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

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Physiology and Hygiene.

CHAPTER V.

THE SKULL AND SPINAL COLUMN.

The skull is one of the most remarkable portions of the human skeleton. Its office is to contain and protect the brain, the center of all those faculties and forces which give rise to the various phenomena of life. The skull is a bony cage, not consisting of a single piece, but made up of several thin plates of bone of various shapes, which are joined together in a variety of ways.

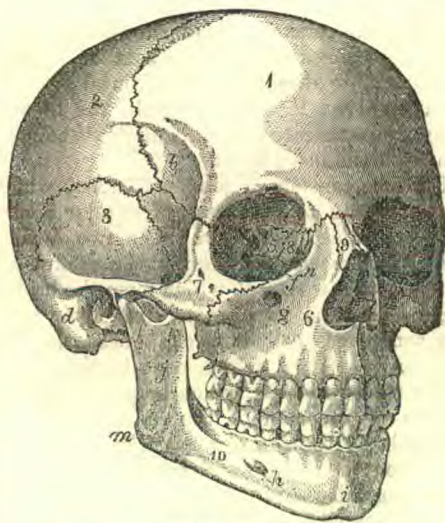
The whole skull, including the cranium and face, comprises twenty-two bones. Portions of most of these can be seen in the accompanying engraving. The irregular lines indicate the outlines of the several bones, and also the serrated edges at their points of contact. These serrations fit closely together, so that when joined together they are very strongly united.

In infancy, there are several parts of the skull where the adjoining bones do not meet. In other words, the bony box inclosing the brain is deficient in some places. These are commonly called "soft spots." The name is especially applied to the large deficiency near the top of the head. Technically, these places are termed fontanelles. They are especially provided to allow the brain to grow and expand with the growth of the child. If it were not for this provision, the skull would always remain in an infantile condition.

The cranium is composed of eight bones: The *occipital*, which forms the floor of the back portion of the cranial cavity; the *sphenoid*, which forms the floor of the anterior part of the same cavity; the two *parietal*, covering the sides and vertex; the two *temporal*, forming a part of the sides and the floor; the *frontal*, which forms the forehead; and the *ethmoid*, a small bone which forms a small

part of the floor of the cranial cavity, and also assists in forming the socket for the eye. These can be seen by reference to the cut. Upon their external surface may be noticed many eminences, ridges, and depressions. Many of these are for the attachment of muscles. Phrenologists also teach that not a few of these physical characteristics are indications of the conformation of the brain, and thus of individual character. There can be no doubt that the character of the human brain may be to a certain extent determined by an external examination of the skull. The only question is, how accurate results can be obtained by such examinations.

Fig. 16.



HUMAN SKULL.

This engraving shows portions of every bone in the skull with the exception of the occipital, palate, inferior turbinated, and vomer. 1. Frontal; 2. Parietal; 3. Temporal; 4. Sphenoid; 5. Ethmoid; 6. Superior Maxillary; 7. Malar; 8. Lacrymal; 9. Nasal; 10. Inferior Maxillary; a. Orbital plate of Frontal bone; b. Temporal fossa; c. Opening for Optic Nerve; d. Mastoid Process; e. Orbital part of Malar bone; f. Orbital part of Superior Maxillary; g. Infra-orbital foramen; h. Mental foramen; i. Symphysis Menti; j. Ascending Ramus of lower jaw; k. Coronoid Process; l. Condyle; m. Angle of jaw.

The general form of the skull varies in different nations. In the Caucasian race the oval or ovoid form is predominant. The skull of the negro is less regular in shape, and is usually compressed. Other races exhibit other peculiarities. The thickness of the

skull also varies greatly, both in different individuals and in different parts of the same skull, some portions not being more than one-sixteenth of an inch in thickness, while others may be half an inch, or even a full inch.

The arched form of the skull gives it a greater power of resistance than could be secured by any other arrangement. Its structure is also such as to secure the greatest possible amount of strength with the least weight, consisting of two tables or plates, an external and an internal, the space between the two being filled with a loose or cancellous tissue, here called the *diploe*. There are many openings in the skull of various sizes which are provided for the passage of nerves and blood-vessels. Most of these are situated near the base of the skull. One of them, the largest, is called the *foramen magnum*. The spinal cord enters the skull through this opening.

Some of the bones of the skull are hollow. Others contain large cells. The frontal bone, containing the frontal sinus, a large cavity situated just beneath the eyebrows, is an example of the first class; the mastoid process of the temporal bone, the ethmoid and sphenoid bones, are examples of the second class. These sometimes become the seat of painful and obstinate diseases. The frontal sinus is often involved in nasal catarrh, the disease being communicated to it through its connection with the nasal cavity.

The face consists of fourteen bones, which mostly belong to the class of irregular bones. They are named as follows: The two *lachrymal*, which assist in forming the socket for the eye; the two *nasal*, which form the bridge of the nose; the two *malar*, from their location sometimes called cheek bones; the two *superior maxillary*, which contain the upper teeth; the two *palate*, which help to form that portion of the roof of the mouth called the hard palate; the *inferior maxillary*, or lower jaw bone; the two *inferior turbinated*, located in the nostrils; and the *vomer*, which divides the two nostrils.

The two superior maxillary bones contain large cavities which communicate with the nasal cavity; they often become the seat of troublesome diseases, as catarrh and polypoid tumors.

Three other very small bones or ossicles are found upon each side of the skull in a cavity in the temporal bone. They form a part of the hearing apparatus. They are called, from their curious shapes, the *malleus* (mallet), *incus* (anvil), and *stapes* (stirrup). In infancy, there is a fourth, called the orbicular, which eventually becomes joined to the *stapes*.

The spinal column is made up of twenty-

six separate bones, twenty-four vertebrae, the sacrum, and the coccyx. In infants, the sacrum is composed of five separate pieces, which become thoroughly united in adult life. The coccyx, the terminal bone of the spinal column, is likewise composed of four separate pieces in childhood; but they usually unite with the attainment of maturity.

Fig. 17.

VERTEBRAL COLUMN.

1. Atlas; 2. Axis; 3. Last cervical vertebra; 4. First dorsal vertebra; 5. First lumbar vertebra; 6. Last dorsal vertebra; 7. Last lumbar vertebra; 8. Sacrum; 9. Coccyx; 10. Facet for articulation with Os Inominatum; 14. Sacro-vertebral Prominence; 15. Concave surface of Sacrum.



A single vertebra consists of a body to which is joined an arch upon the posterior portion. By this arrangement a large opening is formed in each; and when they are placed one upon another these openings or foramina form the spinal canal, which contains the spinal cord. Upon the posterior part of the arch is found a very prominent process of bone called the spinous process. These spines are longer in the region of the back than in any other portion.

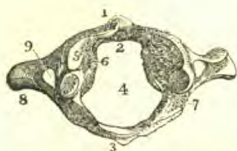
The numerous pieces composing the spinal column are separated by thin layers of cartilage. These cartilages are disc-shaped, and are placed between the bodies of every two adjoining vertebrae. The principal office of these cartilages is to diminish friction and to act like a series of springs to prevent the head from receiving jars. During the daytime, when the body is erect, these disc-like cartilages become somewhat flattened and thinned by the pressure of the upper part of the body. In consequence of this, the height of a person varies each day, being greatest in the morning. The amount of variation differs with individuals. It is not at all uncommon for a person to lose one inch in height during the day; and it is stated that a certain nobleman once lost two inches of his stature by spending many consecutive hours in the chase.

By another beautiful arrangement the liability of the brain to jars and sudden concussions is still further provided against. This arrangement consists in the beautiful curves which are seen in a normal spine, and which

are exhibited in the accompanying cut. (Fig. 17.)

A single vertebra is seen at Fig. 18. This vertebra is different from all the others in that it has no body. It is called the *atlas*, and articulates with the head. The skull is really made up of modified vertebra, and may be considered as the expanded extremity of the spinal canal.

Fig. 18.



FIRST VERTEBRA—ATLAS.

1. Tubercle on anterior arch; 2. Surface for articulation with Odontoid process of Axis; 3. Rudimentary Spinous process on posterior arch; 4. Foramen for Spinal Cord; 5. Surface for articulation with skull; 6. Lateral mass; 7. Groove for Vertebral artery; 8. Transverse process; 9. Foramen for Vertebral artery.

The spine, or backbone, is the anatomical center of the framework of the body. It is found only in the higher class of animals, which are thence called *vertebrates*.

EFFECTS OF IMPROPER POSITIONS.

Fig. 17 shows the spine in its natural form, the only curves being antero-posterior. As we have already seen, the several vertebrae are separated by discs of cartilage, which readily yield to pressure. By considering these facts it is not difficult to see how easily the spine may become distorted by sitting or lying in improper positions. Fig. 19 is a diagrammatic representation of double lateral curvature of the spine. When a person sits or lies in such a position that the spinal column is bent into an unnatural shape, the solid bodies of the vertebrae press upon the yielding cartilages unevenly, the pressure being greater upon one side than upon the other. If this constrained position becomes continuous or habitual, the intervertebral cartilages finally become wedge-shaped, so that they retain the bones constantly in their abnormal position, and thus a permanent curvature is produced.

Students often contract curvatures of this description by sitting in constrained attitudes while engaged in reading or study. Seamstresses are especially liable to the deformity from occupying abnormal postures while en-

Fig. 19.



gaged about their work. The same is true of mechanics and artisans of various sorts. One of the most extreme cases of acquired spinal curvature we ever saw was that of a man whose occupation as a waiter had for many years required him to walk in an unnatural and constrained manner.

These deformities are most frequently indicated to the observer by a difference in the prominence and elevation of the two shoulders. Many people do not discover that they have acquired any unnatural shape until informed of the fact by their tailor or dressmaker. The latter of course uses consummate skill in hiding the defect when it is discovered; but in spite of these precautions one has only to observe carefully those with whom he associates, or chances to meet upon the street, to become convinced that unsightly blemishes of this character are exceedingly common.

The evils which accompany curvatures of the spine are often very serious. The action of the lungs and other vital organs are not only interfered with by mechanical obstruction, but the delicate spinal nerves which control all the bodily functions are often seriously injured by the pressure of the deformed vertebrae. The further effects of malpositions will be noticed in other connections.

Is the Use of Salt Wholly Injurious?

THE QUESTION DISCUSSED.

[THE following article was written at our own request. The author is one of our warmest friends, and with the exception of his skepticism on the salt question is a thorough health reformer, even according to our radical views. He thoroughly believes what he advocates, and the reader cannot fail to be interested in the vigorous and ingenious style in which he handles the subject. For the benefit of those to whom the subject is somewhat new, we would remark that this is by no means the most important branch of health reform, and that we do not advocate the immediate and complete abandonment of salt as being the best plan of discarding it.

In order to better enable the reader to understand the merits of the question, we have chosen to consider the article in sections. The argument in favor of salt by Eld. G. I. Butler is printed in solid type, and each section is followed by our reply in leaded type. On account of the length of the article, we have been obliged to divide it into two parts. This month we consider the portion devoted to the Biblical argument. The great length of the article has also made it necessary for us to study the greatest possible brevity in our replies;

and on this account we have omitted noticing at length any points except those of primary importance, trusting that the intelligent reader will be able to answer those of a minor character by the aid of the general hints which we have given. The remainder of the article, which relates more particularly to the physiological argument, will be considered next month.—Ed.]

In this question we refer of course to its being taken into the living organism. We understand the REFORMER to teach the effect of salt in the system to be evil and only evil. In the June number, we read: "We don't find anything useful for salt to do." "It does do much mischief. It vitiates the taste; it irritates the stomach; it impairs digestion; it poisons the blood; it clogs the liver; it produces a feverish condition of the whole system, producing thirst; it excites the passions; and, in fact, its work of mischief is universal in the vital domain. Every fluid is deteriorated, every delicate tissue inflamed and irritated, every function disturbed." Surely this is a fearful catalogue of evils to charge upon our old familiar household companion. Its effects, then, according to the above, are poisonous and only poisonous. If so, it should of course be entirely banished from the culinary domain. But before bidding a final adieu to our old friend, we wish to offer a few thoughts on the other side of the question.

I shall first claim that the Bible teaches contrary conclusions from the above. We prize the HEALTH REFORMER, because it accepts the sacred Scriptures as being good authority in whatever they teach. The REFORMER gives it a voice in deciding what man's diet should be, and in reference to all his physical habits. As these habits have an intimate relation to the character he will form, how proper that the Bible should be consulted in reference to them! What does it say about salt? We will first notice Job 6:6. "Can that which is unsavory be eaten without salt?" I introduce this Scripture, first, to prove the antiquity of eating salt. Job is universally recognized as one of the most ancient writers of the Bible, as ancient probably as Moses. Salt was then recognized as an article of diet. Secondly, this query which Job propounds, occurs in the midst of several other queries, all of which must be answered in the negative or they would contradict the meaning of the writer. "Does the wild ass bray when he hath grass?" He does not. "Or loweth the ox over his fodder?" No. "Is there any taste in the white of an egg." Certainly not. Well, "Can that which is unsavory be eaten without salt?" Oh! yes; says the extreme health reformer, it is much better without the salt. Salt is a poison wholly injurious. But here we see the difference between Job's conclusion and that of our health reform friend. The conclusion of Holy Writ is just opposite that of those who condemn salt. Job recognizes it as even a *necessary* article of diet. I leave Job and the REFORMER to settle the question between themselves which is right. I simply wish to show here that the Bible favors salt.

REPLY. We do not dispute the antiquity of

the practice of eating salt. Several other bad habits are still more ancient; as intemperance, for example, which led Noah into an indecorous plight, and was the occasion of national misfortune to one line of his descendants. Sin, itself, boasts a still more ancient origin; and if custom were to be made the test of propriety, as our friend attempts to do with salt, a very powerful plea for sin and wickedness of every grade might be fairly urged. We shall revert to this point again. Our friend is evidently in error concerning our position with reference to "unsavory things." We agree with Job that unpalatable things cannot well be eaten *without salt*; but observe that Job does not say that unsavory things should be eaten even *with salt*, which our friend seems to overlook. We prefer to dispense with unpalatable things altogether, and salt with the rest. To healthy tastes, salt is one of the *most unsavory* things, as our friend can demonstrate by doing without it for a year until his taste becomes natural. Scores of health reformers of undoubted veracity can confirm our testimony on this point. The REFORMER discards *all* unsavory things: tobacco, rum, salt, etc., each of which is pronounced savory and toothsome by millions of human beings, but which are unpalatable enough to the unvitiated taste.

I shall next attempt to show that it was impossible to carry out the requirements of the Levitical law without eating salt. The priests, the Levites, and, in some instances, the people, partook of the sacrifices offered at the altar. These were salted with salt. Lev. 2:13: "And every oblation of thy meat-offering shalt thou season with salt; neither shalt thou suffer the salt of the covenant of thy God to be lacking from thy meat-offering; with all thine offerings thou shalt offer salt." Mark 9:49: "For every one shall be salted with fire, and every sacrifice shall be salted with salt." Or, as Campbell renders it, "*As every sacrifice is salted with salt,*" which is doubtless the proper meaning. Here we see that every sacrifice made to the Lord was salted. How this was done, in regard to the burnt-offering, we read in Eze. 43:24: "And thou shalt offer them [the bullock and the ram] before the Lord, and the priests shall cast salt upon them, and they shall offer them up for a burnt offering unto the Lord." Doubtless salt was cast upon all their offerings in a similar manner, for they were to be "salted with salt." Before they were offered to the Lord, they were salted.

We next show that portions of these thus salted were to be eaten; yes, and that these sacrifices were the main support of the priests of the Lord. "And this is the law of the meat-offering: The sons of Aaron shall offer it before the Lord, before the altar. And he shall take of it his handful, of the flour of the meat-offering, and of the oil thereof, and *all* the frankincense which is upon the meat-offering, and shall burn it upon the altar for a sweet savor, even the memorial of it, unto the Lord. And the *remainder* thereof shall Aaron and his sons eat.

. . . I have given it unto them for their portion of my offerings made by fire. . . . All the males among the children of Aaron shall eat of it. It shall be a statute forever in your generations concerning the offerings of the Lord made by fire." Lev. 6:14-18. Of the sin-offering we read, "This is the law of the sin-offering: In the place where the burnt-offering is killed shall the sin-offering be killed before the Lord; it is most holy. The priest that offereth it for sin shall eat it; in the holy place shall it be eaten, in the court of the tabernacle of the congregation. . . . All the males among the priests shall eat thereof." Chap. 6:25-29. I will not quote so much as to be tedious, but simply add that the same connection shows they were to eat of the trespass-offering, the peace-offering, and the wave-offering, and I know not but of others. Let us remember that all these were to be salted with salt. Have I not then abundantly proved my proposition that it was impossible to carry out the provisions of the law without eating salt? I think every candid person will admit it. If the REFORMER'S position be right, then we must conclude that in the provisions of his law, God made it absolutely necessary that the priests, his most devoted ministers, should eat what would "poison the blood; produce a feverish condition of the whole system; excite the passions; work universal mischief in the vital domain; deteriorate every fluid; inflame every tissue; disturb every function." Is it not strange that God should so direct? Was he not the creator of salt? Did he not know its properties? Did he desire to injure his own ministers? These are questions we leave for those to decide who think salt so hurtful. For our part, we believe God acted more reasonably than such a position would imply, and that salt is rather a blessing than a curse. But it may be said that the offering of salt was a religious ceremony, and possessed some hidden significance because of its peculiar properties. If we should grant all this implies, it would not explain why the Lord should so arrange it that the priests must eat poison. He could easily have left it so that the salt should all have been consumed with the frankincense. But the passage where salt is spoken of plainly implies that it was looked upon as a great blessing. "Neither shalt thou suffer the salt of the covenant of thy God to be lacking." A covenant of salt (the term is used three times in the Scriptures) is referred to as of the most sacred character. Salt is an emblem of purity, and not of corruption and death, as it would be if the position we are noticing were correct.

REPLY. We are willing to admit that the priests ate salt with their offerings, although there are grounds for suspicion that the salt was only added to that portion of the offering that was burnt. And there are ample reasons for believing that the quantity of salt eaten may have been very trivial. But we wish to call especial attention to the following points:—

1. Whenever any reason whatever is assigned for the use of salt, it is always plainly indicated that it was as an emblem of a religious character.

2. That it was not added for dietetic purposes is proved by several facts: *a.* Some of the sacrifices to which salt was added were *wholly burned*; and hence, in these cases, at least, the salt was not eaten; *b.* Salt was added to *all* offerings, as proved by the text quoted by our friend. Now, many offerings consisted of fruits, such as grapes, which would undoubtedly have been rendered very unpalatable if they had been *eaten*, as well as *offered*, with salt, which we think no one will dispute, not even our salt-loving friend, who so dislikes "unsavory" things; *c.* From the texts cited by our friend, it would appear that only the males were to eat of this salted food; if salt was so necessary for dietetic purposes, why was no provision made for the wives and daughters of the priests?

3. Our friend believes with us that flesh food is not the natural food of man, and that it has had much to do with causing the deterioration of the race. He also agrees with us that fine flour is both an unnatural and hurtful article of food. We have, also, been unable to learn that he either practices or advocates the habitual use of wine. Yet by the requirements of the same law which enjoined the use of salt in sacrifices, flesh, fine flour, and wine, were used in the same manner, and the priests were equally obliged to partake of these injurious articles. If our friend will reconcile his faith on these points with the Jewish law, he will have good answers to the questions asked us respecting the wisdom of God in requiring his ministers to eat hurtful articles of food.

4. Although our clerical friend is well versed in Biblical lore, he appears to have overlooked a few texts which mention salt. A reference to the following texts will convince both him and the reader that salt was not always represented as "an emblem of purity" by Bible writers, as might be inferred from his concluding sentence: Deut. 29:23; Ps. 107:34 (margin); Jer. 17:6; Zeph. 2:9; Judges 9:45. These texts represent it as an emblem of barrenness, desolation, general devastation and destruction, as all will agree upon reading them, which corresponds with its effects upon the human system.

5. Our reviewer would have us explain why the Creator did not so arrange it that the salt would be consumed with the frankincense. We answer, positive proof has not been given that he did not so arrange it. If he did not, then we may still answer with Paul, "How unsearchable are his judgments, and his ways past finding out." Perhaps our friend will explain to us why the prophet Ezekiel was required to eat bread which was baked with offal. (See Eze. 4:12, 15.) Surely such a culinary process would not add to the gustatory properties of the holy man's diet. Again, an explanation of the reason why the Jews were required to eat their food "with bitter herbs" (See Num. 9:11) at certain times would be equally interesting. Did they require them as "a tonic," or "an alternative?" Certainly they could not have

been very "savory," and unpalatable things are commonly and correctly considered to be unwholesome, since it is necessary that food should be relished to render it nutritious. The explanation of these two mysteries will relieve us of all embarrassment on the salt question.

Furthermore, we would call attention to the fact that the bitter herbs employed by the Hebrews in their feasts (See Ex. 12: 8, and Num. 9: 11,) were not such as were wholly harmless. According to Smith's Dictionary of the Bible, and other equally eminent authorities, these herbs were, in part at least, wormwood, wild lettuce, bitter coriander, horehound, tansy, and others of similar character. All of these contain peculiar poisonous principles which give them their medicinal properties, all of them being used in medicine. Wormwood contains a deadly poison called *absinthe*. It is used as a narcotic or intoxicant in France, where its fatal effects are frequently met with. Horehound is put down in the materia medica as a stimulant, expectorant, and laxative. Each of the others has some hurtful property; and yet the Jews were required to eat them in their religious feasts just as much as they were required to use salt. Will our friend insist on this account that he must daily indulge in potations of wormwood tea or tansy biters? We hope not; but he has no better reason for eating salt than for making a dietetic use of these, regarding the Bible as the basis of argument.

We next notice our Saviour's words: "For every one shall be salted with fire, as every sacrifice is salted with salt. [Campbell]. Salt is good; but if the salt have lost its saltiness, wherewith will ye season it? Have salt in yourselves, and have peace one with another." Mark 9: 49, 50. Our Saviour first notices the very fact we have been considering, the salting of sacrifices. He was familiar with all that this implied—the partaking of these sacrifices thus salted by the priests and the people. This is the very point he is talking about. He then adds, "Salt is good." He is not here talking about manuring land, or the preparation of manure heaps; but he is talking about the use to which it is put in connection with the offering of sacrifices. The saltiness of the salt, or its savor or taste, as expressed in other passages, is the very quality which renders it good. We have shown from Scripture, and every sane man knows, that the principal use of salt in our world is in connection with food, either as a condiment or to preserve from putrefaction or decay. The Saviour, in speaking of it, must have considered its common use among mankind, which we have shown was from remote ages, back of the very earliest Bible writers. In speaking of it, he pronounces it good. Its goodness depends upon its "savor"; that is, its taste. It is a historical fact that some of the salt used in ancient times had a mixture of foreign material in it, and that sometimes upon exposure to the sun and rain the saltiness evaporated, leaving a useless residuum which was only fit to pave streets. The goodness was then in its saltiness, or taste. We

care not whether this be referred to its preservative qualities in keeping things from corruption, or to its being more directly taken into the system; for the general or final result would in each case be the same, since none will deny that the general use of it in hindering corruption is pertaining to things in some way to be used as food. It is a plain principle that when a commendation is placed upon anything, such commendation applies to its most common use, unless that use is expressly excepted, or some secondary use expressly referred to. We therefore claim that our Saviour pronounces a commendation upon the ordinary use of salt. It subserves a good purpose. It is useful, the REFORMER to the contrary notwithstanding. What a contrast between the Saviour's language and the article we are considering. He says, "Salt is good." Our author says, "We don't find anything useful for salt to do." He says it is good. The REFORMER says it "does great mischief, poisons the blood, excites the passions, and its work of mischief is universal in the vital domain." Which shall we believe?

REPLY. We must differ with our ingenious friend in the theory that Christ was speaking particularly of the dietetic use of salt in Mark 9: 49. The connection shows that he had direct reference to the offering of sacrifices rather than to the eating of them, which was, indeed, always a secondary matter. Whether he refers to the eating of salt in the expression "salt is good," is a question open to doubt; from the preceding sentence we might fairly infer that he referred to its use in sacrifices only. As we have already shown, it was thus used as a religious emblem. Its precise significance we will leave the reader to discover from the Talmud; whatever it may have been, the Saviour was fully justified in pronouncing it good for this purpose. It is certain that the Bible nowhere says that "salt is good" to eat.

Among all Oriental nations the eating of salt has from time immemorial been considered as an act of friendship. Eating salt with a person is by them regarded much as the North American Indians regard the smoking of the calumet, or pipe of peace. Persons who have thus eaten salt together are bound by a reciprocal treaty in the most inviolate friendship. If a traveler in the Arabian desert can succeed in tasting salt in a wild Arab's tent, he is thenceforth safe, at least so far as that individual is concerned, no matter how hostile may have been the previous intentions of the untamed Ishmaelite. It is a very reasonable conjecture that it was in view of this long-established custom that the Almighty chose salt as an emblem of the covenant between himself and his ancient people, it being the most expressive and impressive symbol which could have been chosen, on account of its sacred associations. When a Jew brought his sacrifice to the door of the tabernacle, and presented it to the priest to be offered, he understood that he was pledging his faithfulness in "a covenant of salt," just as he would do in eating salt with a

friend, according to the universal custom of Eastern nations at that time, and even to a great extent at the present day.

But we are ready to grant, for argument's sake, that the words "salt is good" do refer exclusively to the "savor or taste" of salt, as our excellent friend claims; for if the question thus becomes *merely a matter of taste*, its importance is wonderfully decreased. Many people like the taste of salt, as our friend does, and as we once did. With few exceptions, then, we could all concur that our gustatory sense agrees with that of our Saviour, who said, in substance, as our friend claims to have demonstrated, "Salt *tastes* good." But this does not remove our objections to salt, for they are founded upon the evil which it works in the system, rather than upon any of its sensible properties. Then there is no disagreement between us and the teaching of the Saviour, for he referred only to the *taste* when he said, "Salt is good." We must thank our friend for making this point so clear. His logic is invincible. We can hardly agree with him, however, that salt will evaporate, since it is not a volatile substance. The only case of evaporation of this mineral of which we have been able to learn was one in which a beautiful and massive salt crystal suddenly "evaporated" in a lecture room while being circulated for exhibition, and immediately condensed in a thieving student's pocket.

The Saviour continues further, "Have salt in yourselves." It is plainly evident that the word salt is used in two senses in this connection, as a natural agent and in a figurative sense. He commends it for its preserving qualities, and uses the term to signify that in us we should have preserving qualities in a moral sense, as salt does in a physical sense. We take it none will dispute this, that when a thing is used to compare something else with, the things compared must resemble each other in the points illustrated or else the comparison would be entirely lame. The Saviour wants us to have something good in ourselves, something that will have a preserving influence. He selects salt as such. But how strange, if it is so destructive as our friends think. He might as well say, Have poison in yourselves. This view of the subject would make our Saviour's words seem like nonsense. The apostle uses the term in the same sense: "Let your speech be always with grace, seasoned with salt." Col. 4:6. He uses it in this metaphorical sense. But the apostle could not have believed it hurtful; for he would not want our speech seasoned with poison. Therefore, the opinion of these Bible writers was totally different from that of our extreme health reformers on the salt question.

To avoid the force of the Saviour's expression, "Salt is good," sometimes Luke 14:34, 35, is quoted: "Salt is good, but if the salt have lost its savor, wherewith shall it be seasoned? It is neither fit for the land, nor yet for the dung-hill. But men cast it out." Objectors say, "Oh! yes; salt is good for the land, or for the

manure heap; but he don't say it is good to eat." I have shown very plainly that the Scripture does recognize salt as something to be eaten, and every one knows its use in connection with food in one way or another is its most common use, and always has been. This passage says nothing that militates against this. The Saviour is here showing its utter worthlessness when it has lost its savor, i. e., *its taste*, for that is the meaning of savor. Is the taste the sense by which the value of a manure is tested to show its fertilizing qualities? Hardly. In showing this worthlessness he mentions only the least and most unimportant of its uses; as much as to say, It is not even good for anything for these purposes. Of course, then, it would be worthless for more important ones. There is such a thing as a climax in speech, and this is one to show the utter worthlessness of salt that has lost its taste. So are we when devoid of the grace of God.

REPLY. We must again thank our accommodating friend for furnishing us with a solution of the difficulty in which he labors to involve us. He shows to us very conclusively that in Mark 9:50, the Saviour has reference to the *preservative quality* of salt. Hence, when he said "Salt is good," he simply meant, *salt is a good preservative agent*; it will prevent the corruption of decay; "have salt in yourselves" (grace), so that you may not be defiled with sin. This is beautiful, thus far; but our friend ignores all logical sequence when he says, "He might as well say, Have *poison* in yourselves!" The Saviour had reference only to the preservative quality of salt, as our friend demonstrates, and no one will dispute the propriety of the comparison, since the other qualities of the article are not involved in this part of the question. The remaining points in the paragraph we have already fully considered. We are, however, unable to discover the climax referred to by our friend.

But we cannot leave this point without noticing what appears to us to be a most unaccountable oversight for a Bible student like our clerical friend. The latter clause of Mark 9:49, which he makes the whole basis of the arguments noticed in the last two sections, is by the best critics pronounced to be spurious. According to the Emphatic Diaglott, and other critical works, it is not found in some of the most reliable original manuscripts of the Bible, is marked doubtful by the learned Griesbach, and is totally expunged by Tischendorf, the renowned Bible critic. Thus it must be seen, even by the most prejudiced, that this flimsy fabric of ingenious argument falls to the ground, being left wholly without a basis. And this would be true, indeed, even if the text were genuine; for we have already demonstrated its futility. Consequently, this, our opponent's strongest argument, disappears as a double fallacy.

We notice but one more passage of Scripture on this subject. "Ye are the salt of the earth; but if the salt have lost his savor, wherewith shall it be salted? It is thenceforth good for

nothing but to be cast out, and to be trodden under foot of men. Ye are the light of the world," etc. Matt. 5:13, 14. Here the same principle of illustration comes in. The righteous are the light of the world. Certainly, light is a good thing. "Ye are the salt of the earth." Then is not salt a good thing? It is as long as it retains its savor, or taste. What is the office salt fills in the physical economy to which our Saviour refers? Is it that of a manure or a fertilizer? Nonsense. If so, then the office which the righteous fill in the moral economy is that of a fertilizer. We know very well that it is the preservative quality of salt to which our Saviour refers. This is the very office the righteous hold in the moral world. Had there been ten righteous in Sodom, it would not have been destroyed. Gen. 18:33. As the REFORMER says, "preventing vital changes" is the property of salt. That must be a good thing, then, according to the Saviour; for that is the very thing he refers to when he pronounces it good. Who cannot see that in all these references to salt in the Scripture it is spoken of as a good thing, and not as evil? Were the REFORMER's article correct, all these Scripture writers, and the Saviour himself, who was the creator of salt (for he made the world), must have been egregiously mistaken. Not a passage can be found in Scripture teaching that salt is injurious. Its testimony is all on one side of this question, and that diametrically opposite that of the article we are noticing. Mark this! We are not quoting these Scriptures to prove that a man must eat salt as a duty, or anything of the kind; but only to show that the teaching of Scripture is against the idea that it is "*wholly injurious*." And this we claim to have proved. Here we leave the Bible argument.

REPLY. Health reformers—even the most radical ones—have never questioned that salt was an excellent preservative; and we have freely admitted that it was this quality to which the Saviour referred when he said, "Salt is good," as our friend so ably proved. Consequently, most of the arguments advanced in the last paragraph do not require further notice. We must, however, call the attention of our versatile friend to what appears to us to be a remarkable inconsistency, in that he is now affirming very decidedly that in saying, "Salt is good," the Saviour referred to the *preservative quality* of salt, while in a previous portion of his article he contended with equal vigor that he had reference to the *taste or savor* of this saline compound. However, we have already shown that either view is wholly consistent with the teachings of health reformers on the salt question.

A single illustration will show that we are not guilty of the absurdity which our industrious opponent attempts to lay upon us. Paul said, 1 Tim. 4:4, "Every creature of God is good." In this text creature means created thing or being. Must we then believe that everything is good to eat? We cannot believe that our friend will claim this, notwithstanding his relish for some mineral sub-

stances. Must salt be good to eat because it is a good preservative? We fancy not; for, so far as preservative qualities are concerned, and they are the only ones now in question, Christ might have said the same of corrosive sublimate—an excellent antiseptic—as he said of salt. Few would long relish the latter article as a regular diet. A saw-mill will make very fine lumber, but it would make a very poor quality of flour. Fire is a most valuable source of heat outside of the body; inside, it would probably be considered rather too warm. Salt is a good antiseptic outside of the body; inside of it, there is no demand for such an agent. Vital changes are to be facilitated rather than prevented, as a very superficial knowledge of physiology is sufficient to show.

We again refer the reader to Deut. 29:23, Judg. 9:45, and many kindred texts, which we do not quote for want of space, to show that the character of salt as a good thing is not unimpeachable, even on Scripture testimony. Thus it may be possible that neither the Bible, the Saviour, nor the REFORMER, is "egregiously mistaken" on this saline question.

We cannot close our remarks upon this question without calling attention to some further facts with reference to the Bible argument on the salt question.

1. By going back to the record of creation it is seen that salt and other mineral substances constituted no part of Adam's fare. Gen. 1:29.

2. The same line of argument which our opponent adopts in defense of the practice of using salt, if followed in reference to other subjects, would justify many other hurtful and pernicious practices; as the use of alcoholic liquors and polygamy. No candid Bible student will deny this. This is proving too much, we imagine, for our astute opponent.

3. As before remarked, the amount of salt eaten with the sacrifices was extremely small. *a.* Because—as Dr. Clarke demonstrates, in his "Commentary"—a very small portion of the sacrifices were eaten; *b.* Because but a very minute portion of salt was added to the sacrifice—a mere sprinkling being scattered upon it by the priest. The sacrifice was not saturated with brine, as might be supposed; only a very little salt was sprinkled upon the outside, and more than likely as not this small quantity was added only to the portion burned. At least, the text will fairly allow this inference.

4. But suppose that the ancient Jews did eat salt with their sacrifices, and that in considerable quantities (which has not been proved), is this any reason why health reformers in the nineteenth century shall employ that chemical compound as an article of daily food? If so, then must we be likewise obliged to make a like use of "bitter herbs;" for these were required to be eaten by the conditions of the Mosaic law. No man of average common sense can fail to see the absurdity of such a position. Bitter herbs were not command-

ed for the beneficial effect which they were to have upon the health; neither was salt. Each had a very evident religious significance, and was employed wholly with reference to this.

5. In his dealings with mankind, many of the plans of the Almighty seem to have no especial regard for the laws of hygiene. For example: No one will suppose that the prophet Jonah was especially benefited healthwise by being obliged to sit forty days exposed to the scorching rays of an Eastern sun in the vicinity of Nineveh; nor was his sea voyage to that place in the slimy depths of a whale's stomach of a character the best calculated to improve his physical condition. Who among the advocates of dress reform would assert that the long and cumbersome gowns of the priests were particularly healthful? and who that knows anything of physiology would venture the intimation that the nocturnal feasts of the Jewish nation were strictly in accordance with hygiene? Again, who will attempt to maintain that the prophet Jeremiah derived any special advantages in the direction of health from wearing an uncomfortable wooden yoke about his neck for two whole years? We might cite scores of similar instances, but these are sufficient to illustrate our point.

6. In discussing questions of this sort it should always be borne in mind that the Bible is not a scientific work. It is neither a hand-book of hygiene nor a treatise on physiology; and although it contains a great amount of most excellent instruction even in matters pertaining to health, it cannot be regarded as anything like a complete guide in dietetics. Consequently, such appeals to it as have been made by our crafty opponent must be regarded as of exceedingly doubtful propriety.

Our worthy reviewer closes his specious argument from the Bible with the extraordinary statement that he has the evidence all on his side, and the explanation that after all this labored argument the matter is of only trivial importance—a mere matter of option or convenience. With regard to the *statement*, we will leave the reader to decide; but we cannot concur in the *explanation*, for we hold that if salt is *good*—really beneficial to the health of the body, and thus conducive to human happiness—it is the *duty* of every person who is able to obtain it to use it liberally. And if this is the case, those of us who are teaching that it is injurious, and are thus leading people to sacrifice a measure of their health and happiness, are cursing the world with our pernicious influence. We are veritable imps and vampires of society, and ought to be denounced in no stinted terms. On the other hand, if salt is the evil thing which we believe it to be—considered as an article of diet—it is plainly our duty to our fellow-men to warn them of its ill effects; and it is the duty of all who are convinced of the truth of these views to renounce its use, either immediately or gradually.

We have purposely omitted many arguments in our brief replies. Some of these we will adduce in considering the balance of the article next month.

Hints Toward Reform.

BY RALPH E. HOYT.

AN Indiana doctor takes the trouble to send a long communication to the *Chicago Times*, from Ft. Wayne, giving what he calls an infallible remedy for diphtheria. After discussing the subject long and eloquently, he offers his "infallible" prescription. I need not copy it. Suffice to say that the chief ingredient is *quinine*, while about a dozen other drug poisons are thrown in, just by way of variety. The prescription is an excellent one, no doubt, "in its place," and we advise every parent whose child may be afflicted with the diphtheria and the Hoosier doctor, to take the "remedy" and—throw it into the fire.

About the last thing that seems to enter the heads of people who manage churches, halls, and other public buildings, is the idea that any body needs a little fresh air, in such places.

A friend of ours tells of a circumstance which actually happened, not long since, showing how reluctant some persons are to waste anything of supposed value, even though the saving of it may cost far more than it is worth. An old lady whose husband was sick, employed a drug doctor, who prescribed a large dose of calomel and jalap. A liberal supply of the poisonous stuff was procured, but the sick man became better so speedily (after the doctor had departed) that he refused to take the dose provided for him. At this, the good wife declared it was "a shame to have so much good, powerful medicine *wasted*," and so she *swallowed it herself*! Economy is commendable, but the best way to economize on drugs is to never buy them.

It is seldom that human folly is known to run off into quite so wicked an extreme as in the case of the tobacco lunatic of whom the *Troy Times* speaks as follows:—

"Mr. Kalaes, who was known among his acquaintances by the name of the king of smokers, has just died near Rotterdam. He had erected a mansion, one portion of which was devoted to the arrangement of a collection of pipes, according to their nationality and chronological order. A few days before his death he summoned his lawyer and made his will, in which he directed that all the smokers of the country should be invited to the funeral, and that each should be presented with ten pounds of tobacco, and two Dutch pipes of newest fashion, on which should be engraved the name, arms, and date, of the decease of the testator. He requested all his relatives, friends, and funeral guests to be careful to keep their pipes alight during the

funeral ceremonies, after which they should empty the ashes from their pipes on his coffin. The poor of the neighborhood who attended to his last wishes were to receive annually, on the anniversary of his death, ten pounds of tobacco and a small cask of good beer. He desired that his oak coffin should be lined with the cedar of his old Havana cigar boxes, and that a box of French caporal and a packet of old Dutch tobacco should be placed at the foot of his coffin. His favorite pipe was to be placed by his side, along with a box of matches, a flint, and steel, and some tinder; as he said there was no knowing what might happen. A correct calculator has made out that Mr. Kaleas had, during his 80 years of life, smoked more than four tons of tobacco, and had drank about 500,000 quarts of beer."

Table Manners.

A PLEASANT meal heartily enjoyed by a cheerful company—how much life and health there is in it! But an untidy meal eaten in gloom by a sour family—how much of dyspepsia and death there is in it! It is not so much *what* is put upon the table that makes the meal inviting, as it is the tasteful manner in which it is arranged and the mood in which it is eaten.

Many families never seem to realize this, and so lose the most pleasant and enjoyable season in family life. The following article upon this subject is worthy of a careful perusal by every reader of the REFORMER. Parents, read this aloud to each other and to your children, and enter into a mutual covenant to put it into immediate practice. It will be worth a fortune to you.

"The table is the place at which the family meet, and where there should be the freest and most unrestrained social intercourse. We eat to live; but the mere animal necessity is lifted up and glorified when the charms of pleasant conversation and of mutual courtesy surround the custom. So far as the sustaining of life is concerned, that object might be reached if each took his bread and meat and retired to a closet to eat it alone. But there is a spiritual life that is to be fed and sustained, and it is starved where there is no grace, not only before, but during, a meal.

"The great trouble with our American life is, that it is too gloomy. We take no time to entertain and amuse each other. Not seldom does it happen in some houses that a meal progresses in dead silence, except when it is necessary to speak about the dishes, or to help some one to potatoes or pie. This is almost as bad as rudeness or quarreling.

There ought to be bright, genial, sparkling talk, in which the children should be allowed to join. There is no sense whatever in compelling an intelligent child to sit like a deaf mute at the table; though, on the other hand, children should not monopolize the conversation, nor be allowed to ask strings of irrelevant questions.

"Every one should prepare for the table by some simple process of dressing. The hair should be smooth, the hands washed, the general appearance of each individual inviting, and each should try to be as agreeable as possible to every other. It is quite wonderful how a little freshening of the toilet freshens up the soul as well as the face. So far, we ought all to be luxurious. If the mother sees to it that her school-boy sons always come to dinner with clean hands and nails, and that her daughters never dawdle into the room in tawdry finery or soiled wrappers, she will do more than she dreams of in the work of making them grow into real gentlemen and ladies.

"The table itself ought to have a festive look. Flowers have a special grace on the breakfast board. A dish of fruit, nicely arranged, pleases the eye as well as the palate at dinner. Clean linen, though coarse, and whole plates and cups, with bright glass and silver, help appetite along. A few well-cooked dishes, however plain, nicely served, will promote health and happiness better than a great variety ruined in the preparation."

There! isn't that good advice? Put it into practice, and it alone will be worth more than the price of the REFORMER.

D. M. CANRIGHT.

Petaluma, Cal.

Don't Kiss the Baby.

THE promiscuous kissing of children is a pestilent practice. We use the word advisedly, and it is mild for the occasion. Murderous would be the proper word, did the kissers know the mischief done.

Yes, madam, murderous, and we are speaking to you. Do you remember calling on your dear friend Mrs. Brown the other day, with a strip of flannel round your neck? and when little Flora came dancing into the room, didn't you pounce upon her demonstratively, call her a precious little pet, and kiss her? Then you serenely proceeded to describe the dreadful sore throat that kept you from prayer-meeting the night before. You had no designs on the dear child's life, we know; nevertheless you killed her! Killed her as surely as if you had fed her with

strychnine or arsenic. Your caresses were fatal.

Two or three days after, the little pet began to complain of a sore throat, too. The symptoms grew rapidly alarming; and when the doctor came, the single word "diphtheria" sufficed to explain them all. To-day a little mound in Greenwood is the sole memento of your visit.

Of course, the mother does not suspect, and would not dare to suspect, you of any instrumentality in her bereavement. She charges it to a mysterious Providence. The doctor says nothing to disturb the delusion; that would be impolitic, if not cruel; but to an outsider he is free to say that the child's death was due directly to your infernal stupidity. Those are precisely his words; more forcible than elegant, it is true; but who shall say, under the circumstances, that they are not justifiable? Remember,

"Evil is wrought by want of thought,
As well as by want of heart."

It would be hard to tell how much of the prevalent sickness and mortality from diphtheria is due to such want of thought. As a rule, adults have the disease in so mild a form that they mistake it for a simple cold; and as a cold is not contagious, they think nothing of exposing others to their breath, or to the greater danger of labial contact.

Considering the well-established fact that diphtheria is usually, if not always, communicated by the direct transplanting of the malignant vegetation which causes the disease, the fact that there can be no more certain means of bringing the contagion to its favorite soil than the act of kissing, and the further fact that the custom of kissing children on all occasions is almost universal, it is not surprising that, when the disease is once imported into a community, it is very likely to become epidemic.

It would be absurd to charge the spread of diphtheria entirely to the practice of child-kissing. There are other modes of propagation, though it is hard to conceive of any more directly suited to the spread of the infection or more general in its operation. It stands to diphtheria in about the same relation that promiscuous hand-shaking formerly did to the itch. It were better to avoid the practice.

The children will not suffer if they go un-kissed; and their friends ought, for their sake, to forego the luxury for a season. A single kiss has been known to infect a family; and the most careful may be in a condition to communicate the disease without knowing it. Beware, then, of playing Judas, and let the babies alone.—*Scientific American*.

That Spare Room.

SPARE me from that spare room! Spare me! O spare! I pray. Three nights in that room would put my friends under the painful necessity of paying my funeral expenses, and set the world to talking about "mysterious providences." And yet I did spend *one* night in that room. Query: Was I one-third dead when I came from that room in the morning? I will leave the question for scientists to quarrel over, and while they are finding the answer I will tell my story, and stick a few pins into the sides of those good Christian people who murder travelers. Murder travelers! echoes a voice. Don't be frightened, my good man; for did I not just tell you that three nights in that room would have made provision for a funeral? Travelers do die, and they die from breathing bad air; and do not the good people who give them this horrible air to breathe really kill them? In some book I have read, "Thou shalt not kill." Some people think there is no need of repeating this command. Well, when people stop poisoning other people with bad food and the horrible stench of foul air, then we will examine *that* question. At present, we meet people at every turn who are killing *other* people and *themselves* too. "Thou shalt not kill." Have I killed any one? I did not say you had; but you might ask yourself the question.

During the winter of — I was traveling with a friend in the State of —. We had an appointment to lecture at a certain place for several successive nights. About an hour before the time for the lecture, we arrived in the place; and as there was no hotel, we called at the most imposing house to be seen. It was a substantial building, made of the best material the country could furnish. The people were very kind, bade us welcome, and invited us to partake of their hospitality. A blazing fire was burning on the hearth—a glorious remnant of primitive simplicity, when tight stoves had not been invented, and graveyards did not have so many small slabs to tell their stories of parental inhumanity. We sat down in the cheerful light; supper was provided; my companion sat down to his beef and coffee, while, to the amazement of the company, I took nothing except a glass of water. I was in good order that evening. I spoke with fire and zeal, if there be any fire and zeal in me. We went back to our quarters. Bed-time arrived; we were ushered into a bedroom; yes, into a spare room—that *funeral* chamber of threatened death. The bed stood against the wall. My companion "turned in" first. Look, he said, the walls are cov-

ered with crystals of ice! I was in good spirits, and I laughed. Said I, did you never see ice before? Pull out the bed, said he. I pulled it away from the icy wall.

The bed clothes were damp; but I had taken the precaution to bring a hot brick to the room, and now thrust it into the bed. That will thaw some of the frost out of the bed, I said. Up to this time I had been in excellent spirits. Now I began to feel a little sick. So I went to the window for air. Laughing, I said to my companion, I am going to let in a little more frost. I caught hold of the sash; it would not move. The carpenter had made it fast, and it was frozen tight. No, sir! it can't be done. I tried another. Forty nails could not have more effectually closed it. It was moonlight and starlight; but neither moon nor stars could be seen in that prison hole in which we found ourselves. The steam and smudge from the kitchen had come up the stairway, permeated the room, and frozen on the windows until the outer world was utterly excluded from sight, and the interior of the room was literally packed with poisonous effluvia. Well, what was to be done? Why! bear it. So I lay down to rest. Did I rest? Not if my memory serves me rightly. A little doze, a vision of nightmare, a sensation of suffocating, and I was lying sick in bed. I did not laugh any more. It was no laughing matter. I got up, went to the window, tried it again. Fast! fast! I went into the hall, and tugged away at the hall window. Not a move! One thought came to my mind: Shall I kick out two or three window panes? That would furnish relief; but what should I say to the kind friends who entertained us? My stomach turned, and threw out its contents. My companion was alarmed. Are you sick? he inquired. If I am in my right mind, said I, I think I am. Visions of the black hole of Calcutta flitted across my mind. I lay down, and if ever a sea-sick mariner wished for the shore, I am sure I longed for the dawn of day. Day came, and I rushed out to smell once more the fresh snow banks, and take in the pure air. I could eat nothing that day except a little porridge made from oatmeal, for which I despatched a courier to the nearest store. That night I spoke with difficulty; but I did not try that bed again. I found other quarters where I opened a window, and let the cold air directly over the bed. There I slept, and when I awoke felt like a new man.

Now, my friends, into whose hands this paper may fall, do open your windows, and let out those awful gases! Or, what is better, don't shut them in. Thousands of people do not open a bedroom window, or air their

beds, during the whole winter long. To them, good houses have become a curse. A thousand times better live and die in an old log house, my friend, than sleep in the damp, foul air of that bedroom in your mansion, so cleanly swept and so elegantly furnished?

REFORMER.

Victims of Opium-Eating.

[THE following article from the N. Y. *Sun* ought to excite a considerable smiting of conscience among those whose prescriptions have been the chief instruments in bringing about this lamentable condition of affairs. We are willing to vouch for the truth of the statements made, as some of the cases cited have come under our personal observation.—ED.]

"Mrs. ———, who had for a long time been a victim of the vice of opium eating, and had made strenuous efforts to give up the habit, was attacked on Saturday with strong convulsions, which so exhausted her that she died, after eight hours' illness."

"This afternoon an unknown man was taken from the Twenty-seventh Precinct station-house to the Park Hospital, suffering from the effects of opium, of which he is apparently a consumer."

The foregoing paragraphs appeared in a New York daily newspaper of a recent date. They tell a terrible tale of the progress of a vice which is becoming fearfully prevalent, not only in New York, but throughout the whole country, and particularly in those sections which are supposed to be most exempt from this and kindred social scourges—the habit of opium-eating. In the crusades against the liquor traffic and the spasmodic efforts that are periodically made to promote and advance the cause of temperance, our philanthropists appear entirely to have lost sight of the monster evil that is growing up in our midst, and that is year after year assuming such terrible and alarming proportions. Only the medical faculty have the means of ascertaining the extent to which the practice prevails, and even they can only approximate the actual figures by a rough estimate. It is estimated that of the whole amount of opium consumed in the United States, only about one-third is employed in its various forms for medicinal purposes, while it is maintained that not more than one-fifth is so used. What becomes of the other four-fifths?

The importations of opium from July 1, 1873, to July 1, 1874, according to the returns at the New York Custom House, amounted in the aggregate to 265,513½

pounds, which, at the rate of \$7.25 per pound, reaches a total little short of two millions of dollars. This is the first cost of the crude, unmanufactured drug, and falls very far short of the actual price charged to the consumer. Allowing one-fifth of the more than 132 tons of opium which arrived in one year at this port (and this, be it remembered, is perhaps not more than two-thirds of the whole quantity imported), it is a question fraught with serious import as to what becomes of the remaining four-fifths. There is not a physician or a druggist in the country who is not conversant with more than one case of individual ruin caused by this insidious and almost ineradicable habit. There is hardly a village in the land that does not number among its population its proportion of opium-eaters, laudanum-drinkers, or morphine-consumers, and the sale of these articles is not confined to the village drug store or the apothecary's shop, but even the groceries have a supply of the coveted stimulant for their regular customers. The familiar sign displayed in some shop windows, "If you don't see what you want, ask for it," has for the initiated a meaning that is well understood.

VICTIMS TO THE DRUG.

We were told of a case by a physician well acquainted with the person, in which the helpless slave to opium was in the habit of consuming daily twelve ounces of laudanum, and on Saturday evenings she purchased double the quantity for Sunday's and Monday's consumption. The case of a celebrated journalist who held a high official position in the city of New York at the time of his death a few years ago, is painfully familiar to the public. His death, which was caused by an overdose of morphine, was inevitable, sooner or later, from a long-continued indulgence in the use of this stimulating and treacherous drug. Unfortunately, there are too many such instances in the records of journalism and other intellectual fields of labor. The "Confessions of an Opium Eater," by De Quincy, are the melancholy revelations of a great genius whose mind was completely unhinged by the subtle influence of this potent drug. Among its victims were the celebrated English divine, Robert Hall, the great English abolitionist, Wilberforce, the poet Coleridge, the American orator John Randolph, and a host of lesser lights. The keen observer passing through New York's great thoroughfare will detect in the cadaverous faces which he occasionally sees among the throng, with their yellow parchment-like skin, the glassy, shrunken eyes, the hopelessly irresolute expression, the nerveless, shuffling gait, and the

half-bent form, the ravages of this fell passion.

Many a tale of woe and suffering, mental and physical, is to be found in the medical records of our great city. Occasionally, as in the two instances reported at the head of this article, they find their way into the public journals, but they fail to do more than elicit a passing remark, while the great and growing evil, which threatens eventually to rival in its proportions and the number of its victims the prevailing vice of intemperance, is hardly deemed worthy of the slightest consideration at the hands of our so-called philanthropists. Not a few of the inmates of our lunatic asylums have been deprived of their reason by a long and excessive indulgence in the use of opium; for insanity is sometimes the result, and the unhappy victim finds only in death a release from his sufferings. In the records of Bellevue Hospital there is a case of an aggravated form which we reproduce as affording an illustration of the effects of this terrible habit, and the difficulty experienced in its eradication.

ENORMOUS DOSES.

The patient, who is about forty years of age, was admitted on the 17th of April, 1874, and remained under treatment till the 10th of June. He commenced the habit of taking morphine as a stimulant to aid him in his mental labors about seventeen years ago. His purpose was through its operation not only to be enabled to work longer, but with more concentration of effort. He began with one-eighth of a grain of the sulphate of morphia, which he was in the habit of taking about twice or thrice a week. Finding these doses after a certain time were insufficient to produce the desired effect, they were gradually increased to two grains in the twenty-four hours. Two years after he took the first dose, his use of opium in the form of morphine became so frequent that it was almost impossible to abstain from it, and the unfortunate man could not do so without great mental prostration and physical suffering. It had now reached such proportions as to become a disease. Two years ago he became an inmate of a hospital for the first time, fully convinced that, so far as any effort of his own was concerned, he was entirely beyond relief or cure. His mind was not only affected, but he became deranged. His case was similar to that of a confirmed inebriate whose allowance of drink has been abruptly withdrawn. The usual supply of opium having been withheld, his mind gave way, and delirium followed. After leaving the hospital, he relapsed into the habit, and to such an excess had it grown that the daily quantity necessary for his consumption reached

the enormous amount of fifty-five grains of morphia. Some idea may be formed of the strength of this amount from the fact that one grain of the same preparation is amply sufficient to put a strong man into a sound slumber of many hours' duration. On one occasion he took no less than seventy-five grains in twenty-four hours.

At the time of his admission to Bellevue Hospital, he was, in the language of the record of the case, "a well-nourished looking man, but excessively nervous and lacking in control of his appetite for opium; but he says he realizes his weakness, and desires to put himself under a stronger will than his own." He had passed sleepless nights of agony, craving for opium, but dreading to take it. He had had no morphia for a day previous to admission, and was suffering intensely from nervous prostration. He entreated earnestly for relief, and urgently requested for "hypodermics of morphia"—an infusion of the medicine by injection under the skin of his arm, which the record says showed marks of similar treatment before. The wounds in the arm had partially suppurated, but they were finally healed by proper treatment, and the limb nearly restored to its former condition.

PARALYZING THE BRAIN.

The effects of long indulgence in opium eating were seen in the lamentable condition to which his mind had been reduced, and he complained that on attempting to read or write he felt a cerebral incapacity for such occupation. His mental, or rather his intellectual status seemed to have declined by reason of the omission of his usual stimulant, or its great reduction in quantity.

The record of the case says that at this point it was decided to cut off the weekly dose of Magendie's Solution of Morphia altogether. He had borne manfully the great reduction from fifty-five grains a day to eight grains a week, although reluctantly assenting to this severe treatment, and anticipating untold sufferings therefrom. The result proved as he had expected—great depression and prostration of mind and body. Such was his mental and physical torture that he begged to have only two grains sprinkled upon the wounds on his arm. Although bearing up bravely against his sufferings, which were at times most acute, he was deprived of opium in every form, and such was its effect upon his intellect that he endeavored in vain for a period of two weeks to write a letter.

At times there were signs of improvement. He took daily exercise on the hospital grounds, and to assist the work of recuperation he was

given a sleeping powder of chloral hydrate and bromide of potassium.

His recovery under this treatment was most promising, when he was permitted to leave the hospital temporarily on a pass, and it was observed that the expression of his countenance indicated a return to his old habit—it had become heavy, dull, and listless. He was accused of having procured opium during his absence, but he repelled the accusation with much warmth and earnestness. However, his sudden disappearance from the hospital a day or two after proved that the suspicion was well founded, and his return again to the hospital last October after a four months' absence justified the conclusion at which the physician had arrived. He is again under treatment.

This case is illustrative of nearly all.

THE VICE SPREADING.

The prevalence of this great vice in the East, and particularly in China, is too well known to require comment here. Our present purpose is to show that it is not only insidiously working its way into the United States, but that the habit has already reached such proportions as to be a just cause of alarm. It is true that much of the opium consumed in the United States is used by the Chinese in California and other parts of the country, but this will not account for the remarkable increase which has taken place in the importations of this drug within the last thirty years. The people of China consume nearly fifteen millions of pounds every year. In one canton, according to official returns, there were 4,600 smokers of opium in a population of 13,500 persons, or 33 per cent. To suppose that the vice would never become so prevalent among us as among a semi-barbarous people is justified by the difference of races in their moral characteristics, but there are sufficient grounds for serious apprehensions in the extent to which it already prevails.

The use of opium in the forms of morphine or laudanum among the female portion of our population is a well-established fact, and the paragraph which appears at the head of this article presents only one of many instances which find their way into the daily press. The statistics of importations for the past thirty years show the extent the habit has reached.

THE IMPORTATIONS.

The amount of opium imported into this country in the year 1840 was 24,000 pounds, at which time the population numbered seventeen millions six hundred thousand. In 1859 the importations reached 87,000 pounds—

population, twenty-three millions; and in 1860, 105,000 pounds—population, thirty-one millions.

At the port of New York alone the importations for the last eight years were as follows:—

	Pounds.
For the year 1867	59,393
For the year 1868	91,521
For the year 1869	80,073
For the year 1870	148,236
For the year 1871	116,172
For the year 1872	91,101
From July, 1873, to July, 1874	265,513½

This is exclusive of the opium received at Boston, Philadelphia, Baltimore, New Orleans, San Francisco, and other ports, and the aggregate amount of which, added to that received at our great commercial metropolis, would probably reach at least 400,000 pounds. The value of this immense quantity, at \$7.25, gold, the present price in its crude state, is little less than three millions of dollars.

The amount imported into China from British India is valued at \$15,000,000. The comparison between China and the United States shows that we consume more opium than the Celestials in proportion to our population. It seems incredible that over 800,000 pounds of opium, independent of the supply used for medicine, could be consumed in this country; but we give the figures, and they speak for themselves. There is certainly a wide field presented here for a great movement of the benevolent against the ruin wrought among thousands of our population by this terrible vice.

Excitement and Short Life.

THE following, by an unknown writer, accords with our observation: The deadliest foe to a man's longevity is an unnatural and unreasonable excitement. Every man is born with a certain stock of vitality, which cannot be increased, but which may be husbanded or expended rapidly, as he deems best. Within certain limits he has his choice, to live fast or slow, to live abstemiously or intensely, to draw his little amount of life over a large space, or condense it into a narrow one; but when his stock is exhausted he has no more. He who lives abstemiously, who avoids all stimulants, takes light exercise, never overtakes himself, indulges no exhausting passions, feeds his mind and heart on no exciting material, has no debilitating pleasures, lets nothing ruffle his temper, keeps his "accounts with God and man duly squared up," is sure, barring accidents, to spin out his life to the longest limit which it is possi-

ble to attain; while he who lives intensely, who feeds on high seasoned food, whether material or mental, fatigues his body or brain by hard labor, exposes himself to inflammatory disease, seeks continual excitement, gives loose rein to his passion, frets at every trouble, and enjoys little repose, is burning the candle at both ends, and is sure to shorten his days.

Adam Clarke on Tobacco.

NEAR the conclusion of his little work on the "Use and Abuse of Tobacco," the learned commentator makes the following very excellent remarks:—

"To those who are not yet incorporated with the fashionable company of tobacco consumers, I would say, Never enter. To those who are entered, I would say, Desist.

"First, for the sake of your health, which must be materially injured if not destroyed by it.

"Secondly, for the sake of your property, which, if you are a poor man, must be considerably impaired by it. But, supposing you can afford this extra expense; consider how acceptable the pence (to go no farther) which you spend in this idle and unnecessary employment, would be to many who are often destitute of bread, and to whom one penny would sometimes be as an angel of God.

"Thirdly, for the sake of your time, a large portion of which is irreparably lost, particularly in smoking. Have you any time to dispose of—to murder? Is there no need of prayer, reading, study?

"Fourthly, for the sake of your friends who cannot fail to be pained in your presence for the reasons before assigned.

"Fifthly, for the sake of your voice, which a continuance in snuff-taking will infallibly ruin, as the nasal passages are almost entirely obliterated by it.

"Sixthly, for the sake of your memory, that it may be vigorous and retentive; and for the sake of your judgment, that it may be clear and retentive to the end.

"Lastly, for the sake of your soul. Do you not think that God will visit you for your loss of time, waste of money, and needless self-indulgence? Have you not seen that the use of tobacco leads to drunkenness? Do you not know that habitual smokers have the drinking vessel often at hand, and frequently apply to it? Nor is it any wonder; for the great quantity of necessary moisture which is drawn off from the mouth, etc., by these means, must be supplied some other way. You tremble at the thought: well you may,

for you are in great danger. May God look upon you and save you before it is too late! It was this view of the subject which led Mr. Sylvester to imagine that the plant derived its name from Bacchus, the heathen god of the drunkard.

“Which of their weapons hath the conquest got
Over their wits; the pipe, or else the pot?
For even the derivation of the name
Seems to allude to and include the same;
Tobacco, as τὸ Βακχῶ [to Bakcho] one would say;
To cup-god Bacchus dedicated, ay.”

It is with pain of heart that I am obliged to say that I have known several who, through their immoderate attachment to the pipe, have become vile sots. There are others who are walking unconcernedly in the same dangerous road. I tremble for them. Should this fall into their hands, may they receive it as a warning from God!

Polite Children.

“THANK you, Charlie,” said Mrs. Brown, as her little son handed her a paper he was requested to bring.

“Thank you, Bridget,” said the little fellow, a few hours after, as he received a glass of water from his nurse.

“Well, Mrs. Brown, you have the best mannered children I ever saw,” said a neighbor. “I should be thankful if mine were as polite to me as yours are to the servants. You never spend half so much time on your children’s clothes as I do, and yet every one notices them, they are so well-behaved.”

“We always try to treat our children politely,” was the quiet reply.

This was the whole secret. When I hear parents grumbling about the ill-manners of their children, I always wish to ask, “Have you always treated them with politeness?”

Many parents who are polite and polished in their manners toward the world at large, are perfect bores inside the home-circle. If a stranger offer the slightest service, he is gratefully thanked; but who ever remembers to thus reward the little tireless feet that are traveling all day long, up-stairs and down, on countless errands for somebody? It would be policy for parents to treat their children politely for the sake of obtaining more cheerful obedience, if for no other reason. The costless use of an “If you please,” and “I thank you,” now and then, will go far to lighten an otherwise burdensome task. Say to your son, “John, shut that door,” and, with a scowl, he will move slowly toward it, and shut it with a bang. The

next time, say, “John, will you shut the door, please?” and he will hasten with a pleasant smile to do your bidding.

Health of American Girls.

DR. HENRY MAUDSLEY, an English writer of much note, concludes an article on “Sex in Mind and in Education” in the *Fortnightly Review*, with the following very excellent remarks:—

American men, as a rule, “break down” between forty and fifty, when an Englishman is but beginning to live his public and useful life. The mad excitement of business you have, as well as we; so it must be the unrest of the climate, and their unphilosophical refusal of open-air pleasures and exercise, which are to blame in the case of the men.

There are other reasons which go to make up the languid young-ladyhood of the American girl. Her childhood is denied the happy out-door sports of her brothers. There is a resolute shutting out of every thing like a noisy romp; the active games, and all happy, boisterous plays, by field or roadside, are not proper to her! She is cased in a cramping dress, so heavy and inconvenient that no boy could wear it for a day without falling into gloomy views of life. All this martyrdom to propriety and fashion tells upon strength and symmetry, and the girl reaches womanhood a wreck. That she reaches it at all, under these suffering and bleached-out conditions, is due to her superior elasticity to resist a method of education which would have killed off all the boys years before. . . . There are abundant statistics to prove that hard study is the discipline and tonic most girls need to supplant the too great sentimentality and useless day-dreams fostered by fashionable idleness, and provocative of “nerves,” melancholy, and in-anition generally, and, so far as statistics can, that the women-graduates of these colleges make as healthy and happy wives and mothers as though they had never solved a mathematical problem, nor translated Aristotle.

CHEAP BITTERS.—The *Pharmaceutical Review* gives the following formula for manufacturing medicinal bitters: “Take of cheapest whisky an indefinite quantity; of any bitter vegetable, herb, flower, root, or bark, *q. s.* Mix and flavor with anything or nothing. Put in bottles, and employ an expert liar to write labels and certificates. Present a few bottles to editors and clergymen of taste. Advertise largely, and sell for 500 per cent

above cost of material." To increase the profits still more, we would suggest that the manufacturer should go in for a wholesale undertaker's business also, as a customer, in the first instance, would be certain to require the other's assistance before long.—*Sel.*

Look Out.

AND while you are at it, just take a peep at your back yard and be surprised at the nasty mess of garbage that has there accumulated during the winter, now passed. You will find that your not over-scrupulous Biddy has found it convenient to deposit her potato-peelings, scraps of meat, bones, stale eggs, kitchen sweepings, and sundry other species of offal that are likely to emanate from every well-regulated family kitchen, upon the surface of the ground, convenient to the door of the culinary department. You will find quite an iceberg there also, produced by the dish-water which is occasionally thrown over the savory mess before described, so that when frozen it might be firmly attached to the yard, defying the exertions of rats, cats, dogs and other household pets and scavengers, from dislodging it.

Now, however, as the first warm rays of an April sun fall upon this variegated heap, you will find little rivulets of putrid water seeking your cellar, cistern, or perchance, your well; in which latter case you will find, too soon, that it will not be *well* for you.

Be it known and remembered that a well eighteen or twenty feet deep will act as a drain for the surface of ground, for from twelve to twenty feet all around it. Therefore, whatever of filth may be allowed to accumulate near your well, within this distance, is certain to be represented, to a more or less degree, in the water you drink. Of course, it will appear clear to the eye, and perhaps sweet to the taste; for it has been filtered through the gravel and sand before reaching the well, but it is certain to contain some portion of that poison which produces typhoid fever, and perhaps other equally dangerous diseases.

Then, aside from the danger of this material reaching your well, it is highly deleterious to permit it to be upon the surface of the ground; for there are the unseen seeds of disease and death in the abominable compound. See to it then, that it is speedily and completely removed from your premises, and that the surface of the ground, where it laid, is freely sprinkled with lime.

Be careful, also, to examine your drains. See that they are free and unobstructed, so

that no sewer-gas escapes into your apartments—such an occurrence would be very certain to produce typhoid fever in your family. It is a good plan to procure three or four pounds of *sulphate of iron* (copperas) and throw into your water-closets or drains. It should be thrown in whole and undissolved. If repeated several times during the summer, the liability to contagious fever from sewer-gas would be greatly lessened, if not entirely removed.

When it is remembered that all cases of typhoid fever can be traced to a poison induced by sewer-gas, tainted wells, foul cellars and yards, or decomposing vegetable matter, somewhere in the immediate neighborhood, and that it is never known in perfectly cleanly places, provided with wholesome, untainted water, and where perfect sewerage is maintained, the importance of early attending to our instructions is apparent.

Therefore, all hands turn out and thoroughly police cellars, drains, vaults, and yards, so that you will be prepared to enjoy a summer as free from sickness as your careful cleanliness can render it.—*Bistoury.*

A PATENT-MEDICINE vender who was dilating to a large crowd upon the wonderful efficacy of his iron bitters, pronounced them all-potent in building up an "iron constitution." "That is so, that is so," said a bystander. "What he tells you is a fact, gentleman, every word of it." "Hear that, will you?" cried the delighted quack! "Here is a man who has used the bitters, and can recommend them." "No, not exactly that," replied the old fellow. "I have never used the stuff myself, but, you see, my friend Jenkins did, and they *jest* saved his life. You see, Jenkins had taken the bitters *jest* one week before he was shoved into prison for something. He was stripped of everything in the shape of iron about him, and yet he made a bar and worked his way out. He had taken the man's iron bitters, d'ye mind. And what does Jenkins do but open a vein in his arm, and took iron enough out of his blood to make a crow-bar, and pried the gates open with it and let himself out." The vender set his dog at him.

IN Luther's "Table Talk" we find the following opinion on lager beer: "The man who first brewed beer was a pest to Germany. I have prayed to God that he might destroy the whole beer-brewing business, and the first brewer I have often cursed. There is enough barley destroyed in the breweries to feed all Germany."

The Health Reformer.

BATTLE CREEK, MICH., MAY, 1875.

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

"Regular" Heroic Treatment.

WE not infrequently hear about the "heroic treatment" administered by some of the earlier hydropathists, and of the serious results which followed those severe measures. The "regular" medical profession has been loud in its denunciations of the cold packs, sitz-baths, etc., which were so vigorously used by Priessnitz. Through this means, a deeply-rooted prejudice has become so general that at the present time the great majority of people recoil with a shudder from the word hydropathy, regarding it as synonymous with "cold-water treatment," comprising indiscriminate sousing with ice-cold water, shower-baths at a temperature of zero, and like unpleasant and shocking procedures, long since discarded, except in extraordinary cases.

But since the attention of the medical profession has recently been called to the beneficial results obtained by the use of water in febrile diseases, they seem to have suddenly lost their former fear of the limpid element, and we now hear of the application of this remedy in a way that would have been considered as a just cause for accusation of malpractice if employed by an "irregular" half a decade ago.

Thus, we find an English physician reporting in the *London Lancet* a case of rheumatic fever in which he employed the cold pack with great success, after vainly endeavoring to cure the patient by the use of quinine, opium, huge doses of alkalies, and chloral. In spite of this highly approved treatment, the temperature steadily rose to 104°, 105°, and, finally, to 106.8° F., which is considered to be almost invariably fatal in this disease. It was at this point that the doctor determined to try the effect of the cold pack, which he did in a very effectual manner, keeping the patient enveloped in sheets saturated with iced water, and constantly renewed, for fifty minutes. The effect of this treatment was to decrease the temperature more than ten degrees, it finally reaching two degrees below the healthy standard. Notwithstanding this appar-

ently severe treatment, the patient appeared to be greatly benefited at once, and ultimately made an excellent recovery.

Dr. Flint, of New York, recently reported a case of obstinate remittent fever in which he employed the cool pack thirty-five times within a week. Although the patient died, he expressed the opinion that he might have lived had he employed the pack longer at each time, and *more frequently*. Possibly he might, especially if he had taken fewer "large doses of quinine."

Should the Aged Drink Wine?

DOUBTLESS our total-abstinence friends would say, in answering this question, If alcohol is so injurious even to those who are young and robust, how much more harmful must be its influence upon those whose vital energies are weakened by age! With this answer we would fully agree; but we recently listened to a noted professor who claims that moderate stimulation is necessary in advanced life to promote and sustain nervous activity. He did not state at what age it was necessary to begin the daily potation of alcoholic poison; but from the fact that, although still a young man, he lately ordered three gallons of whisky for his own use, we conclude that he would not be likely to postpone the practice much beyond threescore and ten.

Although it may seem quite unnecessary to do so, we purpose to examine this dangerous doctrine that the old need alcohol to maintain the requisite nervous activity. The points to which we wish to call especial attention are these:—

1. Alcohol does not increase nerve force.
2. The use of alcohol by the aged is attended by peculiar dangers of a most serious character.
 1. That alcohol does not increase nerve force is one of the most easily demonstrable facts of science. Nerve force depends on nerve structure. Alcohol not only does not supply material for the formation of nerve tissue, but it actually interferes with the formation of nervous tissue from other materials. Thus it is both negatively and positively evil. Alcohol *excites* the nerves; it produces nervous irritation, and "promotes" nervous exhaustion. All of these facts accord

both with the deductions of theory and the observations of experience.

2. But, disregarding for a moment the positive injury which alcohol does to the nervous system, and even granting that under certain circumstances it might possibly be desirable to use it for its exciting effects, we still have to consider another very grave question; viz., the effect of alcohol upon other tissues of the body, and especially upon the blood-vessels and the circulation. One of the unpreventable attendants of old age is degeneration of some of the tissues of the body. This degenerative process is most likely to occur in the walls of the blood-vessels; and of all the arteries in the body, those of the brain are the most likely to undergo this change with the advance of years. As the result of the process referred to, the walls of the vessels become partially changed to fat. Sometimes, also, they become calcified, or calcareous, from the gradual absorption of the proper tissue and the deposit of lime salts. When the arteries have been thus weakened by the exchange of their fine elastic tissues for fat or lime, the vessels are easily ruptured. In the brain this is especially apt to occur, since the brain substance is so soft and pulpy that it affords no support to the weakened vessels which supply it with blood. When such a rupture occurs, the blood rushes out into the brain substance, a clot is formed which presses upon the origins of the great nerve trunks, and paralysis results. This is the common cause of apoplexy, which so frequently occasions the death of active men who die after the meridian of life.

It is very apparent that the greater the amount of blood in the brain at any one time, the greater the danger from apoplexy, since the pressure upon the walls of the weakened arteries would be proportionally increased. It is equally evident that anything which increases the amount of blood in the brain must be a predisposing cause of apoplexy. Now, who does not know that one of the most prominent effects of alcohol is violent cerebral congestion?

Again, it is stated by the best of medical authorities that alcohol is one of the chief agents which facilitates the peculiar degeneration of the cerebral vessels of which we have spoken. Have we not, then, in these facts the most am-

ple evidence that the use of alcohol by the aged, instead of being beneficial and judicious is highly dangerous, and most imprudent. Dr. J. R. Black, an eminent and talented medical writer, tells us that a person who has ever had any premonitions of apoplexy is guilty of the highest presumption if he indulges in the use of alcoholic drinks thereafter.

Another Evidence of Progress.

NOTHING can be more cheering to the earnest reformer than to see those who are generally supposed to be somewhat antagonistic to our cause boldly coming out with a full acknowledgement of the principles which have been held and taught by all who have engaged in the movement from its earliest infancy. Such incidents may justly be regarded as the most substantial evidence that progress is being made. When such principles as are embodied in the paragraphs which we quote below are taught as thoroughly as they should be in all the medical schools, we may reasonably hope that the rising generation of doctors will begin to exchange drugs for hygiene, and instead of keeping their patients in heathenish ignorance of the causes of disease, while they blister, bleed, and purge their bodies and drain their purses, they will teach them the principles of hygiene and the requirements of sanitary law. The following extract from the *Sanitarian* is an abstract of an address delivered to the recent graduating class of the medical department of Michigan University by Prof. R. C. Kedzie, M. D. :—

“Preventive medicine is now pressing its claims with an emphasis never before heard. The race demands of the profession, not only to repair the ravages of disease, but to save them from its power. Follow the phalanx of human life as it marches on, and see how fast its ranks are depleted by deserters, till we arrive at threescore years, only to find a body-guard left. Admit that there are fixed climatic conditions unfavorable to long life; that accident and unavoidable conditions destroy a certain per cent.; pass over all the victims whom human foresight and prudence could not save, and what a fearful host still remains, cut off in their vigor and prime by preventable causes. See consumption, like the hovering wings of the angel of death, over-

shadowing the race; cholera and yellow fever sweeping over the land and sowing the earth thick with graves; intemperance rending body and soul to the demon's hell; typhus and typhoid gathering the sheaves of the harvest of death; consider these and a score besides, and then tell me if there is no work to be done in the fields of preventive medicine. 'Lift up your eyes and look on the fields, for they are white already to harvest.' The old superstitions which connected unusual sickness with the wrath of offended Deity have faded in the light of science. The black death, cholera, typhus, scurvy, etc., are as truly the penalties of violated sanitary laws as is death by submersion in water.

"As science sheds more fully its light upon these dark and perplexing questions, we see more and more clearly that sickness and pain are the fruits of our own misdoings. The 'mysterious providences,' about which we have heard so much, are resolving themselves into 'defective drainage,' 'sewage contamination,' 'unwholesome food,' 'poisoned walls,' 'no ventilation,' etc.

"The school rooms, the lecture halls, the court rooms, the temples of religion, the halls of legislation, the hospitals, the prisons, and even our secret bed-chambers are full of subtle poison.

"Go into our cities and villages and see the festering graveyards pouring their literally deadly contents into every well in the vicinity; the cesspools pouring rectified death through all the subsoil; an epidemic of dysentery or typhoid fever sweeps over the afflicted community, and men bow themselves before 'the mysterious providence,' and roll up their eyes as though they were objects worthy of deepest pity. Away with the impiety which would flout our filth in the face of Deity, and say that these afflictions come from his hand. The voice of God thunders as of old, 'Wash you, and be ye clean,' if you expect his favor—clean in your person, and homes, the food you eat, the water you drink, and the air you breathe; clean in thought and in life."

A Sermon on Water.

THE following article is very appropriately suggestive at the present season of the year, since it calls to mind so forcibly the fact now universally recognized that water is not only one of the most common, but one of the most fatally effective agents for the communication of disease. Although, when pure, its value as a beverage and as a remedial agent cannot

be estimated, its potency is never more apparent than when it becomes the means of spreading general devastation among populous communities through infectious contamination. Here is the sermon from the *Medical Press*.—

It is very easy, says the *Times of India*, for teetotalers to say that water is incapable of doing anybody any harm, but facts are fearfully against that theory. Water has done more mischief in its time than all other liquors of which history makes mention. For one prince drowned by his own choice in a butt of wine, millions of men (of whom no doubt thousands were princes) have been drowned, much against their will, by water. But that is not necessarily treacherous, and it is said to be an easy mode of killing men. It is a more insidious and cruel death which water seems especially to delight in causing, and it is of use to call attention to this peculiarity of that overpraised element. Dr. Henry Blanc has just issued, in English and in French, a little book, which we cannot say is exactly a gay or jocular production, but which is certainly a very useful one, and which no well-regulated family should be without. It is called, "Cholera, How to Avoid and Treat It," and in it the learned doctor quotes from Dr. Cutcliffe an account of the manner in which the epidemic that is now spreading over Europe took its rise—in water—in 1867. In that year, three millions of pilgrims, of whom a handful had come from a cholera district, assembled at Hurdwar, a few miles from the spot where the Ganges escapes from the Himalayas.

On the 12th of April the three millions resolved to bathe and drink. "The bathing-place of the pilgrims was a space 650 feet long by 30 feet wide, shut off from the rest of the Ganges by rails. Into this long narrow enclosure pilgrims from all parts of the encampment crowded as closely as possible from early morn to sunset; the water within this space, during the whole time, was thick and dirty—partly from the ashes of the dead, brought by surviving relatives to be deposited in the water of their river god, and partly from the washing of the clothes and bodies of the bathers. Now, pilgrims at the bathing ghaut, after entering the stream, dip themselves under the water three times or more, and then drink of the holy water whilst saying their prayer. The drinking of the water is never omitted; and when two or more members of a family bathe together, each from his own hand gives to the other water to drink. On the evening of the next day, the 13th of April, eight cases of cholera were

admitted into one of the hospitals at Hurdwar. By the 15th, the whole of this vast concourse of pilgrims had dispersed," carrying the cholera in every direction over India; it attacked the British troops along the various routes, it passed the northern frontier, got into Persia, and so on into Europe, where it will work its wicked will for some time to come.

That is a sample of the mischief water can do in the way of spreading disease. The lesson should not be lost upon the government when next three millions of its subjects desire to bathe and drink in an area 650 feet long by 30 feet broad. Neither should it be lost on white water-drinkers who, on their travels in the mofussil, drink freely from lotas, without troubling themselves as to the whereabouts or character of the crystal spring at which they were filled.

Tobacco Pledge.

HALF a century ago, such a thing as a temperance pledge was unheard of; now, there is scarcely a person in the land who has not been solicited, at least, to sign his name to a written agreement to abstain from the use of intoxicating liquors. Fortunately for the world, many temperance reformers are beginning to see that there are other intoxicants quite as hurtful as alcohol. Thus, we now begin to hear of "tobacco pledges," and "total abstinens" from the filthy weed. Why should there not be pledges against the use of tea, coffee, opium, and other hurtful things as well? The following pledge was signed with due legal form by four responsible persons; we clip it, with accompanying remarks, from one of our exchanges:—

"We call the attention of our readers to the following pledge against the use of tobacco. We can say that a similar compact entered into by thousands would restore reason, obviate suicides, and do more for the benefit of the youth of our land than almost any one thing that could be done for them:—

"WHEREAS, The undersigned, having used tobacco for fifteen years, more or less, and having become thoroughly convinced that its use in any form, however moderate, is a positive injury, and believing they owe it to themselves and friends to preserve their general health, and set a good example before their fellow-men, and realizing that the enlightenment of the nineteenth century demands that the average human being should

hold and command enough of self-respect, self-denial, and self-control, to put aside a practice so filthy, degrading, abusive, hurtful and disgusting. Now, therefore: We, the undersigned, in full exercise of our mental faculties, and thoroughly comprehending the supreme sacredness of this compact, do hereby solemnly agree, on all of our sacred honor, never again to use the pernicious weed in any form or any manner. And we do hereby call upon our friends to brand us as being devoid of honor, and unworthy of friendship or confidence, if we ever break over from this sacred compact.

"Given under our hands and seals in the village of Madrid, county of St. Lawrence, and State of New York, this, the seventeenth day of March, 1875."

"Regular" Hospital Practice.

WE recently had the fortune to hear the following conversation between two hospital physicians in New York city:—

"Dr. B. Do you have a great many cases of 'jim jams' (delirium tremens) now, Dr. K.?"

"Dr. K. Oh! yes; we have a great many such patients.

"Dr. B. What do you give them?"

"Dr. K. Chloral hydrate and bromide of potassium.

"Dr. B. Don't you ever 'slip' any of them?"

"Dr. K. What do you mean?"

"Dr. B. Why; don't you ever kill any of them?"

"Dr. K. I never happened to do so.

"Dr. B. We used to 'slip' lots of 'em over at our hospital. We would give them the medicine at night, and on getting up in the morning would find them dead.

"Dr. K. How much medicine did you give?"

"Dr. B. Sixty grains of chloral and thirty of bromide, repeated every hour until patient sleeps. Sometimes they would go to sleep and never wake up."

In the hospital reports these cases appeared as "deaths from *delirium tremens*;" yet the physicians in charge knew quite well that they were as genuine cases of poisoning as a coroner's jury ever held an inquest upon. How long before people will learn and appreciate the fact that drugs are poisons and that poisons are dangerous in disease as well as in health?

People's Department.

Facts Test Theories.

THE statement of facts given in the March number of the REFORMER under the heading, "Wonderful Success," ought to convince every reader that our theory does not rest alone upon supposition, but is sustained by the logic of facts, a sort of argument which it were vain to gainsay. Perhaps it is my duty to suffering, dying humanity to state some facts of the same character of those reported from the experience of Dr. O. T. Lines and lady, though less extended.

Some years past, I lived in the village of Olcott, Niagara Co., N. Y. While I was there, the diphtheria prevailed alarmingly and fatally, for a time. Over thirty deaths occurred in the little village and its immediate vicinity. One, two, three, and four children were taken from a family. Some lost all they had; and one man lost all his children, four in number, and his wife also, leaving him alone. In one or two instances, there were two dead in a house at a time. I think there were not over two or three cases of recovery under drug treatment; and those were for a long time in a feeble and doubtful condition. My wife was familiar with many cases in all stages of the disease, for she spent much time, night and day, in helping take care of the sick, so that she was well acquainted with the disease. My son, living in the place, had two children, and we unanimously determined that, should they have the disease, we would try the hygienic course of treatment. And we had the opportunity to carry out our resolutions; for they both had it with as marked severity in the beginning as others with which my wife had watched. For several days they seemed to waver in the balance; but at the end of five days, it was evident that the scale was turned in favor of life; and in a few days more, they were out at play, as merry as bees. The same kind of treatment was used in two other families, so that, according to my memory, there were some seven or eight cases in all, and not one proved fatal; all recovered.

Such arguments as these ought to be convincing; but I presume that but few in that little village, except those families who used the hygienic treatment, retain a remembrance of the facts. How can that be, since these things might have been known and remembered by all? I will tell you. Some said they did not believe these children had the diphtheria; for if they had, they would have died. Or, if they had it at all, it was very

light. They were well too soon to be recognized as *hard cases*.

But we know that they were veritable cases, and as hard as others in the beginning. The difference was owing solely to the treatment.

A correspondent, quoted in the People's Department of last REFORMER, speaks thus hopefully: "Every day of my life adds strength to my conviction that the people must come to your principles." Why do they not come along? Not for lack of evidence if they would only look at it and follow enlightened conviction. Another correspondent in the same number has alluded to the chief obstacle in the language following: "*Long-established and deeply-rooted prejudices* must be patiently met by a faithful presentation of stubborn facts and invincible truths."

David was enlightened on the power of custom and tradition when he said, "This their way is their folly; yet their posterity approve their sayings. Like sheep they are laid in the grave." Sheep will follow their leaders without stopping to observe the consequences. I have heard of an instance where a leading sheep happened to scale a fence in a flight where an open well was on the opposite side, and the flock rushed on until eighteen were packed in the well and had filled it up. If the people had their eyes open to the deadly effects of drugs, and would seek a remedy regardless of the prevailing custom, they certainly would find a more excellent way.

R. F. COTTRELL.

Who Knows?

THE writer of this is no doctor of any school, and never has assumed the garb of an M. D. in any sense; but he has lived to see some things he has wondered at. He has seen M. D.'s make such terrible mistakes that he has concluded that lay members of the body politic have a right to speak, and act, and think, for themselves; he has concluded that, as a general thing, a conclave of old ladies who have natural good sense and sense of propriety, and most of them have, are better and surer than a council of M. D.'s in saving the patient who is almost beyond medical skill, as the saying is.

I have seen an M. D. decide a case of inflammation of the brain to be only a case of *ague*, and a case of spinal meningitis was, in its incipient stages, only a bilious attack. Have seen tobacco and alcohol recommended for this and that ailment, and *nux vomica* for others, and so on.

Talk of science necessary to create an M.

D. I think it high time for science to prove how a deadly poison can raise a sick man to health; and although the writer is nearly sixty years of age, he is half a mind to take a medical course and see for himself how this is done.

JOS. CLARKE.

Probably our esteemed correspondent does not wish to convey the idea in the above that he has no confidence in, or respect for, the thousands of invaluable facts which are embodied in medical science, especially in the departments of surgery, anatomy, physiology, and pathology. This knowledge is the accumulated product of centuries of patient investigation, and represents the life-work of thousands of earnest students whose whole energies have been devoted to the endeavor to ameliorate the physical ills of mankind.

It is certainly to be regretted that together with the useful learning of the schools there is so great an admixture of error; yet it is not at all surprising that this should be the case when we consider the fact that the great mass of the people, even those who enjoy the benefits of civilization, are tenaciously adhering to theological errors even grosser than those fallacies which curse the medical profession. Again, it should be remembered that it is only a few hundred years since medicine became divorced from theology, from which it drew its most erroneous dogmas.

We agree with the writer of the above that a conclave of *competent* old ladies would be far safer for counsel than a whole college of *incompetent* M. D.'s; but the reverse would be just as true. Experience is often of more practical value than mere theory; but the greatest efficiency can only be secured by a judicious combination of the two.

Perhaps if our worthy friend would take a medical course, as he suggests, he would find himself acquiring an additional grain of charity for our benighted medical friends. Ought we not, at any rate, to give them due credit for the good there is to be found in them, and especially for the evidences of progress which they now and then manifest?

Improper Diet for Man.—No. 2.

IN continuation of this subject, we refer to the present abusive use of cake and pastry, especially that made by bakers, for although much has been said against bakers' food, its

consumption seems rather to increase than diminish.

People buy the richest and most poisonous kinds of cake, choosing to make the plainer kinds themselves. One would think if they could see the way it is made they would never touch it again; this, however, is not the case; for many who eat it do know how it is made, and how injurious it is.

Everybody knows that home-made cake is not at all wholesome, yet they buy bakers', thinking it lighter and more delicate—made so by cheap compounds, old bread of all kinds, and many deleterious substances. It is generally known that ammonia is extensively used both in bread and cake—even the little seed cakes so often given to infants. This fact was proved by breaking open a newly baked cake from which came a strong scent of ammonia.

In times of scarcity of eggs, to make the frosting of cake, which should be made entirely of the whites of eggs, whiting makes up the deficiency.

The following will show to what an extent bakers' cake and pies are manufactured: In the city of New York there is a concern that does nothing but make pies; or, as the boys call them, "Pies an' things." The buildings cover six and a half city lots, and the stables have accommodations for fifty horses. Thirty-seven large wagons are used to deliver the pies daily, and one hundred and twenty persons are employed all the year round. It has an enormous boiler into which some five hundred pumpkins are reduced to a jelly per day; by steam, of course. Near it are two steam mincing machines, capable of slicing up a fabulous quantity of fruits.

One hundred and sixty barrels of flour per week are used in making the pies, and the sum of 8,000 pounds of lard, 1,500 quarts of milk, and 5,000 eggs.

A BAKER.

A Case of Whooping-Cough.

THE following copy of a letter from a lady to her friend may be of interest to other mothers, as it well illustrates the success of simple, hygienic treatment:—

MY DEAR FRIEND: You no doubt wonder why I have not written you ere this; but when I tell you how I have been occupied for the past few weeks, I think you will forgive the neglect.

My darling babe was unintentionally exposed to the whooping-cough; and after she began to cough, she grew steadily worse for four or five days, until she became quite sick.

It was really pitiful to see the poor little thing choke and turn red, almost black, in the face, while gasping for breath. In a short time she became so weak that she would lie for hours at a time either sleeping or taking no notice of anything, the bright look gone, the active little limbs quiet and motionless—so changed. I began to be alarmed when I realized how sick she was, and immediately consulted the "Family Physician," which, as you know, advocates the use of water and discards all medicines. As this disease is so very prevalent everywhere, it is not improbable that your own little one may also take it; and knowing your confidence in the system of water treatment, I will write you the particular plan which I pursued, should you wish to try it.

In the middle of the forenoon (this being always the best time for any bath), about two hours after she had taken nurse, I stripped her body, laid her in a flannel sheet folded twice double, and placed upon her spine, between the shoulders, a woolen cloth wrung out of water as hot as could be borne—so hot that she winced some; but it was only a moment, and she did not cry. I then applied a cold wet linen cloth to the chest, and wrapped her up snugly and close to keep all the steam in. She became quiet, and in less time than I am writing this was fast asleep. This was evidence enough that the treatment was soothing and agreeable, while the result showed that it was just the thing to subdue the cough. Before applying the wet cloths, I had bathed the head with cold water (this should always be done before any kind of bath), and as soon as she was wrapped up and quiet, I placed a light, wet linen cloth upon her head. In about five or ten minutes, I exchanged the cloth on the back for another as hot as could be borne, which I had ready to apply as soon as the first was removed, so as to avoid any exposure to the air, again wrapped close, pinning the blanket about the neck. I should have put on a third one; but she slept so nicely that I concluded to let her rest, which she invariably did after this treatment for about half an hour. When she awoke, I had ready half a pail of tepid water; and after re-wetting her head, I placed her in the water; she appeared to enjoy the operation, so it was no trouble to attend to it. I bathed her arms, shoulders, and body for a few minutes, then took her out into a sheet previously warmed so as not to chill, and wiped her perfectly dry; after which I briskly rubbed the whole body with my bare hand and quickly dressed her. Of course the room is quite warm during the bathing, which is a necessary precaution, though one need not be

so foolish as to have it well nigh to suffocation, as I have known to be the case.

The fomentations were given every other day, but the bath was only given twice a week; and in place of it, a cool wet linen cloth was laid on the spine after the hot ones were removed or the part slightly bathed with cool water, which is quite as well, the object being to close the pores before the air strikes the body, which has the effect to prevent taking cold.

About three times in two weeks, on the days when I did not give the other treatment, I gave a hot leg- and foot-bath; also, two or three times, a fomentation over the liver in place of the one on the back, being careful to have the cloth only large enough to cover the part intended, always finishing off with the cool water.

Nearly every night, or perhaps five nights out of the week, I put a cool wet linen cloth on the forehead covered with a dry piece of flannel and bound about the head with a strip of cotton cloth, firmly pinned in place to prevent slipping about during the night. This is excellent for cold in the head or catarrh. It is well to try it any time when a child "snuffles" with a cold, or good for grown people either. I do not know as this is always needed in every case of whooping-cough; but when it is, it is far better than smearing the head and throat with oil and grease as many do.

Another item, and an important one, is to keep the room of an even temperature. Though it should be comfortably warm, do not on any account oblige the little sufferer to breathe over and over again the close air of a room not supplied with pure oxygen from without. If this is not heeded, the cough will not abate as soon. Nor is it well to let a child sleep in a room that has had no fire in winter. It is almost impossible to subdue a cough if the child has to breathe the keen frosty air of a cold winter's night. 'Tis better far to keep from either extreme of heat or cold; and it pays in the end to observe these rules when you see how much sooner your little one recovers from the disease than do those of your neighbors around you who resort to drug treatment, or perhaps do nothing at all, and let them cough it out all the season through.

I will merely add that at the end of three weeks my babe scarcely coughed more than once or twice in twenty-four hours, and, in six weeks' time, was well and playful as a kitten.

M. E. MCKEE.

HOUSING-UP will kill any invalid.

Hygiene Will not Do for Us.

THE following letter from a man in Minnesota is a fair specimen of those which we occasionally receive from a certain class of people. We do not publish it for the purpose of grieving the writer, or doing him any injury, but merely to show what kind of persons are the most bitter opponents of health reform. The semblance of argument in favor of flesh food which it contains we do not notice, 1. Because its absurdity is too apparent to require exposure; and 2. Because we have already answered a similar argument in the discussion of the salt question, published in this number. The printer has "followed copy" to the letter in putting it in type.

Editor of health Reformer Dear sir I take this Opportunity to inform you that we do not want your health reform sent to us any longer therefore you will please Dis continue the thing for numerous reasons which we could enumerate

You say throw away meet tea coffee shugar syrup salt potatoes fried you might altogether Bread you say we can have Brand Bread or graham which is no better you say eat vegetables & fruit I want to tell you, mr editor that that kind of det will not do at for minnesota why sir they would freze to death the first winter, we had one of your young students 25 years old from your hygiene institution & I could kill two of them at work one at time did do it look at the difference in our ages I am 51 years he 25 year I have eaten a large shar of porke some Bief a good deal of venison good Biscuit & Butter tea Coffee shugar syrup & all the rest of those things which the lord has maid to grow out of the Earth you say that all meets is forbidden in the Bible

Now J, H, Kellogg whot is the use of your Preching eny such thing when God Expresley Commanded the Children of isrel to eat meat & tells them of A good many kinds to that they can eat not tree meat But animals & fowls fish &c &c it is no use to multiply words on the subject for hygiene will not do for us as far as acoholl concerned we have eny Amount of temperance societies here intemperence is a sad evle in land their is god in your Book But we have that & more hear I have written more than I inteded & not half as much I would lik to I do not mean eny Burlesque or hardeness Enmity towards you or your Pet theme But simply facts as we see & fell them

DELIGHTED.—I am delighted with the HEALTH REFORMER; it breathes the pure principles and views that I have entertained for many years. I regard it as a Godsend, and wish that I had practiced its teachings for forty years. Nearly one year ago I met with the February number. I read it through before I laid it down. I thought it equal to any sermon that I ever read or heard, if not superior.

ROBERT W. HANDLEY.

Questions and Answers.

TOMATOES AND CANCERS, ETC.—G. B., N. Y., makes the following inquiries:—

1. Physicians here say that tomatoes will make cancers; is there any truth in the assertion? 2. I have been troubled for two months with an itching on my limbs, especially after retiring. I try to live hygienically, discarding grease, tobacco, tea, coffee, and have eaten very little meat. What is the cause and cure? It is not the itch. 3. Ought a baby fourteen months old to be allowed to drink milk two or three times in the night?

Ans. 1. There are no grounds whatever for the oft-repeated assertion that the dietetic use of tomatoes will cause cancer. Those who advance this singular notion reason like this: Fifty years ago, tomatoes were not used as an article of food. Fifty years ago, also, cancers were rarely met with. At the present day, tomatoes are a common article of diet. At the present time, also, cancer is a common disease. Consequently, cancer is caused by the eating of tomatoes. By the same kind of logic it would be made to appear that the introduction of railroads, of cotton mills, of stoves, of coal, of kerosene oil, of gas, etc., has been the direct cause of cancer. There is a great deal of this kind of reasoning among people generally, and perhaps quite as much among the doctors as any other class. Tomatoes are good food.

2. The itching on your limbs may be due to some parasitic disease, or to a clogged condition of the skin, or it may have a nervous origin. Just which it is, we cannot tell without a personal examination. Perhaps you will find the itching relieved by bathing the limbs in tepid water just before retiring. If water alone does not give relief, add half an ounce of soda to each gallon.

3. No. An infant can easily be taught to take its meals at reasonable and regular hours. The night is the time for sleep, for infants as

well as adults. A child does not need food in the night, and will not call for it unless it has been allowed to form the habit of doing so.

NOSEBLEED.—J. R. W., Va., wishes to know what to do for a boy twelve years of age who has frequent nosebleed, but appears to be otherwise in good health.

Ans. The immediate cause is probably an undue determination of blood to the head. There are many things which may give rise to this condition; as constipation, sedentary habits, confinement in heated rooms, stimulating food, nervous affections, etc. To effect a cure, the cause must be removed. To stop bleeding at the nose, make the person hold his head erect, and plug the nostrils with dry lint or cotton. Do not apply water directly to the nostrils. Sometimes a cold compress, or ice, applied upon the sides of the nose, is very useful. Pressure upon the facial artery where it crosses the lower jaw is also efficacious in certain cases.

DRUGS—BEEF TEA—TRISMUS.—C. N. F., inquires: 1. Do the physicians at the Institute give their patients medicine? 2. Is beef tea the best food for weak patients? 3. In case of an abscess gathering in the face, and so painful as to threaten locked-jaw, if all hygienic appliances failed, would you use morphia?

Ans. 1. The physicians at the Health Institute have no confidence in drugs; and the remedies which they use are those which can aid nature in curing the patient. 2. Beef tea is not food. It is a stimulant like tea and coffee, according to the late Dr. Edward Smith, the best scientific authority on dietetics. 3. We would relieve the patient by opening the abscess. In case of existing trismus, if other remedies failed, we might attempt to secure temporary relief by the judicious use of an anesthetic.

GREASING GEM-PANS.—W. A. D., Minn., asks: What do you recommend or use instead of grease to keep gems, etc., from sticking to the pan while baking?

Ans. The one thing requisite is to keep the pans smooth. Cast iron gem-pans may be made smooth by heating them very hot after smearing well with sweet oil. Then wipe them very thoroughly with a clean cloth, removing every particle of the oil that can be rubbed off. They will then be ready for use. They will not need greasing again for several months if they are carefully wiped each time after using. They should not be washed, but should be kept in a clean, dry place.

NUTS.—F. R. S., Mass., writes: In answer-

ing my question you said nothing of peanuts, butternuts, chestnuts, etc. Are chestnuts more healthful boiled than raw?

Ans. Healthy stomachs will digest almost any kind of nuts; but those nuts which have the mildest flavor, and are the least oily, are the best for all. Fresh hickory nuts may be eaten by almost any one in moderate quantities, if they are made a part of the regular meal. Chestnuts are good food. They are more easily digested when boiled, as is the case with all kinds of farinaceous food.

RINGWORM.—A correspondent in Minn. asks, How do you cure ringworm?

Ans. Rest, avoid all stimulating food and drink, take a general bath twice a week, and keep the bowels regular. In the early stages, apply, locally, tepid water, or a simple infusion of flaxseed or slippery elm. Sometimes lime-water or diluted vinegar afford much relief. Powdered starch, pure sweet almond oil, or diluted glycerine are also good applications. When the disease has become chronic, tepid water, with the addition of one or two drachms of carbonate of soda to the pint, makes a good local application. The disease can be permanently cured only by careful hygienic living.

W. H. B., N. Y.—Apply hot fomentations to your neck and shoulders, following them with brisk friction with cool water. The treatment may be continued every day for a week, if care is used to avoid taking cold. Friction with the dry hand is a good remedy.

DECOMPOSITION AND DIGESTION.—J. W. P. says: 1. Decomposition is still used by old school writers, and occasionally by health reformers, as synonymous with digestion. Is not decomposition a misnomer as used in this connection? 2. Decomposition would seem to be the right word in the right place for the surplus food the stomach had not power to prepare for assimilation; but after decomposition, can it retain the relation as food?

Ans. 1. Yes. Decomposition is a step downward in the scale of organization. Digestion is a preparation for a step higher.

2. No; except for plants which feed upon the products of decomposition.

DYSPEPSIA—DEBILITY.—L. F. W., N. Y.: Your symptoms are plainly those of dyspepsia and consequent general debility. You could probably be benefited at the Institute. Home treatment promises little.

TEMPERANCE and virtue are among the greatest panaceas yet discovered.

DIETETICS.

Tea and Coffee.—No. 3.

MENTAL EFFECTS.

By mental effects we mean the changes that are occasioned in the mental or intellectual organism by the use of tea or coffee.

Whatever may be the nature of the mind, whether the mere result of molecular action, as claimed by the materialist, or the product of the operation of a distinct entity upon the brain, as is more generally believed, it is a well-attested fact that the manifestations of mind can only be perfectly harmonious and healthful when exhibited by a healthy brain, or physical organization.

We have already shown the effect of the use of tea and coffee upon the physical organism—the various vital organs, the different tissues, and especially upon the nerves. Now, the brain itself is nerve tissue, and hence must suffer in common with other similar tissues. Furthermore, it cannot receive or impart any kind of intelligence except through nerves, all of which have been blunted and paralyzed by the constant baneful influence of a daily-administered poison. Hence it is readily seen that the mind of a tea-drinker or coffee-user cannot escape its due share of damage in the general demoralization of the system which these fascinating beverages effect. And how well does experience support this statement! Facts almost without number could be adduced to show that the influence of tea- and coffee-drinking is invariably antagonistic to mental strength and endurance. It was long ago decided by eminent physicians that excitement is not strength. It has quite as long been recognized that every unnatural increase of physical or mental action *must* be followed by a corresponding descent below the average standard of activity.

Then every minister who drinks a strong cup of tea to increase the animation of his discourse, borrows a certain amount of vivacity and energy from some future effort. So every student who goads up his weary brain with a cup of tea to enable him to steal time from sleep, is making a double draft upon his capital of mental force and ability. So, too, the young lady who stimulates with tea to enable her to entertain her visitors, is laying the foundation for future intellectual poverty and mental inefficiency.

ALLEGED BENEFITS OF TEA AND COFFEE CONSIDERED.

These have been slightly touched upon already, but we will now consider them more

fully. Perhaps the first thing we hear in favor of the use of tea and coffee is from some sallow, weak, nervous lady who, when questioned on the subject, declares that she cannot possibly live without her daily tea and coffee, for

THEY SOOTHE THE NERVES.

How do they soothe the nerves? Do they furnish the requisite material for repairing the worn and exhausted organs? No. They only temporarily *excite* them, so that their real condition is for a time obscured; but when their evanescent effect has vanished, the nerves are in greater need than before of being soothed, and each application of the remedy makes the evil worse. This is the reason why we seldom find a confirmed tea-drinker who is not troubled with nervousness. It is also equally true that the great majority of sufferers from this disease are tea- or coffee-drinkers. In hundreds of instances these nervous tea-drinkers have fully and speedily recovered their health by abandoning their use of the article. This is a sure and simple remedy.

TEA AND COFFEE ASSIST DIGESTION.

"My stomach is so weak," says a tea-drinking dyspeptic, "that a cup of good strong tea is necessary to enable me to digest my meal." Yes; this is doubtless the case; and if you continue the practice you will find, after a time, that *two* or *three* cups will be necessary to enable you to dispose of your dinner satisfactorily. Then if you persevere in the habit, in spite of the admonitions of your best medical adviser, nature, you will shortly find it quite impossible to swallow a sufficient quantity of the beverage to make your stomach perform its work. Then you will begin to realize the fact that goading an organ into action is quite a different thing from encouraging and promoting its healthy activity by supplying it with healthful, nourishing food.

Do not be deceived by momentary sensations. Consider the ultimate effects, and you cannot fail to be convinced that instead of promoting digestion, tea and coffee are most effective disturbers of that function. How they interfere with digestion has already been explained.

TEA AND COFFEE RELIEVE HEADACHE.

How invariably the unsuspecting lady resorts to a cup of tea to relieve the distress occasioned by that common malady, sick headache! Yes; and how invariably that same sick headache returns! Who ever heard of a person who was permanently cured of sick headache by tea-drinking? Such a thing would be impossible. Tea and coffee are among the prime

causes of sick headache, although they afford temporary relief, just as tobacco and alcohol are prolific causes of tremors, but yet appear to steady the trembling nerves for a short time.

TEA AND COFFEE SUPPLY THE PLACE OF FOOD.

Many people who are largely addicted to the use of the articles will prefer a cup of strong tea or coffee to a hearty meal of nourishing food. Indeed, it is a general custom with the English peasant to reduce his bread fare one-half that he may be able to procure a cup of tea to accompany the remainder. Dr. Arlidge, of England, has recently called attention to the fact that the women of the working-classes in that country have carried this practice of substituting tea for food to such an extent that they are beginning to manifest the most unmistakable evidence of narcotic poisoning.

Tea silences the demand of the system for food, but it does not in any respect replace it, as may be seen by the weakened energies and the attenuated forms of those who use it largely.

TEA AND COFFEE ARE STIMULATING.

Nothing is truer than this claim; but so far from being an argument in favor of their use, it is one of the first arguments we should offer against employing them for dietetic purposes. What is stimulation? Is it increased strength? or vigor? or vitality? Oh! no; stimulation from the use of any substance as a food, a medicine, or a condiment, is simply poisoning, and is only produced by some poisonous agent. Here is what an able writer in the *Quarterly Journal of Science* says about it: "Stimulation means *abstracted*, not added, force. It involves the narcotic *paralysis* of a portion of the functions, the healthful activity of which is essential to healthy life."

All other eminent physicians concur in this statement, and admit that the best stimulants are the most violent poisons.

TEA AND COFFEE INCREASE MENTAL VIGOR.

Those who make this claim mistake mental activity for mental strength. A greater error could not be made; and yet, this fallacious notion is very popular. See the poor victim of delirium tremens trembling with fright at the fantastic and threatening shapes which his excited fancy portrays. His imagination was never so active in health. Now it makes him see forked tongues darting at him from every corner, and converts every shadow into a monster. Who will venture the assertion that his mind is stronger now than when in health? Listen to the ravings of the patient during the delirium of fever;

the mind is certainly active, but it cannot be said to be strong; for strength is only consonant with health.

When the brain is stimulated to unnatural activity by tea, coffee, tobacco, alcohol, or any other stimulant, it makes violent attempts to accomplish whatever task may be imposed upon it. But the calm, deliberate action of the mind is impossible. The highest efforts of genius can never be exhibited under such circumstances. Is it argued that some of our greatest mental workers, as Voltaire and Jonson, were users of tea or coffee, we would, in answer, call attention to the nervousness, irritability, and irascibility which notably characterized the last years of the life of each of these men. Here we see the legitimate results of the use of tea and coffee, and it is very probable that had these men been more nearly correct in their habits of life they would have achieved even greater success than they did.

TEA AND COFFEE CORRECT THE INJURIOUS EFFECTS OF POOR WATER.

When no other reason can be offered for the continuance of a bad habit, this one is frequently presented. Its absurdity makes it almost insusceptible of candid consideration. How strange that the addition of a poison to water already bad enough should improve it! The assertion is wholly without foundation in fact, and never would have been advanced as an argument by tea-drinkers except for the lack of any better. Two poisons are always worse than one unless they neutralize each other; but no such chemical properties are claimed for tea and coffee.

TEA AND COFFEE ARE NECESSARY CONDIMENTS.

One writer upon dietetics tells us that the utility of tea and coffee does not depend upon their peculiar principle, *theine*, but that it is wholly the product of a certain aromatic oil which they contain, and which he denominates "osmazome." This gentleman argues that food cannot be digested unless it is relished; and that since tea and coffee, in company with other condiments, make the food more palatable to the taste, they must be essential to nutrition.

While it is certainly true that the value of any article as a food depends very largely on its gustatory properties, it cannot be for a moment supposed that the mere question of taste is *sufficient* to settle the nutrient quality of an aliment. In other words, an article may be exceedingly pleasing to the taste, and yet be equally injurious to the health and quite unfit for food. If this were not the case, how would the epicure and the glutton

rejoice; for then they might gratify their appetites without restraint!

Again, an article may be possessed of little or no gustatory properties, and yet be a most valuable and indispensable aliment. Such is the case with pure water. We do not hesitate, then, to declare this argument for the use of tea and coffee to be without weight. It is, indeed, a fact now coming to be recognized more and more fully, that all condiments are not only useless, but injurious, tea and coffee with the rest.

TEA "CHEERS AND NOT INEBRIATES."

Philosophers have speculated, theologians have moralized, and poets have waxed eloquent, about "the cup that cheers and not inebriates." Doubtless we shall startle such when we say that, although this is very pretty poetry, it is false in fact. Tea and coffee, as well as tobacco, are as truly capable of producing a condition of intoxication as is alcohol. Intoxication is a condition in which the sensibilities are paralyzed and the mind delirious. In more than one instance has this identical condition been induced by the use of tea and coffee.

We have already referred to the fact that Dr. Edward Smith, of England, when conducting some experiments on the "physiological action" of coffee, was thrown to the floor, insensible, in company with his assistant, as the effect of drinking strong coffee.

Dr. Cole, of England, describes the cases of several individuals who were frequently found lying insensible as the result of tea-drinking. One case which he mentions, was an author who was thus found two or three times a week.

Indeed, the man who is so far bereft of his reason that he is wholly insensible is not the only person who is drunk. Every man who takes into his system any kind of stimulant, be it tea, coffee, tobacco, opium, arsenic, or alcohol, is drunk just in proportion to the dose, and all his actions will be more or less unnatural.

The word intoxicate is derived from the Latin word *toxicum*, poison, *intoxicatum*, meaning to drug or poison. Intoxication, then, is a condition of poisoning; and it is wholly immaterial whether opium, alcohol, tobacco, tea, or coffee, is the agent employed.

TEA AND COFFEE PREVENT THE CHANGE OF TISSUE.

Tea and coffee, as well as alcohol and tobacco, have been called by some physiologists "accessory foods," because, as was alleged, they prevent the rapid disorganization of tissues, which always accompanies organic activity. It might be easily shown that this

would be most undesirable, if it were really true; for vital action is not only accompanied by organic change, but is inseparably connected with it. Some even say that it is dependent upon it. But we need not enlarge upon this; for it is claimed by our best authorities that careful experiments demonstrate the fact that change is *accelerated* instead of impeded by the use of tea and coffee. While we have little confidence in the reliability of any of these experiments, there being many chances for error, they are very interesting on some accounts.

A popular writer says, "Science almost always finds some foundation in fact for popular prejudices." In this case, we have a very excellent illustration of this fact. Quite a number of illustrious individuals have been for some time recommending the use of tea and coffee, because, as they claimed, they prevented the ordinary rapidity of tissue change, and so lengthened life and economized food. But now we find Dr. Smith, the author of the latest and most popular and reliable work on foods, telling the people that they should use tea and coffee because they *increase* the rapidity of tissue change, and so increase the available force of the individual. The only conclusion to be drawn from this is that even scientific men are sometimes so blinded by the fogs of appetite that they lose sight of true principles and allow themselves to be guided by their prejudices. Reason and common sense must decide from the facts in the case, independent of all such contradictory, and hence unreliable, testimony.

MORAL BEARING OF TEA AND COFFEE-USING.

Every question which concerns mental and physical health necessarily has a more or less direct bearing upon morality and religion, from the fact that man's moral nature is so intimately interwoven with his mental and physical organization that it is necessarily affected by the varying conditions of the latter. The use of tea and coffee has not only the ordinary deleterious influence upon the moral nature which is common to all unhygienic agents, but it is *directly* antagonistic to piety. It is in this light that we shall view it; and we have to bring against it two grave charges.

1. Tea and coffee are largely responsible for a great proportion of the shameful gossip and scandal which work so much mischief in communities, churches, and sometimes whole villages. Every lady who has attended a tea-party knows how this is. Before tea is served, a certain amount of reserve is maintained by even the most garrulous; and character and reputation are in a measure respect-

ed. But when the steaming cup is passed around, the unruly member is unloosed. Then individual character and feelings become the common prey of malice, envy, calumny, and innuendo. The cruel tongue of slander is unrestrained; while insinuations, the basest of all injuries, are recklessly and maliciously hurled against the fairest reputation. Sly hints and implications of wrong somewhere are freely indulged in, no matter who or what may be the character assailed. Teaparties once became, in this way, the source of so much mischief to the government in England that they were strictly interdicted by a royal decree.

2. The use of tea and coffee is one of the chief causes of intemperance.

It has been urged in favor of the use of these beverages that they prevent intemperance by furnishing a means of *mild* stimulation. It is indeed amazing what loose logic, what fallacious reasoning, men will employ on subjects in which the gratification of their perverted appetites and tastes are involved. What would be thought of a ruler who should abolish all laws relative to petty larceny so that thieves and robbers would have an opportunity to gratify their propensity for crime without resorting to burglary and highway robbery? Does not every one know that it is by degrees that the bank robber is made? and that little abstractions, petty thefts, are the stepping-stones to the criminal eminence of the highwayman?

Just so it is in the present case. Tea and coffee with *mild* stimulation are at one end of the drunkard's course, while rum, gin, and brandy, with delirium tremens, are at the other end. The great crime of drunkenness is not in the act of drinking the fiery draught; it is in the *gratification of the desire for artificial stimulation*. The sin is the same in kind, whatever may be the agent employed, although it may differ in degree as the individual indulges in tea, coffee, tobacco, alcohol, hasheesh, or opium.

At first, the mild stimulation of coffee or tea is satisfactory. After a little time, this is found insufficient, even when made as strong as practicable, to excite to the desired degree the exhausted nerves. Something stronger is called for, and tobacco and alcohol gradually obtain a foothold where once they would have been spurned with disgust.

OATMEAL PIE CRUST. Scald two parts of oatmeal with one part of hot water. Roll thin. It bakes very quickly, so that fruit which requires much cooking must be cooked before making into the pie. This remark,

however, applies only to pies which are baked with an upper crust. This crust is very tender, and possesses all the desirable qualities of shortened pie crusts, with none of their deleterious properties.

Beets—Onions.

THE beet, two varieties of which are seen in the accompanying engraving, is one of the most nutritious of all edible roots. In addi-



tion to a considerable quantity of starch and gluten, it contains about ten per cent of saccharine matter. In some varieties, this element is so abundant that the root is found to be a valuable source for the manufacture of sugar in several European countries. Alcohol is also made from it.

To the hygienist, beet-root may be a very valuable food; and it deserves to be much more largely used than it is at present. Their pleasant flavor renders them quite palatable to all but the most depraved tastes without the addition of any condiment.

The practice of eating beet with vinegar is deserving of severe condemnation, for it is one of the most fruitful causes of indigestion. The effect of vinegar upon all vegetable tissues is to harden them and render them less easily acted upon by the digestive fluids.

Beets may be either baked or boiled. The principal advantage in baking is that by this means the nutritive juices of the root are entirely preserved, while they are largely wasted by boiling in the usual manner.

The leaves and stalks of young beets, together with the newly formed roots, are somewhat nutritious, though few people would relish them without the usual accompaniments, which cannot be recommended as either harmless, or anything else than injurious.

ONIONS.

These pungent vegetables, although quite offensive to most noses, are considered very palatable by many. Their offensive qualities are due to an acrid volatile oil which they contain. They are very objectionable for weak stomachs, and it is quite probable that all would be quite as well off without them. Still, they are as nutritious as most other



green vegetables, and if properly cooked, may be eaten by those whose digestive powers are unimpaired. The accompanying cut shows several American and foreign varieties.

Onions are the least objectionable when boiled or roasted. In preparing them for cooking, they should be allowed to remain in water an hour or two after the outer skin and a slice from each end have been removed, so that they may be deprived of a portion of their acidity.

To some tastes, vegetable soups are rendered much more palatable by the addition of onions. In whatever way they are cooked, they should never be attended by the condiments which are commonly added, and which are much less wholesome than the onions themselves. Raw onions should never be eaten, and in selecting for cooking, the milder varieties should be chosen.

It is a bad plan to eat to "make it even."

SEASONABLE HINTS!


Hints to Housekeepers.


The spring is the usual time for housecleaning, and now is a good opportunity, amid the general overturn of household articles, to root out all the causes of death and disease which have accumulated during the winter months. Too many people neglect the closets and garrets, thinking that as these have been unoccupied they need no attention; but this has more than once been a fatal oversight. Sometimes rats, mice, and other vermin, die in these out-of-the-way places, and, being left to undergo putrefaction, they fill the house with the germs of disease. Again, the steam and gases from the kitchen, laden with organic matter, find their way, during the winter months, into every portion of the house, and into the closets and lofts as well as elsewhere. In unoccupied rooms, these vapors condense, and often appear as large drops depending from the ceiling, or as frost upon the windows. Carpets, walls, and unused clothing, become saturated with these deleterious gases, which, on the advent of warm weather, undergo a kind of fermentation which develops the most active causes of disease. Clothing and carpets should be aired and washed. Clothing which cannot well be washed, may be purified by thoroughly heating it for an hour or two. The lofts should be cleared and whitewashed, and the closets should share in the general renovation.


Another hint. Many people, when newly papering their rooms, seek to save themselves a little extra labor by leaving the old paper upon the walls, merely covering it with the new. This is a very dangerous proceeding, sometimes, and is always harmful. The moisture of the fresh paste causes a fermentation of the old, which develops hurtful gases; but if the old paper contained arsenical colors, a still greater evil is produced; for the arsenic is liberated from its solid combination, and appears in one of its most deadly forms, as a gas, which pervades and poisons the entire air of the apartment. This subtle poison may thus be at work, undermining the constitutions of the inmates of such a room, without there being a suspicion of the real cause of the difficulty.


The cellar, too, needs looking after in a very thorough manner. It should be cleared and carefully cleansed, and, if possible, whitewashed. It is a good plan, also, to scatter a quantity of chloride of lime about for a few days to complete the disinfection.

Items for the Month.

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

 WE are very sorry to be obliged to go to press this month without the article on Bible Hygiene from the pen of Eld. White. The failure of the copy to reach us has probably been caused by the freshets in the mountains, which have carried away a large number of bridges on the Union Pacific Railroad, and thus caused an interruption of the mails.

 The discussion of the salt question in this number is somewhat more lengthy than we could desire; but we could not well divide it again without doing injustice to the writer of the portion in favor of salt. The advocate of salt-using is an able and experienced controversialist, and we doubt not that our readers will find themselves well repaid for a careful perusal of the article, especially as most of the arguments are new, the novel attempt being made to prove that the Scriptures recognize salt as a necessary article of diet, and thus sustain its common use as food.

 It is with great regret that we announce the recent death of Mr. S. R. Wells, of New York City. Mr. Wells has long been known as a reformer and a publisher of reformatory works. He was for many years associated with the Fowlers; but has of late years been the sole proprietor of his business. His illness was short, his death being caused by an acute attack of pneumonia. He died, April 12, aged about fifty-five years.

A Word to Agents.

ALTHOUGH the busy season of the year, with farmers, has now fairly begun in many sections, many are finding the present a more favorable time for canvassing than the winter and early spring has been. Not only is the weather more pleasant for this kind of work, but the general hard times which prevailed during the winter months, owing to an almost complete stagnation of many kinds of business, are now less severe, and money is becoming more plenty among the working classes.

Again, the spring is the time when great numbers of people annually suffer from ill health, in consequence of bad living through the winter.

This affords an opportunity for impressing the importance of the subject of health reform and the merits of the REFORMER as an advocate of those principles which, if adopted, will make a person an entire stranger to such disagreeable things as "spring sickness."

Let us make one more effort, friends, before the canvassing season closes. The very liberal terms offered to canvassers have been extended for a few weeks longer for the express purpose of giving time for one more general rally.

We claim that our canvassers are the best paid of any in the world; for they not only get a handsome remuneration for their labor, but they have the satisfaction of feeling that they are benefiting others even more than themselves. We already have a long list of agents, but are there not others still who can spend a few days in getting up a club in some neighboring city or village? Who can tell how much good one might be able to accomplish by even so slight an effort?

A Necessary Article.

On the second page of the cover will be found an advertisement of Kedzie's Improved Water Filter. This filter has been in constant use for a number of years at the Health Institute, and it has always given abundant satisfaction. We call especial attention to this article because we know there are hundreds who are daily suffering from the need of it. The habitual use of hard water is often productive of the most painful and dangerous maladies. Urinary calculi and gall stones are especial products of this injurious habit. In fact, it is impossible to enjoy perfect health while in the daily use of water which is impregnated with lime or other inorganic matters; and any person who thus violates one of the plainest laws of health will inevitably shorten his life in a commensurate degree. None but pure, soft water is safe to use in any form. Every individual who has not free access to a well or spring which supplies pure, soft water should not fail to provide himself, as soon as possible, with one of these filters, which are offered at very moderate rates. The expense is a mere trifle, and will save weeks of suffering as well as expensive doctor bills. Send for one. For prices, see the advertisement referred to.

WE will be much obliged to Mr. J. A. Williams, who sent us some manuscript some weeks since, if he will send us his address, as we have unfortunately lost it.