts from two to six days. This simplifies the question of quarantine—absolute land quarantine being deemed impracticable—and indicates the direction of preventive measures to the vessel, cargo, or the locality, if the poison have found lodgment on shore. A vessel may escape infection if kept clean and dry, and all parts capable of being closed are frequently subjected to the fumes of burning sulphur, and the men employed on board are compelled to bathe and change their flannels daily, and not allowed to sleep on deck or in the hold of the vessel. There is an example of a ship trading between Havana and New York, upon which these precautions have been enforced for a period of twelve years, and not a single case of yellow fever has occurred on board.' So much for good sanitation.

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## SCHOOLS OF FORESTRY.

An interesting paper on Schools of Forestry appears in the last Annual Report of the Board of Education of Connecticut, U. S., from which we take the following extracts :

The experience of Europe long since demonstrated the value and necessity of "Forest Schools" so numerous on the Continent. As these institutions are unknown in this country, a detailed statement of their aims and character will not only be of interest, but I hope, will help towards the organization of similar schools in America. The conclusions of foreign foresters, though confirmed by the broadest observations and experience in Europe, cannot all be wisely adopted in American Sylviculture. Difference in soil, climate, and

growth, health, durability of timber, texture, elasticity and grain of other conditions may affect trees in regard to their rapidity of the wood, and many other qualities. These vital questions can be determined only by careful investigations carried on in each country. The Lombardy poplar, for example, sending out its almost upright laterals from the very ground all along its tall stem, grows beautifully in Italy, and is still a favorite with the Italians as of old with the Romans, who, it it is said, gave it the name *arbor populi.* But in New England so many of its branches winter-kill that it soon becomes an unsightly collection of dead limbs. . . . I have shown that the experiment of reclaiming vast barrens in France, Germany, Russia, Austria, and other European countries has been tried with conspicuous success. What has been done on so broad a scale and with such grand results in Europe surely can be accomplished in the comparatively narrow barrens of the New England States. . . . A few oral lessons in our schools on rural art, and especially on the beauty, variety and value of trees and the ease and ways of their propagation, would be as good seed sown in good ground bringing forth fruit an hundred fold. Very little time would be required for those school talks which would be sure to inspire an interest in the study and culture of trees, and in the broader subject of rural art and adornment.

The Schools of Forestry have exerted a remarkable influence in Germany in diffusing among the people a general and genuine interest in aboriculture. They regard forests as their friends, and understand their climatic influence and economic value in staying spring torrents, preventing summer droughts and supplying lumber and fuel. The Germans have a passion for nature, and love to frequent their beautiful groves and gardens, for parks and woods abound in or near their cities and towns. The rural and suburban adornment, now the pride and glory of so many beautiful towns in Germany, and the fruit of this revived love of aboriculture, is largely due to the influence and the literature which has emanated from her Schools of Forestry.

Efforts are now making to organize a Department of Forestry in connection with the University and new Aboretum of Edinburgh. Hitherto Forestry has been little taught in England, and her young foresters have therefore been educated on the Continent. There is a growing conviction of the need of such institutions in England. The London Journal of Forestry says: 'The University of Edinburgh possesses remarkable facilities for the creation of a School of Forestry, which with some slight additions could be easily converted into a thoroughly equipped Forest Department, capable of teaching the science of Forestry in the most complete and efficient manner. Such an Institution is one of the greatest wants of the age in this country, and no country in the world requires it more. With India, Canada, Australia, New Zealand and South Africa, not to mention numerous smaller dependencies of the British Empire, crying out to us to furnish them with thoroughly educated foresters to conserve

and restore their fast disappearing forests, or to create new ones, it is a standing blot on the institutions of our country that we cannot educate and qualify at home the men who are needed for this important service. Such an institution would be of inestimable value to India and all our colonies, and exert a most beneficent influence on the management and productiveness of our home forests and the rural prosperity of our whole country. The forest wealth of Canada is being rapidly exhausted. The great pine forests on the Ottawa, St. Maurice and Saguenay rivers, with their wonderful net work of tributary streams, are rapidly disappearing beneath the ruthless axe of the lumberman. All the more accessible parts of these great forests are already cleared of pine timber. That huge tract between the Ottawa and the St. Maurice which once seemed inexhaustible, is fast disappearing beneath the destroying axe.

## ARTIFICIAL SUCKLING AND WEANING OF INFANTS.

A paper furnished to the *Review Médicale* (June 17—*Med. Times and Gaz.*) by that indefatigable friend of the French infant, Dr. Brochard, contains some hints worthy of transcription. He observes, as a sign of a bad change of procedure in recent times, that artificial suckling now is said to consist in giving the sucking-bottle, while formerly it was called 'bringing up by hand.' By the common use of the sucking-bottle the indolence of the nurse is encouraged, and the child injured. Furnished with a caoutchouc tube, the infant is now allowed to suckle as long as it pleases if it remain quiet, thus prolonging its repast for too great a time, and destroying all regularity in the administration of its food. A much better plan is adopted in Normandy, for in place of the bottle and tube, which can never be kept clean, a little phial, having a small piece of sponge passed into its neck, is used. An infant can very well be brought up by hand if milk is employed, to the exclusion of all broths, soups, etc.

For weaning, Dr. Brochard lays down four rules:—1. It should never be done suddenly, one regimen being gradually transformed into another, so that the child may be progressively prepared for weaning. The time for it, as Trousseau justly observed, cannot be fixed by the almanac, but it must depend upon dentition. As soon as the teeth appear we should commence our preparations. About the fourth or fifth month we may accustom it to the sucking-bottle, substituting this for one of the sucklings at night, and afterwards for another; and even for a fortnight after weaning the child should have nothing but milk. At a later period farinaceous food and broths may be added. Many women begin to give their infants this kind of food far too soon, and at the time of weaning cannot get them to take the milk which should then form almost their only diet. Solid food should be delayed for some weeks, and given only as the teeth appear. 2. The child should never be weaned until it has its teeth. 3. It should never be weaned during very hot weather, when diarrhœa

is apt to occur. 4. It should not be weaned while in the act of cutting its teeth, the intervals which occur between the cutting of the different groups of teeth being selected. The chief ill-effect of too early weaning is that the infants are subjected to premature alimenation, most infants dying because they eat too soon and too much; aud we should always discourage the pride of so many mothers, that their infants 'can eat anything.' At whatever date weaning is performed, it should always be done methodically, and nothing but milk should be given. On the other hand, too late weaning is mischievous; and the glorification of another set of mothers, who declare that their infants have had nothing but the breast until the tenth or twelfth month, is misplaced, as is the practice of those who refuse to wean them until they have cut all their teeth. The danger here is the production of inanition, the milk losing its nutritive properties, so that at the tenth month it no longer suffices for the infant.

## A SUBSTITUTE FOR MOTHER'S MILK.

In his recently-issued "Experimental Researches in Pure, Applied, and Physical Chemistry," Dr. Frankland describes a method by which a liquid of the same composition as human milk can be easily prepared from cow's milk. The rearing of infants who cannot be supplied with their natural food is notoriously difficult and uncertain, owing chiefly to the great difference in the chemical constitution of human milk and cow's milk. The latter is much richer in casein and poorer in milk-sugar than the former, while asses' milk, which is sometimes used in feeding infants, is too poor in casein and butter, although the proportion of sugar is nearly the same as in human milk. The liquid prepared in the manner described by Dr. Frankland is stated by him to have not only saved the life of one of his own children, but to have proved itself of service in many similar cases in which young infants have been deprived of their proper nourishment. For the benefit of those who have not an opportunity of seeing the original, we reproduce the directions here. Allow one-third of a pint of new milk to stand for about twelve hours, remove the cream, and add to it two-thirds of a pint of new milk, as fresh from the cow as possible. Into the one-third of a pint of blue milk left after the abstraction of the cream, put a piece of rennet about one inch square, set the vessel in warm water until the milk is fully curdled, an operation requiring from five to fifteen minutes, according to the activity of the rennet, which should be removed as soon as the curdling commences and put into an egg-cup for use on subsequent occasions, as it may be employed daily for a month or two. Break up the curd repeatedly, and carefully separate the whole of the whey, which should then be rapidly heated to boiling in a small tin pan placed over a spirit or gas lamp, when a further quantity of casein separates, which must be removed by straining through muslin. Now dissolve 110 grains of powdered milk-sugar

in the hot whey, and mix it with the two-thirds of a pint of new milk, to which the cream from the other third of a pint was added, as already described. The artificial milk should be used within twelve hours of its preparation, and it is almost needless to add that all the vessels employed in its manufacture and administration should be kept scrupulously clean.

## A MINISTER OF PUBLIC HEALTH IN GREAT BRITAIN.

At the late meeting of the Paris International Congress of Hygiene, Mr. Edwin Chadwick C.B. read a paper on the Functions of a Minister of Public Health. He urged that the magnitude of the preventable evils to be dealt with for the protection of the health of populations required the organization of a distinct central department of the public health, presided over by a Minister of State of co-ordinate position with other Ministers, members of the supreme Government; that such Minister should be endowed with supervisory and consultative functions as president of a central Board, composed of specialists of independent responsibility, for the exercise of executive attributions for the protection of the public health; that in connection with such central authority local representative bodies should be appointed with supervisory and consultative functions over local officers of health, with securities for special aptitudes, giving their whole time to the responsible performance of their duties under general rules and orders laid down by the central authority, with the sanction of the legislature. He expressed his conviction that, whenever disconnected and weak local administrations were remedied by a completely organized administration, such an improvement would be effected in the health, strength, and well-being of populations as no age had ever witnessed or imagined. The discussion which followed was favorable to the conclusions he advocated, and an elaborate comparison drawn by him between the importance of the functions of a health minister and those of the War Office or other departments, appeared to make a strong impression.

## IMPORTANT TO PHYSICIANS—THE REGISTRY LAW.

Under this head the *Pacific Medical and Surgical Journal* refers in the following language to the subject of vital statistics. They are applicable to Canada. 'There is probably no country in the world under the influence of Christian civilization, in which so little care is exercised in regard to the registration of vital statistics, as the American Republic. Especially is this the case concerning births. In California, an attempt has been made through the State Board of Health to remedy the defect. A registry law has been in existence for a number of years, but its enforcement has failed for want of compulsory provisions. The recent legislature modified the law so as to favor its enforcement, and

means have been adopted in that direction by the secretary of the Board of Health. Printed blanks have been distributed in every county, so as to place them in the hands of all practitioners. The perfection of the work now rests with physicians. We do not propose to insult the understanding of the members of the profession in California by discussing the advantages of registration. Every intelligent physician knows the utility of correct vital statistics, in elucidating important problems relating to health and disease. In a scientific point of view they are indispensable, and also in regard to the great questions of public hygiene or State medicine. But there is another circumstance which gives such official records especial value on the Pacific Coast, more than in any other part of our country. A large proportion of the population are immigrants from Europe, who retain family and property relations with their parent land, for which reason it becomes a matter of essential importance that they should have access to official records of marriages, births and deaths. Almost every day the occasion arises for the production of evidence on these topics. There is often extreme difficulty in procuring the proper legal testimony, especially with regard to births. Europeans, who have been accustomed to the facilities for procuring such data in their native land, complain of the difficulty imposed on them in California, for want of official records. We hope that every medical man throughout the State whose eye alights on this article, will ponder it carefully and act upon it.'

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ANIMAL VACCINATION.—Nothing will, perhaps, (*Med. Times and Gaz.*) give a clearer notion of the real meaning of animal vaccination than the history of one particular 'stock'—the best known, perhaps, and that now so extensively used in America—the so-called Beaugency stock. On March 28, 1868, it was found by a woman milking a cow at the above-named place, not far from Orleans, that the animal was restless during the process. A midwife came in, and found vesicles on the udder of the animal similar to those produced by vaccination. A veterinary surgeon and four medical practitioners were called in, and more closely examined the animal. Seven or eight of these vesicles were found round about the bases of the teats. The lymph from these vesicles was tried on another cow and two children; all succeeded. Notice was sent to the Academy of Medicine at Paris, and a month after the discovery Dr Depaul arrived from Paris, and a careful investigation took place. The result was a confirmation of the discovery of a natural stock in all particulars, and Dr. Depaul departed for Paris, taking with him animals vaccinated with the products of the original stock. From this a supply was kept up, until it seems to have been lost during the siege of Paris in 1870, but not before it had been introduced into America, where Dr. Martin has been able to preserve it in unimpaired vigour down to the present time. In Belgium other stocks are in use, but all are derived from some natural outbreak of cow-pox, not from any artificial inoculation of small-pox or other malady.

## HEALTH OF PARKDALE.

To the Editor of the SANITARY JOURNAL.

Dear Sir.—It is said by some people that ague is a common disease in that suburb of Toronto, Parkdale. Can you say whether this is true or not? If it is true whence the cause of the ague? Or if not true, can you say if the place is so situated as to be liable to the disease. Some say the malaria causing the ague comes from the marshy ground near the mouth of the Humber. Do you think it would travel so far as that? Or would the few small pond holes, which I have observed are in Parkdale, give rise to the disease? If you will kindly answer the above in your valuable JOURNAL you will much oblige

Yours very truly,

A CONSTANT READER.

Toronto, 10th October, 1878.

In answer to the above, after enquiry, we believe there have been a few cases of ague in Parkdale, but they were of the mildest type. The cause of the disease does not exist there to such an extent as it does about the mouth of the Don. The direct, exciting cause of ague, malaria (bad air), may be and sometimes is carried by winds a long distance. But trees intercept it. It is not probable that it comes to Parkdale from the Humber. The Humber flats are probably mostly wet, and the poison which gives rise to ague appears to proceed from parts of the surface of the ground that have been flooded and then dried, rather than from parts that are still or constantly wet. The source of what little malaria there may be in Parkdale is most likely the few pond holes referred to, which partly dry at times, and thus become beds or favourable soil for the development of the poison. This is a source, however, which may be easily removed by levelling and drainage. Ague in its worst form is not a very formidable disease, the cause of it is well known, and when only limited, is easily removed, and should not in such case be permitted to exist anywhere. It is the foul emanations and gases from sewers and privy vaults which cause the most dangerous and fatal diseases; which it is to be hoped will never find a lodging-place in the beautiful suburb, Parkdale. Parkdale has most excellent natural advantages as regards health. It is on the windward side of the city (which city by the way is not noted for its freedom from stinks,) eastern winds being uncommon, and it admits of easy and thorough drainage. It rests with the people living in it to make it a complete model of a healthy town, which might vie with Dr. B. W. Richardson's Utopian Hygeiaopolis, or the model city about being built in England under his guidance. We shall endeavor on future occasions to say something as to the best manner in which such a desirable end may be accomplished.—THE EDITOR.

## ON THE USE OF WINE.

Notwithstanding that much has been said and written against the use of wines and all alcoholic spirits, and t·o by many eminent physicians, the evidence on the other hand appears most convincing that there is in good wine especially considerable nourishing properties, and in some circumstances these are peculiarly valuable and almost indispensible. Dr. Robert Druitt, an eminent physician of London, whose work on surgery is familiar to probably almost every medical man on this continent, has been furnishing to the *Medical Times and Gazette* evidence of the great value of wine during the seige of Paris (1871) when food was scarce. Dr. Druitt says, the experience of the world has stamped wine as one of the greatest blessings to man. The evidence referred to is from those of the highest standing in France. Surgeon General Gordon, C.B., M.D., &c., who was in Paris during the entire siege, bears witness to its nourishing properties, and says too the medical men considered the absence of 'famine fever' due, in a considerable degree, to the use of wine. Sir John Rose Cormack, M.D., &c., writes, 'the abundance of good claret supplied to the hospital ambulances and general population largely compensated for the deficiency of meat and all alimentary substances.' A civil servant of the highest position in Paris says, 'having been in Paris during the whole of the siege, I know, of certain knowledge, that the ordinary red wine was a most powerful support to the mass of the population; and I doubt if they would have been able to support the numberless privations to which they were exposed had they been deprived of this drink, which took the place of the solid aliment of which they were then deprived.' And the wife of this gentleman adds, 'without the *vin ordinaire*, which we drank during the whole time of the siege, and in which we sopped bread as long as we could get it (some of the bread was black and mixed with sawdust), I do not think we could have resisted so long as we did the extreme want of nutritious food; for no doubt we were greatly supported by the wine, though generally I do not drink it.'

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PREVENTION OF SEA SICKNESS.—On this, a correspondent, F. Peppercorne, L.R.C.P., M.R.C.S., writes to the *Medical Times and Gazette*, as follows. It is now many years since that my brother, Mr. Frederick S. Peppercorne, a civil engineer, at present stationed in New Zealand, discovered, during a tedious voyage to Sydney in a sailing merchant ship, that this disagreeable complaint, to which he was subject, could be quickly relieved, and indeed prevented, by simply buckling firmly round the waist a gentlemans' common elastic belt, so as to make some pressure on the epigastrium, or pit of stomach; or, if in want of the belt, a small shawl, or even a strong silk hankerchief, folded up flat to about three or four inches wide, would answer the purpose. As he had many opportunities of testing this remedy since, in long voyages to New Zealand, no doubt that at the present season, when so many hundreds are crossing the Channel or other seas, either for pleasure, health, or business, this information, if made known, may prove very beneficial.

## CANADIAN WINES.

It is said that the finest light wines in the world are produced on the Rhine and its tributary streams, where the climate is very like that of central Ontario. And it cannot but be gratifying to Canadians to know that they have localities that will produce grapes from which wines may be manufactured which, as Prof. Croft, of University College, and others testify, are equal to many of the light wines of France and Germany. These wines are manufactured by the 'Canada Vine Growers' Association,' represented by the well known and reliable firm of Cramp, Torrances & Co., Toronto, from their extensive vineyards (over 70 acres) at Cooksville, Ont., planted about 20 years ago. We have before us letters from Prof. Croft and Dr. W. H. Ellis, testifying as to the purity of these wines, and also letters from many leading medical practitioners testifying as regards their goodness and medicinal value. While there is no question as to their goodness, there being no duty on native wines, they can be supplied at less cost than the imported article. The stock now offered by the above Company is four years old. Mr. James White is the travelling agent for the firm, and intends making a tour through Canada for the purpose of introducing the wines. He is most energetic and untiring in his effort and we bespeak for the wines an extensive sale. We cordially recommend Mr. White to our readers.

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## BREED'S CHEMICAL COMPOUND AS REGARDS HEALTH.

Most people who burn coal experience more or less inconvenience from the escape from the stoves or heaters, of coal gases. Some there are, indeed, who can hardly live in a house where coal is burned, by reason of the escaped gases causing most troublesome bronchial irritation. The Messrs. Snarr, of Toronto, are the sole agents for a mineral substance, 'Breed's Chemical Compound,' which, when mixed with hard coal, appears in some way to cause the combustion of these gases, and thus prevent their escape into the room or up the pipe. Thus, while health is promoted, a considerable saving of fuel is effected by it. The compound is quite inexpensive. We gave it a trial last winter and were much pleased with it. When mixed with coal, this burned with a pleasant flame, instead of a dull glow. Without it, when the door or top of the base burner was open, gas would escape freely; with it, with these open, no such escaping of gas could usually be detected. We believe it to be really a very useful substance, and recommend our readers to give it a trial.

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A PETITION has been presented to President Hayes, says the *Michigan Medical News*, for the appointment of a commission of the ablest physicians and chemists to make a scientific investigation into the "cause, nature, treatment and future prevention of the fearful epidemic (yellow fever) now raging."

## DIPHTHERIA AND SEWER GAS.

The opinions recently expressed in this country (*The Doctor*, London, England) are corroborated by some statements made by Dr. W. Snively, physician to the Pittsburgh (Pa.) Board of Health, in a paper on an outbreak of the disease in Pittsburgh during the year 1877. Out of 856 cases, the total number reported, there were 366 deaths. Of these 457, with 141 deaths, occurred in a particular district of the city in which the sewerage was almost criminally defective—*i.e.*, there was insufficient grade, inadequate diameter of the main at certain points, absence of traps at the street drops, private connection-points and main termini, while the man-holes were tightly covered and there was an utter lack of ventilation. Slaughter-houses near the termini drained their offal and refuse through connections having no traps ; and one of the latter emptied directly into an untrapped drop. The epidemic set in during July, and raged about five months. During most of this period one main was choked for a distance exceeding 2,000 feet. Two heavy rainfalls occured in July, two in August. Hence he thinks sewer-gas emanations, propagating the disease in the poisoned human system, caused the epidemic.

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## BOOKS AND PAMPHLETS RECEIVED.

REPORT OF THE SELECT COMMITTEE ON PUBLIC HEALTH, Province of Ontario. Toronto : Hunter, Rose & Co.

The subject matter of this report was referred to at length in the last number of this JOURNAL, and elsewhere in this number are brief extracts, which foreshaddow something which we have no doubt will bear much good fruit. Most of our readers have, however, probably seen the report, and we need not notice it further here.

THE INTRA-VENUS INJECTION OF MILK AS A SUBSTITUTE FOR THE TRANSFUSION OF BLOOD, by T. G. Thomas, M.D. New York : D. Appleton & Co.

In this the writer gives due credit to the late Dr. Hodder, of Toronto, as being the first to perform this operation, twenty-eight years ago, the recollection of Dr. Hodder's cases suggested the idea to the writer.

ANNUAL REPORT OF THE BOARD OF EDUCATION OF THE STATE OF CONNECTICUT, U.S. A bound volume of over 200 pages.

THE SCHOOLS OF FORESTRY AND INDUSTRIAL SCHOOLS OF EUROPE ; —AND ECONOMIC TREE PLANTING : By B. G. Northrop. New York : Orang Judd & Comp.

MEDICINE, THE PRESENT AND FUTURE : By J. W. Compton, M.D.

THE TORONTO TURKISH AND VAPOR BATHS, 233 Queen street, are well and ably conducted, and should be well patronized by all, in order to keep the skin healthy and active.

If you want to get your teeth well attended to go to R. G. Trotter, dentist, 53 King St. E. but go early in the morning or the chairs will all be filled, as there is almost always some one there waiting to be attended to.

IF YOU WANT strong, air-tight, easily-cleaned, neat elbows for your stove pipes ask your tinsmith for WEXELBERGS 1st prize elbows.

PARTICULAR ATTENTION is desired to special arrangement the publisher of this JOURNAL has made for CLUBBING with Scribners admirable magazines, St. Nicholas and Scribners Monthly ;—Two of the best magazines published—See advertisment on opposite page. He will send the Nicholas, a magazine for boys and girls (pub. price $3, per annum), together with the SANITARY JOURNAL, for $3. Or Scribners Monthly, (pub. price $4 per ann), and Sanitary Journal for $4. St. Nicholas and the monthly, both, and Sanitary Journal for $6, to any address.

ALL RECEIVING SPECIMEN COPIES OF THIS JOURNAL, who are not already Subscribers, we shall be pleased to place on our List. Any who desire to be so placed, and to have the JOURNAL continued to their Address, will please remit ONE DOLLAR, for the year, or send a P. O. CARD, and remit the money at a more convenient time.

TO OLD FRIENDS AND SUBSCRIBERS we can only say, in reference to past irregularities in the appearance of the JOURNAL, that they have been a source of grief to us, but we have been utterly unable to avoid them. As to the future, we intend to have it issued about the middle of every month, and trust to be able, and shall do our best, to carry out such intention. As the JOURNAL costs now only One Dollar, instead of Two, as it has done in the past, perhaps some of our Friends might be able to present a copy for a year, to a Friend of theirs, as a few have done, or help us in some other way to increase the circulation of the JOURNAL, and so help to educate the public in Sanitary Matters.