

Frissell

Tobacco.

Dr Frissell

Compliments of the Author.

PAPER READ BEFORE THE MEDICAL SOCIETY
OF WEST VIRGINIA.

HEALTH—How Acquired and How Preserved.





TOBACCO.

The Odious Weed That Ranks Chief Among the Vegetable Tribe.

VILE, VENOMOUS AND POISONOUS.

It Inflicts More Harm Upon the Human Race
Than any Other Agent in the
Universe Except
Rum.

ITS ORIGIN, DISCOVERY AND USE,

Old Time Penalties and Prohibitions—Its
Baneful Effects—A Thing to be
Avoided by all Desirous
of Health.

Paper read by Dr. Frissell, of Wheeling, before the West Virginia State Medical Society.

The subject I have selected for some remarks at this time is health, how it is possessed or acquired, and how preserved. Health in its comprehensive meaning implies more than the performance of the natural functions of the body without pain. It implies energy, capacity for endurance, and the courage and character that come from those powers. In this sense, the sense given it by the old Greeks and Romans, health is the capital of a people and furnishes them with the means of present prosperity and future greatness. It lengthens the period of life and adds a thousand enjoyments which we could not otherwise possess. If the constitution is perfectly sound, if there is no hereditary or acquired taint of disease in the system, the answer to the above questions is, obey the physical and organic laws which govern us as physical and organized beings. My remarks at

this time will be directed to the calamities arising from the infringement of the organic laws, though the physical and moral laws will be referred to. The ways by which the organic laws are infringed are numerous, and many of them withal very strange. I regard

Alcohol

as the greatest agent of destruction both to body and mind that ever was introduced into society since the creation of man. There is no vice that produces half so much bodily and mental suffering, half so much crime and immorality as the use of alcohol. As this is now employed, it ranks first among the agents the use of which violates organic and moral laws and results in the destruction of health. The primary effect of the use of alcohol is the transgression of the organic laws, that of the moral laws being secondary. While I assign this pre-eminence to alcohol, there are numerous articles in common use in society that produce in greater or less degree, injurious effects on the human constitution; and to one of the most remarkable of these I am about to refer. In this country, and indeed all over the world, it is one of the great articles of luxury nor do we have to cross the ocean for it as we do for our fine wines, our teas and our spices, but like rum, whisky and cider brandy it is one of the blessed—I might perhaps better say, cursed—productions of our own beloved country. The article, gentlemen is

Tobacco,

A full account of its production, its introduction, and its spread throughout the world, would constitute one of the most curious chapters in the history of human nature. Certainly there is hardly any production of the vegetable world whose aspect and properties have less to recommend them to the favor of our senses and appetites, in their

healthy and unimpaired condition than this plant. Its external aspect has the lugubrious physiognomy of the family to which it belongs, suspicious, venomous and poisonous. Its taste and odour are disagreeable in the extreme, (no known animals but man and the tobacco worm can be made to eat it or touch it) and its effects when eaten are in perfect keeping with its external appearance. But notwithstanding that, and the odious character of the plant, it has of all the vegetable tribes, become the chosen and chiefest of our race. If at this moment those products of the vegetable kingdom which minister merely to the delight and gratification of our senses, should present themselves for our suffrage, the ballot boxes would

Tell the Same Story

throughout the civilized and heathen world. In the saloon of opulence and fashion, in the halls of science; in the chambers of legislation; in the assemblies of the bishops and clergy in the national and state boards of health; in the workshops of labor, and among the wild and varied hordes of savage life, the whole innumerable host of fruits and flowers would be rejected; the former with their delicious flavors, the latter with their multiform beauty and shades of color, with their verdant and spicy odors, all would pass by as scarcely worthy to form a garland wherewith to crown the nauseous and somber-looking tobacco. At the time of the discovery of America, the tobacco plant was cultivated and used by the nations of the West Indies, and in different parts of the continent bordering on the Gulf of Mexico. In 1598 tobacco was sent by Hernades de Toledo into Spain and Portugal from Tabaco (from which it derives its name tobacco), a province of Yucatan, where it was first found by the Spaniards; from thence it was carried in 1560

As a Curiosity

into France, by Jean Nicot or Nicotius, ambassador at the court of Lisbon, whose name is now immortalized by its application to this genus of plants (the botanical name being *Nicotiana tabacum*). From this period the use of tobacco spread rapidly throughout the continent, and in half a century it was known in most countries in Europe. Its use became so general that it attracted the attention of the dignitaries of church and state, and they deemed it necessary to interpose and stop the extravagant use and indul-

gence in it, by the severest prohibitions and penalties. James the First, of England, gave orders that no planter of Virginia should cultivate more than 100 pounds. Pope Urban the Eighth, published a decree excommunicating all who should take snuff at church.

Smoking Was Forbidden

in Prussia under the penalty of having the nose cut off. A Turk who was found smoking in Constantinople was conducted through the streets of that city with a pipe transfixed through his nose. In 1602, James the First published his famous counterblast against tobacco, in which he warns his subjects in the most earnest manner, not to sin against God and harm their own persons and goods, and render themselves scorned by strangers who should come among them, by persevering in a custom, loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black striking fumes thereof, nearest resembling the horrible tygian smoke of the pit that is bottomless. Raphael Tharius writes a Latin poem expressly in its praise, in which he styles the plant "the gift of heaven and ornament of earth." The poet you see has a brilliant imagination, is highly civilized and was probably very fond of tobacco. Camden in his life of Queen Elizabeth, says that men used tobacco everywhere, "some for wantonness, and some for health's sake, and that with insatiable desire and greediness they

Sucked the Stinking Fumes

thereof, through an earthen pipe, which they presently blew out again at their nostrils, so that Englishmen's bodies were so delighted with the plant that they seemed as it were degenerated into barbarians." Even in this country where the use of tobacco originated, we find our puritanic ancestors guarding against its abuse by salutary statutes. In the old Massachusetts' colony laws, is an act laying a penalty upon any one, "who shall smoke tobacco within twenty poles of any house, or who shall take tobacco in any inn or common victualing house except in a private room, so that neither the master of said house nor any of the guest shall take offence there at."

In the earliest records of the Harvard University soon after its foundation is the following regulation. "No scholar shall take tobacco unless permitted by the President with the consent of his par-

ents or guardians, and on good reasons first given by the physician, and then in a sober and private manner."

Dr. Venner in a work entitled "Via Recta ad Vitam Longam," published at London in 1638, gives a brief summary of the

Injuries Done by Tobacco

He writes thus: "It d;leth the brain, dimmeth the sight, vitiateth the smell hurteth the stomach, disturbeth the humors and spirits, corrupteth the breath, induceth a trembling of the limbs, exseccateth the wind-pipe, lungs and liver, annoyeth the melt scorcheth the heart and causeth the blood to be adusted, in a word it overthroweth the spirits, perverteth the understanding, confoundeth the senses with sudden astonishment and stupidity of the whole body."

The public regulation of the Canton of Berne placed the prohibition of smoking in the list of the ten commandments and immediately under that of adultery. There was also a court established called the chamber of tobacco for the express purpose of trying and punishing all violations of their prohibitions. In addition to the above, we cannot let the subject pass without giving the opinion of an old perigrinant of New England known by the title of

"Rain Water Doctor."

He was said to travel always before the storms, prescribe and leave so as to be in advance of the rain. It is somewhat difficult to trace his ideas through his extravagant and almost unintelligible writing, but when they are traced they are at least in accordance with the foregoing. He says, "Then in this juncture, notwithstanding the magnitude of the task and the little time to perform it, one must yield to necessity; therefore in the list of prescriptions, tobacco being computed the most offensive and notorious, we have to proceed to the detection of the tendency of the celebrated fashionable herb. Upon that head it is obvious to the beholders of its use, that incomparable in its prevalency, they must admit the ingenious industry or pious fervency of its constant worshippers, having found out to denote their commendable reverence or multiply their recreative enjoyment, and receive the bliss of their idolized portion, a mode and rite of triplicating permanent libation, mentioning the illustrious members of the

Herb-Ruling Triarchy.

For one must be accounted the periodical sternutitory, or the continued pulverized idol, strenuous nostril communion, and as partner of the salutiferous exertion must be reckoned the herbus sputative mastication; to complete the trifarious herb despotic government, must be added its efficacious combustion, or the sportive holocaust sacrifice of the nutigerous fumigation. By this undeniable specimen of the plant fumigating production, one is advised that it is not enough to have the precaution to abstain from the fumigaling recreation; those anxious to recover and desirous of health must also have the caution to avoid as they would the plague and contagion, the pernicious company of those mouth inflamed torch bearers, effectual promoters of destruction only comparable to Vesuvius, which of their fulminous bowels void nothing but calamitous ignition, bituminous principle, calx, and baneful infection."

Thus, gentleman, has tobacco, the use of which

Originated Among the Savages.

where many, very many of our genteel and fashionable customs had their origin, spread throughout the civilized world.

It has made its way as you see against declamations of the learned, the prohibitions of civil and religious authority, and it now gives rise to an extensive branch of agriculture and of commerce in every part of the globe. Yes, gentleman, though the learned have declaimed, the moralist preached and legislators passed their enactments against the use of tobacco, it has all been to no purpose. In every corner of the earth among the civilized and the savage, the high and the low, the great and the small, the rich and the poor, are found its thousands, yes, I may say its millions indulging in the delights of the pipe, the snuff box and the quid.

Now I am not going to inflict upon you a long lecture on morality, neither am I going to tell you that the use of tobacco is the most sinful and injurious practice on earth, but I am going to tell you it is

A Great Evil

and one of sufficient magnitude to deserve the most serious attention.

The tobacco which is raised in the warm climates is mild in its flavor while that in the colder latitudes is

more strong and pungent. The Bengal tobacco is perhaps the most mild and pleasant in its properties. After this the West India variety, from which is made the Havanna or Spanish cigars. Next is that of the southern States, and lastly that tobacco which is raised in the northern parts of the Union, which is the most acrimonious and pungent of all. The principle which gives to tobacco its peculiar character is an empyreumatic oil, which is found in no other species of plant, and this oil is one of the most deadly poisons known. By the experiments of Brodie, two drops of the oil of tobacco applied to the tongue of a cat, produces

Death in Fifteen Minutes.

Tobacco given in moderate quantities to those unaccustomed to its use, gives rise to confusion in the head, vertigo, stupor, faintness, nausea, vomiting, and general debility of the nervous and circulatory functions, which if increased, results in alarming and even fatal prostration.

The symptoms of its excessive action are severe retching with most distressing and continuous nausea, great feebleness of pulse, coldness of the skin, and sometimes coma and convulsions. It probably operates both through the medium of the nervous system, and by entering the circulation. It is an active vegetable poison, and it has been employed in a variety of ways, much less now than formerly, for the alleviation and cure of disease, which I shall not stop to notice. Its great and universal use, as we all know, is as a luxury, and were it not for the intervention of a certain law of the animal economy, this substance, used to the extent that it now is, would destroy more than the sword, pestilence and famine. This remarkable law is, that the power of use and habit is capable of reconciling the system to bear with apparent impunity what in an unaccustomed state, would prove at once highly deleterious, or

Even Fatal.

This law is strikingly exemplified in the use of opium, chloral, alcohol, tobacco, and many other poisons highly injurious in their influence upon health but so changed in their effects by habitual use as to become in the imagination of those who employ them almost indispensable comforts and first class luxuries in life.

By use the system may be made to bear such quantities of poisons without

showing any very bad effects as at first would cause almost immediate death. A Chinese opium eater would take for his evening quid what would quiet into an eternal sleep any half dozen unpracticed individuals in this room. The two quarts of whisky which the regular toper will make way with in a day, without feeling it much, would make sad work with a fresh subject, and a small portion of a gentleman's tobacco quid taken by an individual who has never used the article, excites nausea and violent vomiting, produces great prostration of the system, and many other alarming symptoms, which those who have been in the habit of witnessing the effects of tobacco on new beginners, are very well aware of.

Smoking, chewing and snuffing are the three principal ways of using tobacco. Of these three ways I imagine smoking is

The Most Injurious

and the most capable of abuse, since in this process the active principles of the tobacco are volatilized with the smoke and extensively applied to mouth, nose and fauces, as well as the wind pipe and lungs.

In no country, perhaps, is smoking so much indulged in as in Germany, where it has become a mighty evil, and the United States is fast verging to the same condition. One German author, in speaking of the injuries done by the extravagant use of tobacco, writes thus:

"This plague, like the Egyptian plague of frogs, is felt everywhere and in everything. It poisons the streets, the club and coffee houses; furniture, clothes and equipage are redolent of the abomination. It makes even the dullness of the newspaper doubly narcotic. Every eatable and drinkable, all that can be seen, felt, heard or understood, is saturated with tobacco. The very air which we breathe is but the conveyance of the poison into the lungs, and every man, woman and child rapidly acquires the complexion of a boiled chicken. From the hour of their waking (if nine-tenths of the population can be said to awake at all) to the hour of their lying down, the pipe is never out of their mouths. One mighty fumigation reigns, and human nature is smoked dry by the tens of thousands of square miles."

The German physiologists compute that of twenty deaths between eighteen

and thirty-five years, ten originate in the quiet and unnoticed

Abuse of the Constitution

by smoking.

Next to smoking stands chewing, which, though less indulged in than the former, is very extensively practised. The principal argument we hear advanced in favor of this practice is its power in preserving teeth. This argument carries with it but little weight. Tobacco, like other narcotics and stimulants will sometimes blunt the sensibility and relieve pain in diseased teeth, and keep them much of the time from coming in contact with acids and other articles that might impair their structure.

I shall only refer to the third form in which tobacco is used, namely, that of snuff, by saying that in addition to the general train of evils already mentioned, the use of snuff tends to dry the nasal membrane, injure speech, and induce catarrhal affections.

Lord Chesterfield, after stigmatizing the tobacco habit in every form as vulgar and filthy, adds:

"Besides, snuff-takers are generally very dull and shallow people and have recourse to it merely as a fill-up to the brain. By all means, therefore, avoid the filthy custom."

This may seem severe, but it is from the

Great Model of Gentility.

Chesterfield, and should not be disregarded.

I will not undertake to give estimates in regard to the amount of tobacco used. The general effects of the article are the same, whatever may be the manner of using it. The greatest injury, however, is done by smoking. First, because smoking is much more extensively practiced than either of the other methods; second, because the active principle, the poison oil of the tobacco, is volatilized in the smoke and brought in contact with the large absorbing membranes of the mouth, nose, throat, pharynx, trachea and bronchial tubes, where it produces a direct and powerful effect upon the nerves. There are certain constitutions which the moderate use of tobacco seems to affect but little, but its excessive use will in all cases gradually undermine the constitution, impair health, engender disease, and finally bring the victim to a premature grave. There are other constitutions which cannot bear even the moderate use of tobacco without mark-

ed injurious effects. Some cannot form the habit of using it. It will make them sick, nervous, weak, faint, and the whole system will be in a complete tremor. This is a common effect on persons of a nervous temperament. But if used at all, whether moderately or excessively, by the nervous or lymphatic, it is

In all Cases Injurious.

gradually poisoning the system and shortening life. I shall not stop now to dwell upon the points usually enumerated as the great objections to the use of tobacco. These you all understand and appreciate.

I have another and more important view to take of the subject, gentlemen, and it is this: "By using tobacco, alcohol, opium, chloral, and many other articles of the same general nature, we violate the organic laws which bear sway over our bodies, we make inroads upon our constitutions, and prepare ourselves to be miserable and short-lived. As I have used the term, "organic law," it may be necessary for me to explain to be understood. We find controlling mind and matter,

Three Sets of Laws,

which together are termed the natural laws, but subdivided into physical, organic and moral or intellectual laws.

The physical laws embrace all the phenomena of mere matter; a stone for instance, when unsupported, falls to the ground with a certain accelerated force, and this motion is said to take place according to the laws of gravitation. An acid when applied to a vegetable blue color converts it into a red, and this is said to take place according to a chemical law, or the law of affinity.

Organized substances have another set of laws governing them termed organic, differing from the merely physical. A stone does not spring from a parent stone; it does not take food from its parent, from the earth, or the air. It does not increase in vigor for a time and then decay and suffer dissolution; but all these processes characterize us as organized and living beings. The organic laws are superior to the merely physical. They enable organized bodies to a great extent to resist the action of surrounding agents. For instance a living animal or man may be placed in an oven along with the carcass of a dead animal, and remain exposed to a heat that will completely bake the dead flesh, and yet come out alive and not

materially injured. The dead flesh, in this case is deprived of its vitality and is merely under the control of the physical laws, gravity and chemical affinity, and decomposition by heat immediately commences, while the living animal by its organic qualities, is able to counteract and resist to a certain extent that influence. The expression "organic laws," in reference to ourselves, indicates a set of laws which govern us as

Organized and Living Beings.

In accordance with these laws take place all the phenomena of production, health, growth and decay; and these phenomena take place with undeviating regularity whenever the circumstances are the same.

The moral laws govern us as intellectual and moral beings. Now, in observing the laws of nature, whatever they may have reference to, we very early notice several important principles, which hold true in reference to all the natural laws, in reference to all the laws of the Creator. I do not propose to meddle with miracles or special providences, but to deal only with natural laws and their phenomena.

First, then, the natural laws are universal and invariable in their operation.

Second, obedience to each law is attended with its own reward, and disobedience with its own punishment.

Third, They are in harmony with the constitution of man.

According to the

Principles of Philosophy

a ship floats because a part of it being immersed displaces a weight of water equal to the whole weight of the ship, leaving the remaining part above the fluid. Now the ship will float on the surface of the water as long as these physical conditions are maintained, and it will sink when they are violated.

If you load the ship so that its weight is greater than the weight of its bulk in water, or if you start a plank and let the water into the body of the ship, it will sink, and the character of the crew will make no difference. It will matter not whether they are good or bad men, whether they are pirates or missionaries, nor what sea or ocean they sail upon; so long as the physical laws are observed which regulate the floating of vessels, just so long will the vessels float, and no longer.

There is no example in any longitude or latitude, or in any

age, of men who have entered life with constitutions in harmony with the organic laws, and who continue to obey those laws throughout, being in consequence of this obedience visited with pain and disease.

There are no instances of men who were born with conditions at variance with the organic laws, and who lived in continual disobedience of them, enjoying that

Sound Health and Vigor of Body

that are the rewards of obedience.

No, gentlemen, the laws that regulate the ship on the ocean and our bodily health and vigor are universal, unbending and invariable in their operation, and cannot be transgressed with impunity. Second, obedience to each law is attended with its own reward and disobedience with its own punishment. Thus, the seamen who preserve their ship in accordance with the physical laws have the reward of sailing in safety, and, on the other hand, a disregard of those laws results in the loss of the vessel.

Those who obey the moral laws, enjoy the intense internal delights that spring from active moral faculties. Besides they render themselves the objects of affection and esteem to moral and intellectual beings. They are, as it were, the salt of the earth. Those who disobey the moral laws, suffer the chastenings of a guilty conscience. They are tormented with insatiable desires, and they are the objects of dislike and malevolence to other beings in the same conditions as themselves, who inflict on them the evils dictated by their own provoked propensities. Those who obey the organic laws are rewarded by health and vigor of body and buoyancy of mind. Those who break them are punished by sickness, feebleness, languor and death.

Recurring to

The Use of Tobacco.

an evil only less in magnitude than that of alcohol, it is not an article of nourishment, but an active poison, and it is only by habit and use that we are able to tolerate it at all. It was never intended by the Creator to be used in a state of health any more than arsenic, mercury, prussic acid or any other poison.

In national schools, as well as in many of the best colleges and seminaries of learning, the use of tobacco is interdicted. Napoleon III. found that

paralytics and lunatics increased throughout France in about the same ratio as the use of tobacco increased and extended among his people, and on careful examination he discovered that the young men in the government training schools, who smoked and used tobacco, were, as a rule, greatly inferior physically, mentally and morally to those who did not use it.

This, and the almost invariable association of

Smoking and Drinking.

so impressed the Emperor, that he prohibited the use of tobacco in all the national schools of France.

Similar was the discovery at the Annapolis Naval Academy, as also at the military academy at West Point, and consequently at both of these schools the use of tobacco was interdicted.

From death reports, and the rapid increase of patients at Weston, we may find that West Virginia is increasing in paralytics and lunatics as rapidly as did France in the time of Napoleon III., and largely from the same the extravagant use of tobacco, a cause not often noticed by the examiners who give certificates of lunacy.

Statistics show that in the United States, and several of the European countries including Germany, tobacco costs more than bread.

It is not, however, the use of alcohol and tobacco in particular that I wish to inveigh against, so much as the criminal ignorance that leads so many people to violate the fundamental laws of their natural lives, and to work injury both to themselves and to their best friends by the use of these articles. The disastrous consequences they call mysterious Providences, in fine charging upon their Maker the results of their own ignorance and folly, and then, perhaps, implore Him to make them reconciled to the divine dispensation and to sanctify it to their well being.

When a highly useful man is cut off in the vigor of his manhood, people say it is a mysterious Providence, but God is not arbitrary in the dispensation of health or sickness, life or death. He has settled laws from which He never deviates. He does not subject a man to the penalty of an organic law unless He has broken that law.

Sickness and Death

are apportioned according to uniform and fixed laws. My doctrine is, gentlemen, that we were born to die of old

age, and if there were no hereditary taint or defect in the original constitution, and if no organic law were ever broken, we should never be sick. We should come into the world, grow to maturity and then waste away without sickness and finally die of old age. Our Creator never changes an organic law to favor or to frown upon an individual. Let the most wicked rebel on earth but obey the organic laws and he will enjoy health.

If a good man is so intent on observing the moral laws that he overlooks the organic, he will suffer. If he keeps the one at the expense of the other, he must pay the forfeit, and there is nothing mysterious about it.

Often parents talk of the loss of a child as though it was the arbitrary act of God, when, perhaps, if the child was physically sound, they destroyed it with their own hands as effectually as though they had given it arsenic or prussic acid. Nor was death any the less sure because it was the consequence of their own ignorance. Organic law recognizes no distinction of person or condition. The

Effect of Transgression

is invariable.

If two ships are together at sea, one containing pirates, the other missionaries, the conditions that float the vessel of the one will be found to be the same for the other, without reference to the moral character of the crew. In the realm of the moral law, the missionaries will attain the reward of their obedience, but this has no influence in effecting their escape in the storm, neither will the skill of the pirate crew avail them anything toward escaping the penalties of an outraged moral law.

Again, there is a deacon or an elder of a church who has put his son into a liquor store, and wonders how he became a drunkard; or a man smokes cigars and keeps them also about his house, and yet fails to understand how his children come to follow in his footsteps; but other people understand it well. Another, with misguided care and tenderness, accustoms his family to the use of wine, toddy, strong tea or coffee, pies, cakes, sweet-meats, and all the attendants of a luxurious life, and thinks it strange that the children of the common laborer, a few doors away, should be strong and healthy, while his own are weak, puny, or die in infancy or early life. He may seek to console himself with a

Mistaken Christian Fortitude

or resignation, but lookers on find no difficulty in identifying that with the legitimate consequences of his own ignorance and folly. Now these are all matters of plain philosophy.

The very means are used that are best calculated to bring about given results, and the real mystery would be for anything else to occur than what actually happens. We are just as much bound to obey the physical and organic laws as the moral, for they are all laws of the same God, established for the same benevolent design. The man of dainty living, drinking his wine or beer, or carrying about with him his brandy bottle and tobacco box; the woman bound up in her corset, or exposing herself in thin shoes, light dresses and bare shoulders and neck, to cold or inclement weather; people who live an indolent, inactive life and feed upon the luxuries of the whole world; those who intermarry with near relatives, and raise families of weak, blind, deformed or demented children—these all are at variance with the organic law, and examples of those paying the penalty of such transgressions are constantly before our eyes. Delirium tremens, with all the horrors of that frightful disease, consumption, zymotic and low-grade fevers, dyspepsia, rheumatism, paralysis, gout, and the like are of daily occurrence.

A Striking Example

of the benefit derived from strictly observing the laws of health, is to be found in an account given by Captain Murray. After his return from a two years' cruise among the icebergs of Labrador and New Foundland, he petitioned to be sent to the West Indies in preference to a Northern station, and thought that with due precaution on the part of himself and crew, the bad effects of the climate of these islands could be successfully avoided.

He accordingly sailed from Plymouth on the 24th day of December, with crew and officers to the amount of 150 men, and was employed on the coast of Curacao, West Indies and the Gulf of Mexico. In the course of his service, he visited most of the islands of this part of the Atlantic ocean and of the Caribbean Sea. He arrived in England on the 23th day of June, without having buried a member of his crew, indeed without a single case of sickness during the entire cruise.

At another time he was sent in com-

mand of a recruit of eighteen guns to Vera Cruz, where he joined three frigates and two brigs. They all remained at anchor eight or ten weeks, and during that time the frigates lost from thirty to fifty men each, and the brigs from sixteen to eighteen; but the recruit, although moored in the midst of the squadron and holding constant intercourse with the other ships, not only lost no men but did not have

One Case of Sickness.

Captain Murray ascribed this result to the four following reasons:

First—Keeping the ship perfectly clean and dry and free from all sources of bad air.

Second—Habituating the men to wearing flannel next to the skin.

Third—Never allowing them to go on shore in the morning on an empty stomach, or to work in the sun unless absolutely necessary.

Fourth—Cheerfulness of the crew. This quality, he thought, did more to keep a ship's company healthy than any other precaution.

By closely observing these conditions Captain Murray said he should sail for the West Indies with as little anxiety as to any other portions of the globe.

Now, among the brigs and frigates there was not sufficient care taken with respect to dryness, pure air cleanliness, dress, diet, exposure, and the like, while Captain Murray took all this care. He was on trial to see what could be done. His prime motive was to see how near he could make his crew live in accordance with the organic laws or the laws of Hygiene, and both reason and fact justified him in the conclusion that strict observance of the proper conditions of health was a

Complete Guarantee Against Danger in the warm latitudes.

You see the result, and a splendid one it was. Suppose two gentlemen were to ascend a mountain on a hot summer day. Bathed in perspiration and exhausted with fatigue, they arrive at the top. One of them, conversant with the laws of health, and wearied as he is, buttons up his coat closer about his body, wraps a handkerchief about his neck, and continues walking around the summit in the full blaze of the sun till cooled to a normal temperature. The other, ignorant of these laws, runs eagerly to the base of a projecting cliff, stretches himself at full length under its refreshing shade, opens his vest to the grateful breeze—in short

gives himself up to the luxury of coolness and repose. The former by warding off the rapid chill of the cool mountain air, descends with health unimpaired, while the latter, from permitting perspiration to be suddenly checked, and the surface of the body to become cooled with injurious rapidity, carries with him to a certainty the seeds of pneumonia, rheumatism, fever or some other disease.

Now cases of this kind frequently occur. Every physician is familiar with them. I have myself seen many a useful man laid aside by precisely similar imprudences. You may call them providences of God if you please, but they are such providences as will always occur under like circumstances. They come according to fixed and invariable laws, and it will be at our own option whether we will have them or not.

From recent tables compiled for the use of life insurance companies, we learn that the average of life is gradually on the increase. That is to say, by

Superior Morality.

cleanliness, knowledge, and general conformity to the organic laws, fewer individuals now perish in infancy, youth and middle age than did fifty or one hundred years ago.

If this be correct, the average duration of life may go on increasing, and generations yet unborn may average the three score years and ten the Scripture age allotted to man. If that day ever comes we will know death only as a natural institution—as an essential part of the very system of our organization.

We will know that birth, growth, and maturity as completely imply decay and death in old age, as morning and noon imply evening and night, as

spring and summer imply harvest, or as the source of a river implies its termination.

Death in old age is a natural and unavoidable institution of the Creator, and will never be abolished as long as man continues an organized being. If man had been destined for a duration like that of the mountains, instead of creating a primitive pair and endowing them with extensive powers of reproduction, we may presume from analogy that the Creator would have furnished the world with its definite complement of living beings, perfect at first in all their parts and functions, and that they would have remained like the rocks and hills

Without Diminution and Without Increase.

My remarks have had reference more to intemperance in general than to intemperance in any particular way. I have referred to some of the evils that come upon us from transgressing the laws of the Creator, which govern us as organized beings. In doing so, I have barely glanced at a great and important subject. If I have succeeded in directing your attention to it, and of convincing you of the great importance of attending to the laws which govern us, I am satisfied. They certainly demand our closest attention. If we wish to enjoy health and comfort, they cannot be ignored. We may transgress them if we choose, but there is no choice in regard to the penalty.

The laws of the Creator are universal and constant. If we transgress a physical law, the penalty attached to the violation is inevitable. If we break an organic law the same is true, and the infraction of any of the moral laws of God is as surely followed by the appropriate punishment.

