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# THE INSTRUCTOR,

FOR

## NOVA SCOTIA, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND.

EDITED BY ALEXANDER MUNRO,

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## The English Language.

WHEN we consider the many dialects or different ways of employing the English language, we are almost inclined to set the expression—"the English language," down as convertable; and under every phase meaning the same thing—English.

We have correct English, such as is generally employed by the English scholar; we have so to speak English English, some of which is bad; we have Scotch English and Irish English, much of which would not be bad if better accented; then we have Yankee English, which is abominable; we have French English, which we were going to say is no English at all; we have Indian English, which, altho' spoken by the descendants of an almost extinct race in the Lower Provinces, is full as good, if not better, than some we have named; we have Gælic English, with its soft nasal accent; and we have in some sections of the country Negro English, Welch English, etc.

And to crown the whole, we have Provincial English, which is generally acknowledged to come closer to the standard of correct English, both in accent and the use of appropriate language than any of those named.

The English generally spoken by the reading portion of the descendants of the Scotch, English and Irish, is far superior to that employed by the original emigrants.

The worst feature is our inclination to drift into the use of slang words and phrases—Yankeeisms, etc., which should be studiously avoided. Progress in language is equally as commendable as progress in other departments of human enquiry; man's restless spirit, especially in a progressive age like the present, is on the alert; new ideas, new things, and new forms of thought, require new names to re-

present them. But great care should be observed in their introduction; the English language contains upwards of one hundred thousand words,—hence its copiousness and flexibility.

Most every country manifests an inclination to localisms in language, some of which are low and vulgar while others are ornate and tend to embellishment.

There are few subjects connected with the intellectual well-being of these young and aspiring Colonies of more importance than that of sustaining a pure English. Parents and Teachers should endeavor to guide the youth under their charge into the use of correct English, and teach them to avoid on all occasions, the use of slang words; it should be remembered that habits once formed are difficult to change. Mankind are wonderful at imitation; hence our public speakers should aim at good English; the pulpit, the bar and Legislative halls are high schools, where the public look for the best teachers.

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**Education Retrograding in New Brunswick.**

"We consider," says the "Sussex Times," "the education of a people second only to the religion of a people; and therefore the greatest temporal subject which can engage their legislators. Then why should the subject of Education be so neglected with us? Either our public men do not sufficiently understand the subject, or are very remiss in their duty. If the former, it is a reflection on the intelligence of our legislators; if the latter, it is a very unpleasant comment upon their manner of performing their duty to their fellow provincialists."

The following remarks from the same paper, shows the inefficiency of the machinery at work; extravagance in the expenditures, and the inattention of our public men to the subject. It is the more strange that this diminution in schools, and school-going pupils should take place in New Brunswick, while our Colonial neighbors are marching onwards in educational improvement.

We have no doubt if the Trustees had charge of the schools in their respective Parishes, and paid for their services, that education would receive a fresh stimulus:—

"When the Report of the Chief Superintendent of Schools for 1859 was laid before the Legislature, pursuant to law, it should have been examined, and its tabular contents compared with former reports. In the first place, individual members might have glanced at the number of schools reported for 1859—namely, 818; then examined the number reported in 1857, under the much abused School Law passed in 1852, which number would have been found to be 892; then examined the total number of pupils on the registers in 1859, which was 25,758; while in 1857 there were on the registers 29,973. Perhaps they would have said to themselves, if the present board of officers have 74 schools and 4215 pupils less to look after, certainly the expense must be less. Let this be examined—"Amount drawn from the Treasury for the Parish School service for the year 1859, £23,712 10s.;" while the total amount drawn for the same purpose for the year 1857, was but £21,048 9s. 6d. We imagine they would then open their eyes in wonder, and exclaim—"What! seventy-four schools closed, over four thousand

pupils lost, and yet the expense increased by TWO THOUSAND SIX HUNDRED AND SIXTY FOUR POUNDS."

### The Universe.

The following sublime remarks, from the "North British Review," are well calculated to lead the mind to lofty conceptions of the Creator of the Universe, as well as to humiliating conceptions of ourselves; they are well worthy of being committed to memory:—

"In wafting ourselves in imagination to our own satellite, the moon—the nearest of our celestial bodies—we have passed over a distance equal to thirty times the diameter of our globe. In advancing to the sun we travel over a distance equal to thirty times that moon; and before we reach Uranus, the remotest of the planets, we have traversed a space equal to twenty times the earth's distance from the sun. Thus placed at the limits of a system enclosed in a circle of 1800 millions of miles in radius, our appreciation of distance would appear to be exhausted, and we seem on the margin of an unfathomable abyss. The telescope, however, and the mural circle, enable us to span the void, and the genius of man, proud of the achievement—and justly, if humbly proud—has crossed the gulf 12,000 times the radius of his own system, that he may study the nearest world in the firmament of heaven. Beyond this frontier lies the whole universe of stars—their binary systems—their clusters, and their nebulous combinations. The observed parallax of one-fourth of a second in Lyra, carries us four times as far into the bosom of space; but though beyond this we have no positive measure of distance, it would be as unphilosophical to assign its limits to creation, as to give it an infinite range. In this rapid flight into space, we have traversed it in but one dimension, and the line which we have traced is but a unit in the scale of celestial distance. Creation in its wide panorama is still above, beneath, and around us. The over-arching heavens still enclose us, and innumerable worlds sparkle in its canopy. If from this bourne, from which the astronomical traveller alone returns, we look upon our course, our own planetary system ceases to be perceived. Its sun is dim—itself but an invisible point in the nebulous light that intervenes. Where, then, is our terrestial ball—its oceans—its continents—its mountains—its empires—its dynasties—its thrones! Where is our father-land—its factions—its Christian disunions—its slave crimes, and its unholy wars? Where is our home—its peace—its endearments—its hopes—and its fears? Where is man, the intellectual monad—the only atom of organic life that pierces the depths, and interprets the enigma of the universe?—and yet the only spark of a spiritual nature which disclaims the authority and resists the will of the Universal King! They have all disappeared in the far off perspective—the long vista of space, whose apex was at the sun, the hugest telescope would fail to descry. No living thing here meets the eye, and no sentiment associated with life presses on the affections. The tiny organism of earth and ocean—every thing that moves and breathes—that lives and dies—all are engulfed in the great conception of the universe. The straining mind can not unite the immeasurable extremes. The infinite in space—the eternal in duration—the omnipotent in power—the perfect in wisdom, alone fill the expanded soul, and portray in their awful combination—the Creator of the Universe."

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The importation of timber from British North America, into London in 1855, was £1,447,302; in 1859, £5,194,574.

"Little Nova Scotia,"

As this Province is wont to be called by some of her politicians, continues to figure abroad;—a Williams in the army, a Wallis and a Belcher in the navy, a Haliburton in the Imperial Parliament, and many others filling offices of trust abroad and at home.

And recently the long distinguished University of Glasgow, with its 1200 students, has bestowed the meed of praise on a number of Nova Scotians. We extract from the "Monthly Record":—

1st. The University Silver Medal, to Simon McGregor, A. M., Nova Scotia, for the best "Essay on the Principles of the interpretation of Prophecy."

2nd. The Rae Wilson Gold Medal, for the best "Essay on the Pentecostal gift of tongues," to Simon McGregor, A. M., Nova Scotia.

3rd. Twenty Guinea Prize given by the late Lord Rector for the best "Essay on the relations of critical, systematic, and historical Theology, G. M. Grant, A. M., Nova Scotia.

4th. For the best "Essay on the nature and use of "Types," in the Old Testament, S. McGregor, A. M., Nova Scotia.

5th. Superiority in competitive trials in translating orally, portions of Calvin's Institutes, G. M. Grant, Nova Scotia.

6th. Best profession in Hebrew, by Students of last year's Senior class, John Cameron, A. M. Nova Scotia.

7th. Best "Essay on the theory of Romanism and theory of Protestantism," George M. Grant, A. M., Simon McGregor, A. M., equal

8th. Ecclesiastical History. Best Answers during Session, Simon McGregor, A. M., Nova Scotia.

9th. Anatomy (2d prize,) Reuben Cross, New Brunswick.

10th. Certificate of Merit, (1st of list) William Fraser, New Glasgow, Nova Scotia.

We understand that the Juniores who went home last year, although they have not carried any positive honors, have acquitted themselves in a manner highly satisfactory to their professors, and promise in future years to maintain the credit of Nova Scotia in Glasgow University.

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**On the Pre-Historical Existence of Man.**

Of all the subjects which have occupied the attention of the scientific societies and journals of Europe during the past year, none have excited so much interest as the geological evidence lately adduced from various sources, tending to prove that the period of man's existence upon our planet has been vastly greater than that hitherto assigned by Biblical and common chronology. It is also a very noticeable circumstance that, notwithstanding this subject has occupied the attention of the scientific men, generally, of Europe, during the past year, to a greater extent than any other, it has been scarcely noticed in any American publication, with the exception of the "Annual of Scientific Discovery," and from the pages of this work for 1859 and 1860, we obtain the following *resume*:—

Some two years ago or more, Mr. Leonard Horner, an English engineer of wealth, and a member of the Royal Society, undertook, in connection with some French Engineers in the employ of the Pasha of Egypt, to determine the depth of the alluvial deposits in the valley of the Nile. This river, as is well-known, is remarkable for its annual overflow, whereby a great part of all the arable land of Egyt is submerged for the period of several weeks, and covered with a thin deposit of mud or sediment, which in geological language

is termed alluvium. This action recurring with great regularity, year after year, has produced on both sides of the Nile a strip of land of unexampled fertility, and is also yearly extending the delta or coast-line, at the mouth of the river, further into the Mediterranean. In all places in the valley of the Nile where the soil has remained undisturbed by human agency, the annual deposits of mud can be seen reposing upon each other with great regularity—each successive layer or stratum of sediment representing a year in time, in the same manner as the successive rings in the trunk of a tree represent the wood-growth of successive seasons. By counting, therefore, the number of layers in a given thickness of Nile deposit, we have an almost certain measure of the time required for its formation.

Mr. Horner's researches were based upon these facts, and were made by sinking a series of shafts, ninety-five in all, across the Nile valley, nearly in a line with, and crossing the site of, the ancient city of Heliopolis. In every case the alluvium was found to be regularly divided into layers, and the average of many careful measurements indicated that the rate of vertical increase of sediment was about three and one half inches per century. One of these shafts, in particular, was sunk close to the great monolithic statue of Rameses II., at Memphis, and it was found that there were nine feet four inches of Nile sediment between eight inches below the present surface of the ground and the lowest part of the platform on which the statue stands. Now this statue has been determined by Lepsius and other Egyptian scholars to have been erected 1361 years before Christ, and this date, added to 1858, gives therefore 3218 years, during which the above-mentioned depth of sediment accumulated; a rate of increase in strict accordance with the results of the measurements above alluded to. Below the platform of stone on which the statue rests, the shaft was driven thirty-two feet; but the lowest two feet consisted of sand, thus leaving thirty feet of true Nile sediment in an undisturbed condition below this foundation. At the base of this sediment, or at a depth of thirty-nine feet four inches from the present surface of the ground, fragments of pottery were found in a good state of preservation, and exhibiting some considerable artistic skill. Allowing, now, that the thirty feet of sediment covering these remains (below the platform of the statue) were deposited at the rate of three and one half inches per century, we have in the fragments of pottery a record of the existence of man 13,500 years before A. D. 1858, 11,500 years before the Christian era, and 7,600 years before the commencement of the reign of Menes as assigned by Lepsius; of man, moreover, in a state of civilization sufficiently advanced to be able to fashion clay into vessels, and harden it by heat.

The fragments in question are now deposited in the British Museum, and Mr. Horner in exhibiting them to the Royal Society, expressed a confident opinion that their antiquity was at least equal to the calculation above given. At any rate, it seems certain that they were deposited in the place from whence they were taken, long anterior to the time when the workmen of Rameses II. laid the platform for the reception of his statue 3000 years ago.

The results of Mr. Horner's investigations are, however, cast entirely in the shade by the discovery of flint weapons, spear heads, axes, &c., associated with the remains of extinct animals—elephant, rhinoceros, bear, tiger, hyena, &c.—in undisturbed beds of gravel, in the north of France. The announcement of this discovery was first made by Mr. Evans, an English geologist, to the London Society of Antiquaries, in June, 1859, and subsequent researches have fully confirmed

it. The weapons and bones occur in what is geologically known as the drift in the neighborhood of the town of Amiens, and present unmistakeable evidence of having been buried contemporaneously. At the meeting of the British Association in September, 1859, Sir Charles Lyell, who has hitherto favored the received chronology respecting man's existence as a race, said that he fully believed that the antiquity of these flint weapons was immensely great as compared with the times of either history or tradition; and it is conceded by all geologists that the continued existence of tropical animals is not possible in Central Europe, under the present conditions of climate. The conclusion, therefore, seems unavoidable, that there were races of men inhabiting Europe at a period when its temperature was altogether different from what it now is, and when the country was the natural habitation of species of animals now restricted to the tropics. Our space does not allow us to enter at greater length into the examination of this subject, and for further information we must refer our readers to the volumes above noticed, and to the speech of Sir Charles Lyell before the British Association, which is there reported. —[Scientific American.

## Science and Art.

Sir David Brewster, the new principal of the University of Edinburgh, in his address at the opening of the Winter Session, on Nov. 2nd, said:— "It is necessary to warn you against speculations morally and intellectually degrading. In the blue heavens above, in the smiling earth beneath, and in the social world around, you will find full scope for the exercise of your noblest faculties, and a field ample enough for the widest range of invention and discovery. Science has never derived any truth, nor art any invention, nor religion any bulwark, nor humanity any boon from those presumptuous mystics who grovel amid nature's subverted laws—burrowing in the cavern of the invisible world, and attempting to storm the awful and impregnable sanctuary of the future.— The sciences of zoology, botany, geology, and mineralogy, including the structure and physical history of the earth, constitute one of the most fascinating studies, and one which even fashion has introduced into many intellectual households, where aquaria or vivaria the nurseries of interesting plants and animals, decorate the library and the drawing-room. Studies of this kind, which can be pursued for health or for pleasure, require like preparation for the mind. They are associated too, with many of our wants and amusements, and find frequent and useful applications in the various conditions of life. In no other University in Scotland can these subjects be so favorably suited as in this, amid its magnificent collections in zoology, botany, and mineralogy. There is only one other branch of study to which I am anxious to call your attention.— The advances which have recently been made in the mechanical and useful arts have already begun to influence our social condition, and must effect still more deeply our system of education. The knowledge which used to constitute a scholar, and fit him for social and intellectual intercourse, will not avail him under the present ascendancy of practical science. New and gigantic inventions mark almost every passing year—the colossal tubular bridge, conveying the monster train over an arm of the sea— the submarine cable carrying the pulse of speech beneath 2,000 miles of ocean—the monster ship freighted with thousands of lives—and the huge rifle gun throwing its fatal but unchristian charge across miles of earth or of ocean. New arts, too, useful and ornamental, have sprung up luxuriantly around us.— New powers of nature have been evoked, and man communicates with

man across seas and continents with more certainty and speed than if he had been endowed with the velocity of the race-horse, or provided with the pinions of the eagle."

### Consumption and its Causes.

At a meeting of the Geographical and Statistical Society, held in this city on the 3d inst., a valuable paper was read on the mortality of consumption, by Henry B. Millard, M. D. He estimated that nearly one-sixth of the deaths among the human race occur from consumption. From statistics extending over a considerable period, he found that one death in 5 7 occurred from consumption. In New York, from 1804 to 1820, one death in every 4.3 was caused by consumption; from 1820 to 1835, one in every 5.4; from 1835 to 1850, one in 6.5; 1848 to 1859, one in 8.46; in Brooklyn, 1848 to 1859, one in 8.11. Of deaths in the army, he found that the greatest number of cases of consumption was from 6.9 to 9.2 annually for every thousand men, between latitudes 36° and 25°, characterized by high temperature, copious rains and excessive moisture. The smallest number of deaths was 1.3 per thousand men, in New Mexico, characterized by high land and dry atmosphere. While consumption is rare in countries of high latitudes, it is curious that in tropical countries the proportion of deaths is often too small to be calculated. In all Judea, in 43 years, only 29 died of consumption. The theory that the sea air may prevent, as well as cure, consumption, is supported by statistics. In the British army, out of 14,590 men, 51 died of consumption; while out of 12,942 men in the navy, only 19 died of that disease. Consumption is not necessarily more prevalent in large than in small cities. Among the trades and professions, the following order of mortality by consumption was mentioned:—The greatest was among tailors, shoemakers; next came blacksmiths, gardeners, bakers, butchers and lawyers; the mortality among tailors being four times that of the lawyers. The greatest mortality by consumption among males is said to be in the city. There is greater liability to consumption between the 20th and 30th years of age than at any other period of life. The general conclusion was, that humidity of the atmosphere is favorable and dryness unfavourable to the generation of the disease, but moist salt water is not calculated for its developement. Want of exercise and air tends to produce it. It is more prevalent among females than among males. There are no reasons for the conclusion that the disease is either on the increase or decrease.

At the conclusion of the reading of Dr. Millard's paper, the thanks of the meeting were presented to him, and a copy requested for the archives of the society.—[Scientific American.

### Telegraphs and Railroads in Russia.

Russia is making great progress.—Her railroads and telegraph lines, which are the chief works undertaken since the termination of the war with the western powers, are evidently designed chiefly to supply a want that was greatly felt by her during the progress of hostilities. There are now railroads from St. Petersburg to Moscow, 398 miles, and Pokoff, 170, besides the short lines, from the capital to Peterhoff and Pavlovsk, and that from Warsaw to Tshentokhoff, on the Russian frontier, and 25 versts beyond, the total length of which is 182 miles. Other lines are in course of construction, or projected, from Pokoff to Warsaw, 462 miles, completing the railroad communication between the capital of the empire and that of Poland; from Dunaburg to Riga, 145 miles, to be afterwards continued to Libau, 53 miles further; and from Moscow to Theodosia, 990 miles. Telegraphic communication already exists between

St. Petersburg and Cronstadt, Abo, Libau, Kowns, Keyeef, and Simpheropol, and between Nicholaieff and Odessa. There is one feature that presents a peculiar interest for the United States, namely, the Russian government has just given its sanction to a grand scheme for connecting St. Petersburg and New York by telegraph via New Archangel and Behring's Straits, having stations at the Amoor, Irkutsk, and other central points on the way, across the vast continent of Eastern Europe and Asia. The American section of the line will unite New York and San Francisco.

### Prince Edward Island School Regulations.

In the "Royal Gazette" of this Island, of March 27th, 1860, the visitor of schools submits some alterations in the existing school regulations of this Island, the substance of which is as follows:—

1st. All teachers now licenced, to be called in, re-examined and classified Nos. 1, 2 and 3.

2. All future teachers on receiving licence, to receive from the Treasury, Forty Pounds per annum; at the end of two years, to be re-examined, on professional attainments, character and success in teaching, in order to receive the 2d Class Salary of Fifty Pounds; and after three years further teaching, to receive, on a successful examination, the highest Salary of Sixty Pounds, yearly.

3. Payments of Salaries to be made Quarterly.

Acadian teachers to be put on the same footing as other Schools, supported under this act.

AVERAGE DAILY ATTENDANCE OF PUPILS.

Where 40 children reside in the District, the average daily attendance should be kept at the present standard, viz., 20; and where upwards of 40, then half the number in all cases to be the standard average attendance.

Whenever the daily average attendance falls below the prescribed standard, then the amount of Salary ought to be in proportion to the actual average attendance, say, at the rate of Thirty Shillings per head, as in minor districts."

Then follows some valuable suggestions respecting the "Boundaries of Districts," "School Trustees," "School Libraries," and the propriety of establishing a "superannuated fund," as "annuity for teachers incapacitated for duty, from any cause—such annuity or retiring allowance to be proportioned to length of service, and to the amount which may be contributed yearly, by the teacher claiming the benefit of such fund."

NORMAL SCHOOL.—Among the improvements recommended in this establishment, the Report suggests, that "the term of attendance should be extended from three to five months." And "persons holding recent certificates from any British or Provincial Institution to be placed on the same footing as those holding certificates of attendance at the Normal School."

The whole is concluded with the following admirable propositions:—

"Instruction and training in morality, being an essential, and the highest part of Education; and the Bible—God's revealed will to man, irrespective of nation or language,—being the only infallible standard of morality, it is necessary and proper that all the youth of our land attending all our public schools, of every grade, should have their minds moulded and regulated by its sacred teachings,—therefore the Board recommend that the introduction of the Bible into all our

public schools, of every grade and class receiving support from the Public Treasury, be authorised; and that the teachers be required to devote one half hour of the former part of each School day, to moral training from the Bible—no sectarian teaching being allowed; and the teacher's remarks to be simply explanatory and practical; the children of Roman Catholics to be allowed to use their own version of the Bible, when preferred; and no children being compelled to receive these instructions whose parents or guardians may object to the same.

The Board would also take the liberty of stating that they conceive the time has now come when our Educational establishment should be completed by the crowning addition of a Provincial College—past Acts and educational progress have paved the way for this highest and necessary addition. To supply it with Students, three or more intermediate or high Schools might be called into operation. A new and complete Educational Act, embracing the College, the High Schools, the Normal School properly equipped, and the needed amendments of Common School regulations would be hailed as a signal advance in the educational interests of the country. All which is humbly submitted.

## AGRICULTURAL.

### Potatoe Convention.

The various families of Potatoes in cultivation having decided to hold a Convention, they duly met, and, after the meeting was called to order and a great Rohan appointed Chairman, Lady's Finger was duly chosen Secretary, who, using a mushroon as desk, proceeded to take notes of the proceedings. She is noted for the number of her eyes, and her appointment gave general satisfaction.

Peach Blossom opened the Convention in his usual flowery manner, and introduced a resolution to organize a Society to be named "The Society for the Amelioration of the Condition of Potatoes." He claimed that many members of the family would be greatly improved by a mealier condition of their systems and stated that his own high condition and reputation were largely due to his mealiness of texture, as well as to his largeness of size. He did not wish to "blow" hard or "puff" any system; but a more elegant color was much needed by many of the race.

Merino next took the floor, in opposition to the resolution. It seemed to him but a plan to endeavour to make the whole family more palatable to the monster Man. Potatoes will get into hot water soon enough without using any extra efforts. Merino had no desire to be put down. The interests of the Convention were vast, and he would advise that they plant themselves firmly in their true positions.

Prince Albert differed from Merino, advocated the resolution, which he heartily seconded. Entertained the highest respect for all potatoes, though some were fitter subjects for steam and starch than others. Could produce 500 bushels per acre, and defied others to do as well. Spoke of his eye-brow over his eyes, and asked gentlemen if they saw anything green there? Any way, his health was always good, and no cancer had yet appeared on his face, and his only sufferings were from boils and tubercular consumption.—Took first premium at State Fairs in 1857, 1858 and 1859.

Early June thought that Prince Albert must have recently come from a potato ball. Some of the older sorts had most evidently been run into the ground, while the newer ones were run to seed. Some were very watery, and needed the amelioration spoken of. The sooner they were allowed to "go to pot" the better. (Cries of "dry up.") Moved an amendment that "No potato hereafter be in any way connected with a broil."

The Chair decided the amendment out of order.

Pinkeye advocated improved cultivation; knew it to be a "harrowing" subject, but hoped always to be able to "come up to the scratch."

Kidney opposed the resolution; thought there were societies enough. Potatoes were doing well enough. He found that among all the *hills* that flesh is heir to, he was benefitted by viewing them couleur de rows. Moved to "lay the resolution on the table."

The Chair thought Kidney might "go on the table" himself, and decided the motion out of order.

Mercer felt blue: was not mercenary, but wanted to please. A brother of his had fairly turned pale in his efforts to please, and was called an A No. 1 sort.

Mexican defended Early June, who was one of the dryest of the family, and ought not to be told to "dry up." Such exclamations furnished food for thought, while potatoes that were thus abusive he considered were not fit "food for pigs."

Chair said Mexican was slightly personal.

Mexican appealed, and the Chair thought Mexic n would be peeled soon enough; adding, "Unless you are quiet, sir, you'll be dished."

The Chairman thought that members had expressed themselves sufficiently as to the resolution, and put the question as to the organization of the Society, when, in spite of the previous apparent opposition, the resolution passed—all eyes.—[Gen. Farmer.

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**Abuse of Manures—Salt for Potatoes**

We once heard of an economical individual, who having bought a small phial of medicine, from which he took a single dose for a pain in the stomach, and then placed it in his trunk.—Sometime after he found it there, and as he said, he could not afford to lose it, he swallowed the whole of it; on this occasion he had no pain in the stomach, until after he had taken the medicine; he found this excess quantity, however, produced the malady.

Sometime since a writer in the "Boston Cultivator" recommended salt for potatoes; the following season another correspondent of that paper reports, "that on two rows he manured his potatoes in the hill with plenty of fine rotten manure, with the addition of a handful of ashes, and then he used salt at the rate of about half a pint to each hill, and covering the whole with loam before dropping in the seed;" he then complains that "at hoeing time, the potatoes where the salt had been used were far behind the others, and that when he dug them in autumn, they yielded less than half as much as any part of the field;" he then asks, "can some of your subscribers, who favor the use of salt as a manure, explain the matter?"

Now let us see what was the quantity of salt used. Suppose the hills to be four feet apart each way, then the experimenter used at the rate of three hundred and fifty bushels of salt to the acre, certainly enough to pickle an ordinary crop of potatoes. If he had used six bushels of salt to the acre, sown broadcast, after the potatoes were planted, he would have found them free from the attacks of the grub, and improved by the treatment. The dews and rains would have carried the salt evenly in the soil, and by the time it reached the level of the potatoes, if they were planted at the proper depth, say six inches, it would have been so evenly divided by dilution as not to prevent new growth, while at the surface, in its more concentrated shape, it would have destroyed many weeds, insects, etc.

Many soils are deficient of chlorine and soda, and in such soils salt is a valuable amendment, applied in the manner we have suggested; but where these ingredients are not deficient, salt need not be used.—[Working Farmer.

### Deep Tillage.

In 1852 an article went the rounds of the papers, stating that Robert Buist, the well known accomplished gardner of Philadelphia, had asserted, "that with proper cultivation, ten acres would yield as much as thirty tilled in the old way; that nothing less than three tons of hay, thirty-five bushels of wheat, eighty bushels of corn, and from four to six hundred bushels of carrots, parsnips and mangel wurzel, per acre, should satisfy us." He said "it is many years since I was favorably impressed with the benefits of sub-soil plowing, but the past season put a climax on all my former experience; land that was sub-soiled was more moist; the crops of a better color and more luxuriant, so much so, that I have determined to double plow ten or more acres of my land every year." We have had similar views for at least the same length of time, consequently, have both sub-soiled and under-drained our farm. With this latter addition to sub-soiling, and the free use of Nitrogenized Super-phosphate of Lime, we raise every year much larger crops than those enumerated above by Mr. Buist.—[Working Farmer.

### We should have Educated Farmers.

There is no reason why men of the very highest education should not be farmers. If a son of mine were brought up on purpose to be a farmer, if that was the calling which he preferred, I still would educate him; if he had common sense to begin with. He would be as much better for it as a farmer as he would as a lawyer. There is no reason why a thoroughly scientific education should not be given to every farmer and to every mechanic. A beginning must be made at the common school. Every neighbourhood ought to have one. But they do not grow of themselves. And no decent man will teach school on wages which a canal-boy or a hostler would turn up his nose at. You may as well put your money into the fire as to send it to a "make-believe" teacher—who teaches school because he is fit for nothing else! Lay out to get a good teacher. Be willing to pay enough to make it worth while for "smart" men to become your teachers. And when your boys show an awakening taste for books, see that they have a good school library with books of histories, travels, and scientific tracts and treatises. Above all do not let the boy get a notion that if he is educated he must, of course, quit the farm. Let him get an education that he may make a better farmer. I do not despair of yet seeing a generation of honest politicians. Educated farmers and educated mechanics, who are in good circumstances and do not need office for support, nor make politics a trade, will stand the best chance of honesty. —[Beecher's Fruit, Flowers, and Farming.

## MISCELLANEOUS.

### Frogs for Food.

Whether it is merely from preconceived notions, seated in our mind, or from the appearance of these amphibious creatures, or from half a dozen other reasons we have, or what it is exactly;—it's no use, we can't swallow frogs; and what is worse still, we don't know how to catch them so as to conciliate our palate, or get our "stomach and brains in good humor with" frog-meat;—although Doc or Brown says—"Their flesh is tender, sweet, and very nutricious." Frogs, he tells us, "have long been with the French a favourite article of food,"—and so we say, have snails and snakes in some countries been considered favorite food. The Doctor says:—

"The flesh of frogs is white and

clean, and as free from offensive odor as that of the chicken. They are to be found everywhere, in all our ponds and marshes, and may be raised to any extent with trifling care and expense. Already an enterprising gentleman in New Jersey has commenced raising them on his farm for the New York market, and finds it a good business at the low price of one dollar a hundred. In a year or two, we dare say, frogs will be seen in Boston market as "plenty as quails," and families in the country will look as often to the frog-pond to furnish a dinner as to the butcher's cart. The large "bull-frogs" are, of course, to be preferred for a roast or steaks, but a few dozen of the little "peepers" will make a pie that will knock the famous "chicken-pie" of "four-and-twenty blackbirds" completely into the shade."

All we want, in the British Provinces, is free trade and no favour; and should the palates of our neighbours across the line become fairly conciliated to the general use of frog-meat, and should the prices be sufficient to warrant the exportation—Nova Scotia and New Brunswick can each send over half a dozen ship loads, or more, every summer, of as large, fat frogs as any can produce.

### The Causes of Consumption.

It is vain to think of cures, or speak of remedies, until we have considered the causes.—[Galen.

The primary, producing causes of consumption are not yet known to the world. Speculation and theorizing upon the subject have abounded; but the real, originating agencies of causation have been sadly and almost entirely overlooked. Serious as is the subject, one cannot but be amused, who will take the trouble to review the various opinions of medical men, which have found a record in the annals of the profession, and been adopted by public sentiment for the last twenty-five or thirty years, touching this question. Each has had its day, and in its turn been supplanted, as summarily and in as quick succession, almost, as the oft-recurring fashions of female apparel. It is time that investigation should commence anew, and be pursued by competent, earnest, and logical minds; and if definite and positive knowledge is possible upon the subject, that we should attain, establish, and apply it.

The present rate of the mortality of consumption is so immense as justly to fill with alarm the minds of those who are familiar with its statistics. If it is to increase in the same ratio for the next half century as it has for the last, it will leave of the civilized races of mankind but a miserable remnant of dwarfs and imbeciles. We view with horror the waste of human life on the field of battle; we are filled with consternation at the ravages of that terrible scourge, the cholera; but what are the effects of war and the pestilence compared with the devastation of this one agency of death, consumption?—War endures but for a time, and has its compensations. The pestilence passes away, when it has taught the lesson for which it was commissioned; but since the first invasion of this, the mightiest and most destructive foe of mortal existence, it has continued its steady and unbroken march without pause or truce; and who shall show compensations? So gradual and insidious has been its progress, and so accustomed have we become to its presence, that we have seen the hosts of its victims perish, without admonition or alarm.

One thousand persons have fallen before the power of this great destroyer during the last year, in the city of Boston; in the State of Massachusetts, about five thousand; and in the United States, but little less than one hundred thousand. It sweeps into the

grave one-fourth of all who die by disease, and nearly one half of those who survive the exposures of childhood. Startling as these facts may be, they do not present the worst features in the history of this dreadful malady. It is self-propagating.—By the heaven-ordained law of hereditary descent, its liabilities are transmitted from parents to offspring. The enfeebled invalid communicates to his children a pre-disposition, which, under the influence of habits and customs, which nurtured the disease in his own case, and which are almost certain to accompany the inheritance of predisposition, will develope into incurable consumption before they pass the years of juvenile manhood.—There is every reason to believe that the mortality of consumption will be doubled in the next generation, if the causes which induce it are suffered to operate unchecked.

There is no subject connected with the existence of man this side of the grave, of more importance to him than a knowledge of the causes of consumption In it is involved the perpetuity of the race, and on its solution hangs one of the most momentous questions of human responsibility. If our great Creator, in his infinite wisdom and supremacy, has sent this terrible infliction to exterminate the human family from the face of the earth, then we should bow ourselves with submissive obedience to the decree, in the faith that his glory and our highest welfare will be best subserved thereby. If it is the result of agencies attending our peculiar position on the planet; if there are unavoidable influences of climate, of atmosphere, or of seasons, so prejudicial to life as to threaten our utter extinction, then it becomes our manifest duty to seek some dwelling-place, if any such there be, where, in milder climes and under more genial skies, we can enjoy that health and longevity which, from the construction of our bodies, a beneficent Providence seems to have designed for us.

But if consumption, with its consequent sufferings and mortality, is the result of our own acts; if we have brought this fearful calamity upon ourselves, as the just penalty of our violations of those organic laws which an all-wise, beneficient Deity has established for the government and welfare of our bodies, as we verily believe, then another course of conduct becomes us. Bowing ourselves in humble penitence before the great Lawgiver of the universe, like the publican of sacred record, we should smite our aching breasts and cry, "God be merciful! God be merciful!" and do works meet for repentance.

We shall continue the discussion of this subject till we have given our views of what are, and what are not, the causes of consumption.—How to Live and Breathe.

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### Cultivation of Flowers.

I think that a few leisure hours may be spent very agreeably and very healthfully in the cultivation of flowers, that we may combine the ornamental with the useful. Flowers, of all things, are the most innocently simple, and most superbly complex objects of study. Flowers unceasingly expand to heaven their grateful odors, and to man their cheerful looks; they are patrons of human joy, soothers of human sorrow, fit emblems of the victor's triumphs and of the young bride's blushes. Flowers are in the volume of nature, what the expression "God is love" is in Revelation. What a desolate place would be the world without a flower! It would be a face without a smile—a feast without a welcome.

"I deem it not an idle task,
These lovely flowers to rear,
That spread their arms as they would ask,
If sun and dew are here;

For simple wants alone are theirs,
The pure and common too—
The beauty of refreshing airs,
The gift of liquid dew.

"Nay, 'tis no idle thing, I trust,
To foster beauty's birth—
To lift from out the lowly dust,
One blossom of the earth;
Where barrenness before had been,
A verdure to disclose,
And make the desert rich in sheen,
To blossom like the rose."

How much flowers resemble the young heart, in its bright morning, before it has stained the foliage of its sinless years. A tradition of them tells us they were once like youth, in this: that they loved, and talked, and had passions like ours. How often and how fondly the poet revels in the field of flowers. Do they not talk to him? Who has ever heard the soft, low whisper of the green leaves and bright flowers on a spring morning, and did not feel gladness in his heart? Like beauty in the human form, flowers hint and foreshow relations of transcendant delicacy and sweetness, and point to the beautiful and unattainable. From the garden favourite to the dainty wild flower of the mountain, all have an inexpressible charm, an unapproachable beauty. How sweetly and instructively the flower bows its head to the breath of night, or the rude storm. Thus the heart learns to bring a holier offering to the shrine of all good.

"Heart comforts are ye, bright flowers, and
I love ye for your gentle ministry,
And for the ample harvest of sweet thoughts
My soul has garnered in for future use."

We hope our fair friends will not overlook the delightful employment of the cultivation of flowers. Every one may have a few; and when the taste is once acquired, it will not readily be relinquished. A woman destitute of the love of flowers seems to us a mistake of nature. The delicate and the beautiful should have sympathy with all in nature that possess the same qualities. The time spent in the cultivation of flowers is not wasted. They contribute to our pleasure; they add to our knowledge of nature; they unfold to us the beautiful, and tend to elevate the mind.

"They in dewy splendor, weep without woe, and blush without crime."

Although every part of a plant offers an interesting subject for study, the beauty of the blossom seems, by association, to heighten the pleasures of scientific research.

Flowers are indeed lovely; yet they are destined for a higher object than a short-lived admiration; for to them is assigned the important office of producing and nourishing the fruit. Like youthful beauty, they are fading and transient; and may our youth so improve the bloom of life, that, when youth and beauty shall have faded away, their minds may exhibit that fruit which it is the important business of the season of youth to nurture and mature.—Cor. Genessee Farmer.

## Short Paragraphs.

STATISTICS OF RELIGIOUS DENOMINATIONS.—The American Ecclesiastical Year Book sets down the population of the world at 2,296,000,000.—Of these 180,704,000 are Roman Catholics; and 88,000,000 Protestants; so that after eighteen centuries of preaching, there are 952,645,000 without the pale of even nominal christianity. Of the Protestant population of the world 23,320,000 are in America; 63,315,000 in Europe; 409,000 in Asia, 712,000 in Africa; and 1,320,000 in Australasia. The Roman Catholics are distributed as follows:—In

America, 36,780,000; in Europe, 138,517,000; in Asia, 4,166,000; in Africa, 1,051,000; and in Australasia, 180,000. Of the 27,800,000, the population of the United States, 21,000,000 are set down as Protestants, and 2,500,000 Roman Catholics; the remainder being Jews, Mormons, Infidels, etc.

IMMORALITY IN IRELAND.—In 1856, of children under 15 years of age, 51,756 received public relief, and of which 7,468 were illegitimate. In 1859, 30,799 were relieved; of which 9,367 were illegitimate.

PIDGEONS.—One man in Michigan shipped one hundred and sixty-four barrels last spring.

WORCESTER'S DICTIONARY.—Twenty-five thousand copies of this work have been sold in the States, and twenty thousand have been ordered by one firm in England.

SICILY.—This Island, the largest of a group, is situate in the Mediterranean, and is about 188 miles in length, by from 31 to 109 in width. It is 344 miles round, and contains an area of 15,875 square miles. It contains a chain of mountains, of which Mount Etna, 10,824 feet above the level of the sea, is the highest; it is eighty miles in circumference at the base.

Sicily is divided into seven Provinces, having Palermo, the residence of the Governor General, as its capitol. It is a handsome town, five miles in circumference, and strongly fortified; and contains a population of 175,000 inhabitants. The Straits of Messina, which separates Sicily from the Kingdom of Naples, varies in width from one to four miles. The whole Island is strongly fortified. The population of Sicily is about 2,000,000—all Catholics. They are intelligent, gay and witty.

FERTALIZING LANDS.—The "Scientific American" deals out the following remarks by way of comment on the communication of one of his correspondents. From these remarks it will be seen that the article referred to asserts, but does not prove, that land may be continuously cropped without manuring:—

The constituents of the soil for raising crops mean those manures called "fertilizers." If our correspondent and his neighbors have cultivated their farms for a number of years without manuring them, and have taken several crops from them during those periods, and at the same time have greatly improved their land, then they have discovered the "philosopher's stone," and we recommend their appointment as professors in all our agricultural colleges and schools. We assert without fear of successful contradiction, that every crop taken from the soil requires to be restored again in constituents in some form, under the penalty of future barrenness. We know that on the rich river-bottoms of the West the soil is very deep, and it will take many years to exhaust it, but thousands of farms have become barren in this new country on account of not restoring the constituents of crops regularly to the soil. We know something about farming practically, but have not learned in the same school as our correspondent and his neighbors. If he is right, what a lot of fools must those farmers be who spend money for guano, superphosphates poudrettes and other fertilizers. If one man can improve his farm and take crops from it regularly for thirty

years without manuring, so can all farmers—if they know how. We trust our correspondent will communicate the method by which this is done, as it is of great consequence to the whole world.

W. S. COLEMAN, a London publisher, in his recent work on insects expresses the belief that insects on being mutilated do not feel pain, as they afterwards perform all the functions of life—eating, drinking, etc., with the evident power of enjoyment.

SUGAR.—Thirty million hundred weight are said to be produced in the world annually.

THE SCHOOLS IN THE UNITED STATES educate annually four million individuals: there is 150,000 teachers.

The State of New York has abandoned capital punishment.

The expenditure of the United States for the year 1860, is set down at $53,314,000.

The General Mining Association of Nova Scotia sold coals, in 1856, 201,285 tons; in 1859, 240,186 tons.—There are Mines opened at twelve different localities, over which the Mining Association have no controul, and from which were exported in 1858, 2,352 tons; and in 1859, 6,757 tons, at prices varying from eight and four pence to ten shillings per ton.

Nova Scotia has granted £25,000 for the road service for 1860.

DECIMAL CURRENCY BILL, NOVA SCOTIA.—This bill enacts that the British sovereign shall be a legal tender for five dollars; the crown, one dollar and twenty-five cents; the half crown, 62½ cents; the florin, 50 cents; the shilling, twenty-five cents; the sixpence, twelve and a half cents; and the four pence, eight cents.

The Sardinian army is said to have reached 300,000 soldiers.

The New Brunswick Legislature was two months in session, and passed ninety-four acts, besides some resolutions.

NEW BRUNSWICK CURRENCY.—Stamps are to be issued of the value of "one, five, ten, twelve and a half, and seventeen cent stamps," which are to be recognized "at a half penny, three pence, six pence, seven pence half penny, and ten pence each, until the 31st October next, after which time each denomination of stamps will be received at their value in cents, viz: One, five, ten twelve and a half and seventeen cents each." Such is the recent Postal orders issued by the Postmaster General of New Brunswick. This is preparing the way for the introduction of the Decimal Currency, which must be the currency of America.

The next point of importance connected with this matter, is the *equalization* of the currency, so that all monies may pass in any British Province at one value.

HEAT AND COLD.—It will be observed that as the days begin to shorten, the heat becomes more intense; and to use an adage, "as the days begin to lengthen, the cold begins to strengthen."