

The Health Reformer.

NATURE'S LAWS, GOD'S LAWS; OBEY AND LIVE.

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Bible Hygiene.

BY ELD. JAMES WHITE.

IN compliance with urgent requests from the editor of the REFORMER, we have consented to furnish articles on the subject of Bible Hygiene for the several numbers for 1875 as far as possible. We enter upon the happy task with highest hopes of succeeding in showing that the plain testimony of the sacred Scriptures upon life and health is in harmony with the restrictions and general principles of the hygienic system. In the present number, however, we content ourselves with only an

INTRODUCTION.

The eccentric Lorenzo Dow once said that prejudice was like a cork in a bottle, which would not let anything out of the bottle, neither would it let anything into it. So blind prejudice will blockade the mind, and not allow errors to pass out, nor the plainest truths to enter in. What shall be done? Shall we say to the people, "Give up your prejudices?" This is asking too much. But few could do this should they try. In fact, they have a right to their prejudices if held subordinate to reason.

A sane condition of the mind is one in which passion and prejudice are controlled by reason. And just so far as reason is controlled by prejudice, passion, and appetite, just so far are men and women insane. There are but few perfectly sane persons in our day. We do not ask men to surrender their prejudices; but in the name of reason and religion, we do invite Christians to so far waive their prejudices as to be qualified to weigh evidence in the scales of reason and justice.

With a large portion of the people, the Bible is the highest and safest authority in all matters of truth and duty. Prove to Christian men and women, who fear God and tremble at his word, that existing reformatory movements are in strict harmony with the teachings of the sacred Scriptures, and they will no longer regard the subject as unworthy of their notice. But the very general impression that the restrictions of the hygienic practice are not sustained by the word of God, has placed many sincere Christians where it is difficult to reach them with the subject.

And it is a painful fact that the vain philosophy, driveling skepticism, and the extremes of some who have been connected with the health reform movement, have done much to prejudice sincere persons against the true philosophy of health. But those who revere God and his holy word can be reached with the plain declarations of the scriptures of the Old and the New Testament. We promise to make it appear that the Bible does not justify Christians in many of the common and fashionable habits of our time, which sustain a close relation to life and health, but that it does demand of them changes from these wrong habits. If we succeed in doing this, it will be considered, by all Bible Christians, that it is highly proper that the attention of the Christian public should be called to the subject from the Bible stand-point.

And when we come to the matter of experience, the cause of health reform has difficulties to overcome. But these are generally the result of ignorance of the real facts in the case.

As an illustration, the objector will sometimes point to feeble persons, who may be advocates of reform in habits of life, as representing the results of changing from common habits. In this they do our cause great injustice, as ninety-nine in one hundred of these persons, in consequence of wrong habits

of life, became incurable invalids before they adopted the reform. Had they continued violating the laws of life and health, they would long since have been in their graves. And the reason why there is a considerable number of this class, is, first, because but very few persons feel the necessity of change until they have lost vitality that they never can recover; and, secondly, because the temperate habits of the reform are so in harmony with natural law that these invalids who adopt them linger upon the mortal shore nearly a lifetime. Hence, to point to these as representatives of the health reform is doing the cause we advocate great injustice.

These feeble persons had made themselves hopelessly such by wrong habits of life, and then, in accordance with popular custom, they submitted themselves to the poisonous processes of drug-taking, and when the last ray of hope of recovery in that direction was gone, and they were ready to drop into the grave, they were induced to adopt hygienic habits, the beneficial effects of which are prolonging their existence in a condition of comparative freedom from pain, and the enjoyment of a good degree of happiness. In view of the real facts in the case we point to these very persons as showing the value of the reform.

But we are happy to state that there are thousands of men and women within our personal knowledge, who, in comfortable health, adopted the principles of Christian temperance, and are now reaping the beneficial results. These have abandoned tobacco, tea, coffee, drugs, flesh-meats, and the third meal, and now, without a dissenting voice, report greatly improved health. Most of these are hard-working people, and report that they can do more work, and with far greater ease, than before they made these changes.

Now, in order to put this matter fairly to the test, we invite the objector to point to a single person who adopted these changes in the strength of manhood or womanhood, and who has run down in strength and health, and become feeble, while pursuing in all respects a temperate and consistent course. Here let the matter be fairly tested. When one such person can be found, then we will examine the matter more closely.

The world is moving. The spirit of investigation is out. The old foundations of error

and superstition are being broken up. Let the world march along, notwithstanding it may not travel just as we may have marked out. We need not say that he who would stop the wheels of reform because they do not exactly track his hand cart is a bigot. This spirit was ruling, and ruining the influence of the disciples of Christ, until the Master taught them better. One of them said, "Master, we saw one casting out devils in thy name; and we forbade him, because he followeth not with us. And Jesus said unto him, Forbid him not; for he that is not against us is for us."

While we would be true to the pure principles of health reform, and would ever hold them before the people as important, both to this life, and to that which is to come, we hope to be so far liberal in our views and feelings as to give those who are reforming credit for what changes they are making, and sustain such friendly relations to them as to cheer them on in the good work.

A quarter of a century since, in the ardor and inexperience of younger days, we sometimes detected in our efforts in dealing with minds an inclination to the old mental cramming system. We mean, by this, simply the barbarous practice of crowding our theories and views upon minds, that may be as independent as our own, in a style to impress sensible people with the idea that we are narrow and overbearing. This course raises the combativeness of men of taste and good sense, and prejudices the very persons who, otherwise, might be reached, and might become ornaments to any reformatory movement. This course will gather minds, many of whom may unfortunately be of the same stamp of their teachers, or of that lower grade that will be quite as well pleased with the plan of mental stuffing as to take the trouble of thinking and deciding for themselves.

The mind of every true convert must travel over every foot of ground on the highway of reformation until it shall reach the very summit of reform. It is our duty as reformers to deal in principles, in the spirit of true Christian courtesy; or, at least, with the spirit of real philanthropy. We can let the true light shine out to the world by precept and by example. This, well done, our duty is done. Let the world move on.

GENERAL ARTICLES.

A DEED AND A WORD.

A LITTLE spring had lost its way
 Amid the grass and fern ;
 A passing stranger scooped a well,
 Where weary men might turn ;
 He walled it in, and hung with care
 A ladle at the brink ;
 He thought not of the deed he did,
 But judged that toil might drink.
 He passed again, and lo ! the well,
 By summer never dried,
 Has cooled ten thousand parching tongues,
 And saved a life beside.

A nameless man, amid a crowd
 That thronged the daily mart ;
 Let fall a word of hope and love,
 Unstudied from the heart ;
 A whisper on the tumult thrown,
 A transitory breath—
 It raised a brother from the dust,
 It saved a soul from death.
 O germ ! O fount ! O word of love !
 O thought at random cast !
 Ye were but little at the first,
 But mighty at the last ! —*Sel.*

The Medical Use of Alcohol.

BY JAMES EDMUNDS, M. D.

(Concluded.)

Now, we are told that alcohol is a stimulant, and the doctor who is working very hard, and the clergyman who has to get the steam up on Sunday, and many who are stock-brokers and merchants in great cities like New York and London, find the pressure so great upon them that "they need," as they say, "a little stimulant." They say, "I admit all you say, doctor; it is very injurious; but, practically, I get on better with the stimulant. I take it as a stimulant." And the lady who is very weak and has a baby takes a pint of stout, and sometimes more, as a stimulant. If that can be made out—that it is a stimulant—there is a justification for its use; I should myself see no more reason against using a stimulant when a man was low and faint than I should against poking my fire or putting the blower up if it was likely to go out(?). I can conceive there are a great many circumstances where a physical stimulant may enable a man to go through his work more easily than he would otherwise be able to do. But what is a stimulant? Do we all understand quite what we mean when we say, "I take a little wine as a stimulant"? Food, as you know, is that which is decomposed in the body and supplies it with the forces which that body afterwards gives out. If your horse is

tired out with his journey, you give him a feed of corn with water, and time enough to digest it, and he goes into the harness again, and goes through the next stage. What is it that has taken him along through that second stage? It is the corn which has served as food to the animal, and has been decomposed in his tissues, just as the coal would be put into a locomotive furnace when the fire was going down. Now, suppose, instead of giving a horse a measure of corn, you give him a liberal allowance of whip—that is a stimulant. The horse goes on, and works until more completely exhausted; and just so with a man. Now, recollect, food is that which puts strength into a man, and stimulant is that which gets strength out of a man; so that when you want to use stimulants, recollect that you are using that which will exhaust the last particles of strength with a facility with which your body otherwise would not part with them. That is what we always do when we work on stimulants. If alcohol be a stimulant, I should submit to you that unless there be very grave reasons indeed shown for it, the habit of working on stimulants must obviously be an unnatural and injurious one. I submit that to you as a *prima facie* proposition, which commends itself to the common sense of every one. Of course we make our horses work to a very large extent on stimulus; what is the result? We use them up in about seven or eight or ten years, when they would otherwise enjoy a long and happy life for thirty years. When a man works in business upon stimulants, that is what he does with himself. If you watch men who work on stimulants for a few years, you will find that they very rapidly deteriorate; they lose a great deal more than they gain by it.

What else is there that alcohol may be described as? I must use a technical word—narcotic. I don't know any other word that will express the idea. What is a narcotic? I will give you examples: chloroform, ether, opium; and there are other narcotics of that kind. Tobacco is a narcotic, and so is alcohol. I cannot but think that alcohol has a partly narcotic influence upon the body, and that its real uses in medicine are those of the narcotic and not those of a stimulant nor those of a food. Let us look at the influence of alcohol and see what it does, and if we unite upon this point there will be no difference of opinion; we shall then have logically approached that position at which we can fairly discuss those points on which we may differ: that is, as to whether alcohol is a stimulant or a narcotic. What do we know about alcohol? There are some things we do know about it with certainty. If a man takes a pint of brandy, what do we see? It intoxicates,

it poisons him. Of course you know intoxicant is a modification of the Greek word *toxicon*. A man who is intoxicated is poisoned; we simply use a Greek instead of a Saxon word for it. We see a man intoxicated; what are the phenomena we see there? A man lies on his back, snoring, helpless, senseless. What are those phenomena? If you set him up, he falls down again like a sack of potatoes; if you try to rouse him, you get out of him nothing but a grunt. Is that the effect of a stimulant, do you think? I should think it is the effect of a paralyzer that you have—mind and body and nerve and muscle all equally and uniformly paralyzed right through. That is what I should submit to you. I think any one who has seen a drunken man, and has observed the phenomena, will agree with me that it is a fair description of it; and there is no doubt that that is specifically accurate: that alcohol in a large dose is a narcotic poison, which paralyzes the body and stupefies the mind. Well, now, there we get something upon which we are all agreed. If a man takes a somewhat larger dose, what do you see then? You see that that snoring and breathing come to an end; you see that the soft, flabby pulsation of the heart ceases; you see that the spark of life goes out, and the man cannot be resuscitated. In fact, there are more men killed—so far as I know of English statistics—more men poisoned in that way, by alcohol, than are poisoned by all other poisons put together. We have a great horror of arsenic and fifty other things; the fact is that all these things are a mere bagatelle in relation to the most direct, absolute, immediate, and certain poisonings which are caused by alcohol. There is no great city on our side of the ocean where there are not inquests held upon men who drink a bottle of brandy, and fall down and die just as if you gave them a spoonful of prussic acid. If we realize these points, we get clear facts to start from. Alcohol is a poison. We can kill a man by a single dose, or the effect of a smaller dose is to paralyze the muscles and stupefy the body. Let us come down gradually, and see what effect a smaller dose will have. A man takes a half-pint of brandy. Well, he does not lie on his back, you will say, and he does not snore; he simply looks very stupid, he cannot walk straight, he sees two policemen where there is only one; he thinks he is strong enough to fight all the world; everything is so buoyant that the pavement rises up and strikes him on the head every now and then. That is what you see when a man has taken half the quantity. What do you think are those phenomena? Are those the phenomena of a stimulating influence, or are they half the quantity

of an influence of the same kind? I submit to you that you simply have half a dose of poison, and you have half the narcotic influence, manifesting itself in submerging the bodily powers, and gradually the finer faculties of mind and body, putting into abeyance those faculties of the nervous system which harmonize the various elements and bring the whole body into its uniform, graceful action; and you have the man's limbs, as it were, not working together, but the mere coarse animal functions still struggling against poisons and the depressing influence of alcohol. If you give the man half that quantity, what do you see? You see a lesser quantity of the very same effect; and so you can go on till you get down to a single glass of wine that your doctor or your merchant takes as a stimulant to help him do his work, and relieve that sense of fatigue with which nature visits a man when he is misusing his constitution and urging his powers beyond that point which they were intended to work. Well, you see also that that is the effect when a minister who cannot preach without a glass of wine has a glass in him. He finds his tongue will run on a little faster than his brains would be able to drive it if he had not got the alcohol in him. I submit to you broadly that if you take a man with a single glass of wine or spirits in him—if you test that man's physical power, mental accuracy, keenness, and freshness of memory, and real debating power (I do not mean simply spouting the material that comes out of his mouth, but I mean debating power, say in Parliament or Congress), you will find that the man who has got spirit in him won't do it as well as the man who does not use it. Test a man with a cross-grained sheet of figures. When he has spirit in him, can he reckon up those figures as well as when he has not? Certainly not. If you have any friends who suffer from defective memories, you can cure that mental defect if you can persuade them to leave off wine. I submit those facts with a view of helping your common sense to see that which we know with regard to spirit, that it is unquestionably a narcotic poison, and that the presumption is that in small doses you have a small quantity of the same effect. I do think that that is a proposition which will commend itself more to you than any such proposition as this: that by diminishing the amount of the dose you reverse the nature of the effect; for that is the proposition which underlies the position that alcohol in large doses undoubtedly is a narcotic, but that in small doses it is a stimulant. It would then come to this—that whenever a man thinks he is taking a little stimulant, he is simply taking that which stupefies and fools him; and I be-

lieve that we have labored, and that the general public have labored, under a great delusion with regard to the use of alcoholic beverages in daily life, in supposing that they had enabled them to do more and better work than they would have been able to accomplish without them. I believe, in cases of sickness, the last thing you want is to disguise the symptoms—to merely fool the patient; that if alcohol were a stimulant, that is not the sort of thing you would want to give to a man when exhausted from fever. If your horse is exhausted, do you want to give him food? or would you give him rest and food? So, if your patient is exhausted by any serious disease, surely it would be the more rational thing to let him rest quietly, to save his strength, and in every possible way to take care to give him such food as will be easily absorbed through the digestive apparatus and keep the ebbing life in the man.

Well, those are the considerations, ladies and gentlemen, which I would submit to you as an answer to the question so pertinently put by our chairman here to-night, Dr. Parker. And when we come to take up specific diseases, I will consider that disease which we know is produced by alcohol—delirium tremens. It is a disease not unknown on this side of the Atlantic; certainly, it is not unknown to us in England. What is the theory? The notion is to cure the man by a hair of the dog that bit him. I do not know whether that commends itself to you as a reasonable proposition or as a reasonable theory of curing a man. How does delirium tremens come about? There are two factors in the production of delirium tremens. First, the man has been living on stimulant, on spirit, without taking necessary food to keep up the proper nutrition of his body, so that spirit has enabled the man to go on and exhaust his nervous system by working beyond a point which he would be able to exhaust it, and the result is you have an impoverished nervous system for want of nutrition. The second effect is, that you have alcohol actually exerting a chemical influence upon the tissues of the brain, upon that physical medium by which the mind and mental powers are manifested. You have, first, want of nutrition; and, secondly, actual poisoning, on the part of alcohol. That poisoning may be either acute or chronic. A man may get violently poisoned by a week's or ten days' debauch, by a state of drunkenness in which he will scarcely have a sober moment; or a man can gradually get into that condition by soaking, and some trifling accident will bring out all these symptoms of delirium tremens, which will carry him off. The theory is with very many eminent phy-

scians, to whose opinion I should defer with the greatest possible respect, although I should strenuously argue against it from my own theory and experience—the theory is that you should let them down gradually; that you should go on and give them spirit. We have had many eminent men on our side of the Atlantic who have given these patients enormous doses of spirits. Suppose one of us had an affectionate friend who for many weeks had been putting poison into our coffee, and at last we found ourselves getting ill, and the ordinary symptoms of arsenical poisoning coming on. Would you think it the proper thing to go on giving it to us, or would you stop the arsenic at once? I submit, you would have it stopped all at once. So, I maintain, when you have a man in a state of delirium tremens, you should stop giving him that substance which poisons his nervous system, and has contributed to bring about that state out of which the exhausted condition of the mind comes. I submit, that is an ordinary common-sense position. I would tell you this also: that we have found, in looking into the statistics of delirium tremens treated in the old way, that the mortality was very great; and while I have gone through all those phases of treatment when younger, and, I thought, immensely cleverer, I have come to the conclusion that the use of spirits in the case of delirium tremens does nothing but injure the patient, and probably hasten his death. I now, without the slightest hesitation, in every case should immediately stop the spirit; and I find that very few cases of delirium tremens that I have are fatal, provided I can have a responsible nurse or a resolute wife who will stop the miserable patient from getting out or sending a servant for a bottle of brandy, which he might have under his pillow and drink on the sly. If you want to save what strength the man has remaining, how will you do that? You will put him to bed; you will save what strength the man has by preventing his walking about, and by prohibiting friends from talking of business matters. If you have a nurse who will exercise the common sense not to argue with the patient in that way, you will save the remaining strength as much as possible. The second point is to keep the man warm. One of the great sources of exhaustion is wasting the supply of heat; and the third point is to give him nice beef-tea, milk and water, and good, well-boiled farinaceous food, and perhaps a simple dose of active medicine to carry off all the remaining alcohol in him from the last dose that he drank. That is the treatment which I have adopted now for many years, and I find it immensely successful. I have been the

means of inducing a great many medical friends on the other side of the Atlantic to adopt that treatment, and my conviction and observation have convinced me that it is always more successful than the other.

Well, I might, if it were proper for me to trespass longer upon your good-nature, go over almost every disease that flesh is heir to, and I almost fancy that in the individual who was suffering from a disease not acquired by his own act, I could always trace it back to a father who went before him, who has left him a wasted vital system; for we are only tenants for life in the vitality of our race, and if we waste our stock of vitality, the children we leave after us will grow up suffering from various maladies which we have introduced into our organizations. There are those who have had diseased physical organisms bequeathed to them, and they are suffering from an irritable brain and an eccentric habit of thought because their fathers drank spirits. I could trace back cases of apoplexy, and show you how the softening of the muscular tissue of the heart, hypochondriacism, dyspepsia, and any one of the varieties of diseases that cut off active men in the middle of their business life, are traceable to alcohol. I suggest to you that you will be better by remembering the words that have fallen from our friend Dr. Parker—a man whose name we revere as much on the other side of the Atlantic as you revere it here—and do away altogether with the use of intoxicating drinks as beverages. They have no place whatever as beverages, and as medicines they need to be used with the utmost possible discrimination, and not as stimulants so much as narcotics, and in such cases as we use opium, ether, chloroform, and other medicines. While I believe that mercury, arsenic, chloroform, and opium are useful in the hands of a skillful physician who knows how to use them in a moment of necessity, I cannot but believe that alcohol also, potent drug as it is, may be useful in many cases of disease; but the cases in which I use it in my own practice, I confess, become less and less frequent every day. And I should feel that I lost very little were I deprived of it—indeed, I almost think that if mercury and many other remedies that are used so freely now were used less freely, the practice of medicine would be more successful than it has hitherto been.

There is one difficulty I have in this matter, and that is that unfortunately the weight of opinion in the medical profession, I am afraid, appears to be in favor of using these things as beverages. Well, medical opinion may be resolved into two elements—elements which any person whose brains are properly con-

structed can appraise: first, medical dogma; and, secondly, medical science. Now, medical science has its well-defined scientific facts, and the inferences which logically attach to those facts. Medical dogma is something else. What is the history of medical dogma? Thirty years ago the fathers of the very men who now prescribe brandy, and wine, and ale for almost all the diseases to which we are liable, prescribed what? Not brandy, nor ale, nor wine, but mercury, bleeding, and starving; and when the old woman said she would not be able to stand it, and the doctor replied that he would not take the responsibility of the result of her refusing his prescription, she said she would take the responsibility, and she is a fine old woman now, but would not have been if she had yielded to the persuasions of these eminent gentlemen. They believed conscientiously in this mode of practice. Do not imagine that I am suggesting that the old gentlemen whose pictures of bleeding their patients we have seen, had any intention to kill them. There is, however, no doubt about this fact: that they did kill nine patients for every one that they cured. I think you will find that medical dogma is a curse to mankind and a delusion to the profession. Now, when some of you go to your doctor, you say, "What do you think, doctor? Had I better take a little spirits?" The doctor has a wife and family at home; he is not always a man well up in real estate in the city of New York; and he has worked twenty years. You may pay your accounts regularly, and your fees are very adequate. He looks at you and says, "Yes, you need a little brandy." Just as the wife who says, "Doctor, do you think that going to Saratoga would do me any good?" "Yes," he replies, "I think it is the best thing you could do." The wife replies, "Then I wish you would write my husband a note, and say I must go." But you must not go to the doctor in that way. You must recollect that he has to look after his wife and family, and he may think that he will lose his reputation if he tells you you must not drink. Some medical men would say, "So-and-so is a well-meaning man, but he is a little cracked. Yours is a constitution that would run down rapidly if it had not a little wine; you came to me in time to save you." You did not die, but got well in spite of the wine, and you would have got well much better if you had not taken the wine. As things now stand, the doctor is put in an extremely uncomfortable position. But I tell you, if you go to your doctor, and say to him, "These alcoholic beverages do a great deal of harm; do you think I need them?" nineteen times out of twenty the doctor would say, "No, I think

you would be better without them." There are some who will not say so; but who are they? Some of them are men who tell you that which they have been told before. As a student in olden time, I dare say I have killed scores of little children by the old-fashioned treatment of tartar emetic and leeching when they had a little cold on their chest. It is quite natural that the young ones should be influenced by the weight of opinion of their elders. Many medical men really have no well-defined belief, but they have seen the old gentleman from whom they learned their profession do things in a certain way, and they remember what has been taught them at the hospital, and they continue to do the same way without thinking of the matter. You will do them a great deal of good if you follow them up and question them. Ask them why they order you spirit, what is it to do, what doses you are to take, and how long you are to take them. It is so strange that if we go to a physician and get an ordinary prescription, if we take it for two or three weeks, we think we have done very well; but if he orders us a glass of wine, we take it all our lives as a medicine, not only with commendable punctuality, but we increase the dose. If you ask your doctor questions, you very often do him service; you call his attention to this matter. My attention was called by a rough-handed total abstainer. I ordered him stout. I said, "You must take a little beer." He sat down in my dining-room and said, "Doctor, I am sure you have a reason for everything. If you can show me it is good for me, I will take it; I have taken nothing for a dozen years, and I am a great deal better without it. What do you think it will do for me?" I had never been cornered in my life in that way. I really found I had no answer; and so you will find that your doctors will have no answers for such questions. When they appeal to experience, resting it upon mere dogma, recollect the facts with regard to medical dogma—that medical dogma, as such, has never been anything but a delusion and a snare.

TRUE GENTLEMEN.—A Christian is Almighty God's gentleman: a gentleman, in the vulgar, superficial way of understanding the word, is the devil's Christian. But to throw aside these polished and too current counterfeits for something valuable and sterling, the real gentleman should be gentle in everything, at least in everything that depends on himself—in carriage, temper, constructions, aims, desires. He ought, therefore, to be mild, calm, quiet, even, temperate—not hasty in

judgment, not exorbitant in ambition, not overbearing, not proud, not rapacious, not oppressive, for these things are contrary to gentleness. Many such gentlemen are to be found, I trust; and many more would be were the true meaning of the name borne in mind and duly inculcated. But, alas! we are misled by etymology: and because a gentleman was originally *homo gentilis*, people seem to fancy they shall lose caste unless they act as Gentiles.—*Guesses at Truth.*

The Health Reform.

BY R. F. COTTRELL.

I AM fully satisfied concerning the inestimable benefit of the health reform. I believe it is a reform. Some years ago, I became a convert to the theory, because it was sustained by arguments irresistible to my mind; and I have so far reduced its principles to practice that to my mind I have demonstrated the truth of these principles. Hence, I value the reform highly, and would recommend it to all.

But I sometimes hear, from those who have been supposed to be health reformers for years, that the reform does not agree with them. It does *not* agree with those who have never had faith enough in it to try it, and it never will. But I am satisfied that all who will have confidence enough in it to give it a fair trial will come to the conclusion all have come to that have done so. When I hear any argue against the health reform and the hygienic treatment, I conclude they have not examined and embraced those principles which to me are so evident, and consequently have not tested, and will not test it in practice. A little more faith is what is needed.

I am nearly sixty years of age. For the last ten years I have been practicing, about as far as possible, the principles I have believed, and testing them in my own case; and though my friends have expressed their fears that I would die a martyr to my foolish fancies, I find myself to-day increasing in health and strength, do not consider myself at all superannuated, but am ready to labor in the good cause of truth—to aid my fellow-men in breaking away from errors and darkness and becoming free, physically, mentally, and morally.

Since bidding a lasting good-bye to drug medication, though I have had disease, as the result of my former mode of living and drug-taking, I have for the last five years of the ten been gradually increasing in health and vigor, and can do more work now, either with hands or brain, than I could ten years ago. I

have had faith enough in the principles of health reform and hygienic treatment to give them at least a partial trial, and the result is encouraging ; and therefore I can confidently and conscientiously recommend them to others, not doubting that a fair trial on their part will be alike satisfactory in its result.

An Encouraging Rumor.

THERE has lately been current in the city a rumor so improbable and yet so delightful that most men fear to investigate it lest it may vanish in the process. It is asserted, perhaps in quarters too sanguine to be trustworthy, that ladies are seriously thinking of wearing dresses which they can walk in. For the last year, the promenade has been a torture to any woman who respects herself a little. Her dress drags all the way around, and the train thereof follows her for a foot or so. She must either make it loathsome by dragging it through the filth, or she must hold it up with both hands. If she attempts this delicate and fatiguing office with one, tired nature soon asserts itself, and somewhere or other a fold of the idiotic garment drops into the mud. It is generally known that the female human has but two hands, and if both of these are filled with superfluous raiment, the management of the parasol, the portemonnaie, the half dozen bundles of dry goods and pound of confectionery, without which a street costume is incomplete, becomes a matter of some difficulty. The unassisted male intellect can see no way out of this trouble except the shortening of the peccant skirts. But we do not envy the fate of the rash man who should suggest it. He will be told he has no taste, no perception of style, no regard for the pure intuitions of woman. If he shall say that a few years ago women wore lovely short dresses and looked like angels in them, he will be met with the crushing reply that "a few years ago" is not to-day. None of these severe votaries of Fashion, however, seem to see that they are evading her decrees in holding up their dresses. The milliners compel them to wear these long robes, so that they may get muddy and wear out sooner, and it is disloyal to try to save them from this fate. But what avails preaching? The only thing that can curtail the street robe is a Movement, a Convention with orations and poems, with chairmen and vice-presidents, and impassionate orators from Boston and Brooklyn to fire the advanced heart, and denounce Capital and Privilege.—*N. Y. Tribune.*

THE BLOOD.

[The following unique stanzas were handed us by J. H. W. more than a year ago ; but by some mishap have laid in our copy drawer until now. They are too good to remain in obscurity.—Ed.]

Six thousand years after his era began,
The astonishing fact was discovered by man
That the blood in his body does not remain still,
But rushes along like the race from a mill.

Certain vessels, call'd arteries, hidden within
The body, conduct from the heart to the skin ;
While others, called veins, throughout every part
Of the system conduct from the skin to the heart.

The heart every instant gets filled with new blood,
Prepared, as you'll see, from the air and the food ;
And this new blood is driven through the whole frame
As from a force pump by the force of the same.

The blood in its passage leaves everywhere
Some of what it has got from the food and the air,
Which is all taken up, ere a moment be gone,
To replenish the tissue, the fat, and the bone.

Throughout the whole structure—bone, muscle, or skin—
Where the arteries end, the veins begin.
And changing its color from red blood to black,
The blood enters the veins and is so carried back.

When the old blood arrives by the veins, at the heart,
It is mixed and churned up in a chamber, apart,
With a thick milky fluid, nutritious and good,
Which the stomach and bowels have drawn from the food.

It is then driven off by a similar force
To the lungs, where the air cells receive it in course,
Where at every breath it takes up through the skin
The material parts of the air within.

Thus regenerate, vigorous, lusty, and red,
And once more forced back upon its fountain-head,
To the artery chamber it rushes amain,
And is ready to start upon service again.

What we get from the air is equal in weight
To what we derive from the food which we eat ;
But what we breathe out, I must tell you once more,
Is of poisons the worst, as I told you before.

In a much clearer light you now may perceive
What it's hoped you'll hold fast and devoutly believe,
That for health and enjoyment the very best fare
Is the soundest of food and the purest of air.

Then show that you value your blood and your skin,
Remove every nuisance without and within :
Obey all the laws that are made to that end,
And regard the inspector of health as your friend.

If your house has a taint, employ in good time
Either carbolic acid or chloride of lime ;
But of all disinfectants the earth is the best—
Smells cover'd by earth are forever at rest.

With all these precautions do n't fear any harm,
And yield to no panic or foolish alarm ;
When the enemy comes be brave but prepared—
Survey your defenses and stand on your guard !

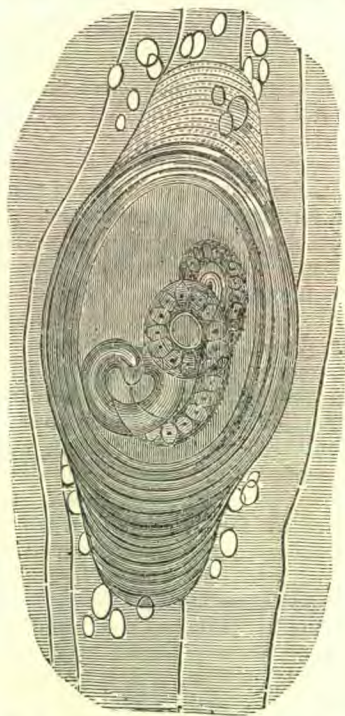
Dangers of Pork-Eating Exposed.

NUMBER TWO.

THE TERRIBLE TRICHINÆ.

Now, my friend, assist your eyesight by a good microscope and you will be convinced that you have only just caught a glimpse of the enormous filthiness, the inherent badness, and intrinsic ugliness of this loathsome animal. Take a thin slice of the lean flesh, place it upon the stage of your microscope, adjust the eye-piece, and look. If you are fortunate, you will find displayed before your eyes hundreds of voracious little animals, each coiled up in its little cell, waiting for an opportunity to escape from its prison walls and begin its destined work of devastation. A gentleman of eminence in Louisville has made very extensive researches upon the subject, and asserts that in at least one hog out of every ten these creatures may be found.

A few weeks ago we obtained a small portion of the flesh of an individual that had



died with trichinæ. Upon subjecting it to a careful microscopical examination with a good instrument, we discovered multitudes of the worms. Each individual presented the appearance represented in the accompanying accurate engraving, which we have published before, but reproduce for the sake of our new

subscribers. The animal is here seen inclosed in a little cyst, or sack.

Being curious to know, approximately, how numerous were the worms in the specimen we were examining, we prepared a small portion about the size of a kernel of wheat in a suitable manner. By careful count, we found upwards of 500; and in a large portion of the specimen they lay so thickly together that it was impossible to isolate them. None but solitary individuals were included; and hence it is fairly presumed that the specimen really contained double the number actually counted. A little computation will show that the flesh of the individual furnishing the specimen must have contained from 250,000 to 500,000 trichinæ in every cubic inch of muscle.

HOW TRICHINÆ KILL.

When taken into the stomach, the trichina is invested by a capsule like the one seen in the engraving, a portion of which has been cut away to show the worm more clearly. This fibrous capsule is very soon dissolved away by the gastric juice, thus setting at liberty the partially matured worm, which grows very rapidly, attaining its full size in about two days, being then many times larger than when first taken into the stomach, when its length is only about one twenty-fifth of an inch. In about a week each worm gives birth to about 1000 young, according to Leuckart, which immediately begin to penetrate the mucous lining of the stomach and intestines. This gives rise to violent purging and vomiting, but to little effect for the relief of the patient, for the worms are already secure in the walls of the intestines. In a very short time they find their way into all the muscles of the body, when the most painful symptoms occur. The patient lingers along for a few days, perhaps weeks, in the most distressing suffering, finally dying from exhaustion, or from suffocation caused by the great number of parasites infesting the muscles of respiration and thus preventing their action.

In less than two weeks after eating an ounce of infected meat a person might have in his intestines hundreds of millions of these rapacious animals, whose ravages no remedy can stay. Imagine, reader, the agony which a person must suffer while this numberless horde of microscopic serpents are boring through the walls of his alimentary canal! The rapidity with which the body becomes filled with these loathsome creatures is most astonishing. Prof. Dalton found 208,000 to the cubic inch in the muscles of a boy who died on the twentieth day after being attacked with the disease. When a person has been

once poisoned, he can never become free from the parasite. Death is his most probable end; but some survive after many months of suffering worse than death. In these cases the worm becomes inclosed in a calcareous sheath, which process takes place in from one to two years. Here they may live for an indefinite period, probably as long as the patient. Virchow mentions a case in which they were found alive in a cancer removed from a woman twenty-four years after they were received into her system.

While writing this article, we have before us a portion of muscle which we removed in an autopsical examination from the deltoid muscle of a woman who died in New York City a few days ago. Upon carefully inspecting it with the naked eye, numerous little white dots may be seen in the small fibers of the muscle. Upon examination with a microscope, these minute white bodies are found to be opaque, like a fine particle from a broken egg shell; but by adding dilute hydrochloric acid, the calcareous salts are dissolved and we are enabled to distinguish a veritable trichina, looking as well developed and vigorous as those found in the preceding specimen, already described, although they have doubtless existed for several years in their present state. Just how long we cannot state, having not yet been able to obtain the previous history of the case.

ITS PREVALENCE IN SWINE.

The trichina is found in cats, rats, mice, and various other animals, as well as in the hog, and it is probable that they are introduced into the latter by eating the dead bodies of the first-mentioned animals. It seems to be the general belief that the disease is of rare occurrence in hogs, and need excite no apprehension. Various facts disprove this supposition, however. It should be remembered that the flesh of an infected animal may be apparently healthy to the unassisted eye, for the trichinae are microscopic objects, often being no more than one seventy-third of an inch in length, and one nine hundred and sixtieth of an inch in transverse diameter. Careful observations have been conducted by scientific men to ascertain the frequency of the disease by examination of the dead carcasses sent to market. A committee of the Chicago Academy of Sciences reported in the *Medical News and Library* for June, 1866, that in 1394 hogs examined in different packing houses and butcher shops of the city, they found an average of one in fifty affected with trichinae. A gentleman of Louisville reported, as the result of extensive observations, that he found an average of one trichinous hog in every ten examined.

It was a current newspaper report that during the winter of 1873-4 between 10,000 and 15,000 hogs died of the disease in a single locality in Illinois. This report has since been disputed, it being alleged that the disease was hog cholera, instead of trichinae poisoning, or trichinosis. This is merely crafty effort at deception on the part of the pork dealers; for we have good authority for believing that hog cholera and trichinosis are two names for a single disease. The first effects of trichinae are very similar to the effects of cholera, and might easily be mistaken for it in man or beast, as both are affected in a similar manner.

FREQUENCY OF THE DISEASE IN MAN.

Until recently, there has been no conception of the frequency of this disease. It is now positively known that many cases of supposed typhoid fever are really the results of trichinae poisoning. Prof. Janeway, Demonstrator of Anatomy at Bellvue Hospital, recently assured me that observations in the dissecting room had convinced him that the disease was of great frequency, not being discovered until revealed by post-mortem examination, the patient being treated for some other supposed affection. He found three cases thus affected in the short space of one month; and it is probable that the majority go undetected.

Trichinosis may simulate numerous diseases. In the first stages it would readily be mistaken for diarrhea, dysentery, or peritonitis. The later stages as closely resemble rheumatism and typhoid fever. The patient often dies in coma, the cause of which would be likely to be attributed to almost any cause but the real one.

Many unmistakable cases of the disease have occurred within the last ten years since public attention has been called to it. I recently conversed with a physician who last winter attended eight cases of the disease in a single family in Malcolm, Iowa. Several members of the family died in a few weeks. The remainder of the family survived, but only to continue suffering. None of them have regained their health.

In Helstadt, Prussia, one hundred and three persons were poisoned by eating sausage at a public dinner. A large number of them died in a short time, twenty within a month.

In Germany, three hundred and sixty persons were attacked with the disease at one time. Large numbers of them perished miserably. Those who survived were doomed to carry about in their flesh, during the remainder of their miserable life, myriads of loathsome worms.

J. H. K.

London.

BY ELD. J. N. ANDREWS.

THERE is no end to the objects of interest in London, whether the observer desires to view the city as an inquirer after its social, civil, or religious history. It has many benevolent institutions for the amelioration of the cases of the poor, the unfortunate, and the distressed. These are probably as well managed as those of any city in the world. It has many impressive monuments to the civil and political history of the city and of the nation. It has also many memorials of the men who have lived in it, of whom the world has not been worthy, and many things which mark the religious history of the nation.

The market place called Smithfield, where so many persons for conscience toward God have yielded themselves to the flames, is well worthy of a visit. The spot where John Rogers and others were burned at the stake is marked by a suitable inscription, and then these words are added, "The noble army of the martyrs praiseth thee." If any men have rendered praise to God it is those who have been able to praise him in the flames. The excellence of the Christian religion is attested by its power to sustain men under the cruel tortures of the rack and the flames. Many have read of that martyr who promised his friend that if he found himself sustained in the flames he would give him a signal by raising his arms aloft. His friend anxiously watched for the signal till he thought the martyr was dead, when all at once the arms that were blazing in the flames were raised toward heaven. There are many persons who think themselves Christians who are not only strangers to the martyr spirit, but even to the spirit of self-denial which is essential to health reform and Christian temperance.

Bunhill Fields is the name of that London burying ground where John Bunyan sleeps in death. Bunyan was many years in prison for daring to worship God contrary to the forms of the established church. Now a costly statue is raised to him in the place where once he was imprisoned. To that imprisonment, however, we owe the Pilgrim's Progress. Near the grave of Bunyan is that of Isaac Watts, one of the sweetest of Christian poets. The tombs of these men are very plain, but they need no monument of brass or marble. Across the street from this graveyard is the chapel where John Wesley so often preached, and in the yard at the rear of this chapel is the grave of Wesley and that of Dr. Adam Clarke, and those of other men eminent in the early history of Methodism.

But it is in Westminster Abbey that England buries those of her dead that the world most honors. Here are kings, and queens, and noblemen, warriors, poets, lawyers, and philosophers. If moral worth had been the criterion, few of these would ever have been admitted to this honored burying-place. Few of the men who have sought, not their own glory, but the good of their fellow-men, lie here. In general, the lives of those who have made this their resting place were stained with violence and crime. Not thus indeed was it with all. Here, within a few feet of each other, lie Mary Queen of Scots, and Elizabeth Queen of England, who caused her to be beheaded. Here, also, once lay the bones of Cromwell, one of the mightiest of England's rulers, and from hence they were removed with ignominy when Charles the Second was restored. Whitehall, the palace of Charles the First, still stands; and it was on a scaffold in front of this palace that he was beheaded. Whether the deed was justifiable or not there can be no doubt that it has had a salutary effect in admonishing subsequent kings.

The parliament house is a magnificent building, yet the room in which the House of Commons assembles is so mean as almost to justify the use of the term shabby. It has plain benches for seats, and the size of the room is such that not more than two-thirds of the house can be seated in it at one time. As the real power of parliament is in the House of Commons, the plainness and inconvenience, even, of the room where this body assembles, and which has been used for many generations, attest the little care which those feel for display who are most able to manifest it. The bank of England, the most powerful banking institution in the world, is another example of the absence of display in those who are best able to afford it. The bank covers a large area, but it is a low building with no outward show, but with decided indications of strength in its walls and doors.

If one wishes to be reminded of many of the great crimes as well as some of the great deeds in English history, the tower of London will bring these to his remembrance. Here are innumerable relics of cruel deeds in the past history of England. If you wish to know what is meant by the thumb-screw, by which tyrants extorted confessions to suit themselves, you can here see the article, and if you please can have it tried upon yourself. The martyrs were accustomed to that kind of torture. Here also is a cruel instrument of iron, the name of which escapes my memory, but fitted to receive the neck, the hands, and the feet of the unfortunate victim, and to bring the head and feet near together, so that

he could not help himself in the least. Here also may be seen the chopping-block where illustrious men have been beheaded, and by it the ax with which this was done. The block is cut out on one side to receive the face, and on the other the breast of the prisoner, while a ridge of wood remains, across which he lays his neck. This chopping-block stands by the door of the dungeon in which Sir Walter Raleigh was confined. This dungeon is eight or ten feet square, and has no aperture for air or light except a small hole in the door itself. Raleigh's captivity ended with his execution by the ax. Many have been prisoners in this tower for conscience toward God. Here Anne Askew was tortured upon the rack, and afterward burned at Smithfield.

The crown and scepter of Queen Victoria may be seen in this tower, as also several other crowns, and various golden emblems of royalty. These are interesting to the eye of the beholder principally because they represent the objects for which men have committed the most atrocious crimes. But when they have secured these golden baubles, we may well doubt whether their possession could give peace of mind or quietude to the troubled conscience.

The government of London seemed to me something admirable. Here are nearly three and a half millions of people congregated upon as small a territory as is possible to gather men upon and have them do business. Every kind of business, every kind of trade, is here represented. Here are the most active minds, and here are those most eager in the pursuit of wealth. London is an epitome of the world of mankind. Yet excellent order is preserved in most parts of the city, and everywhere evil-doers find themselves under the eye of the police. Vast as is the territory, and numerous as is the population, the postman calls at every door to which mail matter is addressed, and then if need be several times in a day. The system, order, and discipline, by which all this is accomplished, is worthy of all praise.

Neuchatel, Switzerland, Nov. 8, 1874.

Smoking "to the Glory of God."

MR. SPURGEON is reported to have said that he "hoped by the grace of God to enjoy a good cigar, and smoke to the glory of God before going to bed." The newspapers took up the remark, and quoted it with evident gusto, which called forth an explanation from Mr. Spurgeon, in which he denied any intention to use the words triflingly, but demurred "al-

together, and most positively to the statement that to smoke tobacco is in itself a sin." He justifies himself in its use by the assertion that a cigar has relieved intense pain, soothed "a weary brain" and given him "calm, refreshing sleep," and thus led him to feel "grateful to God," and to "bless his name."

What logic! Does he not know that every tobacco sot will hail his defense with delight? If the great Spurgeon can smoke "to the glory of God," mothers need never reprove their sons for thus seeking to "honor the Lord" in their youthful days! And what better defense could the toper have for his grog? Does not liquor also "relieve intense pain, soothe a weary brain" and bring sleep?

How little of the spirit of the apostle Paul is here exhibited. Mr. Spurgeon knows, or ought to know, that tobacco is the physical, mental, and moral ruin of thousands, and although he may fondly imagine that it does not injure him, he ought for the sake of his "weaker brother," if for no other consideration, give the weight of his influence against the vile weed.

W. C. G.

Walpole, N. H.

Sunshine.

SEVERAL years ago, while canvassing for the HEALTH REFORMER, I called upon the proprietor of one of the principal hotels in Boston to solicit his subscription for the journal. After making known my business, I presented him with a copy of the REFORMER, which he examined with apparent interest, until his eyes rested upon an article entitled, Sunlight, which was sufficient of itself to close the hotel doors against a health journal second to none. "Take it away," said the now offended landlord. To place such a book as that before his patrons would be equivalent to a request to vacate his rooms, where the light of day, or the sun's healing rays, never penetrate; where women and children remain month after month, being too delicate to venture forth in the open air. Our friend had wisdom enough to see that the principles inculcated in the HEALTH REFORMER were of the right stamp, but was too selfish to allow it a place on his parlor tables, where thousands might read and be benefited by its teachings. Science, as well as common sense, teaches us that sick and delicate people—and there are many in America—should court the sun. The worst specific is laudanum, and the very best is sunshine. Therefore, it is very plain that all poor, pale, puny looking women and children, who are caged up in hotels like so many birds, should pass as many hours as

possible in the sunshine, and as few as possible in the shade.

Many women are martyrs, and yet they do not know it. They shut the sunshine out from their houses and their hearts. They wear veils, they carry parasols, and do all possible to keep off the most subtle, and yet most potent, influence, which will give them strength, and beauty, and cheerfulness.

Dear reader, is it not time to change all this, and get color and roses in your pale cheeks, strength in your weak backs, and courage in your timid souls? Those who, from false pride and modesty, hide themselves from the sunshine, are pale and delicate. They may be blooming and strong; and the sun's healing rays will be a potent influence in their transformation. Ladies, try it, and you will never regret it. M. WOOD.

The Confession of a Reformed Smoker.

BY FRANCIS GERRY FAIRFIELD.

A RECORD OF OBSERVATIONS AND EXPERIMENTS CONCERNING THE PHYSIOLOGICAL ACTION OF TOBACCO.

[THE following article is abridged from the *Popular Science Monthly* for November. We quote the portions of greatest interest to the general reader. It will be observed that, in the experiments described, the weight of the body invariably decreased under the influence of tobacco, and was only restored by abstinence from its use. This is an important result, as it is directly contrary to the results claimed by Dr. Hammond in similar experiments conducted a number of years ago, and which have been made the basis for argument in favor of the habitual use of tobacco and alcohol. These experiments may justly be regarded as a complete refutation of all such arguments, coming as they do from so eminent a source.—ED.]

IN submitting the following observations as to the physiological effect of smoking, it is not my intention to discuss the tobacco question in an exhaustive manner, but, on the other hand, to limit my remarks to experiments tried and recorded in the course of the year ending July 10, 1874, and to the more general memoranda of the previous twelve years, during which the habit was formed, and, with the exception of brief paroxysms of abstinence, steadily developed. Many will no doubt dissent from the conclusions at which I arrived; to whom I

have only to reply that my observations and experiments have not been, save in a cursory memorandum now and then, extended beyond my own person, and represent uniquely the manner in which I have been individually affected by habitual smoking. So far as I have any opinion to express, it consists of induction from actual experiments, and of inferences from actual symptoms; and, if I seem to leave many points undetermined, it must be set down to the fact that they are not within the scope of the particular method I have followed. That tobacco differently affects different temperaments there is no doubt. That different grades and qualities of tobacco differ materially in their physiological action, in manner and symptom, if not essentially, is demonstrated by experiment. In smoking, even, to say nothing of other forms of the tobacco-habit, it makes a material difference whether the same quality is used in conjunction with the pipe or consumed in the form of the cigar—a fact mainly due, no doubt, to the escape of the pyreline, a base of extreme volatility, in cigar-smoking, and to its conservation to a greater extent in pipe-smoking. Yet, making all due allowances for differences of temperament, for the bias of transmitted habit, and for idiosyncrasies developed by special circumstances, I am constrained to the conclusion that, in the majority of instances, the habit of smoking is productive of nervous degeneracy.

My own case is possibly an extreme one, though not, I am inclined to think, to the extent of vitiating its application to the majority. My father used tobacco. My grandfather on my mother's side, a physician by profession, whose physical and mental traits I inherit to a considerable extent, was a moderate smoker; whether my paternal grandfather used the weed, I have no means of ascertaining. I may add, however, that its use is pretty common among the collateral limbs radiating from the family trunk, and that there is hence no reason for regarding the phenomena in my case as the results of constitutional antagonism to the narcotic.

I have been a smoker, or had been up to July, 1874, for thirteen years, having commenced at the age of twenty-two. During the first three years I was somewhat irregular in my habits, sometimes smoking a pipe, sometimes consuming cigars at the rate of from three to five per day, and sometimes refraining altogether for from three days to a week.

* * * * *

The physiological effect of tobacco, when I first began to use it, was intense and disagreeable, producing contraction of the pupil of the eye, dizziness, labored breathing, and considerable tendency to spasms; and as these symp-

toms were more marked with the pipe than with the cigar, in which the pyrieline is mostly disengaged by the surrounding atmosphere, I conclude that they were due in the main not to the nicotine, but to the pyrieline and picoline bases, which are more immediately responsible for the first poisonous action of tobacco-juice when swallowed. Their action is more rapid when taken internally than when subcutaneously injected; and, though substantially identical with that of nicotine, is rather less distinctly narcotic, rather less immediately nervous, and rather more definite in its tendency to produce convulsions. As the nerves become habituated to the narcotic, a state of pleasant and exhilarated reverie, after smoking a few minutes, superseded the more obtrusive symptoms, and lasted sometimes half an hour or more, when languor supervened; and, as the habit became settled, it was accompanied by a mental aura, marked by general tendency to abstraction, and by a dreamy, metaphysical habit of thought. Vague generalizations took the place of real observation in the physical sciences to a greater extent than is compatible with progress in physics. I was intolerant of particulars, and impatient with nicety of discrimination, although I had previously been of extremely analytic habit, and noted in the academy and at college for subtlety as an algebrist. I had my logic of shadows and reveries, and was, withal, a little inclined to mysticism after the German pattern, and to vast theological speculations.

* * * * *

On the other hand there was some loss of sympathy with life. The actual was hazy and Rembrandtish. Day in and day out I speculated on Hegelian nothings—mere dodges in words—as if they had been underlying principles; and it was not until years after, when the passion for physics had possessed me, that it occurred to me that the *anima mundi* was but an ancient whim under a new name, and that the infinite potentiality which the Hegelists talk about was simply a symbol in nine syllables for something that in plain English (or German) is expressed in one—a gain in grandeur of phrase to be sure, but no real gain in other respects.

That these paragraphs fairly contrast the psychological exponents of the tobacco-habit with the normal condition of my mind, I have been able to satisfy myself by many experiments. By refraining from the use of tobacco for three or four weeks, on a few occasions longer than that, I have returned to the old dramatic sympathy with life; while by taking up the habit again, I have leaped in a day from the one condition to the other. This experi-

ment I have repeated many times within the past five years, always with the same transition from one series of psychological experiences to the other and very different series. I fancy Nero must have been a smoker, though there is no record of tobacco in those days; for a great deal that passes for firmness, and not a little that passes for cruelty, in this world, is but the apathy of narcotism in its maturer stages. Indeed, it is an open question whether the tobacco-habit was not largely instrumental in engendering the peculiar stoicism of the American Indian and in promoting its culture.

As the process of narcotizing is persisted in, languor attacks the will, there is sinking at the heart on waking up in the morning, the system craves stimulants with a mighty and unappeasable craving, and the motor centers respond but numbly to the motions of consciousness. The incapacity to recollect that marks the advanced stage is clearly the result of languid volition, engendered by torpor of the motor centers.

These symptoms indicate that the great nervo-vital center, the medulla oblongata, which distributes its forces alike to body and brain, co-ordinated now as vital phenomena, now as psychical phenomena, is more or less involved, and that vital paralysis is liable to supervene at any juncture. But even at this stage the symptoms yield so rapidly to abstinence as to leave no doubt in my mind that the specific influence of the tobacco is transmitted directly to the great vital tract by means of the pneumogastric nerve. The depressed action of the heart, long before the cerebral centers are involved, points directly to this conclusion, and the augmented gastric and salivary secretions indicate the same avenue of action. The tendency to congestion of the lungs that accompanies the tobacco-habit also sustains this hypothesis; and this may be produced in animals by introducing a very minute dose of decoction of tobacco into the system by way of the mouth, while subcutaneous injection is not equally rapid in producing this special result, nor, indeed, in producing death. Nor have I any doubt, from the few experiments I have tried, and the many I have witnessed, that, in opium-smoking, the peculiar symptoms are occasioned by a similar action of the vapor of the drug (on the medullary tract by way of the pneumogastric nerves). The olfactory nerves are, of course, more or less affected, and transmit the specific influence of either drug directly to the interior lobes of the brain; but experiment and observation alike tend to the conclusion that, though dizziness is somewhat accelerated by this action, it is trifling even in its cerebral effect, and that the great thorough-

fare of activity is by way of the pneumogastric. The disturbances in locomotion arising from tobacco are thus secondary effects propagated, not by way of general nervous disturbance, but by direct appeal to the great co-ordinating center, the cerebellum, through the nearly-lying and directly-connected vital tract. The vertiginous symptoms that accompany disturbances of the latter class must not be confounded with those that originate by way of the olfactory nerves, as the whirling sensation is far more marked and distinct in cerebellar disturbances, while the tendency to unconsciousness is somewhat less so.

* * * * *

To these general facts of observation let me now append the details of a series of experiments:—

I had been an inveterate smoker for eight years, when, in the summer of 1872, certain symptoms resembling those of writer's cramp attacked the right arm, and gradually, though to a less alarming extent, enveloped the left. Physicians pronounced it a genuine case of writer's cramp; but owing to the persistent absence of certain symptoms, among them brittleness and want of color in the finger-nails, I was slow to accept the conclusion. There was reason enough why excessive scribbling should bring on the affection; but I was, nevertheless, doubtful, though I so far complied with the prescription as to have recourse to the ordinary electrical appliances insisted upon by Dr. Poore, in his admirable essays on the subject, which embody, in brief form, the memoranda of an expert of some years' practice.

As I half anticipated, the application was without material benefit. Tonics and nervines proved equally inefficacious, and for a year, with short intervals of relief, affairs did but get worse and worse. Blue ink, elastic pen-holders, and broad-nibbed pens, were altogether incapable of ameliorating the affection or mending the scrawling, irregular handwriting that resulted from it; and so essential is it that the hand and mind should work together in a kind of rhythm, in order to form a good style, or to preserve it when formed, that any affection of the nerves of the arm that breaks up this rhythm is nearly as fatal to the poet, essayist, and novelist, as to the artist or the pianist; and I soon found my sentences as cramped and dissonant as my manuscript.

In October, 1873, I started for the country on a brief furlough, having served through the heat of the summer as a member of the staff of the *Evening Post*, and, not finding the tobacco to my liking, was forced to be exceedingly temperate for several weeks. Slowly,

yet perceptibly, the affection of the arms wore off. The hand and fore-arm were less numb when I woke up in the morning, and my handwriting began to assume its former continuity. This I attributed at first to rest, fresh air, and freedom from worry—an error in the main, as will presently appear, though a very natural one under the circumstances.

I had been at home four or five weeks when I succeeded in supplying my commissary department with a sufficiency of the weed of the required quality, in the mean time smoking a little undoctored Connecticut leaf, when the craving became too strong to be comfortably resisted, but consuming, probably, less than two ounces a week. Upon resuming my usual quantum, and within twenty-four hours after the resumption, my arms were as troublesome as ever, and no rest in the least availed to soften the shooting pains or dissipate the numbness (penetrated as if with lances of neuralgia) that enveloped the arm from the wrist to the shoulder. I was thoroughly dispirited, and contemplated shifting my profession and applying for admission to the bar. I did not yet suspect the relation between the tobacco-habit and the malady under which I was suffering.

Remaining in the country, however, longer than I at first intended, my supply of the weed ran out; and I was again reduced to vulgar rations of Connecticut leaf, of which I consumed the smallest quantity possible. The consequence was an immediate reduction of the pain and numbness in my arms. In the course of this somewhat intermittent use of the narcotic, I observed also that a certain cloudiness of recollection, and a slight tendency to aphasia—the latter due, probably, to action on the lingual nerve—followed the resumption of the full dose after an interval of abstinence, the former interfering materially with the opulence of illustration necessary to a good style, the latter annoying me now and then with slips of the tongue in ordinary conversation.

At this stage of the investigation, with the barest suspicion in my mind that tobacco was responsible for most of the ills my flesh had fallen heir to, or rather my nerves, I returned to New York in the latter part of December, and initiated a series of experiments, with a view to test the physiological action of the various brands, and to verify or disarm the suspicion.

December 26th.—Procured a quantity of Cuban tobacco known as Honradez, an extremely fine brand, and put myself on a ration of half an ounce per day. Continued this regimen for twelve days, without per-

ceptible alteration in the symptoms so far as my arms were concerned.

29th.—After three days of Honradez regimen, slight tendency to tremor and sleeplessness, with exceeding dryness of the membrane lining the nose.

January 1st.—Accelerated tendency to tremor and sleeplessness. Went to bed at eleven o'clock, but did not finally lose myself until after the clock struck one; then wandered off into dream-land instead of dropping to sleep in the normal way. Dreams of a queer, trance-like cast, with occasional starts. (I should interpolate here that I usually fall asleep very quickly after going to bed, and sleep very soundly.)

4th.—Augmented tendency to tremor and sleeplessness, with occasional *secousses* of the limbs. Arms still as benumbed as ever, but with an uncomfortable tendency to jerk. Went to bed at eleven o'clock, but lay awake till after the clock struck three; then fell into a fitful but trance-like slumber.

5th.—Came out of my drowse by slow degrees, and breakfasted about ten o'clock. Irritable and peevish. Tried to write after breakfast, but my hand was too shaky. Smoked a pipe of Honradez, which seemed to subdue the tremor.

7th.—Increased tremor and sleeplessness. Went to bed as usual at eleven, but could not sleep. Took an anodyne (bromide of potash) at half-past three o'clock, and slept soundly until eleven the next morning.

I now increased the ration of Honradez to three-fourths of an ounce per day, with an intensification of the symptoms so rapid and determinate as to leave no doubt of their origin. I was wild with nervousness, yet could not sleep soundly, and invariably woke up in the morning with a more or less pronounced pain in the region of the corpora striata (across the forehead) shooting downward and backward to the base of the brain; but the symptoms were still limited to the motor tract (the corpora striata and its connections), and there were no perturbations of the sensory.

Weighed 121 lbs. 3 oz. when I commenced the experiment, and 120 lbs. $2\frac{1}{2}$ oz. when it was concluded. It should be unnecessary to add that a carefully-regulated dietetic regimen accompanied the experiments from beginning to end, securing at once fullness and variety of nutrition.

11th.—Refrained altogether from the use of tobacco. Fell asleep several times during the day. Went to bed at a quarter before eleven, and was asleep before the clock struck. Slept, with occasional whiffs of dream, until half-past eight in the morning. Continued to abstain for ten days, the nervous system

gradually recovering its tone, and the hours of sleep slowly retracting until they fell to a trifle less than eight. An increased craving for food, and relish for it, followed the first day's abstinence, and on the morning of January 12, I ate my broiled steak and drank my cup of coffee with a relish to which I had long been a stranger. The longing for tobacco did not recur strongly until the third day, when it was so importunate that, had I not been trying an experiment, it would have triumphed over all scruples.

Mentally, during the ten days, I was as one coming to himself after a long drowse—an Epimenides recovering from weeks of trance; and, after the third day, during which I suffered from a dull, continuous pain at the base of the brain, in the medullary rather than the cerebellar region, the numbness began to disappear from the arms, which continued to improve pending the progress of the experiment.

21st.—Weighing 122 lbs. 6 oz., put myself on an allowance of three Reina Victoria (Regalia) cigars per day, one after each meal, and continued the regimen for ten days, with the same general result that had followed the pipe and Honradez regimen, but somewhat less marked in its nervousness and tendency to tremor.

31st.—Weighed 120 lbs. 15 oz., and smoked my last Reina Victoria.

February 1st.—Commenced another ten days of abstention, with recovery from the symptoms, at the expiration of which my weight was 122 lbs. 13 oz.

11th.—Placed myself on an allowance of a quarter of an ounce perique per day. The first day I suffered from dizziness after smoking, and from slight nausea while in the act. These symptoms disappeared on the second day. The use of this tobacco (a strong Louisiana variety) was not attended with the marked tendency to tremor and sleeplessness incident to Honradez, but with a marked narcotism of the motor tract, and a marked vital depression—the specific action, no doubt, of its excess of nicotine on the great nervo-vital center, the medulla oblongata. On the fourth day a peculiar sinking at the heart kept me in bed half an hour later than usual in the morning, but a cup of strong coffee taken in bed dissipated the lassitude and restored the vital energy. The numbness in my arms grew more and more pronounced every day, until it required some minutes in the morning with the flesh-brush to readjust the circulation; and with this came a tendency of the legs to fall asleep, showing obstructed nervous circulation, to be followed, in the nature of things, by defective nutrition and ultimate

paralysis. During the last two days of the experiment the vital depression became so oppressive that I resorted to brandy in doses of a tablespoonful three times a day. Lost 1 lb. 11½ oz. during the experiment.

Discarding the perique, with its excess of the nicotine, I now limited myself to three pipes of Honradez per day, with a resultant consumption of two ounces a week. This regimen I maintained until the first of April, when I put myself on a daily allowance of a quarter of an ounce of Virginia cavendish; but the vital depression was so rapid that I desisted from the experiment after four days of lassitude.

April 10th.—Left New York for the country a thorough valetudinarian; and, after abstaining for a few days, with a rapid recovery from the symptoms, commenced to smoke a specific allowance per day of Connecticut, four pipes in fact, which I continued until the first of June, with less vital depression than was produced by perique and cavendish, but with a distinct tendency in that direction, and with a more marked cloudiness of recollection than had followed either.

June 1st.—Withdrew the allowance of leaf and commenced to smoke irregularly an occasional cigar, scarcely one per day on the average, and to note the effect. The vital depression consequent upon a single cigar was often so great as to compel resort to quinine in two grain doses. Finally, discarded the habit altogether, with sufficient benefit to the arms to assure me that the symptoms were contingent on the use of tobacco. The numbness had almost disappeared in three weeks of abstinence; I began to wake up refreshed in the morning, not in a vital swoon. My weight, July 10, was 125 lbs. 3 oz., and I regarded myself as thoroughly convalescent of the habit, though still a Laocoon struggling with his serpents. A violent agitation of the mucous membrane lining the nose has, I should have stated in its proper place, attended every withdrawal of the narcotic, supervening on the second day. The throat has also been considerably affected at these crises, and all the phenomena of a violent cold have been brought on in a few hours; but whether these effects have been mainly due to the withdrawal of the heat evolved in smoking, or to recovery of the membrane from local narcotism, or whether in part to both, I cannot venture to say.

Omitting all details of analysis of different tobaccos as too familiar for repetition, my experiments have led me to conclude:—

1. That nicotine is the special agent concerned in vital paralysis and in disturbances of muscular co-ordination, and that its action

upon the medullary centers is propagated by way of the pneumogastric nerve; that the cerebellar centers (co-ordinating the muscles concerned in locomotion), and the corpora striata (or great motor ganglia of the cerebrum), are next affected; in other words, that the motor tracts follow the vital in yielding to the influence of the poison.

2. That the cortex of the brain is the last to be affected by nicotine, but is more specifically affected by the pyrieline, picoline, and collidine bases. Hence the difference in physiological action between Honradez, with its minimum of nicotine, and perique and cavendish, with their excess; also the analogous difference between Havana cigars and cigars manufactured from Connecticut leaf.

3. That smoking is often the exciting cause of the various neuroses, and always a fruitful source of local aneurism, by impairing the nervous circulation and laying the foundation for defective nutrition in various directions. Cessation from tobacco should be made a condition precedent to medical treatment in writer's cramp and nervous affections of that type (the paralytic).

I am not going to take any radical ground on the tobacco question in its general aspects. Every man must judge for himself, and experiment for himself, as to the physiological action of the weed. I have simply recorded my own experiences and experiments, and the conclusions to which they have impelled me. I will not even say that I shall never smoke another cigar, for temptations are often strong and sudden; but I will say that, in such an event, I should regard myself as the victim of a nervous infirmity, not as one merely indulging himself in a harmless and pleasant luxury—of a devil far easier to get out of the bottle, to apply a Moslem legend, than to get back and cork in again.

Regard for the Aged.

A LITTLE thoughtful attention, how happy it makes the old. They have outlived most of the friends of their early youth. How lonely their hours! Often their partners in life have long filled silent graves; often their children they have followed to the tomb. They stand solitary, bending on their staff, waiting till the same call shall reach them. How often must they think of absent, lamented faces; of the love which cherished them, and the tears of sympathy which fell with theirs, now all gone. Why should not the young cling around and comfort them, cheering their gloom with songs and happy smiles.—*Sel.*

The Health Reformer.

BATTLE CREEK, MICH., JANUARY, 1875.

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

The Old Year and the New.

THE HEALTH REFORMER has now reached its tenth volume; and although it has struggled through many difficulties, we think that its patrons may well feel gratified with the marked success which has attended this effort to enlighten the people upon one of the most vital of subjects. Our circulation has steadily increased from the outset, until we now have a guaranteed circulation of more than a score of thousands, and we feel assured, by present prospects, that our subscription list will soon number 50,000 names.

During the year which closed with our last issue, we have endeavored to present in each number a variety of topics more or less closely related to the great subject of health. We have devoted no space to frivolous stories and senseless twaddle, the curse of modern literature. We deal only in those subjects which relate to the moral, mental, and physical well-being of the race. During the year already begun, we shall still adhere to the same plan, only endeavoring to attain more perfect success in its execution, profiting by each month's experience.

The new year has brought us many new friends, and we hope that we have lost none of those who have so faithfully aided us by their encouragement and patronage during 1874.

The Hygienic Platform.

THANKS to the energetic efforts of our numerous agents, the present number of the HEALTH REFORMER will be sent to several thousands of new subscribers. In order that those who may be comparatively unacquainted with the aim and scope of our journal, may at once become informed upon these points, we present the following as our platform, the elucidation of the principles involved in them being the object of this publication:—

1. Obedience to the laws of life and health is a moral obligation.

2. Mental, moral, and physical health can only be maintained by the observance of mental, moral, and physical laws.

3. A healthy body is essential to perfect soundness of mind.

4. Physical health promotes morality.

5. Morality, likewise, promotes physical health.

6. In the treatment of disease the simplest and safest remedies are the proper curative agents.

7. Nature is the most efficient physician.

We shall not here present any of the various arguments which demonstrate the truth of the above propositions, leaving this as a pleasant task for future numbers. We may further add, for the benefit of those who are entirely unacquainted with the tenets of hygienists, that in enforcing the principles enunciated above we advocate:—

1. Total abstinence from the use of all stimulating beverages, including tea, coffee, and chocolate, as well as alcoholic liquors.

2. That tobacco-using is a filthy habit, ruinous to both body and mind, and a disgrace to civilization.

3. That animal food is not the proper food for man, as indicated by his anatomical and physiological characteristics, while fruits and farinaceous foods are the best adapted to his wants, as proved by science and experience.

4. That simplicity in diet is one of the most important means of preserving health.

5. That improper dress is a prolific source of many of the diseases from which women and children suffer.

Our reasons for these views, which are somewhat radical in character, and may be novel to many, will be given elsewhere in this and future numbers. We also urge the importance of carefully observing each of the several laws of hygiene relating to ventilation, rest, exercise, etc.

We invite the candid attention of the reader to these important subjects, with the conviction that only an unbiased investigation is necessary to insure the adoption of the truths which we are endeavoring to promulgate.

If life to you is not all you would have it, seek to make it better and more enjoyable yourself.

The Health Reformer in Neuchatel.

READERS of the REFORMER will be interested in perusing the following letter from Eld. J. N. Andrews, who left this country a few months since as a missionary to Switzerland. He has long been a thorough reformer, and we are much interested in his mission to spread the light of reform among the Swiss people. These great truths are rapidly finding access to every part of the world, as evinced by the incident related by our esteemed friend, and by many other facts which we might mention.

"In crossing Lake Neuchatel two days since, I was agreeably surprised to see a copy of the HEALTH REFORMER in the side pocket of a gentleman's overcoat. I was the more surprised as he was evidently a European. I learned on entering into conversation with him that he was a native Swiss, and that he had lived sixteen years in the United States, but was now returned to Switzerland with the intention of making Neuchatel his home. I soon found that he was deeply interested in the subject of health reform, and that he was familiar with the writings of Graham, Trall, and Jackson, and with the various health periodicals. He gave the decided preference among the latter to the HEALTH REFORMER. When he learned that I was interested in the REFORMER, he was as much rejoiced as though he had found an old friend. We had a very interesting interview. He is anxious to awaken his friends to the importance of living according to hygienic principles. He wishes me to aid him, and I feel interested to do it. He is a man of extensive general information, and very candid in his statements. I hope to interest him in the moral law as fully as he is now interested in the laws of health and in the subject of proper living.

"Perhaps the readers of the REFORMER may not understand that it is necessarily more difficult to introduce health reform in this country than in the United States. But first it is nearly impossible to procure any graham flour. And what is a more serious difficulty to contend with, the stoves are constructed in such a manner that it is not possible to bake bread of any kind in them. The people depend upon bakers for bread, and take such as they can get. They think that stoves like those in America consume more fuel than they can afford. But I think the real reason to be that this is the kind of stove that they received from their ancestors, and they cannot think of anything better. I can hardly

see how we are ever to make any general change from baker's bread to graham. The gentleman of whom I have spoken procured with much difficulty a small quantity of graham flour, and as he could not bake it, he took it to the baker's and gave him instructions. The result did not encourage him to repeat the experiment. There is a plenty of water in Neuchatel. Fountains of running water from the mountains behind the city, abound. But the water is all hard. I think there are no good filters for rain water in this country. And as to ventilation, the windows open as doors, so that in cold weather they are not very well fitted to change the air of a room without making the room cold to the feet. These items will serve to illustrate the case.

J. N. ANDREWS.

"Neuchatel, Switzerland, Oct. 28, 1874."

Universal Suffocation.

In the summer season, and during the whole year, in tropical climates, fresh air is always in constant requisition, on account of the oppressive heat. The life-giving oxygen is freely invited to diffuse its invigorating influence through every human habitation, and every device is employed to facilitate the dissemination of pure air. But when winter approaches, it seems to be forgotten that the demand of the system for oxygen is even greater in this season of the year than in any other. The houses are carefully banked up with straw and dirt lest a few stray inches of untainted air should enter through the cracks in the floor or some loosely fitting joint. The outside windows are nailed fast, and the door casings are padded with felt, to prevent the entrance of a solitary whiff of fresh, unpoisoned air. Within the dwelling, thus securely barricaded, air-tight stoves are kept at a temperature only a little below the point of fusion, and the inmates dodge furtively in and out in order to maintain the maximum degree of heat by preventing the ingress of any of heaven's pure, cold air.

When a person enters such a hot-house as the one described, and the description is applicable to ninety-nine one-hundredths of all American dwellings, after spending an hour in the open air, the sense of suffocation is very painful for some minutes. He notices the great contrast between such air and that which

he has just been inhaling, and at once suffers from respiring it; but after remaining for some time in the vitiated atmosphere, his lungs learn to tolerate it, and he no longer observes the character of the air he breathes, although he continues to suffer its constitutional effects, notwithstanding the obstuseness of his senses.

Let us notice the difference between such air and that which is found out of doors.

In the first place, it is largely contaminated with that deadly gas, carbonic acid; or, technically, carbon di-oxide. We call this gas *deadly*, because it is doubtless productive of more mortality than any other single gaseous body. In out-of-door air, this gas exists in very minute quantities, not more than .04 of one per cent, or .4 of one part in 1000 parts of air. Small as this quantity is, if it becomes increased to .6, according to some of our most eminent medical authorities, it will impair the health of those who breathe the air containing it. In nearly all dwelling houses, at this season of the year, the proportion of carbonic acid is usually from 1.2 to 4.0 parts per 1000, or from two to six times as much as can be breathed without serious injury.

Again, the lungs are constantly throwing off in the expired air certain organic matters of a very poisonous character, even in health. In disease, these impurities are enormously increased, adding further poison to the surrounding air in the shape of disease germs, and the products of putrefactive changes. The nature of these poisons, and their effects, are closely analogous to those which give rise to typhoid fever, if they are not quite identical with the latter.

Lastly, by superheating, air which is otherwise healthy may become a source of disease. If the air is moist as well as elevated in temperature, it will have a debilitating influence, relaxing the capillary vessels of the skin and lungs, and making those who breathe it liable to colds and pneumonias upon exposure to even slight changes of temperature. If it is dry, as it is most likely to be, it becomes a source of irritation to the mucous surfaces of the air passages and the eyes, and thus leads to serious affections of these organs.

Many people who enjoy good health in warm weather, complain of poor circulation, congestion of the head, and similar difficulties in the winter. Such persons are very likely to keep themselves shut up in close rooms, which are kept at a very high temperature. They constantly draw closer and closer to the fire, but their chilliness increases, notwithstanding. This is one of the most common results of confinement in hot, unventilated rooms.

We need scarcely say that the remedy for all of these evils is ventilation. There seems to prevail at present as great a fear of cold air as there once was of cold water; both are alike harmless and promotive of health when properly used. But whether warm or cool, pure air is absolutely essential. How to secure it is the problem. When log houses and huge fire-places were fashionable, there was no necessity for any attention being directed especially to the ventilation of dwellings, for the blazing fire on the open hearth, communicating with a capacious chimney, was a most efficient means for removing the foul products of combustion and respiration, while an abundant supply of fresh air was sucked in through the loose walls of those primitive edifices; but the unwholesome refinements of our modern civilization have rendered this a puzzling question. Some eminent physicists recommend that the outlet for air should be at the bottom of a room, in imitation of the old-fashioned fire-place, the inlet being near the ceiling, while others recommend exactly the opposite plan. Probably either plan is useful under the circumstances adapted to it. In ordinary dwellings, ventilation can usually be secured only by means of doors and windows. By a little care, unpleasant draughts can be avoided. If necessary, a piece of coarse muslin or wire gauze may be placed before the opening in the window to break the current which pours in. Generally, windows should be opened on several sides of the room, to insure circulation.

Every person requires a breathing space of at least 800 cubic feet. More would be better. To keep this pure, 3000 cubic feet of air must pass through it every hour; or, in other words, the whole air in the room must be changed about four times an hour. To effect

this, the area of inlet should ordinarily be about twenty-four square inches for each occupant of a room. The same space should be allowed for the escape of the air.

We solicit the aid of every true philanthropist in endeavoring to uproot this almost universal practice of gradual suffocation. Carbonic acid may do very well as a means for killing hydrophobic dogs; but its use in the wholesale destruction of human beings is quite unnecessary so long as war and pestilences exist.

Who Are Extremists?

NOTHING is more common than to hear the appellation, "extremist," applied to an individual who is enthusiastically engaged in the advocacy or practical application of some cherished theory. Not infrequently the application seems to be entirely just; but, quite as often, the opposite is the case, especially when the individual in question is a hygienist. We purpose to consider the characteristics of extremists without attempting any technical or very concise definition of the word.

An extremist is an individual who gives undue prominence to a single principle or idea, or to a particular set of ideas. He allows his attention to become so engrossed with a favorite theme that all else is obscured. The man who has a hobby is quite sure to be an extremist. A fanatic is a typical illustration of this class of persons. The extreme individual forgets that there is no such thing as an absolute, universal law in the universe. Everything is relative, even right and wrong. All laws are interdependent, the action of each being modified by all the rest.

It is an error to suppose that it is possible to "carry the truth too far," as we are often warned against. It is impossible to "run a principle into the ground," as an extremist is so frequently accused of doing. Truth is truth, to the most extreme limit of its meaning. A principle is true under every circumstance, if it is true at all. Persons who are really extremists do not hold the truth. Although they may have possessed it, they have gone astray into the paths of error. It is impossible to go *beyond* the truth, although an

easy matter to diverge from it, and this is the misfortune of extremists.

A man may totally discard the use of meat, as we have done for many years, and yet not be an extremist; but when he repudiates the use of animal food under all circumstances, he becomes extreme. That flesh is not the best food for man, nor that designed for such use by the Creator, is a principle which always remains true; but it is also true that animal food contains nourishment and will sustain life, and that its use may be justified by many possible circumstances which it is unnecessary to enumerate here. The same may be said of the use of salt and many other articles of diet which hygienists discard. It is even possible to be extreme on the question of drug medication. It may be justly said that "all drugs are poisons;" and no circumstances can change their character; but only the extremist will say that they can never be used to advantage in the treatment of disease. Although we are as thoroughly opposed as any one to the terrible abuse of drugs which we see every day in the common treatment of the sick, we might mention a score of instances in which drugs are used with the most decided benefit. Thus, one poison may be used to antidote another, as the sesquioxide of iron in poisoning by arsenic. Caustics may be used to destroy morbid growths. Anesthetics are exceedingly useful in the practice of surgery. But we will leave the further consideration of drugs for another article.

We believe in being radical, but seek to avoid being ultra. As we have already said, we would follow the truth wherever it may lead; always recognizing, however, that there are multitudes of truths, and that they are all mutually related. Extremists are usually such through ignorance or egotism; they rest satisfied with only a part of the truth, and are thus led into error.

STANLEY writes, "No drunkard can live in Africa. The very fever discovers his weak point, attacks him and kills him. I knew nothing much of this terrible recurring malady previous to my African experiences, but I had good cause before I ended my mission to know that a drunkard is least able to withstand a tropical and malarious climate."

American Health Association.

THE numerous Health Associations and Boards of Health which have sprung up in this country during the last few years have already done a noble work for humanity; and as they become more firmly established and united, we may hope for still more appreciable results. It should be a matter of great encouragement to hygienists that the leaders in these movements, and the members of these associations, all belong to the class which we are so fond of designating as "drug doctors." Although we may not be able to agree with all the teachings and practices of these men, we should appreciate their philanthropic efforts in the cause of hygiene and sanitary improvement; and it is to be hoped that every hygienist will cordially second these efforts in every possible way.

Through the kindness of Dr. H. B. Baker of Lansing, Mich., Secretary of the State Board of Health, and Superintendent of Vital Statistics, we are in receipt of a condensed report of the recent meeting of the American Health Association at Philadelphia. The following are a few of the more interesting paragraphs as they appear in the *Lansing Republican*:—

"Dr. J. R. Black of Newark, Ohio, read a paper on the 'Influence of Hereditary Defects on Health,' with suggestions for prevention and eradication. He argued that progress, whether of body or of brain, must be through organic structure. Enlightened and systematic attempts to eradicate constitutional defects have rarely, if ever, been made. The prevailing one-sidedness of our social and educational modes of dealing with the young tends to originate and foster almost every hereditary defect, and until a radical reform in this is effected—until man exonerates God from the consequences of his own ignorance and folly, and rightly interprets the significance of the punishments which cry aloud in the form of the many pains and diseases to which he is now so unhappily subject—it is vain to hope that his physical and mental conditions will ever be materially improved.

"Dr. Edward H. Janes of New York read a paper on the 'Health of Tenement Population and the Sanitary Requirements of their Dwellings.' The causes of ill health among tenement populations are: want of sufficient air space, want of adequate ventilation, defective house drainage, damp walls,

too close proximity of sinks and cess-pools, and improper disposal of house refuse.

"Dr. H. B. Baker made a report upon 'The Death-rate of each Sex in Michigan,' in which he compared by life tables the mortality in Michigan with that of the healthy districts in England. In making this comparison Dr. Baker stated that he believed the use of life tables was the only true way of making such comparisons. The usual way is by a per centage of deaths to persons living.

"These life tables of Dr. Baker, compared with Dr. Farr's life tables of the healthy districts of England, were almost identical as to results, excepting as to extreme old age, which in Michigan seemed more favorable than in England. These life tables were illustrated by two diagrams—the first exhibiting for each sex in Michigan and the healthy districts of England the chances of life at every age; and the second diagram showing for these same localities the true expectation of life at every age.

"Dr. Baker stated that nowhere in the United States had life tables been made from accurate State or National mortality statistics. The life tables exhibited by him were based on the statistics of Michigan, corrected by a plan devised by him, which he recommended for trial in other States. This method of correction is fully described in the *Vital Statistics of Michigan for 1871*.

"Rev. Samuel Osgood of New York, who delivered an eloquent address on the 'Relations of Health to the Higher Culture,' claimed that our vices and our follies in great part come from what goes into our mouths. The health laws will be found to act powerfully upon the higher culture—upon the intellect and will, upon the affections and the imagination, and to win new joy to the spirit, as the life of nature is more wisely studied and obeyed. Every great fight, whether at the point of the bayonet or of the tongue or pen, is carried by force, and not by theory or sentiment. Our schools and colleges need to find this out; and a large part of the great and growing disappointments of what are called our educated men comes from this source—want of practical force corresponding with speculative ideas.

"Ezra M. Hunt, President of the Sanitary Commission of New Jersey, read an important paper on 'The Relations of Building-Ground to Health and Disease.' He argued that the prevalence of typhus fever in that season was greatly due to the noxious currents of air arising from filth-burdened ground, drawn into houses in currents, caused

by heating the rooms. To remedy all this, we must get the homes of the people on better foundations than water-soaked, air-polluted, filth-burdened ground.

"Prof. Edward Orton, President of the Ohio Agricultural College, read a paper on 'Geology and the Water Supply of the Country.' He pointed out that in building a house, the first thing usually done was to dig three holes in the ground: one for a cess-pool, one for a privy vault, and one for a well, which is frequently a drain for the first two mentioned; and all of these are not far distant from each other.

"Dr. Baker, on behalf of the State Board of Health of Michigan, presented a book of specimens of poisonous wall-paper gathered in this State by Prof. R. C. Kedzie of the Agricultural College. Several members spoke of the importance of this subject, and a committee was appointed to make further investigations. Dr. R. C. Kedzie was appointed a member of this committee.

"Prof. S. D. Gross, of Philadelphia, made an eloquent appeal for the establishment, by Congress of a National Bureau of Health. Many other valuable papers were read, and the discussions were also of unusual interest."

A Notable Falsehood.

ALTHOUGH we called attention to the deceptive character of that vile compound known as "Vinegar Bitters" some months since, in an article on "bitters" in general, we again refer to the same pernicious article, as there may be many who read this number that did not read the former article.

Although the present is an age when falsehood has come to be regarded as an offense so trivial as to be scarcely worth mentioning, the following paragraph which is appearing in the papers just at present is so contemptible in character, being one of the many deceptive means of advertizing adopted by quacks, that we deem it worthy of exposure:—

"CAN IT BE TRUE?—Within the last few months a considerable number of persons have called upon Dr. Walker, the proprietor of the popular medicine known as Vinegar Bitters, and assured him that, in their belief, his preparation is an infallible antidote for rum and tobacco. The minute details which have been furnished him forbid him to doubt the accuracy of the statements. This new claim of a great remedy to the confidence of

the public will give a vast and well-deserved impulse to its popularity. Heretofore, the Bitters have been recognized as a pure vegetable tonic and corrective, devoid of alcohol, and thoroughly adapted to the cure of stomach and bowel complaints, nervous disorders, bilious affections, muscular diseases, and indeed a majority of the ailments within the reach of medicine; but if it will also cure the craving for liquor and tobacco, philosophers, statesmen and theologians, ought to unite their voices in its praise. Can the good news be true? It is easy to test the question."

Indeed it is not true, but "a notable falsehood;" or, rather, a collection of falsehoods. In the first place, neither "Vinegar Bitters" nor any other kind of "bitters" can be an antidote for rum and tobacco. The only antidote for these poisons is moral courage and total abstinence. The substitution of the word *substitute* for "antidote" would have the effect to transform an untruth into a lamentable truth. "Vinegar Bitters" is a very excellent substitute for rum or any other alcoholic liquor for the simple reason that it is itself largely composed of alcohol. Several months ago the State Assayer of New York, published a report in which he gave the amount of alcohol contained in these so-called "temperance bitters" as equal to that contained in an equal quantity of many kinds of wine, and double that contained in various brands of ale. The statement, then, that this filthy liquid contains no alcohol is a gross misrepresentation of facts.

Our advice to all who value their health is to let alone all kinds of "bitters." They are merely liquor in disguise, and are habitually used by many who call themselves temperance men and so do not take wine or whisky.

DR. L., of St. Louis, who is something of a wag, called on a colored Baptist minister, and propounded a few puzzling questions:—

"Why is it," said he, "that you are not able to do the miracles that the apostles did? They were protected against poisons and all kinds of perils. How is it that you are not protected in the same way?"

The colored brother responded promptly: "Don't know about that, doctor. I s'pect I is. I have taken a mighty sight of strong medicines from you doctors, and I is alive yet."—*Ex.*

Encouraging Words.

WE are always glad to hear from our patrons, to learn of their advances in reform, and to know how they are pleased with our efforts, and whether they are willing to aid us by their influence and hearty co-operation. If the forces of health reformers could only be thoroughly united in a systematic effort to disseminate the great truths in which we all rejoice, what might not be accomplished. Possibly such an organization may sometime be effected. In the meantime, let every one who has tasted of the blessings which result from an obedience to the laws of health, engage with earnestness and appropriate enthusiasm in the work of enlightening his less fortunate neighbors.

The following from R. J. Moffat, of New Brunswick, one of our most efficient and esteemed laborers, is certainly indicative of progress, and gives us new courage in the work :—

"I subjoin the address of two new subscribers to the HEALTH REFORMER, one of whom is an allopathic physician. There has been substantial progress made in this community in molding the *sentiment* of the more intelligent, and in a good degree the *practice* and habits of the same class, by means of your publications, chiefly the REFORMER." "I do all I can myself, and I seldom let an opportunity slip of introducing some of your publications."

If all of our thousands of subscribers would adopt the course of our worthy friend, in a short time every community in the land would feel the influence of these great truths. Try the experiment, friends.

A friend writes from Minnesota that he has taken the REFORMER for several years, during which time he says that the money he has paid for the journal has been all that his doctor bill has cost him, while he has found no use for drugs and so has spent nothing for them. Before becoming acquainted with the health reform, he was obliged to spend from \$50 to \$100 every year for doctors and drugs.

Surely this is a wise economy; for not only is there a considerable pecuniary saving, but a much greater and more important saving of pain, suffering, and loss of time. How many health reformers can bear the same testimony? Thousands, we believe, and we should be glad to hear from them.

Here are a few words from another Minnesota friend, whom we are happy to hear from :—

"I am glad to notice the many signs of

improvement in the REFORMER. May the good work go on, and the wisdom of life your valuable journal furnishes so abundantly in every issue, be scattered broadcast over the land."

Continued progress is our aim, and we shall spare no efforts to make the REFORMER the best health journal published. Give us your support, friends, and we promise you to come as near the standard as earnest work and entire devotion to the cause will bring us.

Another friend who has had a pretty good opportunity to judge of the merits of the REFORMER, writes as follows :—

"I have taken the REFORMER from the first, and have read it with increasing interest. I regard it as the best health journal I know of. I fully indorse its principles, and will try to do all I can to extend its circulation."

Says another, whose good sense is very commendable,

"Times are hard, but years ago I concluded that it was unwise and ruinous to mental and moral health to cut off the supply of good reading matter in the shape of papers and periodicals. Retrenchment in this direction is not to be considered. I would not do without your sound advice, counsel, and *reproof*, for five times your subscription price. So I bid you welcome to our fireside, and must try to introduce you to some of my neighbors and friends who so sorely need your instructions."

We aim to make the REFORMER so practical that every one who reads one number will be convinced that he cannot afford to do without it.

Although but a short time has elapsed since the publication of the series of health tracts, noticed on another page, gratifying results are already appearing. The following is from a Boston gentleman who has obtained many subscribers for the REFORMER :—

"A few days since, I received a package of health tracts, for which I feel very thankful. Immediately upon the reception of them, I carelessly placed them within the reach of one whom I have long tried to persuade to adopt the health reform. My pleadings were in vain. Never, so long as life and reason remained, would he deny himself of what his appetite craved. If he had money to buy with, he would have it if it killed him. But judge of my surprise, dear reader, when this same person, who had read and reread the HEALTH REFORMER, after reading those tracts, informed me that he should never again partake of the filthy swine, and that he should give up his tea, etc."

DIETETICS.

Humbug Food.

UNDER the suggestive heading of "Humbug Pie," an exchange gives the following recipe, which, although unwholesome enough, is nutritious when compared with some of the compounds which so often appear in our agricultural and county papers:—

"One cup of molasses, one cup of sugar, one cup of chopped raisins, two-thirds of a cup of broiled cracker, one cup of cold water, one-half a cup of vinegar; spice like mince pies, and a piece of butter the size of a walnut."

A consideration of the above recipe will show that the only constituent which contains an amount of nutriment worth mentioning is the raisins; and these would be so hopelessly damaged by the other ingredients that the small quantity of actual aliment which they originally contained could not be utilized by the system. A careful observer will not accuse us of exaggeration when we say that thousands, yes, millions of people are daily attempting to supply the alimentary wants of their bodies with compounds which are the veriest humbugs extant. Very earnest and just protests are raised against the many lottery swindles and numerous other deceptive operations constantly being brought to light; but the majority of us daily allow ourselves to be "taken in" by the savory but innutritious and unwholesome mixtures which modern cooks furnish us. A multitude of shrewd farmers, merchants, lawyers, and even doctors, who pride themselves upon their tact and cleverness, are unwittingly cheated several times a day by their dear wives, although we should in justice say that the latter are in total ignorance of the perpetration of any offense. And yet, although a matter which is so intimately related to life and health as is food and drink is of vastly greater moment than mere material or pecuniary affairs a protest against these wholesale dietetic swindles is seldom heard.

The common terms, "rich" and "poor," as applied to food, are excellent illustrations of the ignorance of the popular mind respecting the real dietetic value of articles of food. Thus we hear, and sometimes ourselves speak, of rich pies, rich cakes, etc.; and we talk of poor food and low diet, including in the latter classes articles which are deficient in those elements which would give them rank in the class of "rich food" if present. In our estimation, the terms rich and poor should be applied to articles of diet in exactly the reverse of their present application. If the word "rich"

has any proper significance as relating to food, it should certainly be applied to such articles as contain the materials requisite for the maintenance of the body in the largest proportion, and in the most available condition. This would require us to denominate as "rich," such articles as graham bread, oatmeal pudding, and similar delicacies, while the appellation of "poor" should be applied to pies polluted with lard and spices, cake made indigestible with soda, butter, and a profusion of sweets, and all articles of like character. So, too, would we be obliged to term "poor" the numerous "fried" dishes which figure so largely in the popular bills of fare. But poorest of all is the diet of the man who allows himself to believe that in taking a glass of "bullion" he is taking a "long drink and a square meal at the same time," as the flaming placards in the saloons assert.

What May we Eat?

SINCE writing the preceding article, we have received, from an unregenerate correspondent who very properly signs himself "Humbug," the following pathetic appeal, which we quote as written; we guess his wife is a subscriber to the REFORMER:—

"You wont allow us to eat Beef Pork or Beans SPAR RIB BUTTER Olive oil, Ham—Fried potatoes Ham & Eggs or drink Juice of the grape Milk coffee Tea or use tobacco—Now what is there among Gods gifts you will allow us? Give us a bill of fare—*Humbug.*"

We assure our doubting friend that we do not proscribe anything whatever, not even the worst of the abominations he mentions. It is not our function to enact laws; we only recommend a better way, producing the arguments upon which our doctrines are based, and then we "allow" every man to act his own pleasure in choosing. If our friend prefers to drink wine, tea, and coffee, eat fried potatoes, and other indigestible articles, and use tobacco, saturating himself with its filthy poison, we shall not molest him; but when his abused stomach gives out, his nervous system becomes shattered, and some distressing malady fastens upon him, we protest that he shall not charge Providence with that which is the result of his own violations of the laws of health.

But says our pugnacious friend, "What is there among God's gifts you will allow us?" We answer, All, every one. God's bounties are free to all mankind. It is only the abuse of his gifts that we oppose; and in this we have the support of the Scriptures, which always accord so perfectly with common sense, being therein exhorted to "use this world as not abusing it."

It is a very common error, although a moment's reflection is sufficient to show the absurdity of the idea, to suppose that everything was made to eat. Perhaps we err in saying that any person ever really entertains such a supposition; but many of the arguments for the use of common articles of diet are founded on this absurdity. No doubt the Creator intended every product of his power for some useful purpose; tobacco, tea, coffee, and pork (or, at least, hogs), all have their appropriate uses, but not as articles of food; when thus employed they are grossly abused. Ham, wine, and butter are artificial productions which need have no existence. Milk is excellent food for infants, when derived from healthy sources. It is also food for adults, but not the best food.

Now for a bill of fare. From the despairing tone of the interrogator, whose queries we are considering, it might be inferred that he entertained the idea that if we should take from him the articles which he enumerates he would certainly perish from starvation. Possibly this latter opinion is far too prevalent among those who are unacquainted with the resources of the hygienic diet. One of the chief differences between the diet of a hygienist and that in ordinary use is that the former is composed in great part of those articles which are regarded as luxuries in the latter. When a man becomes a hygienist, he selects from his old dietary all that was really good, wholesome, and nutritious, and adds to it every other esculent that his resources enable him to obtain from the vegetable kingdom. It is needless for us to enumerate the various kinds of fruits and vegetables which may be eaten. Our friend will find in the Hygienic Cook Book, published at this Office, numerous recipes for preparing wholesome dishes which, he will find, will quite replace his accustomed spare rib, ham and eggs, and fried potatoes, if he chooses to try the experiment.

Common Salt.—No. 1.

BY J. S. GALLOWAY, M. D.

IN civilized life, the use of common salt as a seasoning for food is well nigh universal; yet few persons can give any better reason for its use than that every body uses it, indeed, many of the habits which seem so necessary to us, are sustained by no better reasons. Is it not time that science should be called in to settle this and every other question having a bearing upon our welfare, rather than trust them to the capricious conventionalities of artificial life? When there is so much in the world to be deplored—so much pain, suffering, and premature death, all our habits of life should be carefully tested, and so far as they cannot stand the or-

deal, forever abandoned. It is of far less consequence to sustain a cherished theory than it is to develop an important truth. That honest differences of opinion will exist after the most careful study, is to be expected. This has always been, and always will be. But none the less should we respect the faithful investigator, or be respected by him, if from the imperfections incident to all human knowledge, and from occupying different stand-points for observation, we fail to reach the same conclusions. Our progress may be slow, but sooner or later we shall reach the firm foundation of truth immutable.

The following summary of the arguments for using common salt was drawn up by a scientific gentleman of Washington City. It is clear, comprehensive, and concise, and does credit to its author. Yet his conclusions are not, in the estimation of all, quite invulnerable. The consideration of your readers is respectfully asked, not only to the summary, but to the review of each section of it in order.

Section I. "Chloride of sodium, or common salt, is found, like water, throughout the various tissues and fluids of the body, with perhaps the only exception of the enamel of the teeth, where, I believe, it has not yet been found. Its presence is important, as it regulates the phenomena of endosmosis and exosmosis in different parts of the system, especially in digestion, absorption, and assimilation. We know that a solution of common salt passes through animal membrane much less readily than pure water, and tissues which have been desiccated will absorb pure water more abundantly than a saline solution. It does not follow, however, that the presence or absence of salt or its varying quantity in the animal fluids is the only condition which regulates the transudation through the animal membranes. The manner in which endosmosis and exosmosis take place, depends upon the relative quantity of all the ingredients in the fluids, as well as on the constitution of the solids themselves; and the chloride of sodium, as one ingredient among many, influences these phenomena to a great extent, though it does not regulate them exclusively."

That the analysis of the human tissues, so far, has revealed the presence of salt is not questioned. This might naturally be inferred from the analysis being made upon tissues and fluids derived from the bodies of salt eaters. The writer is not aware that this test has ever been made upon any others. Those who habitually take inorganic matter into their bodies, may naturally be expected to give evidence of its presence there, when the proper tests are applied.

That it affects the phenomena of transudation, is no doubt true. But before we conclude that

this is an argument in favor of its use, we must show that endosmosis and exosmosis require its regulating influence. When no animal with a simple stomach, in a state of nature, seeks salt—its natural use being confined, it is believed, to animals with compound stomachs—must we not infer that the Creator made a great mistake in allowing so many animals and men to live under circumstances so unfavorable to the play of important functions of the body? or that we, in our endeavor to regulate them, have arrogated to ourselves wisdom which does not belong to us? Bellows says, of salt, in his work on "Eating," "*It is not in any sense nutriment, as it does not furnish support to any organ or function, and does nothing toward sustaining life*—as has been often proved in the shipwrecked and famishing sailor, who, instead of relieving his sufferings, has added to them by taking salt water, even in very small quantities. Neither is it a chemical agent, combining with some other element in the system to affect a necessary change, as the acids combine with alkaline bases and remove effete matter in the excretions. *It is chloride of sodium wherever found, in the stomach, in the blood, in the excretions, and what its office is in the system is not known*; but, undoubtedly, it has some beneficial influence besides its use as a condiment. . . . Still it is not an absolute necessity in the animal economy, at least not further than may be met by the chloride of sodium, which is found in almost all animal and vegetable food, as whole nations of men and their domestic animals live without salt, except as it is found in food; and this relieves us from the apparent exception which salt furnishes, to the law which I have endeavored to develop, '*that all elements to be incorporated into the human system, or any other animal system, must first be organized in some vegetable.*' There is enough salt in common natural food to account for all the salt actually incorporated in the system; indeed, *it is yet an unsettled physiological question whether any salt is actually incorporated in the blood or in any of the organs.*"

Before concluding that salt is necessary to the regulation of endosmosis and exosmosis, it must be shown that these functions are not well performed without its use. Since so many animals live naturally without salt, and the advocates of its use admit that "whole nations of men" do the same, it seems quite reasonable to suppose that the use of salt is not needed. If the transudation of fluids is affected by it at all, it should be accepted as an argument on the negative rather than on the affirmative side of the question. Common salt is not the only chemical substance that modifies the passage of fluids through animal membranes. But no one claims that sulphate of copper, chloride of zinc,

or any other solution but that of common salt, should be used to regulate the passage of fluids through the vital tissues. Unless it is shown, then, that there is a necessity for interference with this process and that this want is clearly met by the substance in question, the natural conclusion seems to be that it should not be used *because it affects, or is believed to affect, the process of exosmosis and endosmosis.* It is worthy of notice that Dr. Bellows, the author of the above quotation, says, page 289, "My conclusion, therefore, is that salt, like other condiments, promotes digestion by exciting the glands and inducing the production and flow of their secretions."

Section II. "It exerts also an important influence on the solution of various other ingredients with which it is associated. Thus, in the blood, it increases the solubility of the albumen, and probably also of the earthy phosphates.

"The blood globules again, which become disintegrated and dissolved in a solution of pure albumen, are maintained in a state of integrity by the presence of a small quantity of salt."

But why should we meddle with the constituents of the blood upon the hypothesis that some of them are more and some less soluble than they should be? If experiments and observations on a comprehensive scale have shown that "whole nations of men" and myriads of animals with simple stomachs, as the orang-outang, which is much more nearly allied to man in conformation than are any of the animals which in a state of nature crave salt, do live quite as well without such expedients for modifying the solubility of their blood as we do with them; that we who boast of intelligence and a civilization far in advance of theirs, suffer from many forms of disease unknown to them,—must we not, in the absence of any proof that the use of salt to regulate solubility is necessary, conclude that so far as there is any argument in it, its bearing is not in favor of, but against, this saline chemical. Let it be observed that the facts set forth in this section of the summary, as well as those of the previous one, are not in dispute, but the *correctness of the inferences* drawn from them.

TALKING AT TABLE.—Is it proper to talk at table? By all means. We are aware that some few consider it proper to observe perfect silence while at table. The table is the very place to talk, and the meal hours should be among the pleasantest of the day. Don't talk business and discuss what work shall be done after dinner, but give the time to social chat. This should not prolong the meal inconveniently, but there should be enough of it to prevent the common custom of rapid eating.

SEASONABLE HINTS!

A Hint for Boys.

MANY a little boy has cried bitterly after a half hour's fruitless endeavor to push his feet into a pair of boots as hard and inflexible as boards from drying under the kitchen stove, after being soaked in the wet snow on the day previous. But boys cannot forego the pleasure of building snow forts and sliding down hill, notwithstanding all these vexations; and so they finally manage to crowd their tender feet into those same stiff boots, and dash away to their sport again. At night they find their ankles chafed by rubbing against the hard wrinkles, and the next morning they hobble about like cripples, as they are. Now, boys, let me tell you how to save yourselves all this pain. When you pull off your boots at night, fill them to the tops with dry oats. Do not take the oats directly from the cold, damp barn, but first dry them in the oven, or hang them behind the stove in a bag until they are perfectly dry. Crowd them in moderately well, and when you get up the next morning you will find your boots all dry, and perfectly in shape, instead of being shrunken and hard. Place the oats in a little sack and keep them behind the stove ready for another occasion, and you will be saved much vexation. At least, so says a scientific journal, and all the papers are copying the statement, and so we believe it, although we have not happened to have occasion to try it. We suppose that the plan will work with men's boots as well as with boys. Try it.

Color of Clothing.

It is customary to wear dark clothing in the winter, the practice being based, no doubt, upon the general belief that dark clothing is warmer than white. This belief is groundless, however, like many other popular notions, the opposite being true. Paradoxical as it may seem to many, science tells us that white clothing is the best protective from the heat of summer, and also from the cold of winter, provided, of course, that its texture be of the proper character. The reason of this is simple, however, and any one may understand it. White substances are good reflectors of light, but they are very poor radiators or absorbents. The opposite is the case with black substances, in general.

In the summer, the cause of excessive heat is not the too great production of animal heat in the system, but it is the excessive warmth of the sun's rays; hence, the best protective covering for this season is that which will the most effectually prevent these rays from reaching the

body. In the winter, the cause of suffering from cold is the absorption of the heat of the body by the surrounding cold atmosphere; hence, the best apparel for winter is that which will absorb and radiate the smallest quantity of the bodily heat. As we have seen, white clothing answers both of these requirements, and consequently, is the best for both summer and winter.

According to these principles, it is quite fortunate for the world that snow happens to be white instead of black, for if it were of the latter color, its cold would be vastly more intense.

Flavoring Extracts.

As we have frequently warned our readers against the use of the flavoring extracts which are offered for sale at the stores, the following description of the manufacture of some of them may not be uninteresting:—

"Some of the most delicate and costly perfumes are now made by chemical artifice, and not, as formerly, by distilling them from flowers—the perfume of the latter often consisting of oils and ethers, such as the chemist can compound artificially in his laboratory. Commercial enterprise has availed itself of this new avenue to trade and profits; but the most singular fact is that these delightfully fragrant products are most generally derived from substances of intensely disgusting odor. Thus, the peculiarly fetid oil, termed fusel oil, is formed in making brandy and whisky; this fusel oil, distilled with sulphuric acid and acetate of potash, gives the beautiful oil of pears. The oil of apples is made from the same fusel oil, by distillation with sulphuric acid and bichromate of potash; and the oil of grapes, and the oil of cognac, used to impart the flavor of French cognac to brandy, are said to be little else than fusel oil. An exquisite article, known as the oil of pine-apples, is obtained from a product of the action of putrid cheese on sugar, or by making a soap with butter, and distilling it with alcohol and sulphuric acid. The popular oil of bitter almonds, now so largely employed in perfuming soap and for flavoring confectionery, is prepared by the action of nitric acid on the fetid oils of gas tar."

THERE is only one safe way in attempting to rescue a person from drowning, and that is to approach him from behind, grasping each arm firmly just above the elbows, buoying him up and carefully keeping him before you. This may be done by any good swimmer who keeps his presence of mind, even where water is very deep. Let swimmers, while bathing, practice this method, if only for the amusement it affords, and they will soon become experts.

To Correspondents.

HONEY.—J. L. H., Sydney, New South Wales, writes: "I have not met with any word about honey (wild or cultivated) in your pages. Would you find space, sometime, to say what is its position on the dietary scale—best, good, middling, inferior, bad?"

Ans. Honey is a compound of several varieties of sugar, mixed with wax, gum, acids, flavoring extracts, and the pollen of flowers. It is not, as many suppose, manufactured by bees from the sweets which they obtain from various sources. The bee simply sucks from the nectiferous glands of the flower the little drop of sweet juice which has been deposited there by exudation. This it deposits in a little sack, which is a simple expansion of the oesophagus, or what is called in man the meat-pipe. This is only a temporary receptacle for the honey, it being carried to the hive and deposited without any chemical change or transformation. The quality of honey varies with the sources whence it is obtained. In some portions of Switzerland, it is said to be poisonous. The peculiar flavors which it contains, and especially the pollen dust from flowers, are often a source of great annoyance, sometimes serious sickness, to those who partake of it. It often gives rise to headache, nausea, vomiting, and general dullness. As a food, we should class it as very inferior, and positively bad in any but small quantities. It is more objectionable than pure white sugar, for it contains a far greater amount of impurities, some of which are even poisonous.

PILES.—A. C. B. asks: "What is good for a very annoying itching around the rectum? I thought at first it was ascarides; but after rubbing on powdered aloes, and injecting lime water without effect, I think it must be caused by a long settled habit of costiveness. The feeling sometimes is that of smarting. Am occasionally troubled with bleeding piles, though not often."

Ans. The itching is due to the piles, or rather to the same cause which produces the piles; viz., constipation. Both will disappear when the bowels become regular. To secure this result, make use of graham flour and plenty of fruit. Avoid the large use of sugar and milk. Take ample exercise, knead and percuss the abdomen for a minute or two several times a day. Take a hip bath at 85°–90° for fifteen minutes once or twice a week. Resort to enemas occasionally when neces-

sary, but do not form the habit of depending upon them. Avoid cathartics as the worst of poisons. They are one of the most frequent causes of piles and constipation.

CONSUMPTION—BRIGHT'S DISEASE.—H. H. B. writes from Santa Cruz: "I am troubled by what I suppose to be Bright's kidney affection. Lungs also affected with tubercles; cough them up as large as a pea. I believe a totally vegetable diet would be as much drawback to the lung complaint as possible benefit to the other. Feel that no strength should be wasted in a radical change. Please give a suggestion through REFORMER."

Ans. We cannot attempt a prescription with so meagre a description of your condition. We may say, however, that we have seen many consumptives recover upon an exclusively vegetable diet. Still, we would not recommend an immediate and radical change in your case. If you attempt to abandon the use of meat, do it by degrees. A large proportion of fruits and farinaceous articles of food would be beneficial to you. If you have both of the diseases mentioned, you would be wise to seek a good health institution immediately.

KIDNEY DISEASE.—J. F., Mich., complains of headache, pain between the shoulders, in the region of the kidneys, and in the bowels; painful and frequent micturition. Feels too poor to come to the Institute as he would like to do.

Ans. Your symptoms seem to indicate very clearly some affection of the kidneys. Its exact nature we could determine better by an examination of the urine. All we can recommend to you by way of home treatment is to observe carefully the laws of health, use no condiments, avoid exposure, do not overwork, and promote activity of the skin by means of dripping-sheet baths twice a week, and daily frictions with the hand of the whole surface of the body. The wet-girdle worn about the loins every other night may give you some relief. You need a thorough course of hygienic treatment, and should be under the care of an expert hygienic physician. Life is too dear to lose.

OVEREATING.—J. H., Va., has found an objection to the hygienic system. He says: "In my experience, I find but one fault with the hygienic system, and that is that I think it is calculated to cause one to eat too much. I have been living in this way for two years, and overeating is the only trouble I have. I could do much better without a meal than to stop eating when I think I have eaten enough."

If you can give me any advice how to overcome the habit, it will be gratefully received."

Ans. Overeating is very common in this country, even among those who call themselves hygienists. Indeed, some of our most intelligent observers declare that the American people eat, on an average, double the quantity necessary to sustain life and health. President Hitchcock has maintained that one and a half pounds of bread, or its equivalent in other food, is abundantly sufficient to supply the demands of the system. In an experiment continued during a period of twelve weeks, we found an increase of weight of several pounds while subsisting on eighteen ounces of solid nutriment per day. There was a constant improvement of health as well as increase of weight during the whole period, although we were at the same time laboring very hard from fourteen to eighteen hours each day.

How to overcome the habit: 1. Eat very slowly, masticating the food thoroughly. 2. Eat your apples with your meal instead of reserving them until you have already eaten enough. 3. As soon as your reason tells you that you have eaten enough, stop, instantly, leave the table at once, if necessary to enable you to resist temptation, and immediately engage in some pleasant pursuit which will occupy the mind. Of course a little decision of character is necessary, and nothing will assist you much without it. The craving is, very evidently, not a demand for food, but merely the result of the increased enjoyment in eating, which an observance of dietetic laws always brings.

SORGUM SIRUP.—J. A. V., Alabama, says: "I would like to know your opinion of sorghum sirup, whether or not it is healthy or whether the impurities may be removed by different degrees of heat as proposed by a Cincinnati firm."

Ans. Sorghum sirup is open to the same objections as other varieties of sirup, except that it is not so liable to adulteration as the ordinary kinds. We do not consider it a healthful article of food. Very small quantities may be used without great injury by healthy persons. A dyspeptic should avoid sweets of all kinds as much as possible. We have never seen a trial of the process of purification to which you refer. The chief injury resulting from the use of sugar is due to the sugar itself, and to the impurities which it contains.

THE SCRIPTURES ON ANIMAL FOOD.—L. J. K., Ohio, says that after reading our article on butter in a recent number of the REFORMER,

he is convinced of the unwholesomeness of the article, but he cannot quite see why flesh is not proper food for man. He also wishes some solid facts to prove that man is not a carnivorous animal, and cites the fact that the Bible makes a distinction between clean and unclean animals, that Abraham and Jacob kept large flocks of sheep and herds of cattle, and that the Saviour fed the multitude with fishes, in support of the view that man is carnivorous in character according to the teachings of Holy Writ.

Ans. We cannot here enter into a lengthy consideration of the teachings of the Bible upon this subject; but we think that the following considerations are sufficient to settle the question:—

1. The Bible nowhere commands the use of flesh.

2. It is evident from the first chapter of Genesis that man and all other animals were originally designed by the Creator to subsist upon vegetable food. No mention of animal food is made in their bill of fare.

3. All that can be made out in favor of flesh-eating, from the Bible accounts, is that it was customary in ancient times, that it was permitted by divine authority, and that it was regulated by salutary laws.

4. The last proposition is equally true of polygamy; hence, if the proposition is advanced as an argument for meat-eating, it can with equal propriety be urged in favor of polygamy. It is of no value, however, for either. Both are demonstrably wrong and injurious to human welfare, mentally, morally, and physically.

For a full consideration of the scientific arguments bearing on this question, see pamphlet entitled, "Proper Diet for Man," published at this Office. You will find the solid facts there.

WHOOPIING COUGH.—L. J. K. also inquires respecting the treatment of whooping cough in infants.

Ans. No known means will arrest the disease, unless it be the means recommended and practiced by the celebrated Brown-Sequard, which consists in keeping the patient insensible with poisonous doses of belladonna, for several days in succession. If the patient does not die, it is barely possible that he may escape the disease upon recovery from the effects of the poison. The cause of the disease is a poison which pervades the system. Recovery takes place when it is all eliminated, and not before. Nurse the patient well, avoid exposure to sudden changes of temperature, but keep the air of the sick room pure as pos-

sible by ventilation. Give nourishing food, and administer a warm bath every other day.

Mrs. H. M. D., Iowa: Your case is too complicated for us to attempt a diagnosis or prescription without a full history. We would advise you to seek the advice of an experienced hygienic physician, or spend a few weeks at some good health institution.

E. Z., Wis.: We would advise you to apply at once to a skillful surgeon for an examination of the limb. The case may be one for surgical treatment, which can only be ascertained by exploration.

DIPHTHERIA.—Says J. S. B., Nashville, Tenn., "Diphtheria is raging in some parts of adjoining counties; can you give any assistance by way of remedies? what is the cause?"

Ans. Hygienic remedies are the only ones which give even apparent benefit in this disease. Under drug treatment it is terribly fatal. Hygienic treatment consists in packs, general baths, and careful nursing, together with the application of very cold compresses or ice bags to the throat, occasionally alternated with hot fomentations. If false membranes are formed in the pharynx, do not use nitrate of silver, as commonly advised, but allow the patient to keep bits of ice in the mouth, swallowing them frequently and thus bringing them in contact with the inflamed membrane. Gargles are of little account. The best application is pure lemon juice, which may be applied to the pharynx with a swab. Keep the patient's feet warm and his head cool. Few will die with this treatment.

MASONRY—CARE OF INFANTS, ETC.—W. H. B., Mass., inquires: 1. Do you think it a benefit to join the free-masons? 2. We have a healthy daughter ten weeks old; will you please give us some directions for keeping her well? 3. Should the mother attend to her house-work, and what should she eat and drink during nursing?

Ans. 1. No. 2. See article on page 207 of last volume, entitled, "How to Treat Babies." 3. A nursing mother may eat any healthful food which agrees with her tastes. She should carefully avoid too much care and overwork.

WORMS.—Mrs. L. B. D., Iowa, thinks she and her little daughter are both troubled with worms. She asks, "Can there be a remedy?"

Ans. Yes. Keep the bowels regular, use cool injections into the rectum, and, if necessary, employ an anthelmintic, anointing the anus with sweet oil is recommended.

"Humbug," Wis.: Your questions are answered in Dietetic Department.

On account of lack of space, several questions are left over for next month.

Miscellaneous Paragraphs.

A HAPPY COUNTRY.—Dr. Oliver Wendell Holmes, a distinguished professor in the medical department of Harvard University, has expressed the serious conviction that the world would be infinitely better off if all the drugs in it were cast into the sea. If this celebrated poet and physician is correct in his conclusion, and we cannot doubt that he is, France must be a happy country; for an exchange informs us that in that favored country there are cities of 15,000 inhabitants which have not a single physician, while others of a population of 20,000 have but one. The city of Roubaix contains 76,000 persons, who are drugged by only eight doctors. Fortunate indeed must such a people be, unless the place of physicians is supplied by ignorant quacks and charlatans. We have no enmity against the physician, *per se*, nor even against his drugs, provided that they are wisely employed; but we most heartily deplore the terrible waste of life which we yearly witness as the result of employing in the treatment of disease articles which could be only appropriately used in destroying vermin and superannuated dogs.

We are almost persuaded to believe that if the hypothesis of Dr. Holmes could be realized in fact that the great majority of chronic diseases would cease to exist except in the pages of medical history.

RUMFORD, it is said, proposed to the Elector of Bavaria a scheme for feeding his soldiers at a much cheaper rate than formerly. His plan was simply to compel them to masticate their food thoroughly. A small quantity thus eaten would according to that famous projector, afford more sustenance than a large meal hastily devoured.—*Macaulay*.


THE yearly mortality of the globe is 42,403,000 persons. That is at the rate of 115,200 per day, 4,800 per hour, 80 per minute. Among 10,000 persons, one arrives at the age of 100; one in 500 attains the age of 80; one in 100 to the age of 70. In 100 persons, 95 marry.—*Bos. Pilot*.


It is reported of the famous Dr. I. Lettson that he once said in reference to his medical practice,


"When patients come to I,
I blister, bleed, and purge 'em;
If then they chance to die,
What's that to I? I. Lettson."


READING the great Spurgeon's declaration that "a cigar is a thing to thank God for," a school boy in Rome bought a cigar. He was afterward seen hanging over a fence, but he was not giving thanks.


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.


 The articles upon Bible Hygiene, proposed by Elder White on the first page, are called for and much needed. It is hoped that he will be able to fill several pages each month.


 With next number we shall begin the publication of a series of illustrated articles upon Physiology and Hygiene. This is in pursuance of a long-contemplated plan which we have been hitherto prevented from carrying out on account of the difficulty of procuring suitable engravings for illustration.

 We would hereby express our thanks to those who have contributed articles for publication during the last year, and would cordially solicit contributions from all those whose personal experience or opportunities for observation may have put them in possession of items or ideas of interest to the readers of the REFORMER.

 FIVE-HUNDRED FIRST-CLASS CANVASSERS WANTED! The publishers of the HEALTH REFORMER are determined to raise their subscription lists to 50,000. They offer to first-class canvassers, who will give their time to the work, a cash premium by which they can make from five to ten dollars a day. For further particulars, send for our circular. PUBLISHERS.

 There are more patients at our Health Institute at the present time than there has been at this season of any previous year. Great changes and improvements are in contemplation, such as will compare with the importance of the proper method of healing the sick, and the natural beauty of the grounds.

 We have already sold 45,000 copies of the Hygienic Family Almanac. Agents and canvassers say that it sells well. January will be a good month to scatter it everywhere by sale, and by our friends to all their friends, by present. Single copy, 10 cents. Twenty copies, post-paid, for \$1.00. Four dollars per 100 copies at the Office.

 Please see notice of Vick's Floral Guide for 1875 on second page of cover. It is indeed worthy of the attention of the lovers of the beautiful in nature.


The Reformer for 1875.


ONLY ONE DOLLAR A YEAR AND POSTAGE PAID.


THE new postal law, regulating the postage on periodicals, which will take effect at the beginning of the year 1875, requires that the postage shall be prepaid. By this new law the postage on the HEALTH REFORMER, monthly, will be only about five cents a year.


We observe that some publishers are taking advantage of this change, and are adding to the prices of their periodicals a sum equal to the amount of present rates of postage. Should we do as others are doing in this respect we should put the price of the REFORMER at \$1.12 per year, but, instead of robbing our patrons of the benefits of the reduction in rates of postage which the law provides for them, we propose to continue the REFORMER, at its present exceedingly low price, notwithstanding the heavy draft upon this Office in the prepayment of the postage.


We therefore offer the HEALTH REFORMER to the public, one year, postage paid, for the small sum of one dollar. And while we do all in our power to encourage the circulation of this journal, we earnestly appeal to all our faithful patrons to be prompt in paying in advance, and liberal in aiding in a much larger list of full-paying subscribers. PUBLISHERS.

 Most of our patrons are promptly paying for the REFORMER for 1875. We shall not drop off the names of any delinquents this month, as times are hard with some, and some others who have plenty of money are slow. We urge all whose time is up to remit without delay. United States' currency may be forwarded by mail at our risk in sums not to exceed two dollars. PUBLISHERS.

 There is no use to call in question the fact that the Self-acting Fountain Syringe is the very best. No other is in use at our Health Institute. Our physicians recommend no other. It should be in every family. It will be sent, post-paid, at the prices given on second page of cover.

 The readers of the REFORMER will be very happy to hear from Europe each month by the pen of Eld. Andrews.

 The liberal friends of the cause are requested to obtain all the full-paying subscribers to the REFORMER possible.

 Hygienists in New England desiring work are requested to address, with particulars, W. V. HARDY, Concord, Vt.