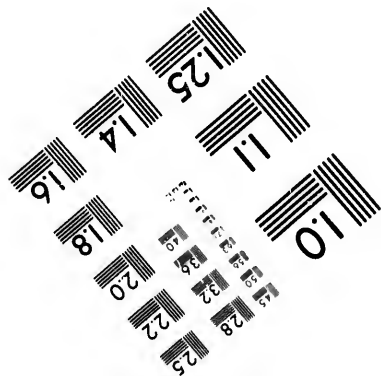
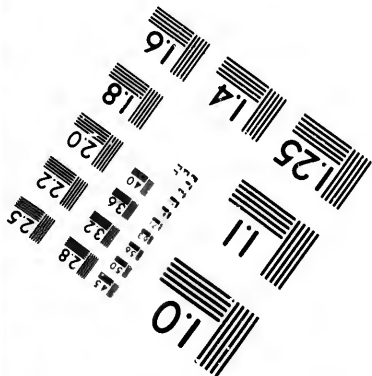
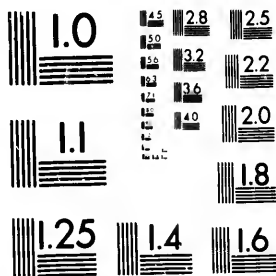


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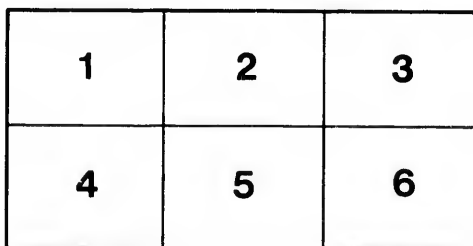
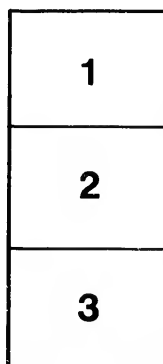
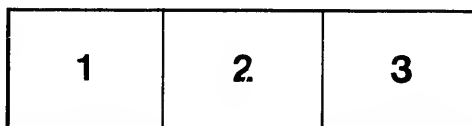
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—BY—

PROFESSOR J. W. CROUTER.

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## CONTENTS OF BOILED-DOWN ESSAYS.

The Temperaments.  
A New System of Temperaments.  
Cause of Disease and Enfeeblement.  
The Culture of the Brain as a Means  
to Secure Long Life.  
Choice of a Profession.  
The Proper Choice of a Husband  
or Wife.

The Formation of the Earth.  
The Twin Poems.  
The Cause of the Light of the Sun.  
The Tides.  
The Cause of Earthquakes.  
Proofs that a Deluge Occurred.  
Phrenological Chart.

London, Ont.:

FREE PRESS PRINTING COMPANY,

1886.

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## CONTENTS OF BOILED-DOWN ESSAYS.

Review of the Old System of the Temperaments; Physiological Signs for Reading Character, so that every reader will be better able to read character at sight; Cause of the Shortening of Life; Cause of Sickness; How to be Healthy, and Live Long; How to be Happy; Oxygen as an Excitator—Why it Makes Persons Joyous; Why Northern People are more Vigorous than Southern People; How the Human Beings and Animals are kept Warm; The Acid-maker—Explanation of the Reason why, through grafting, Sour and Sweet Apples may be made to Grow on the same Tree; Why some Plants are Poisonous; Why some Persons are very Lean. Directions given for becoming Fatter; Why some Persons are very Fat, and How to become Leaner; Why those having a Dark Skin are not so liable to Fevers in a Tropical Country as persons having a Fair Skin; Skin Diseases; Leprosy; Finest Temperament and Condition of Body; How to Develop it; Choice of a Profession or Trade, so as to be successful in Making Wealth; How to acquire a Good Memory of Business Transactions and Names; How to become a good Writer and Speaker; Governor-General's Letter; Success Difficult when Times are Bad; How to Form a new Marriage Bureau that will suit the young Church people; Directions for the Choice of a Consort, and subsequent Condition necessary to be blest

with beautiful, intellectual, vigorous and delightful Children; Why some Religious persons have Irreligious Children; Why some Drunkards have Temperate Boys; Cause of Dudes (this is a very important part); Why Ladies having Large Veins in their hands should be Chosen for Wives in preference to those having Small Veins in arms and hands; Theory of Races; How Negroes came to Inhabit Africa, and How the Mongolians differ from the Caucasian Races; Who were the Progenitors of the Wife of Cain? Was the Flood Universal? Formation of the Earth so as to be Red-hot from the Centre to the Crust, and the Crust never Red-hot; Cause of the Light of the Sun (the author has searched several late works treating on the light of the sun, and could find no satisfactory explanation, his explanation of this subject is entirely original with him); Cause of the Tide which follows the one caused by the Moon (the philosophical explanation of this subject is also original with the author of this work); The poems called "Farewell to The Earl of Dufferin," which was printed before the departure of this nobleman, and "Welcome to the Marquis of Lorne," will be read with interest by every loyal Canadian. A new political scheme for the restoration of good times. If extensively made known, then good times will be realized.

LONDON, ONT.:

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1886.

## AMERICAN PRESS NOTICES.

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Prof. Crouter has been practising Phrenology for a number of days at the Leland House, Brainerd. Every one of his large number of patrons, embracing business men, mechanics and laborers, admitted his superior ability as a phrenologist, and several were surprised at the accuracy with which he delineated their traits of character.—*Clerk Leland House.*

Prof. J. W. Crouter gave a lecture at the Baptist Church last Wednesday night, on the subject of "Perfect Happiness." The lecture, as the title of the topic implies, was of a moral nature, given to an appreciative audience whose interest in the subject was kept undiminished from the time of the commencement to the close of the address, by the able and familiar manner in which the speaker handled his subject. The Prof. comes excellently recommended both by letter and complimentary notices in local papers where he has resided.—*Detroit Record.*

Among the social sciences, the one destined to play the most important part is the study of phrenology. Beginning, as it does, at the commencement of the character, telling to those who are willing to see, the possible capacity of the "coming race." It is as a governing factor in the formation of the future, the Archimedean lever by which we can elevate humanity. By it we learn how to train the infant mind; and as the infant is trained, so will the man be; and as the man is, so is the nation. We were led into the above train of thought by hearing Professor J. W. Crouter's lecture on "Education, phrenologically considered." He proved conclusively that the brain of the child was, so to speak, the garden in which the hand of nature implanted the seeds that contained the germs of both evil and good. This ended nature's work. Mature reason was then left with its God-like power of free will either by neglect to allow the garden to become choked by noxious weeds, or by cultivation to be beautified with an abundance of the good and beautiful. The lecturer received a vote of thanks from his delighted audience as he concluded. At the solicitation of many he deferred his departure until he gave his second lecture, a sequel to his first, and in a two hours' discourse he, on the second evening, kept us under the sway of his masterly eloquence while he told us how to "increase human happiness." We would advise all who wish to enjoy a "feast of reason and a flow of soul" to attend the entertainments of Professor J. W. Crouter, of Ontario, whenever he may be among them.—*Perham Independent, Minn.*

Prof. Crouter lectured to a full house on Saturday evening, and exceeded the expectations of the audience in eloquence and ability.—*Brainerd Tribune, Minn.*

# BOILED-DOWN ESSAYS.

## THE TEMPERAMENTS.

The old system of the Temperaments as taught by George Comb the great Scotch Phrenologist and Disquisitionist, which system was modified by the Fowler's, is not scientific enough to be reliable as a means for distinguishing and describing character.

These writers give as a sign of the sanguine temperament light or chestnut hair, blue eyes, florid features, and an animated countenance.

The characteristics of this temperament they describe as emotional, ardent, impressible, having more activity, excitability than energy.

But the French, Italians and Spaniards have these characteristics in a high degree, while a majority of them have dark hair and eyes, and brunette complexions.

The Germans and Scandinavians, who are staid in manner and reflective in thought, and energetic workers, have golden or rich auburn hair, blonde complexions, and quite frequently florid features.

It is easy to see that these writers were not careful observers, since they ascribe the characteristics which belong to a certain class of persons to the opposite ones.

Prof. Fowler has given a different name to the sanguine temperament. He calls it the vital temperament. He says that those who have a predominance of this temperament are both mentally and physically active, are impulsive, ardent, not fond of hard work. He says that they are versatile, though the author of this work does not see the fitness in the use of this term in connection with this condition of body. The Germans and Hollanders, whom he describes as having a marked development of what he terms the vital

temperament are noted for having characteristics the very opposite of versatile, besides they are persevering and hard workers.

With equal inappropriateness, the same writer has made the mental temperament to include what was previously called the nervous temperament, when observation proves that the function of the brain and the nerves are quite dissimilar. The nerves feel and are sensitive to the touch, while the brain thinks and is not sensitive to the touch.

Again, Prof. Fowler blends the description of the two parts of the human system, and makes a mixture of qualities that will not hold true in an analysis of different classes of persons.

Numerous observations show that there are many persons who are excitable, intense in their sensitiveness, the kind of persons whom Fowler describes as having the mental temperament, yet who have only an ordinary amount of thinking power, which is the principal characteristic of those who have the mind or mental temperament, while there are others who are remarkable for stoicism, yet who are noted for their profundity of thought, and for the multitude of the opinions they form.

Like other pseudo scientists, these writers are noted for compiling theories which are founded in fancy more than in fact.

Those who have ordinary common sense, though they may not take time to originate a theory, yet with a little observation and reflection they can tell whether the theory is sound or not, and the author of the new system of the temperaments can submit it to such men with every confidence that they will see its merits over all others.

## A NEW SYSTEM OF TEMPERAMENTS.

ORIGINATED AND FIRST TAUGHT BY

PROFESSOR J. W. CROUTER.

In order to understand this system of temperaments, it is necessary to consider the human system as divided into several parts.

The following is a specification of them:—

The Osseous part, which constitutes the bones.

The Cartilaginous part, which embraces the tendons or sinews.

The Myotic part, which embraces the muscles.

The Abdominal part, which includes the stomach, liver, spleen and intestines.

The Thoracic part, which embraces the lungs, heart and proximate veins and arteries. The Abdominal and Thoracic parts will be referred to as the Viscular part.

The Neurotic part, which embraces the nerves.

The Cerebral part, which includes the cerebrum and cerebellum or brain

The Dermiscular part, which constitutes the integuments or skin.

Figures will be used to indicate the size of each of the several parts in those who may get charts.

The figures used will signify as follows :—

1, very small; 2, small; 3, moderate; 4, average; 5, full; 6, large; 7, very large.

In the naming of the New System of Temperaments the following abbreviations will be used, and they will signify as follows :—Os means osseous or bony; MYO means myotic or muscular; NEURO means neurotic or nervous; ABDU means the contents of the abdomen; VISCU means the viscera or the contents of the abdominal and thoracic parts; CEPHE means the head; DERMA means the skin.

The human being could not maintain an existence with a total lack of either of the parts specified.

When two or more parts of the system predominate in any person there will be a condition of body which is termed a temperament.

*When the bones, muscles, lungs and stomach predominate, there will be a condition of body termed the Os-Myo Viscular temperament.*

Signs—Strong frame and muscles, of generally coarse features, especially nose and cheek bones, strong digestive organs and lungs, combined with moderate brain power.

Characteristics—Great love of outdoor and muscular exercise, and but little disposition to study. Sig. Lowanda is an extreme illustration of this temperament. He gave exhibitions of extraordinary muscular power. Lowanda's forehead was rather low and narrow. It was of a type which a phrenologist would describe as only moderately intellectual, yet he could lift a barrel weighing several hundred pounds by taking a strap attached to it in his teeth, and without the aid of his hands he could lift it.

The Os-Myo Viscular temperament adapts those having it to heavy manual labor. Such persons study perforce and not from choice. The amusements they prefer are of an athletic kind.

*When the lungs and digestive organs and brain predominate in a person there will be a condition of body termed the*

#### NEURO-VISCU-CEPHALIC TEMPERAMENT.

This temperament is somewhat analogous to the sanguine temperament.

Signs—Deep chest, large veins, full or large sized head, auburn hair and fine features,

blonde complexion, in hot countries merging into brunette complexions.

Characteristics—Bodily activity, mental acumen and inventive power, capability to learn the sciences and arts, high capability for enjoyment, strong affections. In poetry and religion fervid. Given to bookmaking and reading. When educated they are enthusiastic in the choice and pronunciation of words.

The Teutons, Danes, Scandinavians and Franks and their descendants in all countries, have the signs and characteristics of this temperament in a high degree.

If those who have the neuro-viscu-cephalic temperament engage in manual labor, or take muscular exercise sufficient to give them a large degree of muscularity, they will have *par excellence* a superior temperament, and to them may be ascribed a high degree of perfection.

Those who have the neuro-viscu-cephalic temperament, with a small development of the muscles, ought to engage in vocation requiring principally the exercise of the mental powers.

The post master of Grant Park, Ills., had a large development of the neuro-viscu-cephalic temperament, but he was abnormally deficient in the osseous and myotic parts. He had only rudimentary stumps for his lower limbs, his right arm was imperfect. Still he could use it. His left arm was so imperfect as to be unusable. He was carried into a store, and the author was requested to give him a phrenological examination. He was described as having a good brain, good business judgment, and not only capable of providing for himself, but of accumulating property. He was described as having a praiseworthy character. Prof. Crouter learned on the following day that this subject was one of the solid business men of the town, and that he was respected for intelligence and moral worth by all who knew him.

If the cerebellum predominates somewhat in those who have the neuro-viscu-cephalic temperament, a tendency to corpulency will be observable. Such persons are fond of good living. They love a good joke, at which they laugh hilariously. In business matters they show ability and clearheadedness, as writers they show vivacity and humour. Charles Lamb was a good illustration. He was corpulent and heavy, but in light literature he was delightful.

There is another type of the neuro-viscu-cephalic temperament, the marked peculiarity of it is the predominance of the lungs. This condition of the body might with propriety be termed the sanguine temperament. The features are florid, the veins, arteries and heart are large. The size of the veins presupposes a

proportionate size of the arteries, heart and lungs; for if the veins are large it is inferential that the arteries are equally so, and the heart must correspond to the size of the veins so as to be able to receive the blood returned to it through the veins; then the lungs must be in proportion to the heart, since they must be large enough to allow all of the blood to be spread out in the lungs, where it is purified, oxygenated and vitalized; hence large veins in the limbs and hands indicate that the party is full of blood, and this condition of the body might be termed the sanguine temperament.

The oxygenation of the blood is attended with two important results, viz, the formation of animal heat and exhilaration. It is known that oxygen, one of the component parts of the air will unite with carbon and form a fire. Fats are mainly composed of carbon; cereals also contain a large percentage of carbon. If a lighted candle is placed in a jar, and the mouth of the jar is covered, the candle will go out as soon as the oxygen in the jar is exhausted. Coals burn without flame, but they must have air. During the process of breathing, oxygen is separated from the air in the lungs, it unites with the fatty particles floating in the blood, and animal heat is produced.

But oxygen is more than a means for producing heat, it is an exhilarator also. Laughing gas, the inhalation of which makes the inhaler excited and happy, is a compound of oxygen and nitrogen; air is composed of the same elements, but in different proportions. Common air contains five times as much nitrogen as oxygen, laughing gas or nitrous oxide consists of one equivalent of oxygen and one of nitrogen.

Combustion forms carbonic acid, the leaves of plants and trees absorb the carbonic acid, the compound is separated in the leaves, the greater portion of the oxygen or acid maker is thrown out, and the carbon is retained for the growth of plants. This is a beautiful provision in nature—carbonic acid in a certain proportion would prove the death of animals, but it is the life of plants, and the oxygen which plants do not need is eliminated from them to enliven man and everything that breathes the air.

Before science revealed the fact that the growth of plants depended more on the leaves than on the roots, it was a wonder to some men why through the process of grafting that the same tree might be made to produce fruits the flavor of which would differ from each other, but this is no longer a puzzle to the author. The leaves of every engrafted branch produces leaves which differ in their absorbing and eliminating power. All the leaves absorb

carbonic acid, but some of the leaves throw out the greater quantity of the acid, retaining the carbon which makes the sweet apple or fruit, while other leaves retain more of the acid, hence, the fruit that grows on such a branch will be sour. Some plants absorb deleterious exhalations and change them into deadly poisons. Instinct in animals, and reason in man, are means by which they may be avoided. Some of these poisonous plants in the hands of the physician become means for curing human maladies.

A careful review of the principles just given will show why large lunged persons feel happy without any particular circumstance to make them so. They breath copiously, the blood is charged by the exhilarator oxygen, and they are made happy. This is one reason why those who are engaged in manual labor have so much happiness with so little to enjoy. The dense air of northern countries makes the inhabitants of them more vigorous and happy than the people who live in tropical climates where the air is rare, because the former people take more oxygen in the lungs.

In Phrenological examinations the Professor ought to be able to ascertain if the party has large and sound lungs, if he finds that this is his temperament he will describe him as capable of strong feelings of enjoyment or vexation. Such persons will show a great degree of exhilaration if they become intoxicated.

Those who have the Neuro-Viscero-Cephalic Temperament combined with rather large lungs will have a highly emotional nature; if they are speakers, they will be eloquent; if writers, they will manifest exuberance of fancy. Their vituperative remarks will be most poignant; their eulogisms of character, places and things will be rose-colored; hence in perusing books the reader should know if the author has the Neuro-Viscero-Cephalic Temperament with a predominance of lung power, if so, he must make an allowance for his tendency for hyperbolism.

*Those who have long, large bones, strong nerves and a fair or large-sized head will have the*

#### OS-NEURO-CEPHALIC TEMPERAMENT.

Signs—Spare form, in some cases very tall; sharp pale features, bony hands, frequently thin lips, grey eyes, dark hair. Persons having this temperament seem to be a compound of bones, nerves and brain, with just enough of the other parts to keep life in them, yet many of them are active workers. Many of the Americans are of this type, they are clear headed, stoical, sharp in business, full of nervous activity.

The author saw an abnormal case of this temperament in Barnum's Museum. His bones seemed only to cover with skin. He was termed the living skeleton, he could not walk; he could scarcely use his hands, yet he was talkative, and clear headed.

There is a condition of body that tends to a wasting away of the flesh, called atrophy. This condition is produced by the lung power being in excess of nutrition. It has been thought that large lungs give great immunity from consumption, but over large lungs cause a wasting away of the fatty parts; and if the diet is meagre, even the muscles will be shrunken. And this condition from the lack of warmth, eventuates in colds and consumption; hence, persons with this temperament ought to learn to eat fat meats, particularly fat mutton or beef.

*When the Abdomen Lymphatics and the head, especially the cerebellum or lesser brain, predominates over the other parts, there will be a condition of body termed the*

#### ABDO-LYMpha-CEPHALIC TEMPERAMENT.

Signs—Corpulency, plump, but tapering limbs and hands, small veins, mild blue or grey eyes. In the caucasian races the color of the face will seem to be etiolated, though some have blooming faces. Mothers having this temperament are apt to have precocious and sometimes hydrocephalous children. Hard muscular work or exercise is the main preventive.

The lungs and heart of persons having this temperament are comparatively small, hence there is a feeble circulation of the blood, therefore such persons are apt to have cold hands and limbs. Generally there will be an absence of rose tint in the face. Warm kisses will be given for cold ones when this is the temperament of one party.

The characteristics of those who have the Abdo-Lympha-Cephalic temperament are mildness of temper, purity of heart, platonic affections, tranquility of mind. If the brain is large and well formed in those having this temperament, they will have considerable intelligence.

Parties having the abdo-lymphatic temperament ought to eat lean beef, drink strong tea; they may eat acidulous fruits, a few potatoes. Fat forming foods should be avoided. Some quite young ladies have this temperament, not fully developed, as they do not generally begin to be stout until they are over twenty years old, such ladies might be pardoned for wearing long corsets not over tightly drawn; though it would be better for them to take much exercise to prevent obesity.

The author has frequently seen abnormal manifestations of this temperament. One was a

lady who weighed over 600 lbs., another was a boy who weighed 260 lbs. when he was seven years old.

*When the bones and tendons are large, skin thick, with moderate developments of the other parts of the human system, there will be a condition of body termed the*

#### OSSEO-DERMA-CARTILAGINOUS TEMPERAMENT.

Signs—Large bones; sinews larger in proportion than the muscles, giving the appearance of big joints, animalized chin, large feet and hands; inferior development of the brain; thick skin, color dark and in some races black.

As the skin carries off impurities from the system, these persons are well adapted to live in hot countries where malarious vapors ascend from the marshes: since copious perspiration carries off the poisons from the system, whereby fevers are prevented in them.

In some countries those who have this temperament are liable to skin diseases, one of the most foul and contagious of which is known by the name of elephantiasis.

*Those who have a full development of muscles and nerves and whose skin is of a tawny color, have a condition of body which is termed the*

#### DERMA-NEURO-MYOTIC TEMPERAMENT.

Signs—Dark, and almond shaped eyes; olive colored skin, medium stature, bones and head of moderate size.

Characteristics—Omnivorous in the use of foods, generally temperate and healthy, except occasional manifestation of skin diseases of the leprous type.

Characteristics—Considerable bodily activity, dexterous workers, good imitators, moderate depth of thought and inventive power, hence superstitious; somewhat vivacious, moderate in desires, hence not given to dissipation. The Mongolian races afford prominent illustrations of those who possess this temperament.

#### THE PERFECT TEMPERAMENT.

Signs—An even balanced and a large and fine development of all the parts of the human system.

Signs—Symmetrical form; limbs somewhat tapering; well formed hands; nails clear and shapely; medium sized feet; high instep; skin fine; face somewhat florid; horizontal and full sized lips; oval face; lustrous eyes, cornea clear; arched but not very thick eyebrows; full sized chin, frequently dimpled; cheeks full and sometimes dimpled, especially when excited; ample and arched forehead; full sized and symmetrical head; fine hair, inclined to be

slightly waving, or which will curl with a little effort. Those who have this temperament will manifest graceful elasticity in walk-

ing, dancing or working, and are capable of attaining the highest order of human culture and enjoyment.

## CAUSE OF DISEASE AND ENFEEBLEMENT.

THE AVOIDANCE OF WHICH TENDS TO INSURE GREAT LENGTH OF LIFE.

An over large liver is more apt to produce jaundice than the muscularity which is said to be a characteristic of the bilious temperament. As the liver is a strong factor in the digestion of fats and carbonaceous foods, a strong liver aids in the digestion of the foods, which, when fully assimilated tends to recuperate those who are exhausted with work, hence it fits one to endure much fatigue. Large lungs are a stimulus to action. Naturally females have larger livers than males, but their lungs are smaller. In proportion to size, females can endure more than males.

When the liver is too weak, so that fat meats disagree with the party, the difficulty may be overcome by culture. The party should commence by eating a small piece of boiled or roasted fat beef or mutton, and at each meal eat a little larger piece. Drinking large quantities of ale or beer enlarges the kidneys and sometimes produces diseases of the urinary organs. The taking of too much fluid substance in the system enlarges the kidneys, because they must be exerted more to carry off the excess of fluid. For a similar reason the eating of fat enlarges the liver, because

the fat acts on the liver and gives it more work to do, whereby it is enlarged so as to increase its power to digest more fat.

Tight lacing weakens the lungs, liver and stomach; hence ladies who are spare, thin, and pale faced, ought to wear quite loose-fitting garments. If they wear corsets, they should cut off 4 or 5 inches in the length of them, so that the lower part should not compress the body in the region of the lungs and stomach. A small cerebellum does not give sufficient strength to the digestive organs. The pneumogastric nerve, which is spread out on both sides of the stomach, takes its rise in the medula oblongata, but this part connects with the cerebellum and is affected by it, so that digestion is promoted by a large cerebellum.

Inferentially a disproportion in the size of any of the vital organs is apt to result in disease. A phrenologist fully capable to practice to the advantage of his patrons, ought to be able to understand not only the brain but the whole system. The hygienic advice which Prof. Crouter can give to subjects, if followed, will save them many a dollar for medicines.

## THE CULTURE OF THE BRAIN AS A MEANS TO SECURE LONG LIFE.

Numerous experiments prove that impressions on the brain will not only affect the health, but life also.

An instance is recorded in which a criminal died by being made to believe he was bleeding to death; he was bandaged and strapped to a table, and his arm was slightly pricked; water was made to trickle down into a dish; the doctors feigned how much blood the party had lost from time to time; at last the blood was made to trickle slowly; the doctors said that he would die in a few minutes more, and the man expired without the loss of a drop of blood.

Too much caution and too little hope, cause too much concern about the future. One having this condition of mind borrows trouble,—he is a pessimist; he thinks that everything

will turn out for the worst; he frets himself into a premature grave. Another gives himself no concern as to the future. He is apt to come to want and be obliged to live poor. Through impoverishment of blood the vital forces are weakened, and he too is liable to die before his time.

A well-balanced brain conduces to length of days, but culture adds to the tendency. Mental, moral and social culture strengthens the brain, and strong brains help to ward off diseases. Mental activity tends to increase the fineness of the quality of the brain. Fineness of texture is a sign of strength; this is true in metallic and vegetable substances, and human tissue also. The church helps to cultivate the moral organs; the family helps to cultivate the social qualities; and good books, lectures

and study help to cultivate the intellectual faculties; hence all of these things tend to lengthen out the span of life.

Vicious habits weaken the moral qualities; alcoholic drinks tend to deaden connubial and parental love. Mark the man who commences to drink a few years after marriage and see the difference in his love for his family.

At first strong drink quickens the intellect, but ultimately it blunts it. Tavern-keepers often make money when they commence to sell and use strong drink, but in time their intellects become dull and then they lose their wealth. They drink more deeply; the habit saps the vital powers, then disease steps in and soon uses up all the life forces which remain; then death follows. It is the general observation that tavern-keepers are short-lived. The occasional drinker stands a better chance for long life than the regular tippler; the regular tippler looks old before he is of middle age.

Medical men claim that pure beer, if taken at meal time, promotes digestion. If this is true, it is beneficial in a few cases, but persons in robust health ought not to use such a beverage, because it causes too large a development of the internal organs. It produces a condition of body which requires a continuance in the use of it, whereby disproportions in the vital organs are made, which condition tends to the development of disease.

The copious use of beer makes the blood impure and watery. Some become corpulent by its use; but watery blood does not develop muscular power or strong brains. The author of this article could not have written it in the terse terms in which it is couched, if he had been in the habit of using beer or strong drink freely. Beer stimulates the lacteal absorbents so that impurities are taken up and carried to the subclavian vein and mixed with the blood. It has been observed that wounds on great beer drinkers are hard to heal in consequence of too copious discharge of pus from the wounds.

Such an impure condition of blood augments the severity of an attack of sickness so as to make it more dangerous. Insurance companies have learned that the mortality of beer and spirit drinkers is greater than that of the abstemious. The conclusion is reasonable, that wholesome food eaten in moderation at regular intervals, sound sleep, moderate work, a cheerful disposition, pleasant surroundings and good society tend to the promotion of long life and happiness.

Not only on the ground that beer is not a harmless beverage should the production of it be displaced by law for one that is beneficial, but also that the chance for individual and national prosperity could be increased.

Unfermented, and therefore unintoxicating, wine is a better dinner drink than either beer, tea, or coffee. It was the kind of wine that St. Paul advised Timothy to use. If the juice of the grape immediately after it is pressed out is put in the skin of a beast, it will ferment but very little, while the flavor is better than that of the juice which is allowed to ferment and sour.

Barbed wire fences will answer for grape vines to grow on. If farmers would spend the time in raising grapes that they now spend in raising barley used for making beer, and the corn used for making what is termed rye whiskey, they would make more money, and they would spend much of it for building material, clothing and furniture. The production of beer and spirits is in too few hands, and does not help the trades enough. This is one of the causes of hard times; hence it is best to cause a distribution of the production of drinks by the passage of a law abolishing the production of beer, and limiting the production of alcohol so as to produce only enough for medicinal and mechanical purposes. Then there should be a law preventing the giving of wine to others save at one's own residence. This would prevent treating. The law could be worded so that its enforcement would be sure. With this law fifty per cent. less money would be spent for drinks. In the United States it would amount to \$500,000,000, and the proportion would be about the same according to population in other countries. The greater part of this sum would be spent for clothing and furniture. This would set every idle factory in active operation to supply the goods. Then wages would go booming, and everybody would be employed, and hearts that are now sad would rejoice. Talmage, in a sermon, told us somewhat of the grievances which exist, but he failed to point out a remedy that would be practicable on this side of the grave. The author of this essay has given one remedy for hard times. He has three more that he will publish, if this essay sells so as to encourage him in the work. They will be all adopted, because, like the scheme just given, they will be mutually beneficial to capitalist and workingman. The remaining schemes will be entirely new to the political world. One of the schemes will act in a similar sense to the governor balls of a steam engine; it will act as a regulator, and will prevent recurring depressions in trade. Even if the scheme advocated in this pamphlet was carried out, it would promote good times. It would abolish drunkenness. Temperance societies have failed to cure the evil habit of excessive drinking by moral suasion, so they have been driven to the advocacy of prohibitory laws,



but it is claimed that prohibitory liquor laws do not prohibit the sale and use of intoxicating drinks. Where such laws exist, liquors are smuggled, and there is illicit selling and drinking. But let a law be passed by each Government that beer shall not be brewed, and the breweries will cease to manufacture it. If the distillers were required to keep an account of all the alcohol they manufacture, and to whom it was sold; and if the dealers were required also to keep an account of their transactions, the illicit use of alcohol could be nearly prevented, providing the manufacture of wine was permitted, for there seems to be a natural craving for some kind of beverage. A child cries, it is thirsty, water is offered to it, the child shakes its head, and cries louder and louder, with tones which seem to say, milk! milk! Human beings can drink water, but the juice of fruits is sometimes preferred; sometimes it is the juice of a lemon with sugar that is desired; nature seems to know; sometimes it is the juice of other fruits. The author of this essay has passed boxes of ripe cherries in Winnipeg; price 75c. for a small box of them. Being a philosophical author, he had to deny himself the pleasure of eating them, though the longing desire to do so is not easy to express. Human nature seems to want some other kind of drink than water, and delicious and nearly non-intoxicating wines fully answer the requirement of man in this respect.

Let the law advocated in this essay be passed, and everyone would be benefited except the brewer and distiller. The tavern-keeper would be benefited, because he would not have to ruin himself in drinking treats in order to make enough to pay rents, insurance, and licenses. These expenses would be far less, and better times would cause more travelling. There would be no treating: hence there would be less loafing. Men would not hang around bars waiting for someone to treat, while their poor wives split the wood with which to cook their scanty meals.

Men will say that treating cannot be abolished by law. Just let a properly worded law be tried, and see. Let the first fine for giving wine or other liquors away at public houses be \$5. There are men who will pay it, and then they will go right back to the bar and treat again. Then let the fine be \$10, and in less than a week they will repeat the offence and snap their fingers in defiance of the law. Let the next punishment be \$10 and five days in jail, and the boastful spirit will be awed into subjection. Swells will pay fines, but the idea of being termed a jail-bird is more than distasteful. The law would benefit those men, because it would prevent

the prodigality which ruins them. The law would give them a valid excuse for not treating. They could say to their boon companions that they were willing to pay fines in order to have the sweet privilege of treating, but the other alternative is not to be entertained.

Men are imprisoned for fraud, and no one proves recalcitrant. Then why should the advocate of a measure which would prevent men from injuring themselves and others also be ruthlessly denounced, especially when the author's object is to befriend mankind.

It is not to be expected that every hotel-keeper who reads this work, or hears of the scheme which it advocates, will be friendly towards the author, because some of them will fear that the scheme will interfere with the profits of their business. But if ever the idea should become law, they will be surprised that then they would make more money, with the pleasant consciousness that no one need be harmed when it is enforced.

There was a wine made in olden times that was condemned. Solomon said in his Proverbs, chap. 23, verse 29, "Look not on wine when it is red, when it giveth its color in the cup, when it moveth itself aright." Probably this was fermented wine, and therefore it should be avoided. Everyone who understands the chemical properties of alcohol, and the mode of its production, knows that wines or other substances must first be fermented before alcohol can be distilled from them. Air is necessary for fermentation. Fermentation changes the delicious flavor of the juices, and makes them acidulous or somewhat sour. A certain amount of saccharine matter in the juice of fruit, with the requisite condition and time for fermentation, produces vinegar. The free use of the kind of wine which Solomon condemned made the eyes red, hence it must have been intoxicating. The results produced then are quite similar to the results which follow the use of intoxicating drinks in modern times, viz., woe, sorrow, contentions, babblings, wounds without cause. Intoxicating drinks increase the circulation of the blood; it swells the arteries and veins. This is shown in the cornea of the eye. In the natural state the blood vessels in the cornea of the eye are not observable, but the continued use of alcoholic drinks enlarge the exceedingly fine capillaries in the cornea or white part of the eye, so that a redness is observed. The continued use of alcoholic drinks cause a continued inflammatory state of the blood vessels; the organism is weakened, so that disease takes a double hold on tipplers. Surely the wine made by the Saviour must have been different from the vitiating wine condemned by Solomon. It was the better

wine, its flavor was good, showing that it was not acidulated. Doubtless the kind of wine which the Lord made from water was similar to the wines that are associated with blessings.

The process for preventing wine from fermenting was known before the time of Christ.

Before the crusade against the use of beer and spirits, had the preachers studied the question, so that they could use their influence in favor of a non-intoxicating wine, there

would be no need of temperance lectures to day. Let the clergy and the editors use their influence in favor of the displacement of beer and spirits by non-fermented wine, and ere long the result can be secured. Then will follow good times; and drunkenness, and much of the hard times which exist will be followed by better times. Dyspepsia will be a disease of the past, and workers will be able to earn a better living, because they will be more vigorous.

## CHOICE OF A PROFESSION.

If a boy's talents are such that he could become a superior engineer, and an inferior public speaker, through many years of culture he may become a fairly good speaker or preacher, so as to get a moderate living; but if he should choose to become a civil engineer, his talents would enable him to achieve a high position and become wealthy.

There are many men who are engaged in ordinary callings who have not had an opportunity to learn the full extent of their powers. Want of success deprives them of full confidence in themselves. They work on through life with the dispirited idea that they do not amount to much.

Rev. DeWitt Talmage, D. D., said in a discourse that there were men who were engaged in sawing wood who ought to have been educated for the pulpit, and that there are preachers who ought to be engaged in cutting wood. A boy may choose a trade or profession, and have a natural fitness for it; but most boys choose a business because it is spoken well of, or because there is money in it for them; but if their talents or disposition unfits them for success in it, failure and poverty will be the result. If a party should work for a little while at a score of different branches of business, he might be able to form a fairly good opinion whether he was fit for some one of the callings. Still, a short experience in a trade is not sufficient to enable one to know with absolute certainty whether it is the very best choice he could make. The skillful phrenologist, after an examination, can tell with scientific certainty all about one's talents, capabilities and disposition; and if the phrenologist is known to be honest in giving his opinion, it is worth obtaining. If he is exorbitant in his charges, if he charges \$10 for a chart, his fairness may be doubted, because the service is not commensurate to the charge. A phrenologist who charges a very high price for an examination knows that

those who are willing to pay it like to have a very nobby vocation, and he is willing to suggest one to please the party. But the phrenologist who is not greedy for money, who charges a reasonable fee for charts, can be trusted to give an honest opinion as to one's talents and capabilities, and the calling to which they are best adapted. As in medicine or law, so in phrenology, the most skillful should be employed. Mere pretensions to skill should be ignored; evidences of ability should be examined.

### PROFESSOR CROUTER'S CLAIMS TO CONSIDERATION.

In order that a phrenologist may attain the highest capability as a delineator of character from an examination of the head, he should not only be able to learn all about those phrenological principles which have been described by the authors who first gave a philosophical explanation of them, but he should have the genius which fits him for originating new ideas in mental and physical science. J. W. Crouter's works prove that he possesses this kind of genius in a high degree, hence he has not only been able to learn all that has been taught on phrenology by other authors, but he has studied more deeply in the subject, so that he is able to explain peculiarities of the brain which previous to his observations were not understood. On this ground Professor Crouter's claim that he has a knowledge of phrenology superior to others is valid.

Accuracy in the measurement of the size of the phrenological organs is a very essential quality in a practical phrenologist. The accuracy of Prof. Crouter's measurements of the mental organs was admitted a quarter of a century ago. Then he took lessons in portrait painting in order that he might paint likenesses to illustrate his lectures. Prof. Crouter found that drawing increased his perception

of size to that degree that by placing his hands on a person's head he can tell quite exactly the size of it, and he is equally accurate in measuring the size of the different organs.

The grey matter which constitutes the convolutions of the brain is that portion of the cerebrum which enables one to enjoy, think, learn and remember.

If the convolutions in a small head, or one measuring twenty-one inches in circumference, are double in depth or thickness than they are in one having a very large head, then the one having the small head will know more, and his intellectual capabilities will be greater.

But if the convolutions of the brain in one having a small head are inferior, then he will be almost an imberbe.

Hence it is of importance that a phrenologist should be able to judge the quality and depth of the convolutions of the brain in any subject he examines.

The depth of the convolutions generally are in proportion to activity and fineness of quality. These conditions can be ascertained by external signs.

Prof. Crouter found that drawing portraits and landscapes greatly increased his perceptive powers, so that he has become an expert in judging the quality and activity of various brains: hence he is able to tell whether a person has deep or shallow convolutions of the brain. In this respect he excels those phrenologists who have not practised the art of painting as he has done.

The difficulty in the measurement of the convolutions of the brain is one of the stumbling blocks which doctors see in the way of practising phrenology; but Prof. Crouter's explanations to them on this and other points are so satisfactory that many of them get charts from him.

In the early part of Prof. Crouter's career as a phrenologist he taught that the practice of the art of drawing increased the memory and the mechanical and inventive powers, and he has found in his own experience the truth of his teachings. He also found that lecturing without notes strengthened his memory. The use of the memory invigorates it. Stage drivers who can neither read nor write generally have good memories. They must remember the orders they receive from place to place. This taxing of the memory makes it good; reading books and repeating contents to friends improves it. If artisans would review from memory everything they do through the week they would have better memories. Then, with a review of their acts they would resolve not to repeat the improper ones. Then they would grow better. The use

of beer and spirits to that extent that the eyes are made red impairs memory, because the brain is overcharged with blood also.

In the accurate measurement of the phrenological organs, Prof. Crouter excels those phrenologists who have not practised sketching different shaped heads, which he often does on a blackboard to illustrate his lectures, besides drawing oil paintings for the pleasure of it.

There is nothing requiring verbal descriptions which needs a greater command of language than the delineation of character and the qualities of the human organism.

Naturally Prof. Crouter was deficient in language. As the English language is largely of Saxon origin, and only a moiety of the words taken from the Latin and Greek languages, he determined on the shorter way to become familiar with the Englishized words. The method he adopted was to read a dictionary by course, and at the same time to mark the words he wished to remember; then to review and commit the marked words to memory. He found that this practice increased his memory of names also. Afterwards he wrote verses, because poetic composition requires a more euphuistic choice of words than prose. This sort of composition develops a tendency to condensed methods of expression, while some kinds of prose composition tends to diffuseness. Through the author's tendency to coin new words he has used the word *diffuseness* instead of *diffuseness*. Through self-culture Prof. Crouter so increased the size of the organ of language that subsequent admeasurement of it by other phrenologists show that it has grown to a large size.

Many years ago Prof. Crouter taught that the persistent culture of any organ of the mind would increase it in power and size. His own experience in the culture of the organ of language is a marked proof of it.

Prof. Crouter's greatest difficulty in the use of language was in public speaking. He was apt to talk too fast, and stutter; hence he adopted the plan of talking very slowly, and of pronouncing his words distinctly. After he acquired a better command of language, he then talked more rapidly. Some preachers weary their audiences by their rapid and indistinct speaking.

Prof. Crouter's style of speech is so pure and clear that ladies of the most superior culture are delighted with his delineations of their powers of mind and traits of character.

Good judges have acknowledged that Prof. Crouter's chart entitled "Human Traits of Character in Rhyme," is couched in more elegant language than any of the works of

Prof. Fowler, the great American phrenologist. This essay, and J. W. Crouter's essay on "Creation and the Tides," was sent to His Excellency the Marquis of Lansdowne, and that nobleman was pleased to have the letter, of which the following is a copy, sent to the author :

(COPY.)

GOVERNMENT HOUSE,

October 28, 1885.

SIR,—I am desired by His Excellency the Governor-General to acknowledge the receipt of your letter of the 22nd inst., and to thank you for the copies of your essays which accompanied it.

I am, sir,

Your obedient servant,

MELGUND,

Gov.-Gen'l's Secretary.

To J. W. Crouter,  
Winnipeg.

It is unlikely that the Governor-General of Canada would thank an author for a work which had but little merit.

It is not for the purpose of self-laudation that these statements are made, but to give other evidence than his own opinion that he has succeeded by self-culture in improving the organ of language so as to be fully capable of practising phrenology.

In order to be well fitted to give sound phrenological advice to patrons, a phrenologist ought not only to know all about the functions of the organs of the mind, but he should have an extensive knowledge of the conditions of trade. A man may be well fitted by natural adaptation to a business, but the condition of trade may be such that it will yield him only a poor living. The following remarks will illustrate the difficulty that even an expert phrenologist may have in pointing out a business for a party so as to suit him.

During a long continued depression in trade, Prof. Crouter found it difficult to select a vocation to suit the parents of a boy. After making an examination he could tell with certainty the profession, trade or line of busi-

ness which is in accordance with the talents, temperament and disposition of the boy, but a clear headed father would object to such and such a vocation on the ground that there was no money in it. Still, such a parent ought to know that unfitness for a business generally results in failure and poverty, therefore the most suitable vocation should be chosen.

There are quite a large number of students and others who have completed their education, who are undecided whether to take their chance in some one of the over-crowded professions, or engage in a trafficking or manufacturing business. Anyone of them knows that if he has pre-eminent fitness for either of the learned professions, there is room for success in it for him. Some of these men are naturally adapted to the mercantile business, and they could engage in it with good prospects of success when times are good.

There are others whose feeble health unfits them for continuing their present business. Such persons are desirous of learning with scientific certainty if they can make a change in their business that would benefit them. Some need a different climate, while others would do better in the country.

When times were bad Prof. Crouter found it somewhat difficult to advise such persons what change it was best for them to make; though taking their talents, health and temperaments into consideration, he could tell them what was the best course for them to pursue under the circumstances.

After a phrenological examination, Prof. Crouter could tell a lady the color of eyes, form and size of head, color of hair, temperament, taste and disposition of a gentleman who would not only be pleased with her during courtship, but all through life; but during long continued depressions in trade he could not promise that such a gentleman could succeed in business so as to support her in comfort and luxury.

But when times are fairly good the Professor has no difficulty in giving phrenological advice, as to choice of business, consort, &c.

## THE PROPER CHOICE OF A HUSBAND OR WIFE

### SO AS TO AVOID THE BICKERINGS OF LIFE.

A formal introduction makes a couple acquainted. The gentleman visits the lady because it is agreeable. The circle of his acquaintance is limited, and he likes company. He may not have any intention of marrying her. Her looks do not exactly suit him,

though he escorts her to the lecture and concert; he buys confectionery for her. The lady accepts the attentions of the gentleman; still she disclaims any intention of marrying him. She says that there is much about his manner and looks that does not please her.

but, as there is no one who will be her escort who is more in accordance with the idea she has formed of the kind of husband she would like, she accepts his company. Doubtless this is wrong. Still, until leaders of public opinion are willing to advocate better means by which a lady can be suited with a husband, casuists ought to forbear a harsh opinion against such ladies.

It is a sequence that when two individuals try to please each other, if for no other reason than to have each other's company, they will be apt to love each other. Each will become accustomed to any distasteful feature or characteristic which is seen in the other, so that it will be less and less a source of displeasure. At last the couple will become fond of each other; a proposition of marriage is made and accepted. Ultimately the care of children takes the place of courteous attention; the fervency of love is slackened; again they begin to see each other's faults in a stronger light; sharp words are uttered, which make the faults appear more prominent; the words, "I wish I had never seen you," are used; then, were it not for the strengthening of the marriage bond by offspring, they would separate perhaps forever.

Where wealth is the principal factor in the choice of a consort, estrangement of feelings may follow, which may make the society of each other almost unbearable. Still, if the couple make the best of the union and try to please each other, the connubial state in their case will be a tolerable one.

Rev. De Witt Talmage, D. D. (May, 1886) gave a discourse on the unhappy condition of the working classes. He gave prominence to the unfair discriminations in wages against women, and the sufferings of some of them. In the discourse he evinced the fact that he possessed great powers of observation. He quickly sees the current of public opinion, and he knows how to make the most of it and become popular. Talmage is a great man. In eloquence and the specious mode in which he presents his views, he convinces his audiences of his ability, but he seems to lack that greater greatness which finds a practical solution of the evils he so graphically and touchingly describes. Methinks if he was self-sacrificing enough he might advocate the following scheme, and set the example in carrying it out. In large cities like New York or Brooklyn agents would have to be employed. These would act under the supervision of the Church. It is said that marriages are made in heaven. The following scheme is the nearest approach to the idea that can be made on earth.

There are thousands of young men in the cities who spend every year more in dissipation than would be sufficient to support a family in comfort. It is the difficulty in a city to become acquainted with anyone that would suit as a wife. This is one of the hindrances to honorable marriage. Young men who are temperate and good have often explained this difficulty to the author; hence he studied out the following scheme to obviate the difficulty.

This is the scheme. Let every lady and gentleman who belongs to a Church, and who wishes to marry, place in the hands of a lady agent their photographs, side and front views, accompanied with a statement of their ages, height, complexion, weight, and social position. The agent should place the photographs in a room and number them, reserving the address. Any single person who belongs to the Church may have the privilege of examining the photographs. If he is suited with one he will give his photographs, accompanied with statement of age, etc., to the agent. These will be sent to the lady by the agent, and if she desires it an introduction will follow, and marriage also if the parties are satisfied.

The only danger that would arise from the adoption of this scheme is that many would seek to join the Church before they were thoroughly converted.

Let the scheme be rendered popular, and there is many a one who has a sad looking face to-day who would become a happy matronly woman.

Many a young man who would drift into sin would be saved.

Young people who desire to choose a consort should be guided by some other considerations than fancy merely.

Friends who visit each other frequently make observations about the resemblance of children to parents. Sometimes it is said that a child takes after the father for constitution and after the mother for features. Sometimes there is such an exact interblending of qualities that it is difficult to decide which of the parents a child more nearly resembles. If the mother has an aquiline nose and the father a pug nose, his children may have straight noses, which are more beautiful.

General directions are all that can be given in a printed work, but the expert phrenologist can give minute and particular directions for the choice of a consort suitable to the one to whom he gives a phrenological chart.

## ZOOGENOLOGY AND ANTHROPOLOGY,

on which directions for the choice of a consort are given, interwoven with explanations for maintaining the subsequent condition so as to be blessed with beautiful, intelligent, delightful and vigorous offspring.

The following synopsis not only embraces the important ideas in Fowler's work called "Sexual Science," but some very important things not explained in Fowler's work. The language used in this essay will be fully as chaste as the language used by some city clergymen in the discussion of some themes.

The bible forbids the marriage of those near of kin. Modern observations show that the command was a wise one. Cereals which are sown without change of grain on the same kind of soil will degenerate in quality and productiveness. The cereals become assimilated so much to the nature of the soil on which it is repeatedly grown, that the soil does not stimulate the germs into vigorous action; hence the propriety of changing the same kind of grain to be sown with those who have a different kind of soil.

A gentleman of a certain temperament, who resembles his mother, might as well kiss his own arm for rapturousness as to kiss a lady who has the same temperament, and who also resembles her mother. They are too near alike, and if they marry, their offspring will likely be distorted in form for the reason that the spermatazæ does not sufficiently stimulate the ovulum; therefore inferiority, both mental and physical, will be apt to characterize their children, even if both parents have large and superior organizations. Excessiveness weakens (see Proverbs of Solomon, chap. 31, v. 3) That restraint on indulgence, which favors the highest degree of physical vigor, is an important factor in the reproduction of superior offspring. Those whose highest ideas of happiness is eating, drinking, sensual pleasures and games of rivalry, are not fit to sit in company with those who are characterized for superior intellectual, social and moral culture; nor are they fit for marriage. Such persons revel in excesses which rob them of a hundred other kinds of happiness, which, because of their inferior culture they know nothing of.

If a man desires to have children who will be a source of happiness to him, he should cultivate purity of thought; religion develops courtesy of feeling,—hence he should go to church with a good purpose; he should make his home neat; in order to cultivate taste, he should read good books and discuss their principles, so as to cultivate intellectuality;

he should cultivate economy, not to pinchedness, but so as to live well and still save property,—this will develop business judgment. He should cultivate music; he should cultivate every noble power, because they are all transmissible to offspring. How often it is said that Mahlah takes after her mother for music, while Tubal takes after his father for mechanical taste. Inferentially, both parents should be musical and ingenious. The talent for cooking and embroidery should be transmitted from mother to daughter.

If both parents take muscular exercise enough to develop large veins in their limbs, providing they are well nourished, they will be apt to have robust offspring. Small veins in the hands is a sign of feeble circulation of blood. Ladies who have small veins in their hands and arms ought to wear loosely-fitting garments, and also take plenty of muscular exercise to develop the veins several months before marriage, in order to avoid having a weakly child.

Those whose aim in eating and dressing is to become delicate, should resolve to be spinsters. If delicate ladies marry, their weakness may be transmitted, though there may be a blending of qualities, so that the offspring may be neither strong nor weak. Let the reader examine the heads of some children of the wealthy classes. He will find that a number of them will have the top of the head dished. The hollow part will be in the region of the organ of veneration; the upper part of the forehead will project; the sides of the head will be spread outward; this configuration of head shows a hydrocephalus quality. When it is not strongly marked the child will manifest considerable smartness; but it is apt to decrease before the party attains maturity. It is more of a sign of mental weakness than strength. Such children are apt to be precocious; they have not the strength to ward off or repel disease, and they are likely to die before maturity, unless they have the best of care.

After an observer has found a child of this description, he may feel confident either that the father is dyspeptic, or that the mother is delicate. She has too little blood in her veins, and what there is, is of an impoverished kind. There are some ladies who are remarkable for obesity; they have small veins in their hands and limbs; they have too little blood. Such ladies are apt to have children with the heads dished as described. There is one other condition which is apt to result in the formation of children having their heads depressed on the top, instead of being rounded up as they ought to be: mothers who bear children so soon one after another, that their vitality is impaired, are likely to have children

with the organ of veneration small. This is why some very religious parents have children possessing no religious tendency.

If the anthers of a pumpkin flower are removed, and then at the time necessary for fructification some pollen from a cucumber flower is sprinkled on the stigmas of it, a mongrel vegetable will be produced which will be neither a pumpkin nor a cucumber, but a mixture of both. The vegetable produced in this way will not be so large as a pumpkin, but it will be larger than a cucumber. The seeds of it will not grow.

In procreation, if the male principle is weakly, it will exert a feeble influence in determining the character of offspring, not only in the structural tendency but the vigor of it.

The digestive powers of graminivorous animals are such that they can extract rich blood from succulent grasses; not so with the digestive powers of man. If small children use watery foods, such as roots and fruits, their blood will be thin and watery. This condition of blood will give a tendency to rickets. The heads of rickety children generally spread out at the sides, the upper part of the forehead projects, producing what is termed a beetle-brow. Owing to the inferior quality of such brains, quite a number of such persons are apt to be stupid after they attain maturity. The top part of the head, in the region of the organ of veneration, will be depressed. A weakly embryo will evince the same organic and structural tendencies. The author has seen thousands of cases in which both father and mother had the organ of veneration large, and yet some of the children would have the organ small. In many of the cases an enquiry would reveal the fact that one or both of the parents had poor digestion. One instance will illustrate this. A farmer left Minnesota for Kansas to engage in raising cattle. They had one child, whose head was well formed. In Kansas both parents became sick with ague. They had, however, three children born unto them in Kansas. The tops of their heads were sunken in each one of these three children. After their return to Minnesota another child was born. It was very nervous, but the top part of its head was rounded. The frequent doses of quinine, which the parents took as a preventative and remedy for the ague, will account for the nervous condition of the youngest child. The nerve-stimulating quality of the quinine developed a nervous condition in the parents, and they transmitted it to the youngest child.

The children who take after a drunken father are apt to have the tops of their heads dished. Such children will be insubordinate

and impudent, and they are very liable to become drunkards. The weakened principle of the father, which helps to govern future development, is the cause of this. But some of the children of drunken fathers take after the mother, who is stronger. In that case the children may be exemplary and abstemious.

It is sometimes observed that after marriage weakly women greatly improve in vigor. This improvement will be especially noticed where the husband is robust. Women in an interesting state must wear somewhat loose clothing. The blood which flows through her vigorous offspring must pass through her veins. Through this circumstance her whole system is stimulated, her appetite improves, and hence she grows stronger. For a somewhat similar reason a white woman who has several children by a colored husband becomes a shade darker in color; the pigment which colors the skin of the fetus is augmented and stains her own skin—so the two become one flesh.

There are many who are not aware that tight lacing is one of the causes of irreligion; but if they would study phrenology, and examine some thousands of heads, as the author of this essay has done, they would be convinced that tight lacing lessens the respiratory and digestive organs, and therefore the amount of rich blood, which is necessary to reproduce good sized and superior offspring.

Emigrants are apt to be of the sturdy and resolute class. In a new country where there is a chance to accumulate wealth, they are apt to become rich. The children of such parents will be of large size, they will have the brain power necessary for high intellectual culture and great success. But the daughters of such a family will make a mistake. Their father acquired wealth; hence they will aim to be stylish, and as it is considered the highest evidence of elegance to have a slender waist, they will use long and tightly-drawn corsets in order to produce this form, and they will succeed. And as the family is wealthy and respectable, they will marry, but the offspring will in part take after the mother, and the boys will be less in size of body and head than the grandfather. After the boys are of age they will marry slender waisted-girls, and again there will be degeneracy of progeny. Still they will be apt at learning. There is a saying that men grow weaker and wiser. When men grow rich they cease to do manual labor. They make the head spare the hands. The tendency to learn is reproductive. Sons of lawyers can learn law more easily than the sons of common laborers. Sons of clergymen can learn to sing and preach more easily than the sons of doctors, except in the case in which the doctors or their wives are great

talkers or singers. Parents who do no muscular work do not need large bones and muscles, but their brains become abnormally active. Their children are apt to take after the parts most used.

Under the present conditions arising from social customs, the possession of wealth tends to degeneracy of size, and to increase of mental activity.

Let one go out on the public works and he will find instances in which lots of big men, having large heads, are doing the heavy, coarse work; and a small-bodied, small-headed and sharp-eyed man holding the position of contractor. A fashionable gentleman of small size is not apt to marry a tall, stout servant girl; but such a union, as far as offspring is concerned, would be mutually advantageous, since the children would take after the mother for size, and after the father for fineness and mental activity. But a fashionable gentleman could not endure the thought of introducing into the *elite* of society one who had been a servant; hence, as a matter of course, he must choose his wife from the fashionable set. She will be either small or tight-laced and weakly. With such a union the reproductive law must take its course, and the offspring will be smaller and weaker, and at this stage of degeneracy the brain may partake of the weakness of the body of both parents. If the party is a boy, he will inherit love of style, but he will be deficient in mentality. This class constitutes the dudes of society. If the reader could have the grand-parents, parents, children and grand-children of a family such as described in a row, with the grand parents at the head of it, he would see a marked illustration of degeneracy; and if the observer believed in Darwinism reversed, he would be apt to think, if the degeneracy should continue for a few generations more, they would resemble in size and intelligence the class of organisms which the Darwinites believe were the progenitors of mankind, except, perhaps, they would not have the caudal appendage.

Impressions affect the appearance of progeny. Jacob knew this, see Gen. chap. 30. The contemplation of the pictures of beautiful saints by a woman affects maternity, so that some, if not all her children will be religious and beautiful.

The result of impressions are mainly seen in color and form, and but little in vigor or size. If men should bang their hair as the ladies do, the hair on the foreheads of offspring would in time cover nearly the whole of them. What funny little beings some of such human persons would be. If slavery was permissible, they could be bought instead of pet monkeys.

There is perhaps not a lady who wears tightly fitting corsets who will admit that she laces tightly; she will declare that her clothes are quite loose. But let her watch her own chest during respiration, and she will find that it expands from the armpits upwards. During singing the chest just below the neck heaves to an unnatural height, while the lower part of the chest scarcely dilates at all, this is unnatural breathing. Through compression the lungs are made smaller, but this is not half of the injury done. The region of the system where the ovaries, stomach and liver are located, is compressed, and emaciation more or less is the consequence. It is painful to see the half-starved girls who compress themselves so that they cannot eat enough to make themselves look plump and rosy.

One reason why some ladies talk so little is they do not breathe deeply, hence the blood is not oxygenated and stimulated enough to give the mental power to think or enjoy the good things of life.

The author of this essay is no cynic. He almost idolizes large and lovely women. Unfortunately it is only the little women who ever took a fancy to him. Such ladies are apt to take a fancy to men who weigh about two hundred pounds. One author, in treating on this subject, said that there were many reasons why large-sized men ought not to marry petite ladies, but he did not give any reasons. One reason why large-sized men marry little women is because the latter take a fancy for such men, and it is very kind in the men to please the ladies. But what if his boys should take after his darling little wife. He may love and provide for them, but they will not gratify the pride of his heart.

Beecher recommended early marriages as one of the cures of the evils of society. He dared not talk of the evil tendencies which result from tight-lacing. He would lose his popularity, and I heard him say that in order to do good one must be popular; but it would be like the thing to see a man do a little good after he became popular.

The author of this essay has no desire to wound the heart of any one. Every sentence in this essay was written for the benefit of mankind, and especially the fairest and best portion of it, nor was it through acerbity of temper that he penned his remarks *re* slenderness. At a certain age the fairest girls are naturally slender. The wearing of a properly constructed corset adds to their charmingness. In the most superior types of the human race the centre of the breasts are on a line drawn just below the armpits. The ancients wore a



girdle just below them, leaving the lower part of the chest and the waist free. There was no interference with respiration or digestion. The lower part of the corset should commence at that part where the ancients used to wear the girdle; it should fit more loosely upwards. Then robust health would develop the highest form of loveliness. Long corsets, which compress the waist, lessen the very development desired, since lack of nourishment makes a person flat-chested. Some dandies are said to wear corsets, but for what purpose the author is at a loss to know, unless it is to make them appear feminine.

In the foregoing remarks it was shown that whatever cause produced maternal feebleness or impoverishment of the blood would be liable to result in inferior offspring. In some parts of Southern Europe the poor people live principally on vegetables. The result is weak and watery blood, and as a resulting consequence they are apt to have hydrocephalus or rickety children, most of whom die before they are seven years old. Many of the Indians, whose progenitors were well-fed on buffalo meat and venison, and who took a great deal of out-door exercise, had remarkably robust offspring. Some of the adults had no cuspidated teeth, the front teeth being shaped like the molar or double teeth.

When tall men, who have large veins in their limbs, and who resemble their fathers, marry tall women, who also have large veins in their limbs, and who resemble their mothers, their offspring will be vigorous both in brain and muscle. They will have good digestion; the top part of the head will be rounded up. The organ of veneration will be large, hence such children will have a tendency to obedience. If they have a chance for education, they will become the controlling element in society; they will dominate the inferior classes. For the reasons given, and for others equally important, men of the large and superior type ought not to marry little women. A lady or gentleman having a tendency to obesity ought to marry one having a tendency to spareness. Mr. Spindleshanks ought to marry Miss Duck; then if there was a blending of qualities in their offspring, the children would have more symmetrical forms than either of them. For the same reason a gentleman having a high, broad forehead, the upper part projecting, ought to marry a lady having a receding forehead, so that those children who resemble both parents will have well-shaped foreheads. Those who have long limbs and short bodies ought to marry those who have somewhat short limbs and longer bodies. Still some of the children may take more after the father

than the mother. As a rule, daughters take most after the mother, and sons after the father; but sometimes, through certain prior conditions, this tendency is reversed and some of the sons take most after the mother. If the reader thoroughly reviews the treatise on Zoogeny he will have no difficulty in understanding the cause of this. The paternal or maternal principle depends on physical condition. Through overwork or dyspepsia there may be impairment of the one and not the other. In that case the offspring will take most after the one that has the better physical condition of the pair.

As in physical or mental quality, extremes of development should be offset by deficiencies in the opposite sex. If one is timorous the other should be fearless; if one is too combative the other should be non-resisting, else quarrels will be a frequent occurrence until separation takes place; if one is stubborn the other should be pliant; if one is parsimonious the other should have less thought about saving, since if both parents are too greedy of gain their offspring will be apt to be misers or dishonest; both should be religious, but if one is zealous the other should be more passive in religion; if one has too little jousness, generally indicated by crescent-shaped lips, or lips the corners of which turn downward, they ought to marry those who have lips the corners of which turn upward; persons with thick lips ought to marry those with thin lips. Those who mumble words so that it is difficult to understand them ought not to marry, since they have an inferior quality of organism, and it is reproducible.

The author of this essay could give hundreds of examples to illustrate the principles in this essay, but if he did it would make a book of several hundred pages. For proof of the accuracy of the author's observations, let the reader compare offspring with parental condition as the author has done, and he will be satisfied that every principle is correct.

The author gives the following example because it is illustrative. He examined a gentleman who was six feet tall, he was large and robust, but the top of his head was dished, his cerebellum was large. Inferentially one of his parents was strong and the other feeble. There must have been a blending of qualities. The gentleman had a masculine look; inferentially he took most after the father. The top of his head was depressed; that showed that his mother was feeble. So the author ventured to tell the audience when the phrenological examination was made that the father of the subject for examination was a physical Hercules, that he had a superior memory, and that his judgment

was so good that he was consulted by his neighbors, and the mother was a delicate and little woman. The gentleman was asked to state if it was not true, and he admitted that it was exactly so, but he wondered how a phrenologist could tell so much about parents by examining the head of one of the offspring.

#### ANTHROPOLOGY.

The theory that blackness of skin is a natural condition of those who are indigenous to tropical climates, is no more true than that those who are indigenous to temperate climates are blondes. The Indian is tawny colored in every part of the north temperate zone. The difficulty with many writers, some who are very plausible and popular, is, they are not careful readers and observers. The prevalent idea is that in the beginning God created only one pair, but a careful reading of the first and second chapters of Genesis will show that there were two pairs created. In the first chapter it is stated that "God created man in his own image, male and female created he them," inferentially, they were to live on fruits and nuts, etc., as the Africans do. In the second chapter there is an account of the creation of Adam, and it is particularly mentioned that it was not good for man—*i.e.*, this man to be *alone*, so God took a rib from Adam, "And the rib which the Lord God had taken from man, made he a woman, and brought her to the man." In the first chapter the reading seems to imply that a man and woman were created contemporaneously. In the second chapter the reading implies that Adam was made *first* and Eve afterwards. This second pair God put into the Garden of Eden to dress it and keep it. So it seems that the design of God was that this second pair should till the ground.

It is not stated that there was a law against miscegenation, but there was an antipathy to it. This is evident from subsequent scriptural commands that the Israelites were specially required not to take wives from other nations.

That evil qualities followed the intermarriages of the sons of God with the daughters of men, is evident from the wickedness that ultimately prevailed on earth.

The sons of God doubtless mean the pure descendents of Seth. This will be evident if the genealogy of Christ is traced back to Adam, who is called the son of God, see St. Luke, 3rd, v. 23 to 38 inclusive; hence the descendents of Seth unmingled with other races are properly termed the sons of God. They may have lost their birthright through sin; others may acquire the birthright by conversion to christianity. Let the scriptures be understood as they read, and no difficulty need exist

in knowing from whence Abel got his wife. The first pair mentioned in the first chapter of Genesis had been fulfilling the Divine injunction and had been multiplying in the land. After Cain went out from the presence of the Lord, he chose a wife in the Land of Nod. Unless he married his sister, and this is very improbable as no mention is made of his having a sister, he must have taken himself a wife from the descendants of the first pair created.

In Gen. 6th chap. v. 2, it is stated "that the sons of God saw the daughters of men that they were fair; and they took them wives of all which they chose." "In Adam was breathed the breath of life and he became a living soul." In *sano sensu*, the son of God and his offspring were coequally so. They ought not to have intermarried with the daughters of men, since after a time "every imagination of the thoughts of his heart was evil continually;" surely they were very bad, so God determined to destroy the earth with a flood.

The author of this essay has written a work in which he demonstrates on absolute scientific principles, that a deluge covered the whole earth, mountains included. As in modern, so in ancient times, women were often in their houses when the men were absent.

As there are Africans it seems to be infernal that some pregnant women were in houses in which were stores of nuts and dried fruits provided to last till the next crop should grow. The sudden breaking up of the fountains of the deep, with the descent of torrents of rain and the bursting of enormous water spouts, uplifted the houses and floated them away before the male inhabitants of them could return, so that the men were all drowned. The scripture account mentions the death of every man, save Noah and his sons.

Some of these houses which had been floating for months would find resting places after the dry land began to appear, inferentially some one or more of the houses lodged on the African continent, and from them descended the negro races. Similarly a few houses in which were some women of the mixed races, these houses finding lodgment on the continent of Asia would account for the existence of the Mongolian peoples. The author of this essay would like to know if this explanation is not as reasonable as any other yet given, even if it is not scientific.

Those preachers who may object to this exegesis on the ground that some women escaped death by the flood, will please remember that some professors of theology teach their students, who are studying for the ministry,

that the bible account that a flood covered the whole earth is not true. If the reader doubts that preachers have been taught that there was only a partial deluge, just let him ask his graduated clergyman if he believes that the flood spoken of in the bible really did cover the whole face of the globe on which we live,

but every beast, creeping thing, and every man died, save Noah and those that were with him: the Ark, and perhaps he will be surprised to find that his preacher does not believe the bible account; but the preacher

will begin to wrest the scripture from its true meaning, and say that the whole face of the earth does not mean the whole face of the earth, but only a portion of it where Noah lived, and that it was not really necessary to save animals in the ark because they were saved alived in other portions of the earth which were not submerged by the flood, and the necessity of a great ark was only a myth. For my part, I believe the bible, and I can demonstrate its accuracy on the basis of absolute facts.

## THE FORMATION OF THE EARTH,

In a Red Hot State from the Centre Outward to the Crust, and  
the so-called Crust Never Hotter than it is Now—How  
the Earth is Prevented from Cooling--How it was  
Illuminated during its Formation.

The question of light on the first day of creation has long been a puzzle to the clergy and the professors of theological colleges. They can understand the statement that on the first day of creation that God made light, but they found it difficult to reconcile the idea with the biblical statement that God made the two lights, viz., the sun and moon on the fourth day of creation. They know that during the union of certain chemical compounds that light is evolved, but they know also that there is not in any locality on earth a sufficient quantity to produce enough light to illumine a hemisphere of the earth.

That which hinders great scholars and observers from solving philosophical and theological questions is their lack of inventive talent. They are adepts in learning languages and facts, they may be eloquent, and hence be popular with the people, but they lack that originality which is necessary to solve questions in physical science.

The author of this essay challenges the whole scientific world to refute the following exegesis.

The whole of the essay is the original production of J. W. Crouter.

Water is a compound of hydrogen and oxygen. Before it was in a fluid form, as it exists in the oceans, it must have been in a gaseous state. Steam (the nearest approach to this gas), if exposed to air at an ordinary temperature, is immediately condensed into vapor; vapor existing in a considerable quantity in any place accumulates into drops. The agglomeration of them would form bodies of water. The air could not contain the

waters of a) the oceans in either the condition of vapor or steam. Some parts of the oceans are over 6 miles deep, vapors seldom ascend over 5 miles high. The heat of the earth decreases at a certain ratio. At the base of a mountain it is 60° above zero; at the top of it, it is 40° below, or a difference of 100° fah. If the surface of the earth was red hot, the decrease in the heat according to distance from the surface of it would diminish to that degree that at a distance of 40 miles the freezing point would be reached. Therefore the water which is in the oceans could not surround the earth in the form of vapor, since ere half of the water which is in the oceans could ascend into the air in the form of steam, it would be condensed and returned to the earth; but the elements which compose water could exist in the form of gas in space where there is no heat.

Before the hydrogen and oxygen gases were reduced to water calcium must have floated through them, since lime is found in the water. So also metallic particles must have floated through these gases, since they must have been in a position so they could be heated to incandescence ere they were agglomerated to form the red hot nucleus of the earth. Such a state of these gases—*i. e.*, the interblending of metaliferous atoms among them would cause the production of electricity. The flashes of electricity would ignite the hydrogen, which, supported by oxygen would form particles of water; the condensation of these would form seas; and as the oceans exist all around the world, the combustion of sufficient hydrogen to make all the water in the earth would make the forming earth to blaze like a star.

The space occupied by the burning hydrogen was so vast that it could not have cooled in 24 hours. Still it could not have remained heated a week. A globe of hydrogen and oxygen 90 feet, if ignited, would be consumed with the suddenness of gunpowder. Only an approximate idea could be formed as to the time it would take for all the hydrogen which forms the water of the earth to be consumed, but reasoning from analogy, it would not take 24 hours. In this time all the metallic particles which floated through it and which were made red hot by its combustion, would be agglomerated. The earth moves in its orbit at the rate of a 1000 miles a minute. We have no other way to measure the velocity in which atoms move in space, than by the velocity in which masses of them move in space. The exceedingly diaphanous comets moving at the rate of 180 thousand miles an hour. During the formation of the earth, the accumulating masses moved towards each other until some of them would weigh a pound, these red hot masses moving in a heated space so they could not cool would unite with others in a geometrical ratio doubling every minute. A continuance of this for less than a day of 24 hours, would form a mass of red hot matter larger than the size of the earth. This mass would attract the chlorine, a non-combustible gas to its surface. Floating through this gas would be the material for crust and soils at the surface of it. This gas and soda would be mixed with falling water, so that chloride of sodium or salt would be formed. The red hot mass would be covered up, and the whole would become covered with water till the dry land was made to appear; then it would be cool enough for man and beast to walk on it. The annual descent of electricity into the earth would preserve it at a uniform temperature from century to century.

The foregoing article is very much condensed from the original essay which the author has written on Creation, the Deluge and the Tides. He is aware that the publication of such works is seldom a profitable thing. The clergy are the only ones who could promulgate the exegesis with fair remuneration. In every country priest and pastor are held in great reverence; the people are willing to pay such men. Beecher receives \$250 per sermon; Talmage receives more than a moiety of this sum. These men show great ability in describing the evils of the age. Beecher helped to start the blaze, *re* the evil of slavery; his sister, Mrs. Stowe, fanned the flame by her novel until it flared throughout the Northern States. It became popular to speak against slavery, The Press now took hold of the question. The agitation increased in vehe-

mence. A civil war was the result. Beecher said that this war cost directly and indirectly six thousand millions of dollars. Thousands of women were made widows; tens of thousands were maimed for life.

I was on a visit from Canada to Rochester when Thompson gave a lecture against slavery. I heard two men warmly discussing the question. I listened for a while, then I said this question may lead to a national war to settle it. I always regarded war with horror, hence, I began to think out a peaceful solution of this question. I am satisfied that I succeeded, but then as now, I had no pulpit in which to promulgate my plan. Beecher and kindred spirits described the evil, but they lacked the inventive power to find an economical and peaceful remedy.

Now, there is another social evil beginning to manifest itself. The ominous voice of unemployed men is beginning to be heard all over the world. A remedy must be found, or anarchy will be the result. Talmage has been speaking on this subject. He suggests forbearance between employer and employed, but the same suggestions were made before Talmage was born, and every decade since. In his sermon of 14th inst., he gave, as one remedy, abstinence from strong drink. Gough gave the same remedy nearly half a century ago, and yet there is fully as much liquor drank now as then. I have given a remedy in this work, and the only objection that I ever heard against it was *this*—it will not work—for the reason that it has NEVER BEEN TRIED. This molehill of an objection was magnified into a mountain by the pessimistical objector.

Individuals have often said to me, "Publish your work, and if it is good the public will buy it." This work will prove the accuracy of the opinion. True it is a small-sized work. If the author had not lost all of his goods by fire last winter, one of the other political schemes which the author has originated would have appeared in it.

Let those clergy who would like to have a work which proves, on the basis of absolute fact, that the Scriptures are literally true, order a few score of copies of this essay for gratuitous distribution among their congregations, so as to give them a greater recompense for the money they secure from them. Let those statesmen who have nearly always cast their influence and votes on the wrong side of public questions order a number of copies for distribution. Let the men who often spend a dollar for whisky and cigar treats buy a dozen copies of this work to lend and re-lend. Let them do this promptly, and the author will soon complete and publish all his works

—poetical, scientific and political—including a solution of the Irish question, which will be satisfactory to all parties.

The author of this essay wishes to disabuse the reader of the impression which he might form from some of the statements made in this work, that the author has an exalted idea of himself, and that others know but little. The author is willing to admit his failings and imperfections. A mechanic who can make a watch, or one who can make a steam engine, or a builder who can build a paper-mill, evinces capabilities in these respects superior to what the author claims to have. He has a high regard for the class of men who can make the kind of paper on which this essay is written. The gentleman who has the kind of political tactics which has enabled him to secure a seat in a legislative body has shown capabilities of a certain kind superior to what the author has evinced, since he would fain have a legislative position, but he is too outspoken to get one. The preacher who by the specious mode in which he presents his views, and the adroit way of advertising himself, which enables him to get \$250 for a sermon, and \$400 for a lecture, has manifested ability

in this respect far ahead of the author. The author has reason, however, to claim that he is an original thinker; his essays prove this. He feels that some of his original ideas, if widely disseminated, will be a world-wide and lasting benefit.

Some have expressed the opinion that since Beecher's avowal of his belief in Darwinism, he has quite undone all the good that his theological and ethical teachings have done for twenty-five years. Some believe that the press notices and remarks which have been made about Beecher and Talmage were not paid for by these reverend gentlemen. If that is true, surely the press can afford to eulogise this work, since such press notices would enable the author to publish solutions of the greatest questions in physical and social science. The author does not desire the press to do anything for him for nothing, but if editors think they can be of any benefit to the world they may show themselves public benefactors by doing so; but the press or the clergy who may speak adversely of the author or his works will unwittingly prove themselves the enemies of mankind.



Beecher indirectly thousands of thousands

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## THE TWIN POEMS:

"Farewell to the Earl of Dufferin" and "Canada's Welcome to the Princess Louise and Marquis of Lorne."

BY J. W. CROUTER.

## FAREWELL TO THE EARL OF DUFFERIN.

I will write the words I would not speak,  
Noble Earl of Dufferin, farewell, farewell;  
No consolation will I seek,  
While regrets at your leaving my bosom swell.

Earl of Dufferin, soon you will leave our shore,  
To cross the broad Atlantic Ocean once more,  
And you will muse as you watch the waves' white foam,  
Thinking of greetings when you arrive at home.  
In fancy you will review scenes lovely and grand,  
You will contrast them with those of native land;  
Your island rivers flowing through pastures green,  
Or sparkling in rapids with glistening sheen,  
Where peasants sing and dance on holidays,  
As happy as larks when warbling their lays.  
Your rivers you will contrast with Canadian streams,  
Where anon sombre forests obscure the sun's beams,  
Or our noble rivers on which great ships may ride,  
Carrying cargoes of grain to the ocean's tide.  
In fancy you will contrast the days spent in childhood  
With the time you spent in a Canadian wildwood,  
Where the tawny-skin people of the forest live,  
Ever ready their hospitality to give.  
As you listen to the ocean's waves' loud roar,  
You will think of British Columbia's shore,  
Where waves resound along the rocky-bound coast,  
Amidst scenes of whose grandeur this country might  
boast;  
Where giant mountains rise sheer from the water's edge,  
Rising gradually higher, ledge upon ledge,  
Up to the clouds where their tops are covered with snow,  
While the grasses are green in the valleys below;  
You will think of these views in deep reverie,  
While watching the waves of the great blue sea.  
Often you will think of the friends you have left,  
And when alone you will feel like one bereft;  
But this thought, above others, will cheer your mind,  
In Canada you leave no enemies behind.  
During your journeys our broad country through,  
You have made myriads of friends, both noble and true;  
The addresses you have given in city and town,  
Have greatly added to your wide-spread renown.  
Reports of your tours have spread a good opinion  
Of the great fertility of our vast Dominion;  
Under your rule we have become a broad nation,  
Which, years hence, will have a great population;  
From ocean to ocean, in each province, you have been,  
And we will not forget the noble Earl of Dufferin.

May God speed the ship safely o'er the main,  
Which carries the Earl to his native shore;  
May abundance of joy and freedom from pain,  
Ever be his lot till life's journey is o'er.

WELCOME TO THE PRINCESS LOUISE AND  
MARQUIS OF LORNE.

French, Saxon, Scotch and Irish Canadians are we,  
But we are all Britons in our welcome to the Princess Louise;

From ocean to ocean, from lakes to northern sea,  
Canadians are ready to say "Welcome to the Marquis of Lorne."

We are waiting the time in great expectancy,  
When our hearts will be thrilled with ecstasy,  
For Canadians are to have the high honor  
Of having the Marquis of Lorne for Governor.  
Double honor for the land wherein we were born,  
For comes not alone the Marquis of Lorne;  
His consort is the daughter of Great Britain's Queen;  
We are linked to motherland, though oceans lie between.  
The Empress of nigh three hundred millions of people  
Sends her daughter to reside at our capital;  
Let our welcome evince a most liberal hand,  
Well worthy of this our great northern land;  
We will prove our loyalty by showing honor due,  
And by showing ourselves brave, noble and true.  
E'er the staunch Sarmatian arrives at her quay,  
Let Haligonians make a gorgeous display;  
From the ship to their carriage let them carpet the street,  
And with loud huzzas their Excellencies greet.  
Let each city in which they sojourn the first night,  
Be illuminated with a great flood of light, [panes,  
Streaming with bright lights placed near the window  
While cornet bands fill the air with sweetest strains;  
Let there be a grand pyrotechnical display,  
Dispelling darkness till it seems like unto day;  
Let citizens adorn their great thoroughfares,  
And hoist the maple flag o'er the city squares,  
And deck arches with boughs on which Boreas blow—  
Boughs from trees which are green when earth is white  
with snow—  
Words of welcome intertwined in evergreen wreaths,  
Wreaths made from vines which grow in our northern  
heaths.  
The Princess and Marquis these arches will view,  
While pleased with the change from the old country to  
the new.  
Let the *élite* of our cities, while gorgeously dressed,  
Give grand parties to the Princess and the viceregal guest,  
And when the Princess goes back to her mother's side,  
She will speak of our great Dominion with pride.  
Where'er the Marquis comes we will gather in meetings,  
And show him the heartiness of Canadian greetings;  
No honor given hero fresh from great victory,  
Will be more than we will give to vice-royalty.  
May the day be bright, following a lovely morn,  
When arrives Princess Louise and Marquis of Lorne!

Ye winds, waft the ship blandly the ocean o'er,  
Which brings the Princess and Marquis to Canada;  
May no tempest make wild waves to surge and roar,  
While their Excellencies are on their happy way.

## THE CAUSE OF THE LIGHT OF THE SUN.

In my work on "Creation," I have shown how the earth was formed so that it is red-hot from the centre outward to the crust. The sun, stars and satellites were conglomerated in the same way. This is fully explained in the larger work.

Let the principle be granted, which can be proved, that the sun is an incandescent mass, and that there are interspersed over the surface of the sun innumerable oceans, with co-equal spaces of land between them.

As evaporation has the tendency to cool the substance from which the vapor escapes, it is inferable that the bottom of the oceans in the sun, and the material at the margin of them, would be cooled to the temperature of boiling water.

If the light of the sun could be produced one way, and if it could not be caused by any other means, inferentially that must be the way it is produced.

Electricity is evolved by the accumulation of clouds. Flashes of lightning come from them to the earth, and the refulgence of these flashes is sufficient to illumine the visible horizon.

Steam produced by boiling water is immediately changed to vapor, when exposed to air of ordinary temperature.

If the water of the Hudson Bay could be made boiling hot, an amount of vapor would arise from it that would form clouds on a scale so vast that lightning would be produced in bolts large enough to illuminate the earth to the rational horizon from that point.

If all the oceans on the earth could be rendered boiling hot, the enormous amount of clouds that would arise from the surface of them would produce sufficient electricity to make the whole earth to shine like a star.

Without an atmosphere vapors would not ascend from the surface of bodies of water. Without an atmosphere surrounding the sun the conditions necessary to produce sufficient light to enable the sun to illuminate the earth would not exist.

A red-hot mass of iron irradiates a mild, pale light. The concussions produced by one body striking another causes heat, and if the concussions are numerous and great enough the body may be rendered red-hot. To maintain the sun in a state of incandescence, hundreds of bodies similar to the earth would have to strike the sun monthly with the velocity of a thousand miles a minute. If such an occurrence took place, it would be observable by means of a telescope; but as such a falling of bodies into the sun has not

been observed, the sun is not kept hot by concussion.

The light produced by incandescent metals is insignificant, when compared with that produced by an electric light of co-equal magnitude.

During the chemical union of some substances light is evolved, but after the union has taken place the light ceases, and light from the same elements cannot be produced again until they are reduced to their previous condition before the union took place, which caused the emission of light.

Light is produced by the union of carbon contained in oil with oxygen during combustion and carbonic acid is formed, but it would puzzle any chemist to formulate a theory to show in such a sphere as the sun is how that carbonic acid could be separated into oil and oxygen so as to be consumed in the production of light. We know that this can take place on the earth, since the leaves of plants will absorb carbonic acid and eliminate the oxygen and retain the carbon for the growth of plants, with their seeds containing oil. In this we see a transformation of substances, so that from the same elements light can be produced again. But plants cannot grow in the sun, and even if they could, a sufficient light could not be produced in this way to evolve the light which is continually irradiated from the sun; hence, the conditions necessary to produce the sun's light presupposes the existence of an atmosphere similar to that which surrounds the earth, but extending thousands of miles from the sun. It is estimated that the atmosphere extends from the earth to the distance of forty-five miles. It is not presumable that because the sun is over a million of times larger than the earth, that his atmosphere extends forty-five millions of miles from his surface; but the sun's atmosphere may extend several thousands of miles from it.

It is known that the air is more dense at the lowest levels of the earth's surface than it is at an elevation of four or five miles. This is accounted for on the principle that gravity causes a pressure of the air which is above on the air which is below.

At first it might be supposed that the pressure of a volume of air extending to the height of 4,000 or 5,000 miles from the sun would cause such a pressure on the air at the surface of the sun that it would liquify it. But it is also known that the rotary motion of a body produces a centrifugal tendency. The surface of the sun moves at the rate of nearly 100,000

miles a day, hence the centrifugal force produced at the surface of the sun would counter-balance to a certain degree the pressure of the atmosphere on the sun; yet the pressure of a volume of air surrounding the sun would be greater than the pressure of the air on the earth, because the surface motion of the sun is a little over four times greater than that of the earth, while the volume of air extending from the surface of the sun is perhaps a thousand times greater. But this state of the air is a necessity, in order that the conditions should exist for the production of light sufficient to give all the light the earth requires for the growth of plants.

Boiling oceans interspersed over the sun, with an atmosphere extending far above them, would produce a condition not only to cause the present luminosity of the sun, but a continual reproduction of it.

From the boiling oceans in the sun immense volumes of vapor would rise and would form clouds of the size of the oceans on the earth, and from them would descend shafts of lightning. We know by observation that bolts of lightning will set buildings on fire; we know that certain conditions of an electric current will fuse metals. If the electric flashes which descend to the earth could be augmented a thousand fold in number and size, and continued for a month, the earth would be fused. It is the descent of these flashes of lightning to the earth which prevents it from cooling off. The author knows that the idea is at variance with the preconceived notions of some thinkers, but some preconceived notions are not always correct. The author has observed that thunder showers do not always cool the air, but on the contrary, the descent of lightning into the earth heats it up and produces the conditions necessary to cause another thunder shower. When the air becomes very heated and rare, a more dense and cold current comes from some other quarter, then there will be a change of temperature.

Over the vast surface of the sun, whose circumference is 2,400,000 miles, the amount of vapors that would constantly rise from the numerous oceans interspersed over the face of it would cause clouds to be formed which would develop an amount of electricity vastly beyond any human imagination. Doubtless the size of the thunder bolts would be in keeping with the size of the sun, hence some of them would exceed a hundred miles in length and several inches in diameter. The constant descent of such shafts of lightning would keep the exposed surface of the sun in a continual state of incandescence, and the descent of similar electric bolts into the oceans would keep them forever boiling.

It is known that if water is poured on metal when heated to a white heat, it will be immediately separated into hydrogen and oxygen, the original elements which composed the water. The water which would fall on the sun would be immediately changed into gas; currents of electricity would ignite this gas, so that over the face of the sun there would be a continuous blaze of hydrogen, as this light exists it is inferential that the aforesaid causes must exist in the sun to produce it.

The mild, yellow light of burning hydrogen, in union with the brighter electric light makes, it more pleasant to the inhabitants of earth.

In this system of things there would be ever a reproducing cause of light. Constantly streams of electricity would flash from cloud to cloud; constantly millions of great bolts of lightning would descend to the sun from vast strata of clouds to keep it at a white heat; constantly showers of rain would fall on this incandescent surface, to be changed into hydrogen and oxygen; constantly there would be flashes of blazing hydrogen, extending for hundreds of thousands of miles. Flashes of lightning would fly athwart the sun at the rate of a hundred thousand miles a minute.

In some seasons the rain-fall on some one of the exposed parts of the sun would cool this place for a time, then there would be a sun-spot. When that part of the sun was turned so as to be in a line with the earth, there would be a cold period for two weeks. When the opposite or brighter part of the sun came in line with the earth then it would become warmer. Hence, when in any year there is a great dark spot on the sun, a cold and frosty summer may be expected.

The luminous point of an electric lamp is about half an inch in diameter, but the apparent flame is much larger. A bolt of lightning equal to a square of five inches, and a hundred miles long, would yield a million times as much light as an electric lamp. One thousand such shafts of lightning descending to a hemisphere of the sun, or flying athwart it, would irradiate light sufficient to make shadows plainly observable on earth, but there are many millions of such electric shafts in motion spread over the immense surface of the sun.

It is a law of electricity that currents of it passing through bodies having different degrees of density become heated. The spots on the sun, which had become cool, dense and dark, would be the condition required for the development of more heat, since these spots would be more dense than others; hence currents of electricity passing through them would cause them to be heated to a white heat



again, again to be splashed with water, and thus to be immediately separated into hydrogen and oxygen, again to be consumed and converted into vapor and then carried by the dense air of the sun thousands of miles from its surface, there to aid in forming vast strata, from which bolts of electricity would ensue and flash from cloud to cloud, while many millions of such bolts would descend on the thousands of millions of square miles of the sun's surface to produce a luminous atmosphere, the light of which would extend beyond the furthest planet which revolves around the sun.

THE SUN CANNOT COOL OFF.

If a vessel containing hot water is placed in a cool atmosphere, vapor can be seen rising from it. The colder the air in which the vessel is placed the greater will be the amount of vapor which will ascend from the water. When the bodies of water in the Northern hemisphere become more than usually heated during a very hot summer, there will be a

great precipitation of snow during the following winter, since warm water and cold air is a condition favorable for the evaporation of water. The winter of 1886 and 1887 will be marked for a great precipitation of rain and snow, since all the bodies of water in the Northern hemisphere were heated to an unusual degree during the hot summer of 1886. Wind currents from the Arctic regions towards the more rare areas of air in the south will carry the vapors over the lands, and in their course these vapors will fall in rain or snow, according to latitude. When the atmosphere of the sun cools somewhat through the existence of sun spots, then the conditions exist for a greater ascension of vapors from the oceans on the surface of the sun, and as a sequence a greater quantity of electricity will be produced. The augmented electric shafts will fuse the dark spots, there will be an increased production of hydrogenic and electric light, and the following summer will be very hot. This explains why the cold summers of 1884 and 1885 were followed by the hot summer 1886.

THE TIDES.

The cause that produces the tide that follows the one caused by the moon. First originated by J. W. Crouter.

First principle—let a number of balls of equal size, a part being composed of wood and the others of metal, be attached to the outside of a wheel by short india-rubber strings, then let the wheel be made to revolve, and it will be found that the metal balls will be forced further from the wheel than the wooden ones.

This simple experiment illustrates the law that the centrifugal tendency of matter at the surface of a body revolving with a rotary motion is in proportion to density.

If the water on one hemisphere of the earth could be rendered heavier than the water in the opposite hemisphere, in such a way that the weight of the water could be graduated so that it would be heaviest at a certain point and gradually less heavy from that point to the rational horizon, then the conditions would exist for the production of a centrifugal tide.

Where the water was heaviest, there it would be thrown up highest, and the water would be forced outward at the surface of the earth to a less degree, gradually to the rational horizon where there would be a neutral point.

This condition of the water is continually being produced in the following way:

The moon attracts the water on one hemisphere of the earth and makes it lighter there

in proportion to the attraction, and the water is made lightest near the point where the moon is vertical at any moment, and the water is gradually less heavy to the rational horizon, since the attractive power of the moon decreases in proportion to the squares of the distance between her and the portions of the earth attracted.

The attractive power of the moon reaches past the rational horizon from any point whereby the conditions for the production of two daily tides exist. The one at the cispodes under the moon, termed the lunar tide, and the other at the antipodes, termed the centrifugal tide. As the earth revolves these tides follow each other at equal distances apart, since the centrifugal tide must be at the opposite side of the earth to the lunar tide, caused by the attraction of the moon. As the moon rises about an hour later every day, it is high tide about an hour later every day, thereby giving inferential evidence that the moon causes one tide. The centrifugal force produces a tide on the opposite side of the earth at the same time.

It is found by practical tests that a pound weight weighed by a spring scale, weighs apparently the same everywhere on the surface

of the earth at the levels of the ocean, and that water weighs about the same in one place as in another at all times of the day. Therefore it may be thought by some that the theory that the centrifugal force produces a tide is without foundation. The fact that matter seems to weigh the same in all parts of the earth requires the consideration of another principle.

It has been thought by some scientific writers that as the centrifugal tendency produced by the rotary motion of the earth lessens weight at the equator, that therefore a mass of matter of the same bulk and density would weigh more at the poles than at the equator.

The force of gravity is in proportion to mass. The greater the mass the greater will be the gravitating force.

The equatorial diameter of the earth is 26 miles greater than the polar diameter, hence from the center of the earth to a point at the equator the earth is 13 miles larger than from the center of the earth to either pole. The greater mass of the earth at the equator exerts a gravitating force which counterbalances the centrifugal tendency, since any quantity of matter weighed by a spring scale at the equator will weigh the same at either pole.

The surface motion of the earth gradually decreases north and south of the equator towards the poles, so also does the size of the earth diminish to a certain extent, whereby the centrifugal tendency is counterbalanced by gravity, until the neutral parts of the earth at the poles are reached; hence matter weighs the same in all parts of the earth, except when the influence of the moon makes it lighter.

If the earth could cease its rotary motion for a day, and at the same time could preserve its spheroidness, then, because the mass of the earth is greatest at the equator, a given quantity of matter would weigh heavier at the equator than it would at the poles, but let the diurnal motion of the earth be restored, then the centrifugal force which lessens weight would exert an equalizing power, and therefore restore the even weight of material all over the earth, except where it is disturbed by the lunar influence.

The centrifugal tendency not only caused the oblate form of the earth, but in harmony with the law explained, and continuously as the tide rises by this law the even weight of the water of the ocean is nearly preserved on the side of the earth where the centrifugal tide is produced.

On the opposite side of the earth where the lunar force is exerted, the greater mass of water upheaved produces a greater force of gravity, whereby the even weight of water is

nearly maintained. The difference is sufficient to produce a tide a little less than 3 feet high in mid-ocean.

There must be a difference in the weight of the water in the two hemispheres or a centrifugal tide could not be produced, though the difference in the weight is an imperceptible fraction of a pound, yet multiplied by the number of pounds of water in the vast spread and depth of the oceans, it is sufficient to produce a tide through the operation of the cause described. At times a difference in the weight of some bodies of water is observable.

Millers have learned by observation that at new moon, when both the sun and moon are attracting the water at the antipodes, that the machinery of a mill at the eispodes runs more rapidly with the same head of water near midnight than it does during the day time.

This difference in the motion of the machinery is accounted for on the principle that both the sun and moon attract the water on one side of the earth, and makes it lighter in proportion to the attraction, whereby the force of the water on the machinery is less potent during the day, but towards midnight the water is heavier, hence it exerts a greater force on the valves of the water wheel during its outflow, whereby the machinery is made to move more rapidly.

Raftsmen have also noticed that their rafts float more rapidly down the stream at night during new moon, even in those streams where the current is said to be uniform.

#### THE CONCLUSION IS ABSOLUTE.

The moon by its attraction makes the water in one hemisphere lighter in proportion to its attraction save partially counterbalanced by greater bulk produced by the uplifted tide. And as the moon's attraction decreases in an inverse ratio, somewhat past the rational horizon from the part over which the moon is vertical, whereby the water in the opposite hemisphere is left heaviest at a point furthest removed from the moon's influence, and gradually lighter to the rational horizon from this point: hence two daily tides are produced, one by the direct action of the moon and the other by the centrifugal force.

The sun being situated at a distance of 92,500,000 miles from the earth does not exert an attractive force on the earth sufficient to produce tides, since, if it did they would be observed at the first and last quarter of the moon, when the attraction of the sun is exerted on a point midway between the highest point of the lunar and centrifugal force. At this time the tides rise to a less height than at the new and full moon, and then there is but a flowage of two tides daily. If the sun pro-

duced a tide it would be observable in that part of the ocean where it is vertical, and where it acts independently to the lunar attraction, but as they do not occur, it is inferential that the influence of the sun on the waters of the ocean is not sufficient to produce a perceptible tide. Still the sun certainly attracts the earth; at the first and last quarter of the moon. The effect of the attraction of the sun is to lessen the height of the spring tides. It does this by drawing the water in a lateral direction to that extent that low tides are the result. The moon apparently revolves around the earth from east to west. It is the revolution of the earth on its axis from west to east that gives this apparency. Following the apparent course of the moon, the waters in mid-ocean where there are no coast line obstructions is drawn into a westerly current. North of the equator the current runs in a south-westerly direction. South of the equator the current runs in a north westerly direction, because the waters of the oceans north and south of the equator are drawn in an oblique direction towards the moon.

As the moon travels over the earth at the rate of  $1041\frac{2}{3}$  miles an hour, the general tendency of the lunar currents are not reversed, in those parts of the globe where the oceans surround a great part of the earth in an unbroken expanse. The coast line of America extending as it does from near the north pole to the equator, and south of it to  $55^{\circ}$  s. lat., forms a barrier to the westerly current caused by the moon.

When the moon is in the zenith at a point 6250 miles eastwards of the Bristol Channel, the attraction of the moon is exerted obliquely on the waters in the Channel. At this time the tide water is lowest there. As the moon moves westward, the water in the Atlantic Ocean is drawn obliquely towards the moon; the tide begins to rise and flow eastward towards the European and African coasts. The tide continues to rise an hour after, after the moon has passed the zenith of any point of longitude.

In three hours after the moon has passed the zenith of longitude, it has leaped the Atlantic Ocean, then the waters are drawn obliquely after it; then the tide rushes in a westerly direction towards the eastern coast

of America, where it dams up against the coast to the height of about six feet.

Although water is not in a complete state of rest at the neutral point between the ebb and flow of the tides, yet it is in that condition that when the tide begins to flow it dams up against the water, which is in a comparative state of rest, and makes what is termed a tidal wave or boar.

The variation in the height of the tides in different places is due to the configuration of coast lines. The height that a tide will rise in a given bay may be approximately estimated by measuring the distance from point to point of the head lands which mark the commencement of the indentation in the coast.

From Cape Sable, N. S., to Cape Cod, near Boston, U. S. A., the distance is about 350 miles. In Boston Harbor the tide rises about six feet. As the tide moves onward, the channel for its flowage becomes more narrow. Between Cape Sable and Frenchman's Bay the distance is about 200 miles; here the tide rises much higher. Between Annapolis, N. S., and St. John's, N. B., the distance is about 40 miles; here the tide rises to the height of 45 feet. Further up the Bay of Fundy the tide rises to 50 feet, and at the head of the Bay the tide rises to the height of 60 feet. The spring tides sometimes rise to the height of 70 feet. Not only must the water gain in height what it lacked in width of room for flowage, but the incoming tide dams up against the water as it flows into the Bay, so that the two causes, viz., a wide entrance from point to point of coast line leading into a deep Bay, which grows more narrow towards its head, and from which the water cannot find exit, but dams up against the water in the Bay, produces the highest tide on the globe.

The fact that the tide rises in the Bay of Fundy to the height of 60 feet, and during some spring tides, when there is a strong south-west wind, to the height of 80 feet, must cause a flowage of water up the streams that empty into the Bay whenever the tide flows. The inhabitants living near the margin of these streams may take to their boats when the tide begins to flow and float up the stream, and when it ebbs float back again to the landing-place near their homes.

## THE CAUSE OF EARTHQUAKES.

The cause of earthquakes cannot be learned by observation, since the force which produces them is hidden far below the surface of the earth. Men who excel in learning and observation merely, are not adequate to the task of explaining the phenomena they observe. The power to learn from observation and from books is one thing, but inventive talent is quite a different quality of the mind. Great learning may fit one to occupy a professor's chair in a college,—he can teach what he has learned, but, unless he possesses originality, he should stick to his teaching, and not try to give original explanations, even if there happens to be coincidences which seem to give plausibility to the explanations.

It has been thought by some that because it is found that the heat of the earth increases one degree for about every fifty feet as the descent is made in the earth, that at a certain point below the surface of the earth that matter there is in an incandescent condition, and therefore it is in a fluid condition, and that the so-termed crust of the earth rests on a red hot fluid mass, and that it is the bottomless pit of fire. These theorists forget that pressure condenses matter. They know that the pressure of the water above on the water below a mile from the surface of the ocean is enormous; they know that pressure will convert some gases into a solid. Inferentially the pressure produced by ten miles in depth of the crust of the earth on the matter below it would convert said matter into a solid. It has been inferred that the average weight of the earth is two and a-half times the weight of rocks. The inference is reasonable, because the pressure of the outer part of the earth on the interior parts would reduce the latter parts to great solidity. Hence to suppose that the bed of the ocean would sink to a greater depth would be about as reasonable as to suppose that a piece of dough or putty would sink into the marble slab or board on which it was being kneaded, or that a piece of marble would not sink into a mass of soft putty if it was laid on it. Some other force besides the pressure of the rocky matter which lies under the Atlantic ocean on the incandescent matter below it would be necessary to change its shape or depth.

A change in the position of the poles, which would increase the centrifugal tendency to a greater degree in some localities, would be a sufficient force to materially change the position and configuration of the bottom of the ocean, but the position of the North Pole star to the earth does not indicate any change in its position to the North Pole.

If the mass of matter below the oceans would yield to pressure, then we might be apprehensive that the American continent, with its high ranges of mountains, would in time sink out of sight; but while the North Pole retains its present point this will not occur, because the dense matter which underlies the American continent will prevent it from sinking. We must look to other causes than the disturbances of the earth's crust to account for earthquakes.

It is known that graphite or carbon exists in considerable quantities deep below the surface of the earth. It is also known that if a current of electricity passing through a wire is interrupted by carbon points, that at the points of interruption a bright light will be produced, and that the carbon will be consumed. It is also known that a current of electricity is constantly passing around the earth from west to east. Hence, all that is necessary to cause the combustion of a mass of graphite situated at any point is, that a strong current of electricity, combined with a certain amount of air, should come into contact with it. The electricity near the surface of the earth is diffusive,—it is radiated to the atmosphere; but deep below the surface of the earth there are continuous mineral deposits, which serve as good conductors of currents of electricity. They are conveyed from point to point continuously. It is known that fissures in the rocks extend to vast distances, and that water flows through some of them, and others are dry. Crevices lead to these fissures. Through some crevices water flows upwards through them in perpetual springs. Through others air is pressed downwards and fills the fissure. One of the latter fissures leading to a deep deposit of graphite, in conjunction with a current of electricity, would be all that would be necessary to insure its combustion; the adjacent rocks would be melted. At a sufficient distance below the surface of the earth the melted matter would not cool off. The combustion of the graphite would go on; a cavern would be formed; it would enlarge through the erosion by fire; there would be formed in time a subterranean lake of fire; for centuries the graphite would continue to burn; while masses of fused rock would fall into the seething lake of liquid lava. In process of time a vein of water passing through a fissure in the rocks would be reached; then water would rush into the super-heated cavern. Any scientist knows that if water falls on incandescent metal that it will be immediately separated into hydrogen and oxygen, and if this gas comes in contact with red-hot metal

it will ignite, and an explosion will follow. Boilers are exploded in this way. Every engineer knows how dangerous it is to allow the water to get so low in his boiler that the iron composing the flues may become red-hot. An expert engineer would know what would be the result if a large quantity of water should rush into a cavern hundreds of rods in length and half full of substances heated to a white heat (a condition produced by the burning of carbon by electricity). He knows that an explosion would occur; he knows that if the rocks would not yield which composed the walls of the cavern that the gas would find vent through the fissure by which the water flowed into the cavern; it would rush through the one filled with air; it would reverse the current of water flowing into the cavern; he knows that steam would be formed, and it would rush through the fissures with a rumbling noise, and that the concussions produced would make the earth shake. If the volume of steam was large enough, buildings situated on the line of the fissure through which the steam was passing would totter and fall. At some parts the accumulations of steam would be so great that the earth in some places would be rent assunder, and if by chance men or animals were standing above the spot where the earth opened they would fall in, and then the earth would instantly close, so that their burial place would never be known. In some places these fissures extend for hundreds of miles, and the earthquake extends for an equal distance, but in proportion to the distance from the steam forming cavern the vibrations of the earth would be less and less, till only a faint trembling. The trembling of the earth would be felt laterally to the fissure to a wide distance. As fissures branch and run in different directions the earthquake would diverge from straight lines.

Anyone who has seen the wreck of an exploded boiler can form some idea of the agitation of the earth which would be produced by the formation of a million times the amount of steam that the largest boiler can contain, and sent bounding through the crevices. In some places such a formation of steam would burst open the rocks, the lava would be forced out, a volcano would be formed, and from the crater would arise ashes and smoke. From time to time veins of water would be reached, then a violent eruption of the volcano would occur; the explosion would scatter the ashes of the burned graphite for scores of miles. Will some learned scientist explain how these ashes were formed if not by the burning of carboniferous substances?

Doubtless the sending of currents of electricity through the earth from galvanic batteries

has augmented the combustion of graphite and the formation of earthquakes. It might be inferred by the semi-thoughtless that where the greater number of telegraph wires converge, there would be the greater number of earthquakes; but these narrow-headed thinkers forget that the currents of electricity must pass through beds of graphite which are supplied with air through an underground fissure, since, as has been explained, the electricity near the surface of the earth is too diffused to produce combustion of carboniferous substances. A body of graphite exhausted before water reached it would not produce an earthquake, and after the graphite has been consumed no other earthquake can take place there.

The recent earthquake at Charleston may never recur. The consumed graphite cannot again form a heated cavern. The water which was forced outwards after its first flowage inwards will return, as it did return, to produce a succession of earthquakes. The first inflowage must have been slight, because the first trembling of the earth in the States was slight; this was followed by a greater inflowage of water and hydrogen, and steam was formed on an immense scale, producing an earthquake which shook the city to its foundations, but the steam and gas would again reverse the water course, and after the steam which caused the trembling of the earth had been changed into water, for a time the quaking of the earth would cease; then the current of the water in the fissure would flow into the cavern again, then more hydrogen, and steam would be produced and another earthquake would follow; but each inflowage would tend to cool the heated matter in the cavern until the heat sufficient to produce steam enough to cause a reversal of the flowage in the cavern would cease; then the cavern would be flooded, and the quaking of the earth would cease.

It is stated that the rails along the lines of the railroads leading from the city of Charleston were bent in some places in a manner that would indicate that the earth beneath them rolled like waves of the sea, and that on other lines the rails were bent in an opposite way. This is explained by the idea that the rolling of the land which was vertical to the fissure through which the steam rushed resembled the waves of the sea, while laterally from the fissure the movement of the earth would produce lateral oscillations. The filling of the wells in the city and adjacent to it was produced by having the currents of the water reversed. The greater current of electricity which circulates around the earth from west to east is at the equator, and in the Torrid Zone.

Hence the Torrid Zone and countries adjacent to it is the point of the world where the greater number of earthquakes occur.

Artisans who drill for water sometimes find empty fissures. Others are filled with flowing water. Sometimes a space is found between layers of rocks, filled with sand mixed with shells, giving evidence that water once flowed through the fissure, and that sand had choked

it up so that the water ceased to flow through it. There would be a lengthy extent of the fissure that would be empty, a crevice would allow air to pass into the empty portions of the fissures, and in this way it could find its way to beds of graphite at a point where a current of electricity was passing; then combustion would follow, and in time a superheated cavern would be formed; then the inflow of water would produce an earthquake.

## PROOFS THAT A DELUGE OCCURRED.

It is supposed by astronomical observers that the atmosphere of the planet, Mars, extends several times further from the body of the planet than the atmosphere of the earth does from the earth. Such an atmospheric condition in Mars would cause a great and constant accumulation of clouds over the surface of it. There would be constant flashes of lightning from cloud to cloud, and from clouds to the planet. The electric light of Mars would be interblended with the reflected light of the sun. The brilliancy of Mars can in this way be accounted for.

If the atmosphere of the earth extended outward a hundred times further than it does, the conditions would exist for the ascent of clouds many times larger than those which are now formed under the present atmospheric condition. From the augmented clouds there would be continual discharge of electric shafts; these would make the water in the oceans boil; the earth would be melted, and the condition of the earth would be changed—it would become a luminous star.

The earth has just the amount of atmosphere necessary to produce all the clouds which supply the earth with its annual fall of rain, and the amount of electricity which prevents the earth from cooling off.

The theory that the earth was hurled from the sun, and that it has been cooling off for millions of years, is founded on two facts—First, the internal parts of the earth are incandescent. In another part of this work it has been shown how the earth was formed, so that it is red hot from the centre outward to the crust, but the crust was subsequently added and was never red hot. The second fact is the peculiarity of rocks which have the appearance of having been grooved by ice floe.

The opinion that the earth has been cooling off for millions of ages until an arctic climate reigned in one-half of the north temperate zone, and then after the lapse of an indefinite portion of time this tendency of the earth to

cool off in this region was reversed is an incongruous opinion.

The upheaval of continents is given as a reason for this change in temperature, but learned scientists seem to forget one class of facts when they are trying to build up a theory on other data. It is known that in high northern latitudes where the ocean extends it is warmer in winter than it is on the land. Observation would teach us that if the northern half of the north temperate zone was sunk, so that the oceans would float over it, the region of the formation of ice floe would be diminished, *i. e.*, the southern limit of it would be further north. It is, therefore, evident that the uplifting of continents neither reverses, increases, or produces a tendency in the earth to warm up or cool off. Whatever of this tendency is observable in any locality is due to other and explainable causes. The account of a glacial era is a pseudo-scientific myth.

### SCIENTIFIC EXPLANATION OF THE CAUSE WHICH PRODUCED A SUBMERGENCE OF THE ENTIRE EARTH.

If the earth again should make a quarter revolution from north towards the south while continuing its rotary motion, there would be another deluge, and all the mountains of the earth would be covered; a quarter revolution of the earth from the north southwards would change the position of the poles indicated by N. and S.; they would become points at the equator; such a partial revolution of the earth would change the equatorial form of the earth; the points N. and S. would be each 13 miles too high, *i. e.* they would be 13 miles too far from the earth's centre to be in harmony with the present equatorial form of the earth; the centrifugal force which caused the present spheroidness of the earth would, with its irresistible power, change the new form of the earth at the equator; it would uplift the parts that were too low, and new continents would

be raised from the deep; gravity acting alone at the poles would pull down the parts that were too high to be in harmony with the present polar form of the earth; rocks would sink lowest, soil next, and water would overspread all the continents previously existing; the sinkage of the new poles would be 13 miles, and the sinkage would be gradually less each way, radiating from the poles, but the sinkage would be sufficient to submerge all the mountains of the previously existing continents. It is not necessary to show what caused the earth to make a quarter revolution from north towards the south in order to prove that it did occur, any more than it is necessary to show what caused the Pacific ocean to be larger than the Atlantic ocean. In order to prove that it is larger, measurements show that the Pacific ocean is the largest body of water on the globe, and the drift proves that the continents were once under water. Doubtless when the earth made its partial revolution from the north towards the south, that the North Pole went further than the former equator; then it receded and continued to oscillate until the present position of the poles was fixed.

If previous to the Noachian deluge the land had encircled the earth in an unbroken line, then only one-half of it would have been submerged, since only at two points and for 6,000 miles radiating from them would a sinkage of the land occur. Doubtless, then, as now, water covered more than one-half of the equatorial portion of the globe.

The drift and rocky formations of the earth show most conclusively that they were once under water for a long period. A quarter revolution of the earth in the time of Noah would not only produce a flood similar to that described by him, but new continents would be uplifted; the area which constituted the Arctic regions would be uplifted, and would be brought within the region which now con-

stitutes one-half of the north temperate zone. The rocks which had been plowed for ages by ice would be covered with metamorphic materials ere they emerged to form the series of rocks which geologists love to examine. Tropical animals would be carried by the turning of the earth to the part which is now Northern Siberia. Some of them are frozen and preserved to the present day. The Garden of Eden would be carried with the turning earth to a point near the present North Pole, and buried beneath an Arctic sea as the South Pole moved northward. There are no ice-grooved rocks in Asia or Siberia. This gives us undoubted evidence that the earth changed its axis as described. During the flood many coal fields would be formed. The breaking up of the fountains of the deep would uproot vast forests, the trees would swim some of them far below the surface of the waters, they would jam and interlace, the interstices would be filled with floating leaves, the mass find lodgment in the emerging continents, but ere it gained the surface it would become covered with layers of sand and clay; other swimming masses would find lodgment on this and form other layers; pressure would consolidate these masses, and heat would change them into anthracite and bituminous coal.

This essay is an epitome of a larger work which the author intends to write, and it is hoped the sale of this work will encourage him in the publication of a larger work.

The author of this essay feels disposed to incline his head uncovered in reverence for the Christian pastors who still hold the opinion held by his father and other ministers of his time, "that in six days the Lord made heaven and earth, the sea, and all that in them is," and that a flood covered the whole earth.

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# DEFINITION AND NEW NAMING OF PHRENOLOGICAL ORGANS

By Prof. J. W. Crouter.



- AMATIVENESS, Disposition of the sexes to love each other.  
PHILOFROGENITIVENESS, Love of one's young, love of pets.  
ADHERESIVENESS, Tendency to form unions, love of society.  
INHABITIVENESS, Love of the place where one has lived.  
CONCENTRATIVENESS, Tendency to concentrated thought.  
VINCOTIVENESS, or *Combativeness*, Conquering disposition.  
DESTRUCTIVENESS, The hurting or killing propensity.  
ALIMENTIVENESS, Appetite for foods, digestive power.  
ACCUMULATIVENESS, or *Acquisitiveness*, Propensity to save property  
SECRETIVENESS, Power to prevent the face from showing emotions.  
CAUTIOUSNESS, Disposition to be on guard in times of danger.  
APPROBATIVENESS, Desire to be noticed and approved.  
DOMINATIVENESS, or *Self-Esteem*, Confidence in one's self, loves to rule.  
FIRMNESS, Stability of purpose, fixedness of will.  
CONSCIENTIOUSNESS, Innate sense of equity and fairness.  
HOPEFULNESS, or *Hope*, Tendency to hope for pleasing things.  
MARVELLOUSNESS, Tendency to believe in signs and omens.  
DEVOTIOUSNESS, or *Veneration*, Reverence for superiors.  
BENEVOLENCE, Desire to make others happy, sympathy.  
CONSTRUCTIVENESS, Disposition to construct, natural ingenuity.  
ESTHETICNESS, or *Ideality*, Sense of the grand and beautiful.  
IMITATIVENESS, Tendency to talk and act like others.  
MIRTHFULNESS, Disposition to laugh at absurdities.  
INDIVIDUATIVENESS, or *Individuality*, Tendency to see things.  
FIGURATIVENESS, or *Form*, Perception of the shape of things.  
PERSPECTIVENESS, or *Size*, Judgment of size at a distance.  
CHROMATIVENESS, or *Color*, Appreciation of colors or tints.  
METHODICNESS, or *Order*, Tendency to systematize.  
NUMERATIVENESS, or *Calculation*, The mathematical talent.  
VIATIVENESS, or *Locality*, Power to find one's way.  
EVENTIVENESS, or *Eventuality*, Power to remember events.  
CHRONOSENESNESS, or *Time*, Perception of duration.  
SYMPHONOUSNESS, or *Tune*, Love of harmony in sounds.  
LINGUACIOUSNESS, or *Language*, Power of speech.  
COMPARATIVENESS, or *Comparison*, Reasoning from analogy.  
CAUSATIVENESS, or *Causality*, Traces causes to effects.  
PHYSIOMATIVENESS, Power to read character from faces.

*Explanation of the Marking of the Chart.*—The figures used in marking this chart indicate the strength of each of the characteristics described in the lines. The figures signify as follows:—1, very weak; 2, weak; 3, moderate strength; 4, average strength; 5, full strength; 6, large, or great strength of characteristic; 7, very strong.

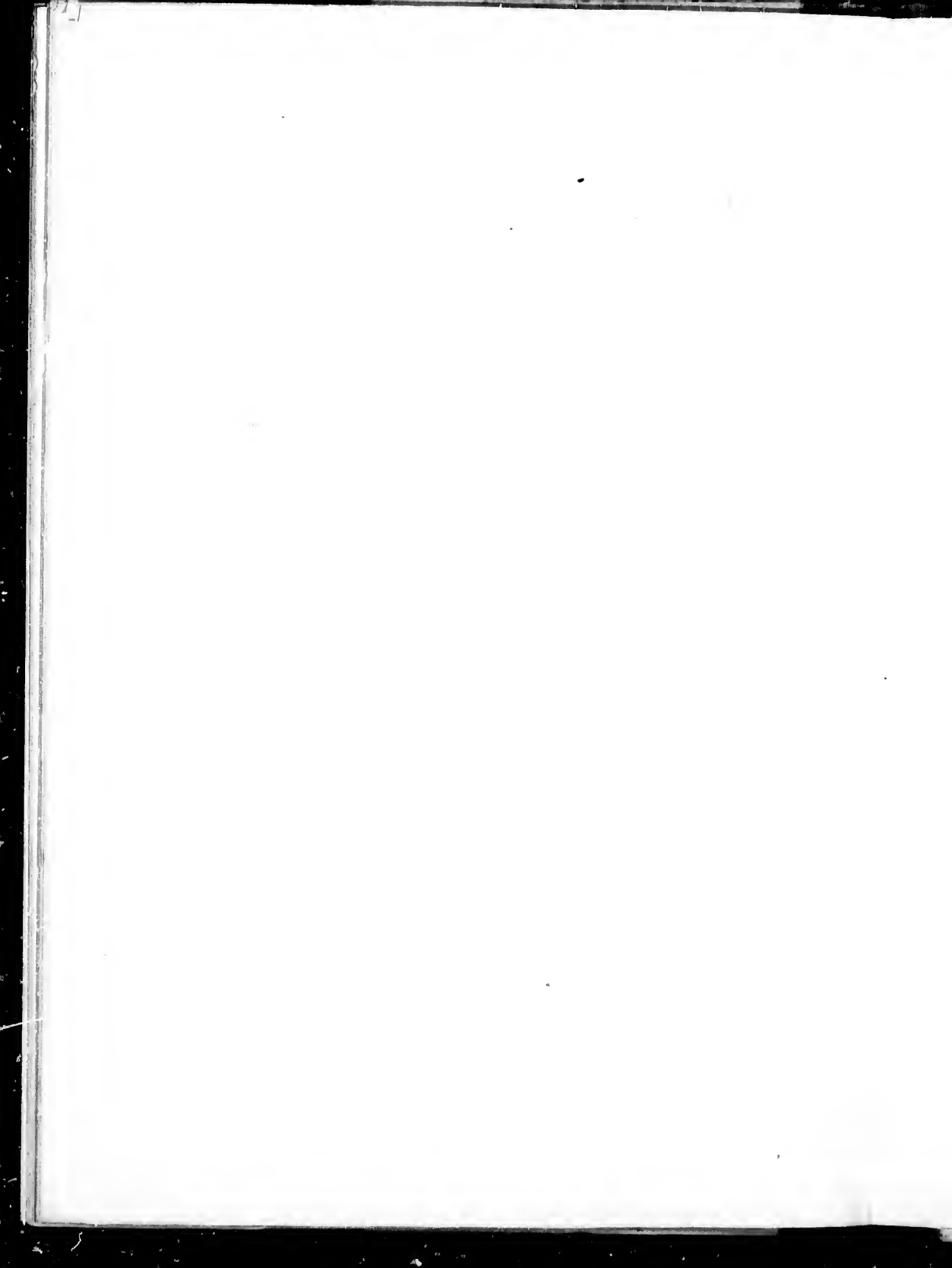


# ICAL ORGANS

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The published and unpublished Poems of the author would make a volume of 200 pages. His poem, in manuscript, relating to his Voyage down the Red River of the North, was destroyed in the conflagration of the C. P. R. Station, Winnipeg. The author finds that he can rewrite the poem from memory. This poem will make over a hundred printed pages.

Among the other manuscripts burned was a treatise on American Finance. In this essay, a better system of finance than the American Government adopted was explained. Through this system, if it had been put in force, the American Government might have been out of debt by the year 1880 without reduction of expenditure or increase of taxes or inflation of currency. The author wrote out a synopsis of the principles embraced in the essay, and sent them to Sir Leonard Tilley, late Minister of Finance, and now Lieut.-Governor of New Brunswick, and this statesman commenced his answer in the following words:

Ottawa, 2nd Feb, 1880.

Dear Sir,—Many thanks for your interesting letter of the 24th Jan., &c.

Such acknowledgments ought to be convincing that there is something more than visionary theories in the writing of the author. Since the time of George III. of England, it has not been the policy of governments to give place or emolument to authors. The not-helping policy is, perhaps, right enough since it would increase the number of starving authors by the legion; though, considered with regard to poise, the author of this essay could not be numbered as one of them, since he weighs 195 lbs.

Both the American and Canadian press have noticed the lack of attendance to lectures. It seems that the lecture era has passed, since it has been stated by some American newspapers that the leading pulpit orators are unable to make any engagements to lecture, hence Prof. Crouter has resolved to write a number of small works to take the place of lectures, since he is satisfied that these essays will convince the public that he is capable of giving a superior lecture.

In evidence that Prof. Crouter is an expert phrenologist, read the following Press Notices:—

"Prof. J. W. Crouter, formerly of Cobourg, Ont., lectured in Brandon, Monday, 29th inst. His lecture was eloquent and attentively listened to. He gave a number of illustrations of the way weak or small phrenological organs impaired business judgment. In each instance he pointed out how to cultivate and strengthen the weak organs. In the second part of the lecture he spoke on the application of zoogeny in the improvement of different varieties of animals and plants, incidentally his remarks must be of importance to all who listened to them. A liberal silver contribution and a vote of thanks gave satisfactory evidence that his lecture was well received. The Professor has been practicing phrenology in the city for the past three weeks, and all of his patrons acknowledge his proficiency in the science to be equal to that of the celebrated O. S. Fowler. The Pro-

fessor goes east to-morrow to publish his new work on the "Universal Deluge."—Brandon Mail.

Read the following from the *Tribune-Review* of Portage la Prairie:—

"Prof. J. W. Crouter, of Cobourg, Ont., author of Phrenology in Rhyme, or a Synopsis of Phrenology, of 24 pages, has been practicing Phrenology in Portage la Prairie for a week. His patrons speak highly of his skill. One gentleman who received a chart from O. S. Fowler, for which he paid \$5, admitted that J. W. Crouter was fully equal in the accuracy of his description of character to O. S. Fowler. Prof. Crouter is the author of an essay on the Creation and the Tides, which proves that he is a thinker of more than ordinary ability."

From the *Daily Manitoba*, June 4th, 1886:—

"Prof. Crouter has been practicing Phrenology in Winnipeg for over a year. Many of the wealthy citizens have patronized him. Like doctors, he makes calls at offices or residences when requested, verbally or by card. For the past four months J. W. Crouter has been writing essays. They will be published soon. That J. W. Crouter has merit as a writer is evinced by the fact that he has received acknowledgments for some of his writings from the Earl of Dufferin, Marquis of Lorne and Marquis of Lansdowne."

The following is from the *Rat Portage Progress*, Dec. 5th, 1885:

"Prof. J. W. Crouter has been doing a rushing business in his profession as a Phrenologist in Rat Portage for two weeks. Among his patrons were quite a number of our leading townsmen. The clever way he describes the leading traits of character of his subjects shows that he has had great experience in his profession."

From the *Manitoba Liberal*, Portage la Prairie, Sept. 26th, 1884:

"BURNSIDE,

"(From our own Correspondent.)

"J. W. Crouter delivered a lecture on Sabbath evening in the Methodist Church here on 'The Deluge.' He treated the subject very ably, and proved from scientific facts that the 'Deluge' we read of in Scripture is no fable but a reality. Mr. Crouter is a very pleasant speaker, and comes from Cobourg, Ont. He was attentively listened to by a very respectable audience. Mr. Batters occupied the chair, and the Rev. Mr. Todd closed the meeting with prayer."

It is a mistake which some persons make to suppose that statesmen are inventors of political schemes. As a rule, every new political idea is invented by some original thinker. If it becomes popular, then the statesman will introduce the measure in Parliament, and if it passes he will get office and emoluments, and the impecunious philosopher who first taught the scheme will have the satisfaction of knowing that he has been of service to humanity. This unfairness is now bearing its fruit, since the author knew several years ago that the present hard times would come, and he also knew how they could be prevented, but the Government and the people withheld the means necessary for their publication.

