

THE HEALTH REFORMER.

Nature's Laws, God's Laws; Obey and Live.

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Life Sketches.

ELDER JOSEPH BATES.

CAPTAIN BATES retired from the seas in the month of June, 1828. He had acquired more than a competency. He immediately began to devote his time and means to moral reforms, and labored ardently and successfully in this way for about twelve years, when he became an Adventist. He soon entered the lecturing field, and labored as a speaker and writer, and employed his means and energies in the cause of what he regarded Bible truth and reform during the remainder of his useful life until near his death, in 1872, a period of thirty-two years.

During this long period of his ministry, reaching from the noon of life to old age, he lost none of his ardor in the cause of moral reforms. In fact, his second-advent views, that the divine Son of God, and all the holy angels with him, would soon come to receive his people and take them to a pure Heaven, gave the inspired exhortations to purity of life, and the warnings to be ready for the coming of that day, a double force to his mind. While addressing the people upon the subject of readiness to meet the Lord at his coming, we have often heard him apply these texts with great force:—

“And take heed to yourselves, lest at any time your hearts be overcharged with surfeiting, and drunkenness, and cares of this life, and so that day come upon you unawares.” Luke 21 : 34.

“And what agreement hath the temple of God with idols? for ye are the temple of the living God; as God hath said, I will dwell in

them, and walk in them; and I will be their God, and they shall be my people. Wherefore come out from among them, and be ye separate, saith the Lord, and touch not the unclean thing, and I will receive you, and will be a Father unto you, and ye shall be my sons and daughters, saith the Lord Almighty. Having therefore these promises, dearly beloved, let us cleanse ourselves from all filthiness of the flesh and spirit, perfecting holiness in the fear of God.” 2 Cor. 6 : 16–18; 7 : 1.

“Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you? If any man defile the temple of God, him shall God destroy; for the temple of God is holy, which temple ye are.” 1 Cor. 3 : 16, 17.

When we expect a visit from friends we love and honor in our hearts, how natural to wash up, put things in good order, and dress up for the occasion. This simple fact in natural life may well illustrate the action of those Adventists who are really Adventists, in adopting the clean, pure rules of practical hygiene.

The principles of reform which had been written upon the mind and heart of Captain Bates while upon the seas, were still moving his soul to the very depths when among his friends at home. He still moved forward. His table reform commenced about this time, as the following statements from his autobiography show:—

“From the year 1824, when I made my covenant with God, I had lived up to the principles of total abstinence from all intoxicating drinks, but had continued the use of tea and coffee, without much conviction about their poisonous and stimulating effects,

for seven years longer. With my small stock of knowledge on the subject, I was unwilling to be fairly convicted that these stimulants had any effect on me, until on a social visit with my wife at one of our neighbors', where tea was served us somewhat stronger than our usual habit of drinking. It had such an effect on my whole system, that I could not rest nor sleep until after midnight. I then became fully satisfied—and have never seen cause to change my belief since—that it was the tea I had drank which so affected me. From thence I become convicted of its injurious qualities, and discarded the use of it.

"Soon after this, on the same principle, I discarded the use of coffee, so that it is now about thirty years since I have allowed myself knowingly to taste of either. If the reader should ask how much I have gained in this matter, I answer that my health is better, my mind is clearer, and my conscience in this respect is void of offense. Sylvester Graham, in his 'Lectures on the Science of Human Life,' says: 'There is no truth in science more fully ascertained than that both tea and coffee are among the most powerful poisons of the vegetable kingdom.'"

We first met Elder Bates at his home at Fairhaven, Mass., in the year 1846. He had at that time discarded flesh-meats of all kinds, grease, butter, and all kinds of spices, from his own plate. When asked why he did not use them as articles of food, his usual reply was, "I have eaten my share of them." He did not mention his views of proper diet in public at that time, nor in private unless interrogated upon the subject. At his meals he took only plain bread, and cold water. These, so very common, were readily obtained by those who entertained him, and in respect to diet he caused his friends but little trouble, excepting their anxieties that he would starve on bread and water.

When we first became acquainted with Elder Bates, in 1846, he was fifty-four years old. His countenance was fair, his eye was clear and mild, his figure was erect and of fine proportions, and he was the last man to be picked out of the crowd as one who had endured the hardships and exposure of sea life, and who had come in contact with the physical and moral filth of such a life for more than a score of years. He had been

from the seas the period of eighteen years, and during that time his life of rigid temperance in eating, as well as in drinking, and his labors in the pure sphere of moral reform, had regenerated the entire man, body, soul, and spirit, until he seemed almost re-created for the special work to which God had called him. "Be ye clean that bear the vessels of the Lord,"

Elder Bates was a true gentleman. We might suppose that a man of his natural firmness and independence, after twenty-one years of sea-faring life, and commander of rough sailors a large portion of that time, would be exacting and overbearing in his efforts to reform others. True, he would speak what he regarded truth with great freedom and boldness; but after he had set forth principles, and urged the importance of obedience, he was willing to leave his hearers free to decide for themselves.

We need not say that when many of his fellow-laborers embraced the principles of health reform, as taught in the HEALTH REFORMER, and began to advocate them about the year 1860, he joined them in this work with great gladness of heart that he had sympathizers and fellow-workers in the cause. From this time he began to speak freely upon the subject both in public and private life. Up to this time he had refused all fruits and nuts because of the custom to eat them between meals. But when many of his brethren adopted two meals only a day, and furnished their tables with fruits and nuts, he would partake freely of them with his meals.

At a health reform convention held at Battle Creek, Mich., in the spring of 1871, the venerable Elder Bates, in his seventy-ninth year, made a speech of remarkable interest, into which he incorporated some items of his personal history and experience, which in substance appeared in the July REFORMER of that year. It is of such living interest that the reader will pardon us for repeating it here.

"In early life, before finishing my second European voyage, I was impressed into the British naval service, and stationed on board a British war-ship, associated with about seven hundred men, on a daily stated allowance of hard bread, salt provisions, and one

pint of inferior wine. Thus I was held for about two years and a half, until, soon after the declaration of war by the United States against England, the American citizens on board our ship petitioned, and became prisoners of war, and were placed on two-thirds of what had been allowed us before, and no wine. In this state I continued some two years and a half. The last eight months I was associated with about six thousand sailors and soldiers on that most dreary waste called Dartmoor, fifteen miles from Plymouth, in England. Five years' experience in these two schools of vice and debasement of moral character, seriously convinced me of the necessity of

"REFORM.

"What seemed most important of all at that time was the disuse of spirituous liquors. A few weeks after my return home from my imprisonment, in the summer of 1815, I was offered, and accepted, the office of second mate on board a new ship fitting for a European voyage. This was some twelve years before temperance societies were organized. I soon learned that it was indeed a warfare to attempt to stem so strong a current of vice single-handed. I was urged to take a social glass, again and again, for some time. After awhile I yielded, to use it moderately, and finally confined myself to one glass only in twenty-four hours. Wine, beer, and cider were not then considered spirituous liquors. These I used but seldom.

"In the fall of 1821, on my passage from South America to Alexandria, D. C., feeling more serious respecting the unnecessary habit of using one glass a day, I spoke out earnestly, saying, I will never drink another glass of spirituous liquors while I live. And I am not aware that I ever have. But this temperance reform was not yet accomplished. So, on my next voyage from Buenos Ayres, South America, round Cape Horn, in 1822, I fully resolved never to drink wine. By watchfulness and perseverance I broke up my habit of using profane language, and before I left the Pacific Ocean, I had forever discarded the use of that filthy weed, tobacco. These victories strengthened and encouraged me in the work of reform.

"In the summer of 1824, on leaving the

capas of Virginia for another voyage, I resolved from henceforth never to drink ale, porter, beer, cider, nor any liquor that would intoxicate. I now felt strengthened, and fully relieved from this burden to reform, which had been balancing in my mind for upwards of ten years. I had been prospered in my business far beyond what I deserved, and was now setting out on another successful voyage, loading myself down with the cares and business of the world. Turning my attention more to reading the Bible than I had done, I was led to see what a feeble worm of the dust I was—an unpardoned sinner, under condemnation. I began and plead with God for pardoning mercy, for many days. I did then believe, and still believe, that he freely forgave me, for his dear Son's sake. My prospect then for this life, and the life which is to come, was most cheering. I then covenanted with the Lord that I would serve him evermore.

"Some thirty-three years ago, on becoming satisfied of the poisonous nature of both tea and coffee, I resolved never more to use them.

"REFORM IN FOOD.

"In February, 1843, I resolved to eat no more meat. A few months after, I ceased using butter, grease, cheese, pies, and rich cakes. Since the introduction of the health reform several years ago by my brethren, I have been endeavoring to conform in my eating more strictly to the hygienic practice, adopted by the Health Institute in Battle Creek, and confine myself to two meals only in twenty-four hours. If the reader wishes to know what I have gained by my efforts from the first to reform, I answer:—

"1. From the ruinous habits of a common sailor, by the help of the Lord, I walked out into the ranks of sober, industrious, discerning men, who were pleased to employ and promote me in my calling, so that in the space of nine years I was supercargo, and joint owner, in the vessel and cargo which I commanded, with unrestricted commission to go where I thought best, and continue my voyage as long as I should judge best, for our interest.

"The morning after my arrival at the wharf in New York, among the laborers who

came on board to discharge my vessel, was a Mr. Davis, one of my most intimate friends during my imprisonment. We had spent many hours together talking over our dismal position, and the dreadful state and ruinous habits of our fellow-prisoners, and there agreed that if ever we were liberated, we would labor to avoid the dreadful habits of intemperance, and seek for a standing among sober, reflecting men. Aside from his associates, we conversed freely, and he readily admitted our feelings and resolutions in the past, but with sadness of heart acknowledged his lack of moral courage to reform; and now, in this uncertain way, he was seeking for daily labor when his poor state of health would admit of it.

"2. When I reached this point of total abstinence, God in mercy arrested my attention, and on the free confession of my sins, for his dear Son's sake, granted me his rich grace and pardoning mercy.

"3. Contrary to my former convictions, that if I was ever permitted to live to my present age, I should be a suffering cripple from my early exposure in following the sea, thanks be to God and our dear Lord and Saviour, whose rich blessing ever follows every personal effort to reform, that I am entirely free from aches and pains, with the gladdening, cheering prospect that if I continue to reform, and forsake every wrong, I shall, with the redeemed followers of the Lamb, stand 'without fault before the throne of God.'"

No comment on the foregoing is needed. And it is hardly necessary to state that the speech, from one who had nearly reached his four-score years, and who could look back upon a long life of self-control, marked all the way with new victories and new joys, electrified the audience. He then stood as straight as a monument, and would tread the side-walks as lightly as a fox. He stated that his digestion was perfect, and that he never ate and slept better at any period in his life.

Elder Bates was in the hearts of his people. Those who knew him longest and best, prized him most. When his younger and most intimate fellow-laborers told him that his age should excuse him from the fatigue of itinerant life and public speaking, he laid

his armor off as a captured officer would surrender his sword on the field of battle. The decision once made, he was as triumphant in hope and faith as before. Mrs. White wrote to him, recommending a nutritious diet, which called out the following characteristic statements from his pen about forty days before his death:—

"God bless you, Sister White, for your favor of yesterday, the 12th. You say I must have good, nutritious food. I learn from report that I am starving myself and am withholding from my daughter, who is with me and alone a good part of the time in my absence; and that when I ask a blessing at my table, I ask the Lord to bless that which I may eat, and not that which is on the table. This is what I am not guilty of, nor ever was in all my family worship for some fifty years, but *once*; and I do greatly marvel how my industrious neighbors found out this one exception. But I will tell you the circumstance.

"Several years ago I was with the church in Vassar, Tuscola Co., Mich., and was invited to address them and their children in a barn on the Fourth of July, and also to dine with them. The tables were soon up and loaded with tempting eatables; and I was invited to ask the blessing. The swines' flesh, upon the table, I knew was abominable and unclean from creation, Gen. 7:2, 8; and God had positively, by law, forbidden the eating or touching of it. See Lev. 11:7, 8 (law, verse 46); also Deut. 14:1-3, 8. I therefore very quietly distinguished, and asked a blessing on the clean, nutritious, wholesome, *lawful* food. Some whispered, and some smiled, and others looked, and so on.

"Starving, with more than enough to eat! Now allow me to state what, by the providence and blessing of God, we have in our house from which to choose a daily

"BILL OF FARE.

- "90 pounds of super-fine white flour.
- "100 pounds of graham flour.
- "5 bushels of choice garden corn.
- "Pop and sweet corn in abundance.
- "Corn meal, rice, and oatmeal.
- "Corn-starch, butter, sugar, salt.

"VEGETABLES.

- "Three varieties of potatoes.

"Sweet turnips, parsnips, squashes.

"Two varieties of onions.

"PRESERVES.

"11 cans of sweet peaches.

"6 cans sweet grapes.

"Strawberries preserved and dried.

"Quince and grape jelly.

"Tomatoes by the jug.

"20 pounds of dried sweet peaches.

"Box of Isabella grapes, most consumed.

"Three varieties of apples and quinces.

"CONVENIENCES.

"At our door as good a well of water as there is in the State of Michigan.

"Large cistern of rain-water, with iron pump.

"40-gallon filter.

"Lamp-oil, candles.

"Abundant clothing.

"Cooking-stove, most new.

"8 cords of dry wood under cover.

"More at the door if wanted.

"And the most convenient and well-finished dwelling-house in the place.

"But the people say, and they think they know what they say, that he refuses to furnish his table with tea and coffee. That's true! They are poison. Some thirty-five years ago I was using both tea and coffee. After retiring from a tea-party at midnight, my bed companion said, 'What is the matter, can't you lie quiet and sleep?' 'Sleep! no,' said I. 'Why not?' was the next question. 'Oh! I wish Mrs. Bunker's tea had been in the East Indies. It's poison!' Here I forever bade adieu to tea and coffee. After a while my wife joined me, and we discarded them from our table and dwelling. That's the reason they are not on my table.

"They say, too, that this man does not allow any ardent spirits or strong drink in his house. That's true. Please hear my reason: Fifty years ago I was by myself on the boundless ocean. My thoughts troubled me. Said I to Him who always hears, I'll never drink another glass of grog or strong drink while I live. That's why I have no intoxicating drink on or about my premises.

"Well, there is another thing that he is fanatical about, and differs from more than half his countrymen. What is that? He will not have about him nor use any TOBACCO. Guilty! My reason: Forty-eight years ago I was away toward the setting sun; our gallant ship was plowing her way through

the great Pacific. During the nightwatch we were called to take some refreshment. I then tossed my chew of tobacco into the ocean, never, no, never, to touch, taste, or handle any more. And allow me to say that when I had gained the victory over this deadening, besotting, benumbing vice, I went on deck the next morning a better man than ever I was in all my former life. Why? I was free. I could appreciate God's handiwork in sea and sky, even in the tumbling, rolling waves. I could breathe freely, inhaling the pure air of heaven, and shout. I was a free man.

"Therefore, if any demand is ever made on me for tobacco, tea, coffee, or strong drink of any kind that intoxicates, they must present me an order from the Court Above.

"Here comes half a barrel of graham crackers and a lot of farina, a natural bread-stuff of the native South Americans. I think I am now well supplied with good, nutritious food. And if there is any lack I have some good, faithful brethren who seem to be waiting to serve me.

"I am your brother, now on retired pay in Monterey, Michigan.

"JOSEPH BATES.

"Feb. 14, 1872."

As we close this sketch, we are impressed with the words of Paul, prompted by a review of his past life, and the reward of the glorious future: "I have fought a good fight, I have finished my course, I have kept the faith. Henceforth there is laid up for me a crown of righteousness, which the Lord, the righteous Judge, shall give me at that day; and not to me only, but unto all them also that love his appearing."

J. W.

A Mysterious Dispensation.

BY W. H. CLARK, C. M.

WHAT will not these words cover? A poor child improperly cared for, never thoughtfully nursed, fed at any time and at all times, on anything and everything, sickens and dies. The friends are surprised. They never ask how he has been attended, unless they mean medically. They never inquire if he has been out as often as possible in the fresh air, if he has been kept clean, but they remark that the death is a

"mysterious dispensation." Still another child dies, and another. The poor parents feel that their trials are very hard; they wonder that *their* children should all be taken, they almost feel inclined to murmur at their Maker. The friends again and again speak of the "mysterious dispensation," and the father and mother are partly consoled. They have never been told that sickness only follows wrong doing. They have heard that the sins of the fathers are visited on the children to the third and fourth generations.

Shall this always be so? No! Time was that an English jury often returned a verdict of "Died by the visitation of God" when a sudden death occurred; but this is seldom heard now. "Vote of censure upon the managers of an orphan home." Such was the announcement in a London paper in England in January, 1877. What was the reason? There had been a "mysterious dispensation;" such a one as ought never to occur again. *Of forty-eight children who had been admitted to this convent home during twenty-one months, forty-seven had died! Of about four hundred and twenty admitted since the opening of the institution, over four hundred were no longer living!* What a sad picture! Was this a mysterious dispensation? Surely not. Yet if this were not such as a *whole*, perhaps many *individual* deaths were so. No, no! Let us put away these words; they are a cloak which shall no longer conceal willful neglect, but shall for the future mean that man has in some way carelessly or willfully sinned, and that the punishment has necessarily followed.

Utilitarianism.

BY W. T. CURRIE, A. M., M. D.

THERE is nothing like having rules to work by, and to live by. One unvarying rule, of universal application, is worth very much in the study of a language, or one of the mathematical sciences. Indeed, we may say that general rules are invaluable in these studies; for without them, we are perplexed and bewildered by an endless mass of unintelligible data. To discover a general law to which all facts of the same class may be referred, is the highest triumph of scientific investigation.

Now, while rules are worth so much in languages and mathematics, there is a more important study in which they are equally valuable. This is social science. What a chaos of confusion and contradiction is to be found in the common theories of social life! Perhaps it would be nearer the truth to say

that most people live without *any* theories about it. They have no grand, guiding principles. Very likely many do not want any. There is quite a general fear of social principles, because the stones of many social buildings will not bear the application of the *square*. However, there are many honest people among us, who are seeking earnestly for some principles to guide them. For the benefit of such, I will venture to give one, which, it seems to me, is grand, beautiful, and universal in its application.

This rule I will denominate the *Utilitarian Principle*. I am well aware that Utilitarianism has been much derided; but I am also convinced that it has been on account of a misunderstanding of the same, either by those who have held and taught it, or by those who have listened to their definitions, or both. I will define what I conceive to be the grand rule of utilitarianism. All objects we see, all sounds we hear, everything we taste, feel, or smell, produces an effect upon us; and this effect is either good or bad. Anything which produces a good effect, we call useful; whatever causes an opposite effect, we call the reverse. Now, a utilitarian will always endeavor to select the useful, and to reject what cannot be utilized. We are constantly called upon to choose and to reject. Which shall we choose? Always those which are useful; and when the choice lies between useful objects, uniformly those which are the most useful. In a word, we should select the useful, and banish the useless as injurious.

Let us apply this principle to some particulars. For a long time after becoming a hygienist, I was in doubt about what to eat and drink. Would a very small quantity of this thing and that thing do any harm? Finally I hit upon a principle: Will it do any good? That is it precisely. Let the man who is fond of the smallest doses of opium, or rum, or tobacco, tell us *cui bono?* (for what good?) It does something. If it does no good, it certainly does harm. So, too, of all things which people call luxuries. They are useful, or they are not. If they are not, then for what imaginable reason shall we procure them?

How much shall we eat and drink? when? and what? What shall we wear? What ornaments shall we procure for our persons and our houses? In what shall we invest our money? and upon what spend our time? What kind of houses shall we build? what educational advantages provide for our children? and with what influences surround them? These are important financial and social questions, and upon their answers hang

some of the most momentous interests of humanity.

To these, and all similar questions, I think a universal answer can be given, which will become a great guiding principle, and regulate all the particulars, when it is once mentally understood, and embodied in individual action. The answer is, *The useful always; the useless never.*

But here some one may bring in an objection: This will deprive us of the great world of beautiful and lovely things in which we take such infinite delight—poetry, painting, music, statuary, the world of art. To this I answer, By no means. Man has a complex nature. His æsthetic nature needs developing as well as the lower faculties; and all these things *may* be made subservient to this high and noble end. This is the highest good possible, except the development of the spiritual faculties.

Look back over the history of the world, and what a record of waste and extravagance stains its pages. In the catalogue of useless expenses must be placed rum, tobacco, and the ten thousand superfluities of life, the only effect of which is to curse mankind, and entail untold want and woe. If any community could once banish the useless, and limit the expenses of its people to things of real utility, all want would disappear, poverty would be unknown, and the most ample provision could be made for the physical, intellectual, and spiritual wants of all.

Some one may object that this would do away with individuality, and reduce all to a dead level. A little reflection, however, will show this to be unfounded; for as individual tastes give rise to a manifold variety of individual wants, there would still be as great a difference between people as under our present system of profligate waste and wanton extravagance.

Principles.

BY DR. W. B. SPRAGUE.

"ONE lie leads to another," and every transgression seems, in the mind of the perpetrator, to create a necessity for the commission of another to shield him from the consequences of the first. Thus the transgressor goes on from sin to sin until he sinks into the blackness of despair, and suffers eternal death. Yet any candid spectator would say that it would have been far better had the unfortunate person suffered the result of the first transgression and ever after adhered to strict obedience to the laws that governed him.

We have a very close likeness to the course of reasoning that leads one steadily onward in moral depravity, in the popular theories of the day respecting medical practice. If one partake of an injurious substance, instead of patiently enduring the results that must inevitably follow, sooner or later, he introduces another and another poison into the system to delay the day of retribution, but at the same time he is (generally unconsciously) increasing, many times, the suffering that he must ultimately endure.

The science of medicine is a rational science, as is every other true science. The laws of our beings are immutable laws, and so long as we work in harmony with them we enjoy perfect health and happiness; but an infraction of any of them results in suffering as surely as does the violation of a moral law. All the laws that govern us are deductions from certain great principles which govern the universe. Hence, we are subject to these laws from the very fact of our existence; and the better we understand them, and the more nearly we work in harmony with them, the more truly scientific are we, and the more favorable are the conditions that we are able to supply for the restoration and maintenance of health.

Whenever we transgress any of these laws, the function of some organ or organs is disturbed, and nature sets about the work of restoring normal action and thus regaining the equilibrium of the system. This concentration of action on the part of the system for the purpose of restoring a normal condition, produces the sensation of pain that we experience in disease, and which is necessarily the result of transgression. We may now divert the attention of the vital powers from the affected part by bringing about a similar condition in another part of the system, thus diminishing the pain; but the repairing process will be arrested and the part will be left diseased. Or, we may introduce into the system some drug of so noxious a character as to goad it to unnatural action for the purpose of expelling the irritating substance at once; but when the object of aversion is expelled, and the stimulus ceases to act, it is left in much the same condition as a man who has exercised unnatural strength in a violent passion, or through the influence of some other strong stimulus,—entirely unfit to perform the ordinary duties of life. One more alternative remains to a physician, which is to supply the most favorable conditions possible for the completion of the work which nature has so faithfully begun, thus aiding the healing process, and letting her perform the cure. By this means, com-

plete health may be restored and the vital functions may go on with their work undisturbed.

The difference between the practice of hygienic physicians, and that of the "drug doctors" who are so popular with the people at large, consists in the fact that the former choose the last course, while the latter generally practice one of the others. The reason for the popularity of the "drug doctors" and the incredulity manifested toward hygienic methods is that the people have been educated to the idea that they must "take something" if they are sick, without any reason why or any question as to the effect upon the system. Until the people shall become educated in the principles of physiology and hygiene, so that they are capable of thinking for themselves on these subjects, we cannot hope for reform, for there will always be those who are ready to pamper their superstitions and supply them with that for which they clamor.

We hail with joy the evidences that the people of this thinking age are beginning to give their attention to these subjects, which so nearly concern them; and we are confident that a new era in medical history is just dawning.

Head Dress.

THE following interesting article is just as applicable at the present time as when written nearly fifty years ago by Dr. Bell for the *Journal of Health*:—

"Herodotus, on visiting a field of battle, where the slain of the Egyptians and Persians had been collected in separate piles, was struck with the difference in the thickness and firmness of the skull in the individuals of the two nations, that of the former being so hard as to be fractured with difficulty, while that of the latter was so thin and weak as to be readily broken by a small pebble. This difference the historian accounts for from the circumstance of the Egyptians being accustomed from infancy to go bareheaded, whereas the Persians wore constantly thick and heavy tiaras or turbans.

"Though we cannot agree with Herodotus that the fragile skull of the latter was owing entirely to their enormous head-dresses; nevertheless, we are persuaded that the covering mankind are in the habit of wearing upon the head, has no little influence upon their health and comfort.

"There is no part of the body which suffers more from heat and pressure than the head—no one, therefore, which requires to

be kept cooler and less encumbered; neither of which important requisites are sufficiently obtained, in the male sex particularly, by the hats now in fashion.

"When we refer to the general experience of antiquity, we find it to be decidedly in favor of the precept that the head should be lightly covered. The care which nature herself has taken to protect this portion of the body from the influence of external agents, by clothing it with hair, renders, indeed, under ordinary circumstances, any species of artificial covering unnecessary. It is probable, as a general rule, excepting when the natural covering is unusually scanty or entirely wanting, that, not only the cumbrous wigs, powder and pomatum of former times, but even the hats, caps, and bonnets of our own day, might, with great propriety, be dispensed with.

"The great inconvenience which arises from keeping the head warmer than nature intended, is, that in youth, by causing an increased amount of blood to be sent to this part, not only is the scalp more liable to be the seat of eruptive diseases, but even the brain itself is exposed to injury from slight exposures to cold, terminating frequently in incurable dropsy; while, at a more advanced age, a short exposure, without the usual protection, will almost invariably occasion a rheumatic affection, or what is ordinarily termed a cold.

"All expose the face with impunity in the coldest weather, but every one is aware of the risk which is incurred by remaining bareheaded for a short time in the open air during the cooler periods of the day or year. This difference is to be attributed solely to the extreme care which is taken, from birth, to protect the head from the operation of cold.

"It is, perhaps, not generally known, that a covering for the head is far more necessary during exposure to the direct rays of the sun in summer, and in hot countries, than during dry weather in winter, or in cold and temperate climates. From the first, apoplexy, inflammation of the brain, and even sudden death, have been known to result, whereas, from the latter, we are convinced no one would experience any inconvenience, provided the practice of going with the head bare were commenced from infancy. Even the effects of extreme heat are more effectually guarded against by an umbrella or parasol, than by the covering usually worn.

"It may be well here to observe that black hats afford but little protection in summer. Instead of reflecting the heat, they admit it to act even more strongly upon the head.

By those who are much exposed to the sun, white or light-colored hats ought, therefore, always to be preferred.

"Too heavy or tight a covering for the head invariably gives rise to a headache more or less intense. There are few who have not experienced the martyrdom inflicted by a new hat or bonnet of too restricted dimensions. It may be compared, in fact, to that species of torture practiced in former ages by tying a cord firmly around the temples.

"We wish now not to be misunderstood—we do not pretend to advise any of our readers, either male or female, old or young, so far to deviate from general usage as to walk bareheaded in the open air; we merely desire to point out to them the propriety of wearing hats or bonnets constructed of such materials as will render them perfectly light and easy, and prevent the head from being kept unduly warm.

"For an infant, from the period of birth until the growth of its hair is sufficient to render unnecessary artificial protection of any kind, a thin, light, and soft cap should constitute the only head dress. It is all-important that the material of which it is formed be soft and perfectly smooth. A lace or embroidered cap may be very beautiful, and well adapted to gratify the parents' pride of dress, but is an improper covering for an infant's head. The roughness and harshness of its surface is calculated to fret and irritate the delicate skin with which it is in contact, and, if not productive of eruptions and sores, cannot fail to occasion some degree of pain or uneasiness to the wearer. The cap should never be allowed to cover or confine the ears; otherwise, by keeping the latter unnecessarily warm, and improperly compressing them against the sides of the head, it is apt to occasion pains and inflammation of these organs, or a disgusting, sometimes dangerous, soreness and running behind the external ears.

"As soon as the head has become well covered with hair, the cap must be dispensed with during the day as well as at night; and, when a child is taken out, a very light and easy hat may be worn, rather, however, in compliance with the customs of society, than as a necessary protection."

An Unsafe Theory.—It is not a safe theory to believe that whatever is agreeable to the palate is wholesome to the stomach. The idea of the palate standing as a sentinel at the threshold to challenge all comers, and letting only those pass who can give the countersign—that is, respond to the taste of the guard—is prettier than it is true. In a

word, it rests on little or no foundation. The sentinel as often cordially invites an applicant for admission to pass in who proves unruly as he does one who proves to be a welcome guest. Lobster, for instance, is a visitor generally favored by the guard, but who often raises a disturbance. Further, it is occasionally found that the comer for whom the watcher at the vestibule has the greatest regard is the greatest enemy of the party below—the stomach. "Punch's" man, who could, on retiring at night, eat a solid piece of lobster, a few dozen raw oysters, drink a bottle or two of ale, and afterward sink into peaceful and refreshing slumber, "leaving them to fight it out among themselves," was especially blessed, and offers an example which few may follow without grave consequences.

PAT'S CRITICISM.

THERE's a story that's old,
But good if twice told,
Of a doctor of limited skill,
Who cured beast and man
On the "cold-water plan,"
Without the small help of a pill.

On his portal of pine
Hung an elegant sign
Depicting a beautiful rill,
And a lake, where a sprite,
With apparent delight,
Was sporting in sweet dishabille.

Pat McCarty one day,
As he sauntered that way,
Stood and gazed at that portal of pine,
When the doctor with pride
Stepped up to his side,
Saying, "Pat, how is that for a sign?"

"There's wan thing," says Pat,
"Ye've lift out o' that,
Which, be jabers, is quite a mistake,
It's trim and it's nate,
But to make it complate
Ye shud have a foine burd on the lake."

"Ah! indeed! pray, then tell,
To make it look well,
What bird do you think it may lack?"
Says Pat, "Of the same,
I've forgotten the name,
But the song that he sings is 'quack! quack!'"

Cause and Effect.—"John," said Doctor Bumpus, coming in fresh from his round of calls upon his patients, "did Mrs. Green get the medicine I ordered yesterday?" "I guess so," said John, "for I saw crape on the door-handle this morning." The doctor asked no more.

LITERARY MISCELLANY

Devoted to Natural History, Mental and Moral Culture, Social Science,
and other Interesting Topics.

THE SILENT HOUR.

SILENTLY the shades of evening
Gather round my lowly door;
Silently they bring before me
Faces I shall see no more.

Oh, the lost, the unforgotten!
Though the world be oft forgot;
Oh! the shrouded and the lonely—
In our hearts they perish not.

Living in the silent hours
Where our spirits only blend,
They unlinked with earthly trouble,
We still hoping for its end.

How such holy memories cluster,
Like the stars when storms are past
Pointing up to that far Heaven
We may hope to gain at last.

The Duties of a Mother.

BY MRS. E. G. WHITE.

THE Christian mother, to a very great extent, has it within her power to secure to her children good constitutions, sound morals, and correct views of the duties and responsibilities of life. Thousands of mothers are to-day ignorant of the laws of health and morality, and utterly reckless in the management of their children. Thousands are ruined for life and rendered worthless to society through neglect of proper training in early youth. A failure of health prevents the cultivation and development of the mental faculties, the talents lie dormant in consequence, and the world loses the benefit of them. A knowledge of, and obedience to, the laws of nature would have preserved the healthful action of body and mind and given to humanity the blessing of many a life now wasted in uselessness. Through the inefficiency of parents, much good is lost to the world, and God is robbed of the glory he should receive through the proper direction of youthful talent and energy.

Mothers are not thoroughly qualified to discipline and educate the minds of the young, unless they have that knowledge of God by which they can conscientiously train their children for the highest usefulness in this life and for the future, immortal life. In the education of her children, the mother

needs the wisdom which God alone can give her. She also needs health and its accompaniment of calm nerves, clear judgment, and sound reasoning powers. She will then have decision as well as gentleness, firmness as well as love, and will be able to hold the reins of guidance with a firm yet patient hand. She should cultivate that quiet dignity and independence of character which is necessary to her sacred life-work, and the proper conducting of her household. The customs and habits of the world in regard to the training of children should not turn a Christian mother from her course. In no case should she sacrifice her ideas of right because she sees many mothers yielding their scruples in order to gratify the inclinations of their children for questionable amusements, idleness, or a style of dress calculated to foster vanity and injure the health.

Indulgence of wrong desires and gratification of the animal passions are the order of the day in this age of the world. Youth is surrounded with the fascinations of pleasure and the seductive temptations of sin. For these reasons a great and important responsibility rests upon the Christian mother. It is hers, in a measure, to rectify the growing evils of the world by rearing her children in such a manner that they will take a firm stand for the right and cast their influence on the side of virtue. But the mother who submits her God-given womanhood to the slavery of fashion wastes, in useless labor and frivolity, time and energy which should be devoted to her sacred calling. She cannot feel a sense of her solemn responsibility to God and humanity. Satan has invented manifold temptations to divert the minds of mothers from their most important work. The matter of dress holds the larger share of women in the veriest bondage. The study of fashion-plates is pursued with untiring zeal, and is followed up by an endless round of cutting, fitting, stitching, ruffling, pointing, and plaiting, to arrange for vain display. All this costs time, money, and concentration of mind, for which no equivalent is returned. The mental powers are dwarfed for want of proper cultivation, and wretchedly abused by being almost wholly bent upon the object of preparing raiment for the body, while their children are on the way to ruin.

Many mothers are much more concerned as to the dress and adornment of their children than they are for their behavior and the proper direction of their minds. They will spend precious time in ruffling and trimming the garments of their little ones, while those who are to wear them are running in the streets, subject to the influence of vile associates and breathing in the atmosphere of vice. The hours that should be devoted to prayerful communion with them and a careful superintendence of their employments and amusements are worse than wasted in ornamenting the little suits which will serve to add the evil of vanity to the faults already acquired. A mother who prizes the approval of God and who is controlled by heavenly influences will not dare to waste her precious time, strength, and money, in arranging her own and her children's dress to meet the claims of custom. Fashion-loving mothers are daily giving their children lessons in devotion to dress, which they will never unlearn in after-life. They are sowing seeds in those tender minds which will ere long bear fruit. "Sad will the harvest be!" "Whatsoever a man soweth, that shall he also reap."

It is the mother's duty constantly to educate her mind and heart for the grave duties devolving upon her, that she may successfully meet her increasing family cares. She should study the peculiarities in the temperaments of her children, and vary her discipline to suit their different dispositions; thus she will be able to mold their minds in the right shape. The usual management of children at the present time tends to weaken their moral power. They are allowed to be idle, and their active young minds, seeking employment, stumble into evil ways. They are not taught self-denial and prompt obedience, therefore they grow up selfish and incapable of taking up the earnest work of life. The example of most parents is demoralizing to the children, who naturally look to them for a pattern. If the parents are swept into the strong current of the world and follow its practices regardless of right or wrong, time or expense, certainly no better can be expected of their children. The lessons of precept and example given by parents to their children should tend to fit their characters for the higher, immortal life. They are thus qualified also for the greatest usefulness in this world. God has placed us here not to live for our own amusement, but to do good, to bless humanity, to prepare for Heaven. Every violation of moral obligation, with its burden of result, must be met and accounted for hereafter.

Especially are the mother's moments price-

less; her work will be tested in the solemn day of accounts. Then it will be found that many of the failures and crimes of men and women have resulted from the ignorance and gross neglect of those whose duty it was to guide their childish feet in the right way. Then it will be found that many who have blessed the world with the light of genius and truth and holiness, owe the staunch principles and integrity that were the main-spring of their usefulness and success to the careful religious training of a praying Christian mother.

Visit to Middle Park.

BY MARY L. CLOUGH.

(Concluded.)

ON the following day we met several hundred Ute Indians mounted and heavily loaded with skins and furs, on their way to Central City and Denver to trade. This tribe is friendly; having found that the better part of valor is discretion, they are on good terms with the government and reap all the consequent rewards. This does not however prevent them from sometimes taking undue advantage of unprotected whites, and it is best to be well armed in going into the Park, which is their favorite hunting-ground. There had been a shooting affray between the Indians and whites during the summer, and we were therefore specially cautious in dealing with them. The Utes are a dirty, squalid, half-naked set of savages mounted on wretched, half-starved ponies. After chatting awhile with the chief, we purchased some plumed arrows and passed on.

The scenery grew more beautiful as we advanced. It was a delightful change to gallop over the smooth, turfey plateau instead of painfully picking our way over rocks and chasms. The hours flew until, in the waning day, we found ourselves on the bank of the broad, clear Grand River sweeping its sparkling waters toward the far Pacific, for all the streams of Middle Park are tributary to the Colorado River and thus flow into the Western Ocean. All the rivers and brooks of the Park are so pure and transparent that every pebble gleams up plainly from the bottom, and the speckled trout are seen flashing amid the rapid current. A quarter of a mile away were the hot mineral springs, the steam of which rolled out as if from a miniature volcano. Close by was the rustic lodge of the persons employed to keep the bath-house, and around this cabin a few hunters and Indians were lounging, whose picturesque costumes lent a strangeness to the scene. Farther down were clustered the dusky

tepees of an Indian village, and all was backed by a semi-circular sweep of bluff, now steep and rocky, then smooth and waving with grass. Before us rose an abrupt, conical hill; at the right, a mile away, extended a low range of crumbling mountains, covered with disintegrated lava, marking, no doubt, the debris of an ancient volcano. Immediately about us swept the green grassy plateau, gemmed with a thousand varieties of flowers, and over all streamed the level light of the sinking sun, touching with a finger of flame the bald brows of the outlying circle of peaks and mountains, glistening with the sleet and snow of the late storm. It was Arcadia with a crown of ice and a heart of fire.

We camped on the farther bank of the river and walked over to the springs. A few rods distant from Grand River, and perhaps 60 feet above it, that is 7,725 feet above sea-level, on the rising hill before mentioned, these springs boil up in three different places, mingle in a stream, and rush over the precipitous bluff into a natural basin worn in the rock. The water-fall is 18 inches across, and the basin 12 by 15 feet. The water stands from three to four feet in depth and flows off swiftly to the river. Mr. Byers of Denver, proprietor of the *Rocky Mountain News*, claims possession of the springs, and has erected a rude shelter over the bath, and furnishes during the season necessary fixtures and attendants. The water is strongly impregnated with iron, sulphur, soda, and almost everything else that goes to make up the fumes and fragrance of sulphureted hydrogen. The temperature of the main spring is 112° Fahrenheit; but one less exposed to the air is as high as 120°. The mean temperature of the bath is 110°. Into this seething caldron, from which rise cloudy vapors that fill the entire room and issue from every crack and crevice, the bather must enter warily. The almost scalding heat of the water is at first unbearable, and the bather usually retreats with a shriek of pain from his first attempt to enter the bath. But by gradually introducing the person into the water one soon becomes accustomed to the temperature (and the smell), and finds it the most delightful of baths. However, those in delicate health should enjoy this luxury with moderation; for from its excessive heat and peculiar qualities it is necessarily relaxing in its effect if of long duration. The water is very unpleasant to the taste on account of its warmth and mineral properties, but there is a wonderful sparkle and stimulus about it. Applied externally and taken internally it is thought to possess great medicinal virtue in cases of rheumatism, paralysis, and cutaneous affec-

tions. During the summer months, invalids, and persons of leisure, who care to take so tiresome a journey, visit the springs and remain for weeks to try the efficacy of the water and to hunt and fish. Frequently as many as one hundred people are encamped near this point.

Another attraction of Middle Park is the "Moss-Agate Patch," twelve or fifteen miles from the springs over a range of hills. Jasper, chalcedony, agate, onyx, and more precious stones are found all over Middle Park, but at this place is found the richest deposit of moss or fortification agate.

On a brilliant morning, having secured a guide, a regular old mountaineer, we rode, Indian trail, over the hills and far away to the famous "Patch." We found it stretching over a considerable extent of hill. We wandered about for several hours, finding the ground literally strewn with agate and jasper. We selected some fine specimens, lunched beneath a clump of willows, sorted over our treasures, and started for camp as the sun was dropping down in the west. We had a merry ride back through forests of sage brush, scaring up the wild sage-hen and other game as we galloped on. Miles and miles away we could see Grand River, a flashing line of light, winding through the green meadows delicately fringed with willows and aspens. It seemed almost impossible that this beautiful land, so smooth and garden-like, was uncultivated and uninhabited.

The next morning we struck camp and started for home. We could have spent a few weeks in this place very pleasantly, but the season was already so far advanced that it was precarious crossing the Range, as we had amply proven, besides our time was limited; so we reluctantly bade farewell to Park and springs and river. As we were about starting, the Indians, from their village, gave us a parting salute in shape of a rifle-ball whistling a few feet above our heads. We were assured that they frequently paid visitors this questionable compliment, but as there were hundreds of Utes in the Park we concluded that it would not be wise to return it. Our trip back was pleasant, and we had the good fortune to have splendid weather in which to cross the Snowy Range. All the startling majesty of scenery that had before been hidden from us by the tempest was revealed under the clear sunlight of our return. Standing on that great continental divide, looking off upon a hundred cloud-cleaving peaks, slashed with the snow of years, and then across to the distant plains, blue and dim against the far horizon, one feels in the immediate presence of God. The loneliness

is so impressive, the isolation so complete, that a sense of awe creeps over the spirit, and man seems little and weak amid this proudest pomp and majesty of Nature. We stood upon the watch-tower of the continent, feeling the breath of two oceans mingling in the gale that fanned our cheeks. Looking upon the magnificent sweep of distance, one could seem to see, beyond the fading line of the eastern horizon, the cities and palaces of commerce, and over the piles of naked peaks, purple in the western distance, the glow of the sunset land. We could almost hear the shriek of the locomotive flying through the canyons at the north, and trace the line of steam that girdles the world.

On the summit, at an altitude of nearly 12,000 feet, we found brilliant mosses and delicate daisies peeping from the snow and looking just as sweet and contented as if growing in a lady's garden.

On the ninth day from our departure we drove into Central City, sun-burned, weather-beaten, dirty and hungry, having reached the end of our clean clothes and provision. We were greeted by an army of friends, all questioning us about our snow-storm on the summit, for our adventure had traveled on before us and found its way into the city papers with the usual exaggerations. Where is not the enterprising newspaper correspondent to be found! Go to the uttermost parts of the earth, amid the deserts, the rocks, and the caves, and if you see but one person in all your wanderings, beware, it is he looking out for a startling item. However we were in the mood to be lionized, and willing to endure almost anything for the privilege of resting our weary bones on a civilized bed and sitting down once more to a *bona fide* table.

Centennial Big Tree.

BY ELD. J. H. WAGGONER.

THE REFORMER has contained some interesting sketches of the Centennial Exhibition. Though I do not hope to write anything of equal interest, some may be interested in the statement of a few facts concerning that which has been a subject of some inquiry. A section of one of the mammoth redwoods of California was shown in Philadelphia, and letters have been received here from friends in the East, inquiring if it was genuine or ingeniously put together from parts of different trees. If the readers of the REFORMER will credit my story, I may be able to satisfy them on the point.

As New Year's Day is not favorable to

business, not even to profitable visiting, and as I was near the mountains, I rejected the invitation to a dinner of rich viands, and took a hasty trip to the "Big Trees." The weather was clear and dry, and favorable to our purpose. A camp at the foot of the mountains in a sharp frosty air was enjoyable. We ascended some five thousand or six thousand feet with a wagon, and then took to the horses, sometimes finding the road difficult, as we were not well prepared for such traveling. As we neared the redwood grove, the timber increased in size, especially the sugar pines, which were large and very tall. At first we found the redwoods scattering, and of only medium size, for them, and the great height of the large pines rendered it difficult to form a just estimate of the redwoods. As we neared the summit, we found them more numerous and larger, being from twenty-five to thirty feet in diameter. As my time was very limited, having to return at a stated hour, I did not try to visit the very largest trees in the grove, but made it a point to visit the stump and remains of the tree exhibited at Philadelphia.

The tree was cut low to the ground, and a recent fire had destroyed the bark and so marred the edges of the stump that it was not easy to determine its exact size. But from points clearly defined, I made ten steps on its surface either way. Let any man of medium size draw lines across a common center at right angles, ten steps in length, and from the points draw a rough circle, and you may form a quite correct idea of the size of that stump. My companion in this trip said he was there when they were cutting down the tree, and the bark on the stump was thirty-two inches deep. This would increase the diameter of the stump five feet. But a difference of five feet appears inconsiderable to the eye in a tree of that size.

To cut the tree in two it was necessary to open a wide space in which to work. Accordingly, two openings were commenced at a distance apart sufficient to block out a length of fence posts, and thus the workmen from the top let themselves down as the work progressed. The section taken to the Centennial was sixteen feet in length, the inside being split out, the outer shell only being taken. From this inside, and from the length taken out in cutting off the log, the projector of the enterprise obtained two thousand fence posts! How many posts have since been made from the log I cannot now ascertain; but probably one hundred feet of it have been worked up. At the point up to which it is worked, I took a stick seven feet

long and with it could just reach the upper side of the log. How far it was bedded in the ground I could not tell, as there was much rubbish around.

It is difficult to form any just idea of the size of these trees on the spot, because of the surroundings. Everything appears on a large scale, and the eye cannot make a correct comparison. To realize their size, you must mount upon a tree as it lies on the ground. A log sixteen feet in diameter does not look large there, but standing on the top of it, it appears to be monstrous. And then you can only faintly imagine the enormous size of one thirty feet in diameter.

This tree was measured when it was cut down, and *scaled* nearly eight hundred thousand feet of inch lumber, to the first limb. At one load per day, it would take a team of four horses more than a year to carry the lumber away. Putting the amount at seven hundred and fifty thousand feet, and allowing five thousand feet to the house, it would build a village of one hundred and fifty houses, sufficient for seven hundred and fifty inhabitants at an average of five persons to the house. But it could easily be made into comfortable residences for one thousand people.

The beauty of these large trees can hardly be imagined by any one who does not see them. Having a wide base at the ground, they speedily contract to their true *tree size*, and then ascend with a beautiful taper with as much regularity and symmetry as the most skillfully constructed monument. They present none of the variety of form found in other trees, but are uniform in their stateliness and grandeur, seeming to realize the necessity of a true perpendicular for such immense bodies. The limbs are found only at a very considerable height. The only divergence from perpendicular which I observed was in the case of two trees which rose from the same base, and separated above the ground.

This grove is in Fresno County, near King's River Canyon, but the road to it is from Visalia, in Tulare County. It is said to be the largest grove of redwoods in the State, but does not contain the largest trees. The State very properly protects these mammoths, but not sufficiently, as the projector of the Centennial-tree enterprise paid only \$50 for cutting it.

The capriciousness of the climate of California was well illustrated at the time of our trip. On this range the snow frequently lies at the depth of six to ten feet; but at that time there had been no rain in the great San Joaquin valley, and the mountains were dry

and dusty. We climbed to the top on the third of January; only in the north side canyons where the sun does not penetrate was a little ice found. We were about one-thousand feet higher than the summit of Mt. Washington, under a warm sun, and the day every way as pleasant as a fine May-day in any Eastern valley. But now the whole range is covered with snow.

Riding a Camel.—A correspondent of the *San Francisco Chronicle* sends from Cairo the following description of camel-riding:—

"My camel was led down in the sand patiently awaiting his burden. You tie a camel to himself—that is, when he has shut up his legs under him like knife-blades, you slip a leathern bracelet over his knee, and there you have him; for it is impossible for him to open his leg so long as this bracelet is around it, binding the leg above the knee and the shin bone together like a pair of tongs.

"Of course it is not easy to find anything in the desert to which you may tie your camel securely; a beneficent Providence has, therefore, made every camel his own hitching-post, likewise his own cistern and vegetable market and step-ladder—in fact, the camel is the most complete machine on four legs that we have a knowledge of. His machinery is clumsy, and needs oiling. His great joints show through his sides, and his tail is the barest apology, and unworthy of notice. You would think your camel went on stilts if you were to start off suddenly, sitting in a nest of luggage on that high back of his.

"You would think he had his feet in poultices if you were to look at the soft, spongy things as they fall noiselessly on the earth and spread under his tottering weight. And that tearful face of his, with its liquid and pathetic eyes, and those deep cavities above them big enough to hold a hen's egg; his aquiline nose, with its narrow, slanting nostrils, that shut tight against the sand-storms and the withering kamsin, and give a very scornful expression to the face; the whole face looks as if it were going to cry. The absurd under lip is puckering and pouting to the most charming extent, and you are not at all surprised when the beast finally bursts into tears and cries long and loud like a great overgrown baby. This is the pudding-footed pride of the desert, whose silken hair is man's raiment, and whose milk is meat and drink.

"While my camel was still kneeling with his strap over his leg, I stepped into the curve of his neck and went up the front stairs

to the top of his hump. His saddle was a tree of wood with thick rugs lashed over it. It was a little like swinging in a sawbuck, riding that camel to Sakkarah. He edged his way over the desert, putting the two legs on one side of him forward at the same time, and then kneeling over and pushing the other side ahead. I was continually rocked back and forth until my head swung loosely on my shoulders, my sides ached, and all my spine was sore. Many people are seasick when they mount a camel for the first time. The motion is not unlike that of a small boat in a chop sea. There is certainly no pleasure and very little elegance in your rest as you toss to and fro on the summit of that animated mountain of India rubber.

Bustles.—The *Washington Chronicle* thus pictures the misery of a woman who wears a bustle:—

Does it not seem fully apparent to you that the chief aim of our fashionable inventors is to perfect a rare combination of discomfort and discord in female wardrobe? They seem to think women are a lot of silly fools, who are bound to wear anything, no matter how ridiculous it makes them appear, so it is fashionable. We do not claim they are very far from the truth. The latest styles of dress, to say the least, are abominable; the more wrinkled and looped and hitched, bent, doubled, twisted, puckered, contorted, curtailed and retailed, convex and concave, a woman's dress can possibly be made, the more stylish and fashionable she is, and her value and position in society are augmented in the same ratio.

The new bustle perfects and combines this idea of general disorder and discomfort; it might as well be worn on the head, for to conceal it from view by its intended position is a positive impossibility, and it is a failure in that respect.

The ungraceful movement it gives to the skirts and walking gait is one of its faults. No one can sit down in one of them easily or comfortably, neither can it be worn long at a time without positive weariness and injury to health.

Again, the idea of all bustles is indelicate, and this monstrosity is doubly so, and a positive nuisance in every way. A lady is a subject of ridicule with one on, and an object of remarks if seen on the streets without it; so in either case it is an abomination. It might be serviceable in a family as a pigeon coop, but it is out of place on a lady. There are two styles of this most ingenious monster bustle. One is very long, reaching nearly to

the floor; in other words, it is a bustle of the wholesale order, the very superlative of fashionable folly. With one of these on a lady nearly makes a figure of herself; the clothes jump from side to side; as she walks the bustle heaves and tumbles about like the keel of a small schooner "in a blow," and a sailor would feel inclined to cry out, "Steady the helm there; hold her fast!"

The short bustle is a little abbreviated in length, but utterly unmanageable in a street car or anywhere else when the unfortunate wearer desires to sit down. If a woman makes up her mind, she will sit down in spite of the whalebones. She finds on rising that the whole affair is entirely bent out of shape, and one or more loosened bones, that burst from their confinement by the pressure, are stabbing her in the back to her utter misery, and she takes a big vow silently never to put it on again as long as she lives, fashion or no fashion!

Terrible Disasters.—The statistical fiend has been aroused by the Brooklyn Theater disaster, and here are some of the suggestive data of loss of life during the nineteenth century only by fire, flood, famine, earthquakes, and war, the great destroying elements by which the over-population of the world is prevented:—

1872—Earthquake in California,.....	30
1811—Fire at Richmond Theater,.....	68
1871—Fire at Chicago,.....	100
1856—Wreck of steamship Pacific,.....	186
1837—Fire of steamer Ben Sherrod,.....	330
1873—Wreck of steamship Ville du Havre,.....	226
1864—Flood at Sheffield, England,.....	250
1876—Fire at Brooklyn Theater,.....	276
1852—Fire of steamship Amazon,.....	367
1850—Wreck of steamship Royal Adelaide,.....	460
1852—Fire of steamship Austria,.....	471
1873—Wreck of steamship Atlantic,.....	535
1833—Flood in Canton, China,.....	1,000
1872—Earthquake in Syria,.....	1,500
1842—Earthquake in Santo Domingo,.....	5,000
1859—Earthquake at Quito,.....	5,000
1813—Flood in Silesia,.....	6,000
1850—Earthquake at Naples,.....	6,000
1870—Battle of Gravelotte,.....	6,500
1831—Earthquake at Mendoza,.....	7,000
1863—Battle of Gettysburg,.....	7,834
1815—Battle of Waterloo,.....	9,500
1843—Earthquake at Philippine Isles,.....	10,000
1851—Earthquake in Italy,.....	14,000
1857—Earthquake in Italy,.....	22,000
1868—Earthquake in Peru,.....	25,000
1864—Cyclone in East Indies,.....	60,000
1876—Cyclone in East Indies,.....	215,000

Total for a fraction of actual loss of life, 404,383

It may be consoling to know that Burke estimates those "slain in battle and by other means of civilization" since the world began, to be, in round numbers, 36,000,000, while another authority computes the number, with greater liberality, at 6,860,000,000. Evidently disease and old age are the least responsible for deaths.—*Sel.*

DIETETICS.

"Eat ye that which Is Good." As a Man Eateth, so Is he.

Condiments.

By condiments are meant those things which are used in connection with food to give it flavor. Condiments are not of use in the system, to build it up. They add nothing, or next to nothing, of a nutritious quality; but merely make food taste better, in the perverted view of those who use them. It is the acquired habit of using them, and not a natural taste, which creates a demand for them.

Some of them are earthy, or mineral, substances which it is impossible to digest and assimilate; some are pungent and irritating vegetables, which do a positive harm, and are therefore worse than nothing; and of all of them it may be said, that instead of aiding in building up the system, they only add to the burden of the depurating organs, the business of which is to cast out hurtful and useless things, that the machinery of life be not clogged, and disease and death ensue.

Among the condiments we name a few: Butter and pure grease of all kinds; pepper, all-spice, cloves, nutmegs, cinnamon, and various other articles of an irritating, and consequently of a stimulating, nature; vinegar, and all fermented, and consequently intoxicating, liquors. And it is doubtless the case that sugar and most of the sweetenings are of little or of no value, as containing elements capable of building up the living system, and that the less they are used the better.

False ideas are entertained in regard to the use of condiments. Some think that they certainly could not do without them. And so some think concerning various poisons, as tobacco, opium, and alcoholic drinks. But it is a false taste, and one that has been acquired with much suffering, in some instances, that gives to the whole tribe the value which they are thought to possess. Their use has been acquired, or learned, by habitual use, and they may be unlearned by disuse. The taste can be brought back to a natural state, so that food will be relished, we do not say as well, but better, without them. The writer knows this by experience. Food cooked in the most simple manner tastes better without condiments than with them. In fact, I am often sadly disappointed when I take bread, fruits, and vegetables, hoping to enjoy their natural taste, to find that some

foreign and unwelcome substance has been added to make them taste good to a perverted appetite. When I have hoped only for food, I have been disgusted to find its taste disguised with some condiment, so that I have repented of the undertaking of using it.

Let all who would live healthily, and consequently more happily, make a full resolve to get back to a natural use of the foods which God in nature has abundantly given us. Grains of all kinds, fruits in abundance, and several garden vegetables, prepared in the most simple manner, are vastly better, and taste better, than the same things perverted and disguised with condiments; and food thus taken is more easy of digestion and more healthful; and if we will eat to live, at the same time we shall enjoy our food better than the most skillful, laborious, and fastidious epicure. As the doctors say of their drugs and nostrums, so we say of simple, undisguised food: "Try it."

R. F. COTTRELL.

An Arrow-root Diet.—The other day I heard of a baby that had been nearly starved to death on arrow-root gruel. Its mother had asked her physician whether arrow-root was healthy food for a babe. He replied in the affirmative without further explanation. So she proceeded to feed her child on that, and that alone. It pined away, and seemed at last too weak to endure any more of this world, and the same physician was summoned. "What have you been feeding the child?" he asked. "Arrow-root," she answered. "What else?" he asked. "Nothing else," replied the mother. "Why, woman!" exclaimed the doctor, "you have been starving the poor baby." Then he explained to her that arrow-root contained only starch, and could not possibly furnish all the material necessary to build up the child's physical frame, and furnish the various elements needed to make it a healthy child. A little of it would do no harm, but other food must be furnished. Good fresh milk is probably the very best food for babies lately weaned. Next to that, I know of nothing so reasonable as gruel and soft bread, or crackers made of sifted graham flour without shortening or sugar.

The canaille is really the best part of the flour, or the most nourishing, but if the bran

can be ground fine enough to be pleasant in the eating (and this is possible), it is not reasonable to separate the parts of the wheat kernel for ordinary use.—*Am. Agriculturist*.

THE SONG OF THE VEGETARIAN.

Away with your beef and your mutton !
Avaunt with your capers and sauce !
For beefsteaks I do n't care a button !
Veal-cutlets !—I count them as dross ;
Lamb-stew, chicken-salad, don't mention ;
With my stomach roast pig do n't agree ;
From such messes I practice abstinence—
Farinacea's the forage for me !

O stay me with rice and with porridge !
O comfort me sweetly with grits !
Baked beans give me plenty of courage,
And cracked wheat enlivens my wits.
From such food new youth I shall borrow,
Till, as hearty as hearty can be,
I expire of old age, like Cornaro—
Farinacea's the forage for me !

When night comes, ah ! sweet the reflection
(As my senses are muffled in sleep),
Nothing living to serve my reflection
Has been butchered—not even a sheep.
No lamb has been led to the slaughter ;
No calves hung up by their feet ;
No lobsters been drowned in hot water ;
No cows killed that I might have meat.

Clean of heart I encounter the cattle—
Let brutal carnivora blush !
When my soul is oppressed with life's battle,
I forget all about it in mush.
Begone with your flesh-pots of Egypt ;
To the dogs with your coffee and tea ;
Let your *pates de foie gras* be reshipped—
Farinacea's the forage for me !

Avaunt with your beef and your mutton !
Away with your capers and sauce !
For beefsteaks I do n't care a button !
Veal-cutlets !—I count them as dross ;
Lamb-stew, chicken-salad, do n't mention ;
With me no such viands agree ;
From such messes I practice abstinence—
Farinacea's the forage for me !

—*Arcadian*.

Cannibalism.—It is usually supposed that the eating of human flesh is confined to a few barbarous tribes very low down in the scale of being ; but there is good evidence that this practice was once much more extensive than this. Dr. Pavy, an English writer, remarks as follows on this subject :—

"There is little doubt that our ancestors, the ancient inhabitants of Britain, were guilty of eating human flesh, and St. Jerome specially charges the Attacotti, a people of ancient Scotland, with preferring the shepherd to his flock.

"There have been numerous instances of cannibalism among people suffering from starvation in sieges and from shipwreck, and the evidence is tolerably strong that some men

belonging to civilized races, living in wild places, have occasionally decoyed persons to their dens and eaten them. Andrew Wynthoun, in his rhyming chronicle, charges a man who lived early in the fourteenth century with this crime.

"Lindsay, of Pitscottie, also relates that a man and his wife and family were all burnt on the east coast of Scotland for the crime of eating children that they had stolen away. During the horrors of the great French Revolution the heart of the Princess Lamballe was plucked out of her body by one of the mob, taken by him to a restaurant, and there cooked and eaten.

"Statements are given to the effect that there is something attractive in the taste of human flesh to those who have been addicted to the revolting practice of cannibalism."

Effect of Tea on the Skin.—If you place a few drops of strong tea upon a piece of iron, a knife blade, for instance, the tannate of iron is formed, which is black. If you mix tea with iron filings, or pulverized iron, you can make a fair article of ink. If you mix it with fresh human blood, it forms with the iron of the blood the tannate of iron. Take human skin and let it soak for a time in strong tea, and it will become leather. Now, when we remember that the liquids which enter the stomach are rapidly absorbed by the venous absorbents of the stomach, and enter into the circulation and are thrown out of the system by the skin, lungs, and kidneys, it is probable that a drink so common as tea, and so abundantly used, will have some effect. Can it be possible that tannin, introduced with so much liquid-producing respiration, will have no effect upon the skin ? Look at the tea-drinkers of Russia, the Chinese, and the old women of America, who have so long continued the habit of drinking strong tea. Are they not dark colored and leather skinned ?

Vegetable Food.—Flesh in animal foods is represented by seeds in vegetables, and fat by starch and sugar ; and, to continue the analogy, it may be added that seeds when digested will produce flesh, and starch when transformed in the body may produce fat.

Moreover, every other element, whether mineral or organic, which is required for nutrition, is found in the vegetable kingdom ; as, for example, salts of potash, soda, lime, magnesia, iron, and manganese ; substances analogous to fibrin, albumen, and gelatin gum, pectin, and sugar ; phosphoric, acetic, sulphuric, hydrochloric, and fluoric acids ; besides many acids peculiar to vegetables.—*Smith on Foods*.

THE HEALTH REFORMER

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J. H. KELLOGG, M. D., EDITOR.

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Small-Pox and Vaccination.

FEW of the larger cities of this country are ever entirely free from the ravages of small-pox, one of the most fatal of all contagious diseases. In the summer season, when good ventilation is usually much more generally secured than at other seasons of the year, the violence of the disease abates; cases are much less numerous; and when the efforts of health boards are sufficiently energetic and well-directed, the disease may be almost entirely wiped out. But so soon as winter approaches, the poor are again huddled together in close, unventilated tenement-houses, which afford prolific hot-beds for the development of the disease, and it again appears, with greatly increased virulence. This is the cause of a periodical revival of the question of vaccination. In nearly all cities of any considerable size, regular vaccinators are appointed and sent out by the authorities to inoculate all who have not been recently vaccinated.

Thousands are interested in the question, Will vaccination prevent small-pox? Several correspondents have asked us to answer the question, together with another, If vaccination is a preventive of small-pox, is it an advisable procedure? Hygienists in general have been bitterly opposed to vaccination under any circumstances. Many have even shown what seemed to us a fanatical zeal in their opposition to vaccination. The facts which have been indisputably established by the medical experience of thousands are the following:—

1. An individual who has had small-pox is much less liable to have it a second time, even though thoroughly exposed, than if he had not had it.

2. The vaccine disease, or kine-pox, is small-

pox modified by passing through the system of the cow.

3. The change in the system resulting from vaccination will protect a person against small-pox by reason of its being of the same character, though the protection is less perfect than that secured by the disease itself.

4. Hygienic living is also an excellent protective. It keeps the depurating organs in such excellent condition that the virus of the disease is eliminated in the ordinary ways without the necessity for a febrile disturbance.

5. Neither vaccination nor hygienic living is an absolute protective. The protecting influence of vaccination is transient, growing less and less with the increasing remoteness of the application. It would be entirely possible for an individual to take into his system the infecting germs of small-pox in such numbers that it would be impossible for him to escape the disease even though his living were in all other respects radically hygienic. Nevertheless, even in such a case the beneficial results of hygienic living would be seen in mitigating the severity of the disease.

6. The chief objections to vaccination are that it is not a complete protective, and that it may be made the means of conveying dangerous and loathsome diseases.

7. The chief objection to hygienic living as a preventive is that very few can be induced or compelled to live hygienically. The class of people who suffer most from this disease are the lower classes of poor people in the large cities. These are the very ones who are the slowest to adopt reformatory habits.

Taking all of these facts into consideration, we are of the opinion that there are circumstances under which vaccination is the lesser of two evils; but it is better to always employ the bovine virus; that is, that which has come directly from the cow or calf and has not been humanized. If bovine virus cannot

be obtained, the greatest care should be taken to secure humanized virus from sources which are known to be perfectly healthy.

We do not wish to be understood as advocating vaccination. We only admit the possibility of its utility as a protective means among people whose dietetic and other habits cannot be controlled. Personally, we should never think of resorting to it. We have found rigid hygienic living a perfect protection while visiting the most aggravated cases of the disease in New York City, not suffering the slightest symptom of it though frequently and thoroughly exposed.

Parlor Lectures.

THE LIVER.

LADIES AND GENTLEMEN :—I will call your attention this afternoon to a subject which lies near to every person's heart, *the liver*. The liver belongs to a numerous class of vital organs called glands. It is the largest of all of the glandular structures of the human body, constituting about $\frac{1}{32}$ of its total weight. Women have larger livers in proportion to their size than men.

The great importance of the liver to the vital economy is indicated not only by its great proportionate size, but by the fact that it is more uniformly present in the numerous members of the animal kingdom than almost any other of the viscera. In many of the lower animals it is made to perform functions which are performed by several different organs in more highly developed organisms.

In the model before you (one of Bock-Steger's beautiful preparations, a little less than life size), the liver is seen very accurately represented *in situ*. You will observe that the organ lies chiefly upon the right side of the body, its lower border reaching downward nearly to the lower border of the inferior ribs. Its left portion lies over the stomach, and extends so far over to the left that it lies in close proximity to the heart, being separated from it only by the diaphragm.

A superficial examination of the liver shows it to be divided into five portions, called lobes. A more careful scrutiny reveals the fact that each lobe is made up of an immense number of minute, hexagonal

bodies, each about as large as a millet seed, called lobules. These structures are very easily seen in the liver of the hog; a small magnifying glass makes them much more apparent. But the real structure of the organ is revealed only by a powerful microscope. By the aid of this wonderful instrument, each tiny lobule is seen to be composed of multitudes of small cells which are grouped together in a most symmetrical manner, as you will see by examination of a prepared specimen at the close of the lecture. These cells, though so small that several thousand of them arranged in a row will extend but a single inch, perform all the work of the liver; and upon their integrity depend the health and utility of the organ.

Lying upon the under surface of the liver is a small sack called the gall bladder, which communicates by means of a duct with another duct which leads from the liver to the upper part of the small intestine, which it enters a few inches below the stomach.

The blood supply of the liver is sufficiently remarkable to be worthy of attention. Like all other organs of the body it receives a regular supply of blood for the purpose of providing material for growth and keeping the organ in repair; but in addition it receives, through a large vessel called the portal vein, a very large supply of blood. The blood of the portal vein is gathered from the spleen, the pancreas, the stomach, and the intestines. The utility of this arrangement we will see presently.

As previously remarked, the liver belongs to a class of organs called glands. These organs are divided into two classes according to their function. Those of one class form from the blood fluids which are used for the maintenance of some of the vital processes, and which are called secretions. Those of the other class separate from the blood noxious elements which result from the breaking down of the tissues consequent upon the activity of the body, and which would occasion death if retained. The products of these glands are called excretions. Glands of the first sort are called secretory glands; those of the second, excretory or depurating glands. The function of the liver is anomalous in that it is neither exclusively secretory nor excretory, but both combined. The product of

the action of the cells of the liver is a viscid, greenish-yellow fluid called the bile. As just intimated, the bile has a double character, being both a secretion and an excretion.

As a secretory organ, the liver forms from the blood certain elements which in some manner, not yet well understood, aid in the process of digestion.

As an organ of excretion, the liver separates from the blood an exceedingly poisonous element known as *cholesterine*, which is one of the products of the disintegration of nerve tissue. When it is retained in the blood, the most serious results are occasioned, the patient finally dying of coma.

But the elimination of *cholesterine* is not the sole excretory work of the liver. This organ serves a most useful purpose to the system as a sort of strainer by means of which are separated from the blood many of the unwholesome articles which we take as food. Understanding this, we may readily see the utility of the arrangement before mentioned by means of which all the blood from the stomach, the intestines, and other abdominal organs, is passed through the liver before it re-enters the general circulation. By far the greater portion of the food is absorbed into the blood which passes through the stomach and intestines. The same is true of all kinds of medicines and poisons which are taken into the stomach. This blood all passes through the liver for purification. If it has been charged with impurities or noxious elements of any sort during its passage through the stomach and intestines, the liver must do what it can to remove them. One cannot but admire the beauty of this arrangement which thus provides for the removal of deleterious elements at their first entrance into the vital domain, in order that the general system may be protected from injury so far as possible.

The liver does not remove all injurious substances with equal facility. Some it recognizes more readily than others. It seems to be especially designed for the removal of saline and fatty substances. Minerals, as mercury, copper, and arsenic, are not only separated from the blood by the liver, but if taken in any but minute quantities, they are even retained in its substance. The chemist takes advantage of this fact in seeking for

poisons in the body of an individual who is supposed to have been poisoned, often finding traces of the fatal dose in the liver of the deceased when in no other organ. Instances have occurred in which cases of poisoning have been detected in this way months after the death of the victim.

All cholagogues, or medicines which are said to act upon the liver, are poisons which are removed from the system by the depurating efforts of this organ, just as is *cholesterine*, a poison generated within the body. The administration of a cholagogue occasions an increase in the quantity of bile only by increasing the quantity of poisonous elements in the blood to be eliminated by the liver.

As we have seen, one of the functions of the liver is to remove from the system injurious elements taken into it by means of the stomach and intestines. This fact alone would seem to be a sufficient intimation on the part of nature of the injurious character of such substances as are treated in this manner by the liver, as salt, soda, saleratus, all kinds of spices and condiments, and animal fats, together with all mineral medicines, and, especially, cholagogues. Of what possible utility can it be to the system to continually pour into it materials which must be immediately got out again at an expense to the limited forces of the vital economy? A farmer who should sow broadcast over his fields the seeds of the Canada thistle and other weeds while at the same time employing men to till his crops and keep his land free from weeds, would be justly called a poor economist. The individual who takes into his stomach articles which he knows his liver must eliminate, exhibits the same want of economy. Indeed, to spend one's vital forces uselessly is even more reprehensible than any pecuniary waste, since money may be regained; but vitality once wasted is gone forever. But we need not dwell longer on this point at present as we shall return to it at a future time.

There remains for mention yet one other function of the liver which is neither of the character of secretion nor excretion; viz., its sugar-making function. It is now a well-established fact that sugar is formed by the liver. When sugar is formed in moderate quantity, it entirely disappears from the blood during its passage through the lungs.

Any excess is eliminated by the kidneys. Diabetes is a disease in which the liver produces too much sugar, which necessitates an abnormal activity in order to prevent damage to the general system. It is not, primarily, a disease of the kidneys, as many suppose, but probably originates in disease of the liver.

The liver is supposed to have certain other functions of considerable importance, chief of which are the formation and destruction of blood corpuscles, and the formation of urea, an excrementitious element which is eliminated by the liver.

At the next lecture we will consider some of the diseases of the liver.

Had To Give it up.—Thousands of people will soon be suffering from that scourge of all newly settled timbered districts, fever and ague. The almost universal resort will be to quinine and various loudly lauded nostrums warranted to cure the disease but totally incompetent to cure the patient. The inefficiency of such remedies is well shown in the following extract from a letter written last fall by a correspondent of the *Druggist's Circular* :—

“For the past six months, throughout Indiana, we have had to accept the reign of ‘Old King Malaria.’ We had thought him disposed of long ago—at least that his power was broken—and that he only now and then made a raid in certain localities, in the form of intermittent or remittent fevers, just to warn the people about draining their lands and keeping clean and dry houses. But this year’s ‘rampage’ should be a lesson and a warning that he still lives in full force, as the thousands of pale, yellow faces and lean pantaloons will attest. There was a gallant resistance on the part of the people, however, and every available material was brought forth to battle, from ‘boneset tea’ to quinia. All patent medicines that bore the word ‘ague,’ ‘chills,’ ‘fever,’ etc., upon their label, were fired off at random; capsicum pills with calomel and quinia were used as grape-shot. Railroads were destroyed to procure iron tonic to ‘limber up’ with. Dogwood, willow, and wild-cherry barks served as dogs of war; but we had to give it up.”

Of course they did. And so does every

one who does not resort to more effective remedies than those mentioned. We would advise every one who lives in a malarial district to prepare for the approaching season of exposure by beginning at once, if he has not already done so, a course of hygienic living. Discard pork and all fatty foods, tea and coffee, all fried foods; avoid excess in the use of sweets, such as sugar, preserves, honey, and candies; use animal food of all kinds very sparingly; banish rich pastry from the dietary, and use instead an abundance of fruit, fresh and dried, native and foreign. Make a liberal use of such wholesome, nutritious, and delicious articles of food as oatmeal, cracked or crushed wheat, wheat meal, corn meal, and other preparations of the various grains which are not deprived of their most valuable constituents by bolting.

In addition to a careful regulation of the dietary, other hygienic rules must be observed; as frequent bathing—two or three baths a week are none too frequent—regularity in sleeping as well as eating, wearing proper clothing, etc.

Those who thus fortify their systems will generally be able to escape the effects of malarial poisoning, even though they are exposed to its influence. If they should not be so fortunate as to escape entirely, their sufferings will be light when compared with those of persons who have taken no such precautions; and they will find no difficulty in speedily checking the disease. Hygienic living as an “anti-periodic” is vastly superior to quinia, arsenic, cinchonia, or any other mineral or vegetable poison.

Cholera in 1877.—A writer in the American Cyclopaedia adduces facts to establish a remarkable periodicity in the appearance of great cholera epidemics. It has been known for many years that epidemics of cholera originate in India. The natives of this country make periodical pilgrimages to Hurdwar, at the head of the Ganges. Hundreds make the Juggernaut pilgrimage every year. Much larger numbers make the journey every third year. Every sixth and ninth years the number is still greater; and once in twelve years an immense throng, numbering more than three million people, make this long pilgrimage.

Poor food, impure water, together with depressing meteorological conditions and the entire absence of any sanitary precautions, result in the production of disease well characterized as Asiatic cholera. There is more or less of the disease every year. But once in twelve years, at the great pilgrimages, it assumes such proportions that it extends beyond the limits of its original habitat and carries devastation to thousands of households in the larger cities of Europe and even of this country.

Once in sixty years there gathers at Hurdwar a throng of pilgrims still greater than is collected at the twelve-year pilgrimages. The consequence is the production of a still more formidable cholera scourge of sufficient malignancy and strength to sweep over the greater portion of the Western as well as the Eastern Continent before it is checked by the approach of the cold season.

The writer above referred to proves the coincidence of noted epidemics of cholera with the great gatherings at Hurdwar by the citation of dates, from which he claims to demonstrate that another great epidemic will occur in the present year.

Whether these deductions are correct or not, time only will show. We shall soon have an opportunity to test the theory, at any rate. In the meantime, it would not be a bad plan for all to prepare for the worst, so that in case this formidable scourge should make its appearance it may make as few victims as possible.

Expensive Smoke.—The N. Y. *Sun* has the following respecting the amount of smoking done in this country in a single year:—

"In former years, cigarettes were used almost exclusively by Cubans and Spaniards. Now nearly every small boy in the city, and many, too, of larger growth, smoke them by the package. Cigars, too, which in 1863, according to the revenue returns, were reported only to the extent of 199,288,285, have now become a staple necessity, almost touching the two-billion figure, the exact number being 1,908,141,057!

"Let us take ten cents as an average, and we have 2,000,000,000 cigars at ten cents, which equals \$200,000,000. Two hundred millions of dollars spent every year for cigars and cheroots!"

Such an enormous waste as this is of no small consequence when almost every one is complaining of "hard times"; but the pecuniary waste is but a small part of the actual loss. The waste of health, of vital energy, which might be expended in some useful manner for the benefit of the individual or the race, is an irretrievable loss which cannot be estimated in dollars and cents.

We are glad to see that even the newspapers are becoming sufficiently impressed with the magnitude of this evil to lead them to call attention to its results now and then. Tobacco-using is a vice scarcely second to drunkenness in its character, and equally injurious. It is undeniably a form of intemperance, a fact which most people seem to have overlooked. It has been known to occasion delirium tremens.

PEOPLE'S DEPARTMENT

Devoted to Brief Discussions of Health Topics, Individual Experiences, and Answers to Correspondents.

Reforming.—A Vermont friend, who has been progressing in reform for some years, writes as follows:—

EDITOR OF THE HEALTH REFORMER,—Dear Sir: With your blank, I send one dollar for this publication for another year. It has been the means of saving me more than it cost, in tea. By loaning it to my neighbors, some of them also have abandoned the use of tea. I abandoned cider, tea, coffee,

all kinds of spirit and tobacco when I enlisted in Christ's army; but by having black tea recommended by a physician, a good man, I have used it for some years. Good-bye, now, to it. Numbers in our church use tobacco; several young converts (!) were received this year that use it freely. Were I an acting pastor, I would recommend the church to receive no one who had not love enough for Christ and his fellow-men to abandon the use of tobacco.

But what of meat, flesh? I am beginning to be under conviction. Tell us, (1) Why did God give directions and point out so definitely the kinds of animals that might be eaten if none were good for food? And, (2) Why did Abraham's company, the angels, eat of it, if it was not adapted to the health and constitution of man?"

There are thousands who might acknowledge with our correspondent that the information communicated to them through the REFORMER concerning tea alone has saved them an expense much more than equal to the cost of the journal for a year. But we must not neglect the questions asked concerning animal food.

1. The fact that the Creator called the attention of mankind to the fact that the flesh of some animals was more unfit for food than that of others is no proof that he in any way signified the fitness of flesh as food for man. He simply allowed the use of animals for food; but that animal food is not the best food for man is abundantly proven not only by the fact that it was not mentioned in the bill of fare which was given to Adam, but by numerous anatomical and physiological facts, and also by the experience of a large share of the human race.

2. The second question does not seem to us to involve any objection to the positions held by vegetarians. Three suppositions may be entertained respecting the occurrence to which our correspondent refers, a record of which is found in Gen. 18:7, 8. Neither one affords any support to the practice of flesh-eating.

a. It is quite possible that the angels did not really eat, but only appeared to do so. The whole account represents them as they appeared only. They are said to have been men; but most concede that they were not men but angels. They are said to have eaten; it may fairly be supposed that they only appeared to eat.

b. The record does not state that the angels ate meat at all. Abraham prepared both animal and vegetable food and placed it before them. The account is that "they did eat;" but there is no specification respecting what they ate. Perhaps they partook only of the wholesome vegetable dishes placed before them, as do some conscientious health reformers when dining at a table spread with promiscuous articles of food.

c. Lastly, we may suppose that they really ate, and also ate flesh. Even this fact, if it could be established, would evidently prove nothing in favor of the use of animal food; for the angels had called upon Abraham, not

for the purpose of giving him instruction in dietetics, but to impart to him information of momentous interest on an entirely different subject. Hence, no particular significance would attach to their acts in this direction. They came to Abraham in the guise of men; hence, it was necessary that they should appear as men appear—should eat and drink as men were accustomed to do when entertained by a friend after a long journey. They could not be injured by animal food or any other article of which they might partake. They had no message to communicate to Abraham on the subject of diet. Hence there was no inconsistency in the act if they did partake of animal food, even though they were perfectly aware of the fact that animal food was not the proper nor the natural food for human beings.

Encouraging Words.

EVERY mail brings dozens of letters from old and new subscribers, each of which contains, almost without exception, words of encouragement for all who are interested in the advancement of hygiene. The cause is onward. Every day marks some progress gained. Thousands are being enlightened, and the influence of hygiene is extending. The following are a few extracts from recent letters:—

J. G. V. writes from Tenn.: "I have been a subscriber to, and an interested reader of, your excellent journal for some time past, and am happy to say that I have been greatly benefited by an observance of the truths you teach. I bid you Godspeed in your good work, and sincerely trust that your efforts to disseminate hygienic knowledge among the masses may meet with that success you richly merit and deserve, and that the influence you now exert may be rapidly and widely extended."

E. C. E., Iowa, gives us the substantial encouragement of a list of twenty-one names of persons who are to receive the Health Almanac, and adds:—

"You are doing a noble work. I wish I could place your journal in a thousand families. How many are dying for want of knowledge of the *true way to live!* You may hear from me again."

We are always delighted to hear from our friends who show their faith in hygiene by their efforts to extend a knowledge of its

truth among the ignorant masses. Let the light shine.

W. McG., Ill., expresses himself as fully convinced that "health reform is at the very bottom of all other reforms." He neglected to subscribe for the REFORMER last year, but finds that he cannot get along without it; and though he does not put in practice more than one-fourth of what it teaches, he considers it "more precious than gold."

A lady writes from Sandusky, O.: "I have been a constant reader and admirer of the HEALTH REFORMER. I like it for its persistent efforts in denouncing a meat diet, and advocating the only proper diet for man, good dishes prepared from grains, fruits, and vegetables. It advocates a natural diet, no slaying of animals for the food of man. It is the best health journal in the world. I will try to get up a club in this city."

M. C. G. writes: "I am in receipt of the health reform Almanac, and am well pleased with it. I think it a perfect gem, and will do what I can to circulate it."

What the Almanac Is Doing.—Through the munificence and activity of the friends of hygiene, one hundred thousand copies of our Health Almanac have been placed in nearly as many families. Already we are reaping the benefits of this broad scattering of the seeds of truth. From all parts of the United States letters are being received by every mail calling for other of our health publications, notices of which have been seen in the Health Almanac. We know of scores of persons who have recently become health reformers who received their first knowledge of the subject from an Almanac.

The good which may result from a single one of these messengers of healthful truth cannot be easily estimated. Every convert to hygiene becomes a missionary to his friends, and makes other converts who, in turn, also become missionaries; and thus the truth is propagated.

No Desire to Turn Back.—Why should I? I have tried the health reform nearly ten years, commencing at the age of fifteen; and, not to speak of improved health, now, at twenty-five, people suppose I am yet in my "teens." At this rate, Old Age approaches with only half his usual speed. But what if some, whom we should expect to find standing as pillars in this work of reform, tell me I am notional, because I say I must have graham bread; and ask if I think it out of

the way to take occasionally a cup of tea or coffee, or indulge in the luxury (!) of flesh-eating?

As to tea and coffee, I never drank either; so cannot return to that habit. Flesh, my appetite refuses; my stomach no longer recognizes it as food; my system has become naturalized to vegetarianism, and sighs for Egypt no more. Can it be that any are mindful of the flesh-pots of that country from whence they came out—think of leaving the ranks and dropping the banner (the REFORMER)? The greatest objection to the health reform is, some who espouse it do not give it a fair trial. The fault with the REFORMER is, its teachings are not lived out as they should be.

What shall we do when sick? Says one, "Let ague get hold of you, and you'll take something." I used to wish sometimes that I might have a trial of it, but hardly expected it. After awhile I had it, long and severely; but stuck to the anti-drug system and came out all right, not having to carry poisonous drugs in my system to rot my teeth, benumb my brain, or give me rheumatism for life. Thanks to the HEALTH REFORMER for this.

Shall we go back? No, indeed. Shall we stop the REFORMER? No, no! Take it, read it, circulate it, post up on the subject, and be ready to give to every one that asks the reason of your faith; and be sure your faith is not denied by your practice. Prove true to health reform, and health reform will prove true to you.

FRANK STARR.

Alcohol and Cold.—Here is another, valuable testimony in favor of teetotalism; we copy from the *Scientific American*:—

"At a meeting given to the Good Templars of the English arctic expedition, Mr. William Malley, of the alert, in relating his experiences, said that, among the few men who escaped scurvy, and did any sledging worthy of notice, were four teetotalers, who enjoyed perfect immunity from all sickness, establishing beyond the shadow of doubt that the intense cold of the polar regions could be well endured without stimulants."

Questions and Answers.

Dyspepsia.—S. A. B. says: I am a constant sufferer from dyspepsia and often from neuralgia in the stomach. I am a hygienist, which helps, but I do not find a permanent cure. Is there any hope for me?

Ans. Yes; you need a thorough course of hygienic treatment. You require tonic treatment of various kinds. Electricity, properly applied, will give you great relief. Our advice to you would be, Go at once to some good health institution where all hygienic agencies are scientifically employed and spend a few months in getting well.

Stimulant and Nourishment.—J. W. L., Kan., wishes to know (1) if there is any difference between stimulant and nourishment; and (2) what the difference is.

Ans. 1. There is a vast difference. 2. They are exact opposites. A food or nutriment is something that will aid in the building up of the body. A stimulant is something which encourages the waste and breaking down of the body. One builds up; the other tears down. One aids in maintaining the normal condition of the body; the other excites and irritates.

Beef Tea.—C. L. B., Neb., asks: Is there any nutriment in beef tea?

Ans. Yes; but the proportion is very small indeed. There is about as much real nutriment in a pint of beef tea as there would be in a table-spoonful of milk or oatmeal gruel. A person will starve to death on beef tea almost as soon as if he had no food at all. It is a stimulant, like tea, coffee, and alcohol. This position is supported by Dr. Edward Smith, F. R. S., Dr. Letheby, Dr. Pavy, and numerous other scientists.

Catarrh.—J. F. B.: Your difficulty is catarrh. You should live hygienically. Adopt a vegetarian diet. Secure plenty of out-of-door exercise. Take a tepid sponge bath every morning, a wet-sheet pack once a week, and fomentations over the liver every other day. The nasal douche applied daily and frequent sun baths are very beneficial. Wear the wet girde nights.

Constipation in Infant.—H. E. B. wishes to know what to do for extreme constipation in a child of two months.

Ans. Probably some change in its food is necessary. In addition to its usual food give it a few spoonfuls of barley-water whenever it takes its food. Be regular in feeding it. Knead and percuss the bowels several times daily. It is exceeding injurious to allow a child or an adult to become dependent upon the constant use of the enema. Give careful attention to the diet of the mother.

Cleaning Teeth.—A. B., Iowa, wishes to know how to get his teeth clean and keep them so.

Ans. Go to a dentist and have the teeth well cleaned and polished; then cleanse them thoroughly three times a day with soft water, a little fine soap, and precipitated chalk.

Incontinence of Urine.—A. C., Ill., wishes to know what to do for a child who wets his bed every night.

Ans. There are several things that should be done. 1. The diet should be hygienic. Salt and all spices and other irritating condiments should be discarded. 2. The bladder should be emptied just before retiring. 3. The child should eat very little supper, or none at all, and no kind of fluid should be taken within three or four hours of bed-time. 4. It is a good plan to wake the child two or three times during the night and have him empty his bladder.

E. A. K.: See answer to J. F. B., in this number.

F. D. C.: Saltpeter is harmless as a detergent if used in the proportions you mention.

G. M. K.: Such a person as you describe is suffering from catarrh. See answer to J. F. B., in this number.

R. H. R., thinks he has amaurosis, and wants a remedy. We cannot tell from the meager description you give whether your case is one of amaurosis or not. You had better consult a good oculist. Your difficulty may be cataract. Amaurosis is a term which ignorant doctors apply to numerous conditions of the eye which they do not understand.

E. G., Cal.: 1. We would not recommend the practice. 2. Have a good dentist examine your tooth. Save it if possible. 3. Indian-club exercise is an excellent thing if not overdone. 4. It is a good plan to change the clothing several times a week, allowing the soiled garment to air in a warm room for a day or two.

J. G. V., Tenn.: 1. There is no particular bath or diet that will prevent perspiration of the feet. Alternate hot and cold foot baths taken daily, together with a hygienic dietary, are usually sufficient to effect a cure. 2. A person may succeed in getting entire control of his appetite in a short time, if he set about doing so with sufficient firmness of purpose. 2. Pleasant occupation is better for all classes of invalids. 4. Most invalids can take more than one kind of food at a meal without detriment. 5. The eyes are greatly injured by reading while lying down. 6. The alternate hot and cold foot bath is the best remedy for chilblains. It should be taken at bed-time. The extreme of heat and cold should be as intense as can well be borne.

FARM AND HOUSEHOLD?

Devoted to Brief Hints for the Management of the Farm and Household.

—To loosen a glass stopper, pour round it a little sweet-oil, close to the stopper, and let it stand in a warm place.

—Stove polish, when mixed with turpentine instead of water, and applied in the usual manner, is blacker and more glossy and enduring than when mixed with any other liquid.

—To remove paint from cotton, silk, or woollen goods, saturate the spot with spirits of turpentine, and let it remain several hours, then rub it between the hands. It will crumble away, without injury either to the color or texture of the articles.

—To remove ink from paper, shake well together one pound of chloride of lime in four quarts of soft water. Then let it stand for twenty-four hours, after which strain through a clean cotton cloth, and add one teaspoonful of acetic acid to an ounce of chloride of lime water. Apply this to the blot, and the ink will disappear. Absorb the fluid with a blotter.

—Farmers and gardeners who are desirous of securing paying crops would do well to begin in season to secure the most reliable and paying varieties of seeds. In purchasing seeds do not buy anything concerning which there is any room for doubt respecting its genuineness. Buy only of the best-known and most reliable dealers. Mr. Vick, of Rochester, N. Y., enjoys an enviable reputation as a seedsman. We had the pleasure of visiting his large establishment last fall, and found everything managed in a thorough and business-like manner.

Simple Remedy for Burns.—The following simple application is recommended and is undoubtedly worth trying:—

Mix common whiting with water to the consistency of thick cream, spread it on linen in a smooth layer about an eighth of an inch thick, and apply to the injured surface. The whole burnt surface should be covered, thus excluding the air. The ease it affords is instantaneous, and it only requires to be kept moist by occasional sprinkling with cold water.

The Earth-Treatment for Ulcers.—Large, sloughy ulcers, after being washed, are covered with a thick layer of dry earth, over which wet paper is placed as a support, the whole being neatly bandaged. In a few days the ulcers begin to clear, and when the surfaces look healthy and granulating, a dressing of carbolated ointment is to be employed. This treatment has been found very successful in chronic ulcers which had resisted all other methods of treatment. It should be applied only to ulcers which have a sloughy, indolent, or otherwise unhealthy, appearance.

Damp Closets.—At this season of the year there are very few houses which do not contain from one to a dozen dark, damp, unventilated closets. These secluded nooks are the favorite haunts of disease-producing germs. Mold and mildew flourish in such places, together with the minute germs which are always found present in diphtheria and kindred diseases.

A damp closet should not be tolerated a single day after its presence is known. Throw open the door and let in the fresh air and sunshine. Thoroughly cleanse it from every trace of mold and mildew. Then place in it a peck of unslacked lime spread out on a board or tray. As soon as it is reduced to a fine powder, renew it.

A Good Cement.—A good cement for mending almost anything may be made by mixing together litharge and glycerine to the consistency of thick cream or fresh putty. This cement is useful for mending stone jars or any coarse earthenware, stopping leaks in seams of tin pans or wash-boilers, cracks and holes in iron kettles, etc. Holes an inch in diameter in kettles can be filled, and the same used for years in boiling water and feed. It may also be used to fasten on lamp tops, to tighten loose nuts, to secure loose bolts whose nuts are lost, to tighten loose joints of wood or iron, loose boxes in wagon hubs, and in a great many other ways. In all cases, the articles mended should not be used until the cement is hardened, which will require from one day to a week, according to the quantity used. This cement will resist the action of water, hot or cold, acids, and almost any degree of heat.—*Sel.*

To Remove Stains.—A dime's worth of salts of lemon, dissolved in a pint of cold water, will remove all ordinary stains from white clothing, also from black or colored. Care must be taken to rinse thoroughly in several waters as soon as the stains are removed. It may require two or three applications to complete the erasure. This is also a very useful article for the toilet, to remove stains from the hands or from beneath the nails.—*Sel.*

Management of Boys.—The worst thing a parent can do to a boy is to pamper him. A boy can be fed to death and nursed to death. He can be killed by motherly kindness and fatherly guardianship. Boys are only young animals with minds. The most essential part of a boy is his stomach. Next important members of his organism are his legs. Good, strong, sturdy legs, and a stomach able to digest anything in the way of food, and any amount of it, make an equation for boyhood. Do not keep your boy in the house, doting father, but give him a ball, a bat, a sled, a pair of skates, and things he needs for out-door amusement, and send him out-doors. Go with him yourself, if possible. Skate with him, race with him, be a boy with him now, that he may be a man with you by and by.—*Golden Rule.*

Washing Compound.—The following compound is said to greatly facilitate the cleansing of fabrics; the only objection to it is the turpentine, the odor of which is objectionable to some:—

Dissolve 2 lbs. of bar soap in about 3 gallons of water as hot as the hand can bear. Add 1 table-spoonful of turpentine, and 3 of liquid ammonia. Stir, and steep the clothes in this for three hours, keeping the vessel tightly covered. Then wash the clothes in the usual way. The soap and water may be used a second time, in which case a tea-spoonful of turpentine and the same amount of ammonia must be added. This treatment is calculated to save much labor in cleansing summer clothes stained by fruit, etc.

Waste of Land.—If a farm of one hundred and sixty acres is divided by fences into fields of ten acres each, there are five miles of fences. If each fence, now, is one rod wide, no less than ten acres of land are occupied by fences. This is equal to six and one-fourth per cent. of the farm, and the loss of the use of the land is exactly equal to a charge of six and one-fourth per cent. on the whole value of the farm. But nearly every fence row in

the country is made a nursery for weeds, which stock the whole farm, and make an immense amount of labor necessary to keep them from smothering the crops. Much damage always results to the crop from these weeds, and if these expenses are added to the first one, the whole will easily sum up to twenty per cent., or a tax of one-fifth of the value of the farm. To remedy this we would have fewer fences, or we would clean and sow down the fence rows to grass or clover, and mow them twice a year. Ten acres of clover or timothy would at least supply a farm with seed and a few tons of hay every year. We would, in short, consider the fence rows as a valuable part of the farm, and use them as such.—*Am. Agriculturist.*

How To Extricate a Mired Animal.—An animal mired in a swamp gets into a worse predicament the longer it struggles. The effort to extricate it should be made in an effective manner, so that the animal may not be encouraged to exhaust itself in repeated exertions, which are useless, and only sink it deeper in the mire. The usual method is to fasten a rope around the animal's horns or neck, and while this is pulled by some of the assistants, others place rails beneath the body of the animal for the purpose of lifting it out of the hole. This plan is sometimes effective, but it often is not, and at best it is a slow, clumsy, and laborious method. The materials needed for the method here referred to are all that are required for a much better one. This is very simple, and two men can operate it, and at a pinch, even one man alone may succeed with it. A strong stake or an iron bar is driven into the solid ground at a distance of twenty-five feet or more from the mired animal. Two short rails, about nine feet long, are tied together near the ends, so that they can be spread apart in the form of a pair of shears, for hoisting. A long rope is fastened around the horns or neck of the animal, with such a knot that the loop cannot be drawn tight enough to do any injury. The rope is cast over the ends of the rails as they are set up upon the edge of the solid ground, and carried to the stake or crow-bar beyond. The end of the rope is fastened to a stout hand spike, leaving about a foot of the end of it free. This end is laid against the bar or stake, and the other end is moved around it so that the rope is wound upon it, drawing it up, and with it drawing the animal out of the mire. The rope being held up by the tied rails, tends to lift the animal and make its extrication very easy.—*Am. Agriculturist.*

POPULAR SCIENCE?

In this Department Will Be Noted the Progress of Science, New Discoveries and Inventions.

An Animalculum.—Did you ever see an animalculum? Very likely not unless you have a microscope or have the use of such an instrument, for they are invisible to the unaided eye. An animalculum is, as its name implies, a little animal. How large is it? It is not large at all. Its exact size depends upon the species to which any particular individual belongs, for there are a great many tribes of animalcula. Some are so small that twenty thousand of them in a close row would extend but a single inch. In fact, some of them are so diminutive in size that the number named, if moving in close single file, would not reach more than half an inch. Several hundred millions of these tiny creatures might be packed into a space the size of the head of a pin. In a single drop of water four thousand millions would have room to exercise at will; while more than eight trillions, or eight million millions, might occupy a cubic inch without uncomfortable crowding.

Any one who has a microscope of sufficient power can study these curious little creatures at will. The air is full of germs which will produce them under favorable circumstances. All that is required is moisture and some organic matter in solution upon which they may feed. A very good way to provide these essentials is to steep a little hay in a small quantity of water for an hour or two. Pour off the fluid and place it in a warm place. In three or four days or a week if the solution is examined it will be found to be teeming with living creatures.

Let us place a tiny drop under the microscope and submit it to careful scrutiny. The field of view is crowded with curious living forms unlike any which are ever seen by the unaided eye. Here are multitudes of living creatures swimming about without either legs, feet, fins, or tails. Some work themselves along by means of delicate hairs which keep up a constant fanning motion. Others wriggle along like worms. Still others eject, from a reservoir provided for the purpose, minute jets of water by means of which they are propelled along.

Although these remarkable creatures have neither eyes, ears, nor brains, they appear to possess sensation and to exercise volition. One of their most striking peculiarities is their voracity. This might be inferred from

the fact that the most prominent organ in an animalculum is the stomach. In fact, some of the smaller individuals are all stomach. These do not need any mouth, as each can convert any portion of its skin into a stomach whenever it comes in contact with anything eatable. Now and then we see a large animalculum swallow half a dozen unwary smaller ones at a swoop. It seems that the carnivorous propensity prevails from man down to the other extreme of the animal creation.

Not the least curious fact about these peculiar organisms is the facility with which some of them change their form. One kind, the amœba, when quiet is nearly globular. In this form we see it under the microscope. A moment afterward we glance into the instrument and it has assumed the form of a wooden mallet with a short handle. Another glance shows it in the form of a crook-necked squash. Now it looks like a cucumber; and so it may go on changing its form indefinitely.

Very few animalcula are found in pure well water; but they abound in all impure water.

The Largest Flower in the World.—

The largest flower in the world, says the *Scientific American*, is that of the *Rafflesia Arnoldi*, a plant discovered by Dr. Arnold in the island of Sumatra some sixty years ago. The various species now known are all parasitic, not, however, to the branches of other plants, but to the roots. Entirely destitute of leaves and green in color, these singular vegetables are provided with scales or bracts which conceal and envelop the flower previous to opening. A swelling beneath the bark of some huge surface-appearing root of a large tree announces the coming of a flower. Soon the bark splits, and the bud, resembling the head of a young cabbage, bursts, showing five great lobes, which open and roll back slightly on the edges. Then a circular ring appears surrounding a deep cup, in the center of which is the ovary. Below the edges is a kind of gallery wherein are numerous stamens in which is located the pollen, the fecundating action of which it is impossible to comprehend unless it be assumed that insects intervene for its transportation.

The remarkable feature of the flower is its colossal size, the largest species being thirty-

nine inches in diameter. The central cup holds six quarts of liquid, and the total weight of the flower is over fifteen pounds.

Toughened Glass.—The manufacture of the Bastie toughened glass has been recently commenced in this country. A factory has been established in Ohio, and another in Pennsylvania. The principal articles now being manufactured are lamp chimneys. The "toughening" is effected by placing the glass in a hot bath, consisting of three parts of linseed oil to one of tallow, the bath being at an average temperature of 360° F. After removal from this bath, it is immersed in a second bath of a temperature of 200° F. It is then plunged into a cold water bath, and lastly into one of benzine for the purpose of removing the oil; the glass is then dried in bran, and is ready for shipment. A chimney can be blown and completed in about thirty minutes.—*Druggist's Circular.*

Horned Men in Africa.—Capt. J. S. Hay, an African traveler, presented a paper before the British Association in which he described a tribe of human beings whom he had found in Western Africa, many of whom were possessed of horns. This peculiarity was confined entirely to males; and the horny growth seemed to be of the character of excrescences growing from the cheek bones and projecting forward upon either side of the nose. The natives themselves consider the horns as undesirable deformities, and in some cases adopt every means with which they are acquainted to stop their growth, though their efforts in this direction are unavailing. A supply of horned skulls has been sent for, with a view to investigate more carefully the nature and causes of this curious abnormality.

News and Miscellany.

—A horse recently died of hydrophobia in New York.

—The Sultan of Turkey is reported to be dangerously ill.

—A scientist claims to have discovered the skeleton of Agamemnon in Greece.

—An explosion in an English colliery, recently, resulted in the death of ten miners.

—A spurious five-cent piece is in circulation. It is chiefly composed of tin, antimony, and copper.

—New York City has a church to every 2,045 persons of its population, and a grog-shop to every 125.

—The commission appointed to decide the vote for the president, have reported in favor of the republican candidate.

—A French scientist predicts that the human race is to be destroyed, with all other land animals, by the gradual submersion of the land.

—The friends of temperance are cheered to hear of the continued success of the Reform Clubs which have recently been organized in many portions of the country.

—A speaking machine made by Mr. Faber is attracting much notice in Brussels at the present time. He has succeeded in making it pronounce the twenty-four letters of the alphabet.

—A gentleman recently sang a song in Boston, the notes of which were distinctly heard in Salem at a distance of eighteen miles, by the aid of a new electric instrument called the telephone.

—The complete success of the Mississippi has now been fully demonstrated. Ships drawing seventeen feet of water have passed up the river over portions where the former depth was but three feet.

—Slade, the spiritualist medium, who was arrested at the instigation of Dr. Lankester, of London, has at last been discharged on account of an omission in the indictment. He starts at once for Russia.

—The Eastern Question is still as far as ever from any prospect of a settlement. There are doubtless several nations who would like to enjoy the spoils, but none are quite prepared to make an active interference.

—The latest estimate of the population of the earth is as follows according to Behm and Wagner: Europe, 309,000,000; Asia, 824,500,000; Africa, 200,000,000; America, 85,500,000; Australia and Polynesia, 5,000,000; total, 1,424,000,000.

—There is at the present time a village of shanties numbering about 1,500 inhabitants, situated upon the ice in Saginaw Bay, Michigan. The inhabitants of this mushroom village are engaged in catching fish through the ice.

—Australia is in trouble. A few years ago the government imported a cargo of rabbits for the purpose of freeing the pastures from noxious weeds and frightening mischievous animals from the grain-fields. It is now importing weasels for the destruction of the rabbits.

—The government has recently concluded a long series of experiments for the purpose of discovering a means for canceling postage-stamps which would render it impossible to use them again without detection. As yet, no satisfactory process has been devised.

—Ice gorges which have recently occurred in the Ohio and Monongahela Rivers have occasioned the loss of many millions of dollars.

Immense damage was done to shipping both at Cincinnati and Pittsburgh. Several hundred coal barges and a large number of steamers were sunk.

—The remarkable Kentucky meat shower has now a rival in the form of a snake rain in Tennessee. Great numbers of young snakes were scattered over a portion of the city of Memphis during a storm. They were probably carried up by a whirlwind; but no one knows where snakes are plentiful enough to furnish so large a supply.

—At a temperance meeting in Pittsburg, Pa., a reformed drunkard in appealing to his companions to reform called attention to the prodigious size and ruddy color of his nose. He stated that the development of this enormous "rum blossom" has cost him the sum of \$10,000.00. There are a good many equally expensive noses in this country.

—The French government has done a very sensible thing in establishing a school for the proper training of young men for the business of caring for sheep. Upon the expiration of the term of training, each pupil who is able to pass the required examination receives a diploma which makes him a professional shepherd. If sheep-raising is to be prosecuted as a business, it is certainly an act of humanity to provide them with competent keepers. Domestic animals suffer beyond all computation from being left to the tender mercies of vicious dogs and ignorant, often brutish, hired men.

Literary Notices.

THE ILLUSTRATED ANNUAL OF PHRENOLOGY and the HEALTH ALMANAC. New York: S. R. Wells & Co.

These two publications formerly issued separately have been combined. The work contains a great amount of good reading and many useful hygienic hints.

CONSTITUTIONAL AMENDMENT. New York:

The National Temperance Society have just reprinted the very able and comprehensive speech of Hon. H. W. Blair, delivered in the American Congress, in support of his Amendment to the Constitution of the United States prohibiting the manufacture and sale of distilled liquors. The speech is full of facts and arguments which should be read by every temperance man and woman, and by every liquor-drinker, manufacturer, and seller in the country.

QUARTERLY JOURNAL OF INEBRIETY. Binghampton.

The first number of this new periodical which is before us is a valuable contribution to temperance literature. It is the official organ of the American Association for the Cure of Inebriates. Among other valuable papers, the present num-

ber contains a very able and interesting one by Dr. Geo. M. Beard on the "Causes of the Increase of Inebriety in America."

DENTAL LEGISLATION AND ITS NECESSITIES.

By E. S. Holmes, D. D. S.


The above is the title of a paper read before the Michigan State Dental Society and published by request. It ably and conclusively argues the necessity for legislation to prevent incompetent persons from abusing the confidence of the people by attempting to practice the profession of dentistry without adequate preparation. We sincerely hope that the laudable efforts which are being made by the better portion of the profession in the State to secure a law to effect this, will be crowned with success. Thousands of people have had their teeth—and, ultimately, their digestive organs in consequence—ruined by the bungling attempts of dental quacks.


LIVER COMPLAINT, DYSPEPSIA, HEADACHE. New York: M. L. Holbrook & Co.


This little work of 141 pp. deals with three closely allied topics of almost universal interest, at least in this country. Though by no means free from typographical and grammatical errors, the work presents, upon the whole, a very neat appearance. We also notice a few scientific inaccuracies; nevertheless, it contains a great deal of information on subjects with which unprofessional readers are not generally familiar. We regret to see that the author advocates what is known as the "magnetic treatment" of disease. We believe in the efficacy of manipulations, and employ them constantly, but have demonstrated to our entire satisfaction by a large number of experiments, that the "magnetic aura" of which our author speaks is a figment of the imagination. We have yet to learn that any scientific evidence has been adduced in support of the theory upon which the magnetic mode of treatment is based. Patients are cured by manipulation, not by magnetism. We might mention several other particulars in which the author's statements and explanations respecting vital processes do not accord with the best-established principles of medical science, as, for example, in his explanation of the beneficial effects of grapes in cases of derangement of the liver. He says, "The juice of the grape, flowing through the liver, cleanses it of any clogged material there contained." We might justly criticise the phraseology of this sentence, by suggesting that the liver is the organ "clogged," rather than the morbid matter said to be contained in it; but our chief objection is to the idea that the liver is ever cleansed in this way—much as you would wash out a dirty strainer. Grape juice has no specific action upon the liver any more than has calomel, or any other reputed cholagogue.


But we do not wish to detract from the real merit of the work by noticing only its defects. In our opinion it contains a great amount of valuable practical instruction, and its perusal will be of service to almost any one.


Items for the Month.


 A BLUE CROSS by this paragraph signifies that the subscription has expired, and that this number is the last that will be sent till the subscription is renewed. A renewal is earnestly solicited.


 We begin this month a series of articles on practical subjects which will be the substance of familiar lectures delivered at the Health Institute on Monday and Thursday of each week.


 We are sorry to go to press this month without the article on Bible Hygiene by Eld. White, who was unable to furnish it on account of the urgent press of other duties. Our readers will be deeply interested in the concluding article of the sketch of the life of Eld. Joseph Bates.


 Still it is not too late to circulate the Health Almanac. Every mail brings orders for quantities of the Almanac varying all the way from a single copy to thousands. With every mail also come letters which are convincing evidence of the good that is being accomplished by this means.


 The patronage of the Health Institute is increasing so rapidly that it is found necessary to increase the facilities of the institution. Arrangements are now being made to erect a large main building and new bath-rooms during the present season. The patronage of the institution from the immediate vicinity is greater than it has ever been before.

 The uncommonly pleasant winter which has been experienced this season in Michigan has been very favorable for invalids in this State. The cool, bracing air, and the great abundance of sunshine has made this one of the best localities for consumptives that could be found, especially those in the first and second stages of the disease. In this vicinity, there has been very little sickness of any kind, except chronic ailments.

 The present is an unusually favorable time for the circulation of reformatory literature, especially small tracts on alcohol and tobacco. The attention of the people is called to the subject by the organization of Reform Clubs in all parts of the United States. A great popular interest is excited in the cause of temperance. We would suggest that health reformers and members of missionary societies would do well to improve this opportunity to place in the hands of those who are willing to read a supply of temperance literature in the shape of tracts against alcohol and tobacco. We have a good supply of small tracts on these subjects, and furnish them at very nearly the actual cost.

 Every thoughtful parent will be instructed and greatly interested by a perusal of the able article in this number on "The Duties of a Mother," by Mrs. E. G. White. The rich and extensive experience of the author makes her writings on home topics of inestimable worth to all mothers who are desirous of so training their little ones as to make them useful members of society.

 Bound volumes of the HEALTH REFORMER for 1876 are now ready. A volume contains 384 pages of invaluable reading matter. We only echo the verdict of hundreds of readers when we say that the volume completed last year was the most interesting volume of this journal ever published. Well bound with leather back and tips, this constitutes as cheap a volume as was ever offered for sale at \$1.50, post-paid.

 The new work, "Plain Facts about Sexual Life," announced last month, is now nearly ready to place in the hands of canvassers. The binders are already at work upon the cases, and expect to complete in a short time the neatest volume ever issued from this Office. Numerous applications are being received for the agency of the work. We want an agent in every county in the United States. We expect the work will have a rapid sale since it is adapted to the wants of the time, and deals with the subject in a manner quite different from that in which it has been previously handled. Now is the time to secure territory. A copy of the work with blank subscription book and descriptive circulars will be furnished to agents, post-paid, for \$1.50. The retail price of the work will be \$1.25.

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