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TEA AND COFFEE CONSIDERED.

PROF. W. MATTIEU WILLIAMS has been contributing a valuable series of articles on cookery to *Knowledge*, a prominent English magazine, which have been reprinted in this country in the *Popular Science Monthly*. In one of his most recent articles, this able writer considers the use of tea and coffee. He begins by quoting Count Rumford, who recommended an infusion of roasted meal as a substitute for tea and coffee, as follows :—

He tells us that this is not only used by the wood-cutters, but that it is also the common breakfast of the Bavarian peasant, and adds that it is infinitely preferable in all respects to that most pernicious wash, *tea*, with which the lower classes of the inhabitants of Great Britain drench their stomachs and ruin their constitutions. He adds that, when tea is taken with a sufficient quantity of sugar and good cream, and with a large quantity of bread-and-butter, or with toast and boiled eggs, and, above all, *when it is not drunk too hot*, it is certainly less unwholesome; but a simple infusion of this drug, drunk boiling hot, as the poor usually take it, is certainly a poison, which, though it is sometimes slow in its operation, never fails to produce fatal effects, even in the strongest constitutions, where the free use of it is continued for a considerable length of time.

This may appear to many a very strong condemnation of their favorite beverage; nevertheless, I am satisfied that it is perfectly sound. This is not an opinion hastily adopted, but a conclusion based upon many observations, extending over a long

period of years, and confirmed by experiments made upon myself.

The *Pall Mall Gazette* of August 7 says, "There is balm for tea-drinkers in one of Mr. Mattieu Williams's 'Science Notes' in the *Gentleman's Magazine*." This is true to a certain extent. I referred to the Chinese as habitual drinkers of boiled water, and suggest that this may explain their comparative immunity from cholera, where all the other conditions for a raging epidemic are fulfilled. It is the boiling of the water, not the infusion of tea-leaves therein, to which I attribute the destruction of the germs of infection.

In the note which follows, I proposed an infusion of fried or toasted bread-crumbs, oatmeal, maize, wheat, barley, malt, etc., as a substitute for the tea, the deep color of the infusion (poured off from the grounds in this case) serving to certify the boiling of the water. Rumford's burned soup, taken habitually at breakfast or other meals, would answer the same purpose, with the further advantage to poor people of being, to a certain extent, a nutritious soup as well as a beverage. All that is nutritious in porter is in this, minus the alcoholic drug and its vile companion, the fusel-oil.

The experience of every confirmed tea-drinker, when soundly interpreted, supplies condemnation of the beverage; the plea commonly and blindly urged on its behalf being, when understood, an eloquent expression of such condemnation. "It is so refreshing;" "I am fit for nothing when tea-time comes round until I have had my tea, and then I am fit for anything." The "fit for nothing" state comes on at five p. m., when the drug is taken at the orthodox time, or even in the early morning, in the case of those who

are accustomed to have a cup of tea brought to their bedside before rising. With blindness still more profound, some will plead for tea by telling that by its aid one can sit up all night long at brain-work without feeling sleepy, provided ample supplies of the infusion are taken from time to time.

It is unquestionably true that such may be done; that the tea-drinker is languid and weary at tea-time, whatever be the hour; and that the refreshment produced by "the cup that cheers" and is *said* not to inebriate, is almost instantaneous.

What is the true significance of these facts?

The refreshment is certainly not due to nutrition, not to the re-building of any worn-out or exhausted organic tissue. The total quantity of material conveyed from the tea-leaves into the water is ridiculously too small for the performance of any such nutritive function; and, besides this, the action is far too rapid; there is not sufficient time for the conversion of even that minute quantity into organized working tissue. The action cannot be that of a food, but is purely and simply that of a stimulating or irritant drug, acting directly and abnormally on the nervous system.

The five-o'clock lassitude and craving are neither more nor less than the reaction induced by the habitual abnormal stimulation; or otherwise, and quite fairly, stated, it is the outward symptom of a diseased condition of brain, produced by the action of a drug; it may be but a mild form of disease, but it is truly a disease nevertheless.

The active principle which produces this result is the crystalline alkaloid, the *theine*, a compound belonging to the same class as strychnine and a number of similar vegetable poisons. These, when diluted, act medicinally, that is, produce disturbance of normal functions as the tea does, and, like theine, most of them act specially on the nervous system; when concentrated, they are dreadful poisons, very small doses producing death.

The non-tea-drinker does not suffer any of these five-o'clock symptoms, and if otherwise in sound health, remains in steady working condition until his day's work is ended, and the time for rest and sleep arrives. But the habitual victim of any kind of drug or disturber of normal functions, acquires a diseased condition, displayed by the loss of vitality or other

deviation from normal condition, which is temporarily relieved by the usual dose of the drug, but only in such wise as to generate a renewed craving. I include in this general statement all the vice-drugs (to coin a general name) such as alcohol, opium, tobacco (whether smoked, chewed, or snuffed), arsenic, hashish, betel-nut, coca-leaf, thorn-apple, Siberian fungus, maté, etc., all of which are excessively "refreshing" to their victims, and of which the use may be, and has been, defended by the same arguments as those used by the advocates of habitual tea-drinking.

Speaking generally, the reaction or residual effect of these on the system is nearly the opposite of that of their immediate effect, and thus larger and larger doses are demanded to bring the system to its normal condition. The non-tea-drinker or moderate drinker is kept awake by a cup of tea or coffee taken late at night, while the hard drinker of these beverages scarcely feels any effect, especially if accustomed to take it at that time.

The practice of taking tea or coffee by students, in order to work at night, is downright madness, especially when preparing for an examination. More than half of the cases of break-down, loss of memory, fainting, etc., which occur during severe examinations, and far more frequently than is commonly known, are due to this.

I frequently hear of promising students who have thus failed; and, on inquiry, have learned, in almost every instance, that the victim had previously drugged himself with tea or coffee. Sleep is the rest of the brain; to rob the hard-worked brain of its necessary rest is cerebral suicide.

My old friend, the late Thomas Wright, was a victim of this terrible folly. He undertook the translation of the "Life of Julius Cæsar," by Napoleon III., and to do it in a cruelly short time. He fulfilled his contract by sitting up several nights successively by the aid of strong tea or coffee (I forget which). I saw him shortly afterward. In a few weeks he had aged alarmingly, and become quite bald, his brain gave way, and never recovered. There was but little difference between his age and mine; and but for this dreadful cerebral strain, rendered possible only by the alkaloid (for otherwise he would have fallen asleep over his work, and

thereby saved his life), he might still be amusing and instructing thousands of readers by fresh volumes of popularized archæological research.

I need scarcely add that all I have said above applies to coffee as to tea. The active alkaloid is the same in both, but tea contains weight for weight about three times as much as coffee. In this country we commonly use about fifty per cent more coffee than tea to each given measure of water, and thus get about half as much alkaloid. On the Continent they use about double our quantity (this is the true secret of "coffee as in France"), and thus produce as potent an infusion as our tea.

The above remarks are exclusively applied to the *habitual* use of these stimulants. As medicines, used occasionally and judiciously, they are invaluable, provided always that they are not used as ordinary beverages. In Italy, Greece, and some parts of the East, it is customary, when anybody feels ill, with indefinite symptoms, to send to the druggist for a dose of tea. From what I have seen of its action on non-tea-drinkers, it appears to be specially potent in arresting the premonitory symptoms of fever, the fever-headache, etc.

TO BE CONTINUED.

JEWISH HYGIENE AND DIET.

[THE following are a few paragraphs from an interesting paper read before the American Medical Association at its last meeting at Washington, D. C., by C. H. Von Klein, A. M., M. D.—ED.]

We are now in the age of pride and the Niobe of nations. But when we look back, even to the dark age of the Egyptians, we find that our sanitary measures are far behind any other advancements of modern civilization.

Hygeia, commonly called the goddess of health, and from which the term *hygiene* has its etymology, was a pretender, as well as her father Esculapius, who styled himself the god of medicine. But when we look back beyond the days of these pretenders, we find that nations lived hundreds of years before them, whose literature was ever preserved by a nation which has preserved itself and survived nations of ordinary power.

When the Egyptians strove among

themselves, their literature was destroyed, and the loss of the library of Alexandria is felt at the present age. But those people of whom I am now about to speak,—though driven from country to country and from nation to nation, at all ages and in all centuries, and are still persecuted, nevertheless their literature remains, and shines forth with them in full maturity.

Hippocrates, who is supposed to have lived about four hundred years before Christ, whose writings on medical art have been preserved, and who endeavored to explain the causes of disease in the human frame, and their symptoms, and pointed out their preventives, and laid down sanitary regulations and exercises for the preservation of health, appears to have been acquainted with those large volumes of scientific writing, as he well describes their contents. I am surprised that Galen, the great master, one of the most illustrious men in the annals of medical science, does not mention them. But I am not surprised at Paracelsus, the father of quacks, who styled himself Theophrastus Bombastus, Philosophus, and other great names to which he was not entitled. Ever since the days of Hallé, and to the present day, men have lived in both hemispheres who became illustrious for their researches in sanitary science; still on those great works which embrace the teaching and learning of human hygiene, they are mute.

I mean the illustrious works of the Jewish Talmud, the greater parts of its contents, hygiene, a perfect treatise for preserving health. One might not think it possible that the researches of the learned could overlook such a valuable scientific writing. It is strange, but nevertheless true, and can be partly explained. They are writings and teachings of a creed whose name was, before the crucifixion of Christ, and ever since has been, hated, persecuted, and rebelled against. Secondly, they are written in languages that modern scientists are unacquainted with, from the fact that the Talmudic language is a conglomeration of the Hebrew, Chaldaic, Aramaic, Syriac, Arabic, Greek, and Latin. It was preserved by oral delivery for many generations before Christ, and until about the second century after Christ, when the Mishna was compiled. About the middle of the sixth century the entire work was finished.

The תלמוד Talmud (teaching) comprises the Mishna and the Gamara. Its contents

are of a diversified character, relating not merely to religion, but to philosophy, medicine, history, jurisprudence, and the various branches of practical duty.

There are besides the Talmud many other valuable works among the Jews, which are almost entirely devoted to hygiene; viz., חיי אדם *Chi Adam*, life of man; שולחן ערוך *Sulchan Oruk*, a set table; אורח חיים *Aarach Chaim*, path of life; יורה דעה *yorah deah*, teaching of knowledge, etc.

I would enter into detail of the תרי"ג מצוות *Taryag Mitzvoth*, six hundred and thirteen commands of the law, more than one-half of which pertain to hygiene, and show that the whole period of Jewish life, from Alpha to Omega, is based upon sanitary measures and morality, which is the basis of health.

Besides the great Sanhedrim at Jerusalem, there existed many minor sanhedrims, consisting of twenty-three members, in every large country; while at smaller places the judiciary consisted of three persons, composing their minor courts. The former-mentioned Sanhedrims are the ones which ordained the great laws of hygiene. The last-mentioned minor courts are still in existence and operation in almost every congregation throughout Europe. They are termed בית דין *beth din*, house of judgment. Their main acts are decisions upon what is כשר *cashir*, clean, or טריפה *traipha*, unclean; so that if anything occurs within a Jewish household that raises the question of cleanness, it is referred to this body, and their decision is generally abided by. These questions arise very frequently, especially among the Orthodox Jews, as their cleanliness is amazingly great.

In washing the hands, נטילת ידים *natilath yadaim*, they are not only instructed to do this, but they are told in what manner; for instance, they are not to wash their hands by dipping them in a vessel, but the water must be poured upon them; they must pour with the right hand upon the left and with the left on the right, etc., three times; after this they wash the face and rinse the mouth, drying the hands and face with a towel. This must be done as soon as they rise from the bed, even in the daytime. They must not touch any portion of the body before this done; also before and after each meal, after each evacuation or urination, or the touching of dead bodies or anything unclean. In districts of Orthodox Jews they have public baths which are used every morning before

breakfast by each individual; these are termed בית טבילה *Beth Tbilah*, a house of baptism. This certainly is a very notable endeavor to prevent disease.

It lays down sanitary regulations for what they must eat and drink. The diet is so regulated that one article of food will not interfere with another in digestion; for instance, after eating meat they are to wait three hours before milk or its substances dare be used, as the milk is liable to coagulate and irritate the stomach; even vessels in which meats are prepared are prohibited to be used for milky substances, or *vice versa*. This is done for the purpose of strengthening the commands, so that they will not allow themselves to consume milk and meat at the same time. They are also prohibited from eating חיה רעה *cheth roeth*, wild beasts that do not chew the cud, or have the hoof parted, of the species of the bear, lion, tiger, etc., as such live almost exclusively upon animal food. This is reasonable, as they are liable to be infected by morbid poisons from the consumption of dead animals that might have died from hydrophobia or other raging diseases, such as are sometimes found among dogs, cats, rabbits, foxes, wolves, etc.; for whatever disease originates spontaneously in those animals is subject to be transmitted from one to the others; they are therefore dangerous as diet. Even עופה רעה *opheth roeth*, wild fowls of the species of the crow, eagle, ostrich, owl, stork, bat, etc., are prohibited, as they consume dead animals.

The meat the Jews consume from the beast or the fowl must be killed in a certain way, and with a certain instrument, not according to the vulgar custom by striking on the head, by a rude knife, or in a coarse and violent way that would mangle or lacerate the body, which might produce instant inflammation and probably blood poisoning, thus making it unclean and unfit for anybody to consume. The killing of the beast as well as the fowl must be by bleeding through the jugular vein. Prior to the killing, the animal must be well rested, and its respiration normal. There must be no broken limbs; their lungs must be blown up to the trachea, and if it does not expand, it is soaked in water twenty-four hours, when if it does not expand, the animal is unclean. The veins and arteries must be dissected from the animal; this is done for no other purpose but to ascertain whether there are

deep-seated abscesses or not (such abscesses being generally found about the arteries and veins), that would make the animal unclean. The blood of all animals is prohibited, as the consumption thereof is dangerous to human life, because all animals are more or less subject to scrofula or other blood diseases. According to Drs. Buchner, Kerner, Dunn, Horn, Shuman, and others, poison has developed in sausages made of blood, and to which they have given the name of Allantotoxium.

Therefore the Jews do not eat meat, either of the beast or fowl, unless it has been well soaked and salted. Their mode of preparing is first to soak it half an hour, then it is well rinsed off with clean water, and salted on both sides, placed upon a board slanting, there to remain from twenty to thirty minutes, then again it must be rinsed three times before its use is proper. The prohibition of the use of חזיר *chazir*, swine, for food among the Jews it is unnecessary to dwell upon, as its effects are but too well known to the laymen as well as to the physician, not only from the danger of trichinæ but of all other diseases to which the hog is inherent. The hazard from the use thereof and its importation have of late years become national issues in all civilized governments. It should not only be an issue where it is to come from, but its use should be entirely eradicated. Mountains would sink down from the dead caused by the use of this miserable brute. Fish without scales and fins דגים בלוי סנפיר וקשקשת *dagim balo snafir vecashcsheth*, are also prohibited among the Jews. This stands to reason, as frightful poisons are found in many kinds of fish;—not to say that all fish without scales and fins are poisonous, but *all poisonous fish are without scales*, and therefore they must be dreaded. Naturalists have declared that fish live upon their kind, that is to say, fish without scales live only upon such as have no scales, etc., so they are liable to be poisoned from others.

All שרצים *sharatzim*, creeping things, or reptiles, or food containing the same, is strongly prohibited, and the use thereof is considered a great crime by the Jews.

Water, vinegar, and other liquids suspected of foreign bodies must be strained through a cloth. All vegetables subject to vermin, such as parsley, caraway, lettuce, green onions, peas, mushrooms, berries, cherries, and all vegetables whatsoever must be picked and examined leaf by leaf, kernel by kernel, grain by grain.

All fruits, such as apples, pears, cherries, citron, apricots, peaches, oranges, lemons, nuts, etc., that are decayed or moldy, are prohibited for use; their seeds are always be considered unfit for use. By this it can be seen that the ancients have already feared the germ of disease.

All wines, such as יין מסך *yayin mesek*, drugged wines, are interdicted, for they might influence or propagate gout, or cause other afflictions.

Even the manner in which food should be cooked and prepared is laid down; for example, the Talmud asserts that an egg cooked in sand, as is done in hot climates, or laid beside a hot kettle, or wrapped in towels, is not proper food to be consumed. This may appear to us as senseless; but nevertheless it stands to reason that an egg cooked in the above described manner may become partly hatched. By this it may be seen that hatching eggs by artificial temperature is not entirely a modern invention.

They are also instructed how to visit the sick, בקור חולים *bakur cholim*, whom they shall visit, and in what diseases. Not only that, but even the clothes they wear are regulated, how they should be made, and of what fabrics. The cloth must not be a mixture—שעטנז *shatnez*—of linen and wool; this may appear very frivolous to us, but I say there are sanitary measures even in this, as these two textures counteract each other; wool retains its temperature, is a non-conductor of heat, and keeps the body warm, while linen is a conductor of heat, and cools the body. The custom of burying their dead in linen is done for no other purpose than to prevent infection, as wool is a retainer of contagious and infectious matter. Pasteur's experiments are but too fresh in our minds. I do not know whether he attributes the contagion of the sheep to the animal body itself, or to the wool. I cannot conceive that an animal interred for many years could still contain contagion, as the body would be entirely decomposed. But I do believe the wool might retain its infection for hundreds of years, especially if buried in dry ground.

In accordance with the above proofs, it can be seen, as heretofore stated, that the laws of morals and health were with the Jews from their earliest history. And those who are acquainted with the Talmud, which is based upon the fundamental principles of the Bible, know that there is not another religious sect or creed in the universe, with the exception of the Jews

and the Mohammedans, who have in their theology, hygiene and diet. It is an established fact that the Koran is taken from the Talmud, or the Mohammedans would not have it. One thing is certain; the Mosaic and Talmudic laws have accomplished more by their terrific fear of some unknown power that they inculcate than all the legislation of the civilized world, with their rigid pains and penalties.

Some say the works of Shakespeare were written two hundred years before their proper time. I have just as much reason to believe that the Talmud was written a thousand years ahead of its time. It appears to have every field of literature cultivated, and those pertaining to health to the utmost extent.

You may ask, What have the Jews to show for their sanitary or hygienic measures? I will say they have a superior claim to the respect of society. Statistics speak for them, and show that they produce a vast amount less of venereal diseases than any of the civilized or uncivilized nations on the face of the earth. Above all, I believe that the sanitary mode of Jewish life has a great tendency to cultivate the brain and mind.

CONFESSIONS AND OBSERVATIONS OF SIR EDWARD LYTTON BULWER.*

[THE old-fashioned water-cure, such a one as is referred to in the following "confessions," has long since disappeared, at least in this country. Quite a crop of them sprang up here in imitation of similar institutions in England and Germany, where many may still be found with their primitive "cold water" processes, "heroic" methods, "rashes," "crises," etc. Rational medicine has taken the place of empiricism, and the modern scientific sanitarium, which is the best exponent of rational medical treatment, includes all that was meritorious in the old water-cure system, together with the vast additions of useful therapeutic knowledge which have been developed in the various lines of inquiry where experimental research has been so busy for a generation back.—ED.]

* Originally published anonymously, under the title of CONFESSIONS OF A WATER-CURE PATIENT, in the *New Monthly Magazine* (London), then edited by Thomas Campbell, the poet.

I have been a workman in my day. I began to write and to toil, and to win some kind of a name, which I had the ambition to improve, while yet little more than a boy. With a strong love for study in books, with a yet greater desire to accomplish myself in the knowledge of men, for sixteen years I can conceive no life to have been more filled by occupation than mine. What time was not given to action was given to study; what time not given to study was given to action—labor in both! To a constitution naturally far from strong, I allowed no pause or respite. The wear and tear went on without intermission; the whirl of the wheel never ceased. Sometimes, indeed, thoroughly overpowered and exhausted, I sought for escape. The physicians said, "Travel," and I traveled; "Go into the country," and I went. But in such attempts at repose, all my ailments gathered round me—made themselves far more palpable and felt. I had no resource but to fly from myself, to fly into the other world of books, or thought, or reverie, to live in some state of being less painful than my own. As long as I was always at work, it seemed that I had no leisure to be ill. Quiet was my hell.

At length the frame so long neglected—patched up for a while by drugs and doctors, put off and trifled with as an intrusive dun, like a dun who is in his rights—brought in its arrears, crushing and terrible, accumulated through long years. Worn out and wasted, the constitution seemed wholly inadequate to meet the demand. The exhaustion of toil and study had been completed by great anxiety and grief. I had watched with alternate hope and fear the lingering and mournful death-bed of my nearest relation and dearest friend, of the person around whom was entwined the strongest affection my life had known, and when all was over, I seemed scarcely to live myself.

At this time, about the January of 1844, I was thoroughly shattered. The least attempt at exercise exhausted me. The nerves gave way at the most ordinary excitement; a chronic irritation of that vast surface we call the mucous membrane, which had defied for years all medical skill, rendered me continually liable to acute attacks, which, from their repetition, and the increased feebleness of my frame, might at any time be fatal. Though free from any organic disease of the heart, its action was morbidly restless and painful.

My sleep was without refreshment. At morning I rose more weary than I lay down to rest.

Without fatiguing you and your readers further with the *longa cohors* of my complaints, I pass on to record my struggle to resist them. I have always had a great belief in the power of the WILL. What a man determines to do, that, in ninety-nine cases out of a hundred, I hold, he succeeds in doing. I determined to have some insight into a knowledge I had never attained since manhood; namely, the knowledge of health.

I resolutely put away books and study, sought the airs which the physicians esteemed the most healthful, and adopted the strict regimen on which all the children of Æsculapius so wisely insist. In short, I maintained the same general habits as to hours, diet (with the exception of wine, which in moderate quantities seemed to me indispensable), and so far as my strength would allow, of exercise, as, I found afterward, were instituted at hydro-pathic establishments. I dwell on this to forestall in some manner the remark of persons not well acquainted with the medical agencies of water, that it is to the regular life which water-patients lead, and not to the element itself, that they owe their recovery. Nevertheless, I found that these changes, however salutary in theory, produced little, if any, practical amelioration in my health. All invalids know, perhaps, how difficult, under ordinary circumstances, is the alteration of habits from bad to good. The early rising, the walk before breakfast, so delicious in the feelings of freshness and vigor which they bestow upon the strong, often become punishments to the valetudinarian. Head-ache, languor, a sense of weariness over the eyes, a sinking of the whole system toward noon, which seemed imperiously to demand the dangerous aid of stimulants, was all that I obtained by the morning breeze and the languid stroll by the seashore. The suspension from study only afflicted with intolerable *ennui*, and added to the profound dejection of the spirits. The brain, so long accustomed to morbid activity, was but withdrawn from its usual occupations to invent horrors and chimeras. Over the pillow, vainly sought two hours before midnight, hovered no golden sleep. The absence of excitement, however unhealthy, only aggravated the symptoms of ill-health.

It was at this time that I met by chance,

in the library at St. Leonard's, with Captain Claridge's work on the "Water-Cure," as practiced by Priessnitz at Gräfenberg. Making allowance for certain exaggerations therein, which appeared evident to my common sense, enough still remained not only to captivate the imagination and flatter the hopes of an invalid, but to appeal with favor to his sober judgment. Till then, perfectly ignorant of the subject and the system, except by such vague stories and good jests as had reached my ears in Germany, I resolved at least to read what more could be said in favor of the *ariston udor*, and examine dispassionately into its merits as a medicament. I was then under the advice of one of the first physicians of our age. I had consulted half the faculty. I had every reason to be grateful for the attention, and to be confident in the skill, of those whose prescriptions had, from time to time, flattered my hopes and enriched the chemist. But the truth must be spoken—far from being better, I was sinking fast. Little remained for me to try in the great volume of the herbal. Seek what I could next, even if a quackery, it certainly might expedite my grave, but it could scarcely render life, at least the external life, more joyless. Accordingly, I examined, with such grave thought as a sick man brings to bear upon his case, all the grounds upon which to justify myself in an excursion to the snows of Silesia. But I own that, in proportion as I found my faith in the system strengthen, I shrunk from the terrors of this long journey to the rugged region, in which the probable lodging would be a laborer's cottage, and in which the Babel of a hundred languages (so agreeable to the healthful delight in novelty, so appalling to the sickly despondency of a hypochondriac) would murmur and growl over a public table, spread with no tempting condiments. Could I hope to find healing in my own land, and not too far from my own doctors, in case of failure, I might indeed solicit the watery gods; but the journey! I, who scarcely lived through a day without leech or potion, to take the long, gelid journey to Gräfenberg; I should be sure to fall ill by the way, to be clutched and mismanaged by some German doctor, to deposit my bones in some dismal churchyard on the banks of the Rhine.

While thus perplexed, I fell in with one of the pamphlets written by Dr. Wilson, of Malvern, and my doubts were solved. Here was an English doctor, who had him-

self known more than my own sufferings ; who, like myself, had found the pharmacopœia in vain ; who had spent ten months at Gräfenberg, and left all his complaints behind him ; who, fraught with the experience he had acquired, not only in his own person, but from scientific examination of the cases under his eye, had transported the system to our native shores, and who proffered the proverbial salubrity of Malvern air and its holy springs, to those who, like me, had ranged in vain from simple to mineral, and who had become bold by despair, bold enough to try if health, like truth, lay at the bottom of a well.

I was not then aware that other institutions had been established in England of more or less fame. I saw in Dr. Wilson the first transporter—at least, as a physician—of the Silesian system, and did not pause to look out for other and later pupils of this innovating German school.

I resolved then to betake myself to Malvern. On my way through town I paused, in the innocence of my heart, to inquire of some of the faculty if they thought the water-cure would suit my case. With one exception, they were unanimous in the vehemence of their denunciations. Granting even that in some cases, especially of rheumatism, hydropathy had produced a cure, to my complaints it was worse than inapplicable, it was highly dangerous, it would probably be fatal. I had not stamina for the treatment ; it would fix chronic ailments into organic disease ; surely, it would be much better to try what I had not yet tried. What I had not yet tried ? A course of prussic acid ! Nothing was better for gastric irritation, which was no doubt the main cause of my suffering ! If, however, I were obstinately bent upon so mad an experiment, Doctor Wilson was the last* person I should go to. I was not deterred by all these intimidations, nor se-

duced by the salubrious allurements of the prussic acid under its scientific appellation of hydrocyanic. A little reflection taught me that the members of a learned profession are naturally the very persons least disposed to favor innovation upon the practices which custom and prescription have rendered sacred in their eyes. A lawyer is not the person to consult upon bold reforms in jurisprudence. A physician can scarcely be expected to own that a Silesian peasant will cure with water the diseases which resist an armament of phials. And with regard to the peculiar objections to Doctor Wilson, I had read in his own pamphlet attacks upon the orthodox practice sufficient to account for—perhaps to justify—the disposition to depreciate him in return.

Still my friends were anxious and fearful ; to please them I continued to inquire, though not of physicians, but of patients. I sought out some of those who had gone through the process. I sifted some of the cases of cure cited by Doctor Wilson. I found the account of the patients so encouraging, the cases quoted so authentic, that I grew impatient of delay. I threw physic to the dogs, and went to Malvern.

It is not my intention to detail the course I underwent. The different resources of water as a medicament are to be found in many works easily to be obtained, and well worth the study. In this letter I suppose myself to be addressing those as thoroughly acquainted with the system as myself was at the first, and I deal therefore in generals.

The first point which impressed and struck me was the extreme and utter innocence of the water-cure in skillful hands, in any hands, indeed, not thoroughly new to the system. Certainly when I went, I believed it to be a kill or cure system. I fancied it must be a very violent remedy, that it doubtless might effect great and magical cures ; but that if it failed it might be fatal. Now I speak not alone of my own case, but of the immense number of cases I have seen, patients of all ages, all species and genera of disease, all kinds and conditions of constitution, when I declare, upon my honor, that I never witnessed one dangerous symptom produced by the water-cure, whether at Dr. Wilson's or the other Hydropathic Institutions which I afterward visited. And though unquestionably fatal consequences might occur from gross mismanagement, and as unquestionably have so occurred at various estab-

* Why ? Why was he "the last person" to go to ? There was one good and substantial reason for giving him this distinction. He was the last for the same reason that, in the judgment of the College of Cardinals at Rome, MARTIN LUTHER would have been the last person in the world for any man, with mind diseased by being troubled with religious doubts, to have recourse to. Dr. Wilson had proved himself a *renegade*, the first of a long list of renegades. Utterly broken down in health, a hopeless wreck, whom none of his professional brethren could do anything for, he, a regular practitioner of eminent standing, had been compelled to seek alleviation at Gräfenberg ; he did not allow himself to hope for more. In less than a year's residence there he was *made whole*, and on his return to England, had the manliness to *bear witness to the truth, to testify to facts*, in his own case and in hundreds of others which had come under his observation and close scrutiny. The Apostate ! An orthodox practitioner, of finished education, of indisputable standing, of eminent qualifications, of extensive practice, to recognize material facts, while orthodox creeds and superstitions, and those in greatest variety and diversity, were in the counter scale, to make a selection from.

lishments, I am yet convinced that water in itself is so friendly to the human body that it requires a very extraordinary degree of bungling, of ignorance and presumption, to produce results really dangerous; and that a regular practitioner does more frequent mischief from the misapplication of even the simplest drugs, than a water doctor of very moderate experience does or can do by the misapplication of his baths and friction. And here I must observe that those portions of the treatment which appear to the uninitiated as the most perilous, are really the safest, and can be applied with the most impunity to the weakest constitutions; whereas those which appear, from our greater familiarity with them, the least startling and most innocuous, are those which require the greatest knowledge of general pathology and the individual constitution. I shall revert to this part of my subject before I conclude.

TO BE CONTINUED.

STRANGE WAYS OF CURING PEOPLE.

[A WRITER in a contemporary journal, who has evidently seen much of the world, contributes the following entertaining article under the above heading.—ED.]

If people were as careful in avoiding the habits which produce disease as they are persistent in seeking cures for their ailments, the number of invalids in the world would be much reduced.

The valetudinarian of modern times leaves nothing untried which may afford him relief, provided that he has the means which are necessary to enable him to travel. He passes from spa to spa, dosing himself with waters of the foulest taste, allowing himself to be boiled in hot springs, or chilled in cold springs, and, according to the nature of his malady, eating bushels of grape at Meran and quarts of whey at Appenzell; submitting to the movement cure at Stockholm, or reviving himself with kumiss on the Russian steppes.

Besides the various water-cures, the Swedish movement cure, the grape, whey, and kumiss cures, there are baths of peat, of mud, of herbs, and of pine-needles, for each of which some specific virtue is claimed.

Genuine sufferers, who are not responsible for their ailments, and are earnestly seeking recovery, patronize them all to some extent, but like the shape of a new

bonnet, or the flounces on a dress, most of these curious remedies owe their existence to the whims of fashion. It is people who are ailing from the disease of luxury and vice, such as gout and scrofula, who support them, and who use them, not with the intention of giving up their baneful habits if they recover, but in order that they may continue to gratify the very habits which have made the remedy necessary.

The waters of Carlsbad are remarkably efficacious in reducing obesity, and every year crowds of gluttons go there to relieve themselves of the cumbrous fat which they have accumulated in overeating during the winter. The change in their appearance is rapid; they lose twenty, thirty, or more pounds in five or six weeks; and having arrived at this famous Austrian watering-place with the bulk of Falstaff, they leave it at the end of two months reduced to shapely proportions,—only, however, to reappear fattened again the next spring, and anxious to renew the treatment.

The principal watering-places of Germany, Austria, and Switzerland—Ems, Homburg, Baden-Baden, Kissengen, and St. Moritz—are as much resorted to for pleasure and excitement as for the benefits to be derived from their springs. Most of them are beautifully situated, and the fashionable circles of London, Paris, Vienna, and Berlin are transferred to them for the season, with all the gayeties which flourish in cities. The social butterflies bathe and drink the waters, and make a pretense of dieting themselves, but their chief aim is pastime. They have balls, theaters, lovely promenades, and luxurious hotels. They dress in splendid raiment, dine extravagantly, and keep the hours of Belgravia and Mayfair.

In most respects one watering-place is like another; the only differences are in degree of magnificence and size in the hotels and baths. There is a "Kurhaus" to which the visitors flock to drink the water and gossip in the morning, and a "Kurgarten" to which they resort later in the day, sitting in the odor of flowers and the shade of foliage, while they listen to the music and sip their coffee and ices.

The scenes in "Kurhaus" and "Kurgarten," when conversation is humming between the strains of the music, and the well-dressed and polite crowd is winding in and out among the bushes and trees, is as full of color and sparkle as the Champs

Elysées in a June afternoon. It is like a great garden-party, to which guests have been bidden from every country, even from Oregon and Nevada, Ecuador and Afghanistan. There may be invalids who are nursing themselves and giving the waters an earnest trial, but they are not conspicuous, though now and then a white face and a decrepit shape, with tremulous footsteps, will lend the force of contrast to the gaiety.

In all directions there are pretty walks and little woodland restaurants, where coffee and other refreshments are served by picturesquely dressed girls. The roads are kept in fine condition, and protected by civil policemen; something like paternal care is taken of the visitors by the village authorities, and as a return for all these advantages,—the safe, smooth roads, the "Kurhaus," with its reading and smoking rooms, and the "Kurgarten," with its band,—a tax called "Kurtax" is exacted from all persons who stay in the place longer than a week.

The strange remedies to which we have referred may usually be tried in conjunction with the mineral springs.

Peat and mud-baths are given at nearly all the continental watering-places. The peat is powdered and sifted, and mixed with boiling water until it resembles the inky sweepings of a street; when it is at a temperature of nearly one hundred degrees, the patient is required to sit or lie in the slimy mass for from a quarter to three-quarters of an hour, at the end of which time he is immersed and washed in clean water. The benefits claimed for the peat-baths are in their calming effects on the cutaneous nerves, and in their promotion of exudations from the body; hence the remedy is used in cases of rheumatism, gout, paralysis, and sciatica.

The same ailments are treated in the same way by mud-baths. Not all kinds of mud are efficacious, and it is not the mud itself which is valuable, but its constituents, that used in the baths being the deposit of the mineral springs, especially the sulphur springs.

Allied to the peat and mud-baths are sand-baths, which are popular with the ancients, and are administered now, as in old Rome, to promote the elimination of poisonous matter from the body. The patient is buried in sand heated to a temperature of from 116° to 122°, for about an hour, and the perspiration produced in this way is so copious that his weight will

be reduced as much as two pounds in that time.

Earth-baths are said to be valuable for their absorbent effect in withdrawing diseases through the pores, and a weird story of an experiment with them is told by a Western poet. A party of adventurers crossing the mountains had among them two men who were stricken down with scurvy. All the simple remedies of the camp had been exhausted in vain, when an old miner bethought himself of the earth-bath. The sufferers were quite willing to try it, and at night they were buried up to the neck in holes which had been dug where the soil was soft, some distance outside the camp. Their companions returned to their tents; they themselves soon fell asleep. When the party came in the morning to see how the earth-bath had affected the invalids, they were filled with horror; the buried men had been visited by wolves during the night, and their heads had been eaten off.

As this grotesque reminiscence of camp-life is given by a very imaginative person, however, we advise the reader to take it with a grain of salt.

Pine-needle baths are common in Germany. The needles are brewed into a greenish extract, and about two ounces of the fluid are mixed with enough warm water to make a bath. The immersion in this is not at all unpleasant; a strong aromatic scent rises from the water, and the effect of the bath is said to be very beneficial in cases of chronic rheumatism and of neuralgia.

Formerly it was believed that the longer a patient remained in the various baths, the more rapid his cure would be, and the corrosion of his skin was taken to be a sign of recovery; but it is now understood that excess in this is as injurious as in other things. Nevertheless, at some of the mineral water baths it is still the custom to remain in the water several hours at a time. The patients, both men and women, all dressed in long robes, immerse themselves during the whole forenoon and afternoon, beguiling themselves with conversation and reading.

At Leukerbad, in Switzerland, the scene in the baths is very curious. The basins are filled with bathers of both sexes, who not only chat among themselves, but by means of little floating tables are enabled during their immersion to play games of chess, eat, drink, and read. A gallery surrounds the basins, and while the bath-

ers look like some aquatic performing animals, their friends in ordinary dress gather in the gallery, and chat with them.

In New Zealand there is a bath which leaves a coating of silica, like enamel, and which has been called after the notorious Madame Rachel, who pretended to make people "beautiful forever." In the same country a lobster bath is administered, and is said to be efficacious in the most severe cases of rheumatism.

Perhaps the pleasantest of all the strange cases which we have mentioned is the grape cure at Meran.

Meran is a pretty village in the Tyrol. Grapes of the richest bloom and the most delicious flavor are to be seen whenever there is enough soil for the vine; they hang in purple bunches over all the hills, in every garden, round every cottage porch. Carts full of them come into town every morning, and they lie heaped on stalls at the street corners. The patients begin by eating one or two pounds a day, dividing the quantity into three portions, one taken an hour before breakfast, the next before dinner, and the next before supper. The quantity is increased by degrees, until no difficulty is experienced in consuming six or seven pounds a day.

Grape diet, says Dr. Edward Gutman, is an excellent remedy in cases of enlargement of the liver, congestions of the brain produced by mental labor or excitement, and consumption. It is a remedy which our readers would swallow without any repugnance. But the air of Meran is pure, and the patients live out-of-doors. Very likely the pure air and the sunshine have as much to do with the cures effected as the grapes have, for they are the greatest of medicines.

OVERWORK.

A LARGE amount of sentimental rot gets into print about men's killing themselves by overwork. In nine out of ten cases of this kind, the true cause of death will be found to be something besides overwork. We all know professional and business men who work harder than they ought, and yet by taking good care of themselves in the way of diet, exercise, etc., manage to enjoy good health, and wear a cheerful, hearty look. Those who die from "overwork" generally use liquors and tobacco without moderation, keep late hours, and indulge in hazardous speculations outside of their legitimate business. Late hours,

liquor, and tobacco engender weak nerves, and upset the functions of the body; while anxiety over speculative schemes acts upon the brain. With these evil agencies working against a man, some slight exposure brings on an attack of illness, and the whole body being weakened, gives way in a very short time. The sudden illness and speedy demise baffle medical skill; the stricken family and shocked friends are told that overwork was the cause of death, and the press deploras the tendency of our civilization to kill people by overwork, when the real cause of nine-tenths of these deaths is as outlined above. —*The Manufacturer and Builder.*

—Live for something. Thousands of men breathe, move, and live, pass off the stage of life, and are heard of no more. Why? None are blessed by them; none can point to them as the means of their redemption; not a line they wrote, not a word they spoke could be recalled, and so they perished; their light went out in darkness, and they were not remembered more than the insects of yesterday. Will you thus live and die? O man, live for something. Do good, and leave behind you a monument of virtue that the storms of time can never destroy. Write your name by kindness, love, and mercy on thousands you come in contact with year by year, and you will never be forgotten.—*Dr. Chalmers.*

—"Water is the fittest drink for all persons, of all ages and temperaments: of all the productions of nature or art, it comes nearest to that universal remedy so much searched after by mankind, but never discovered."

—No physician ever weighed out medicine with half so much exactness and care as God weighs out to us every trial; not one grain too much does he ever permit to be put in the scale.—*Cecil.*

—The following is told of a green son of the Evergreen Isle. He was eating green corn from the cob for the first time. He handed the cob to the waiter and asked, "Will ye please put some more beans upon me sthick?"

—Man without religion is a creature of circumstance. Religion is above all circumstances, and will lift him above them.



TEMPERANCE AND MISCELLANY.



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Conducted by MRS. E. E. KELLOGG, Superintendent of Hygiene of the National W. C. T. U.

THIS LIFE IS WHAT WE MAKE IT.

LET'S oftener talk of noble deeds,
And rarer of the bad ones,
And sing about our happy days,
And not about the sad ones.
We were not made to fret and sigh,
And when grief sleeps, to wake it;
Bright Happiness is standing by—
This life is what we make it.

Let's find the sunny side of men,
Or be believers in it;
A light there is in every soul
That takes the pains to win it.
Oh! there's a slumbering good in all,
And we perchance may wake it;
Our hands contain the magic wand—
This life is what we make it.

Then here's to those whose loving hearts
Shed light and joy about them!
Thanks be to them for countless gems
We ne'er had known without them.
Oh! this should be a happy world
To all who may partake it;
The fault's our own if it is not—
This life is what we make it.

A SKETCH OF EUROPEAN TRAVELS.

BY MRS. E. E. KELLOGG.

FROM earliest antiquity, man has sought to perpetuate the memory of the dead by some kind of lasting monument. Among the ancient nations, some form of structural tomb was very commonly provided for this purpose. Believing, as many of them did, that the spirits of the dead lived a kind of shadowy life, hovering about the tomb in which they were buried, and depending for their well-being entirely upon the honors bestowed upon them by their descendants, they spared no pains to make these last habitations as enduring as possible. Far more labor and greater expense was often bestowed upon the construction of the abode for the dead than upon the dwellings of the living. Their houses they called inns, because men dwelt there but a brief period; their tombs they termed everlasting mansions, because the dead lived there forever.

The Greeks and Romans attached the greatest importance to the burial of the dead or the entombment of their ashes, because of the common belief that if left without burial the spirit of the dead was doomed to wander alone and desponding for a hundred years on the other side of the Styx; and if by mishap a person perished at sea, or otherwise under such circumstances that his body could not be found, a kind of tomb

called *cenotaph* was erected by his friends, that the spirit of the departed might have a permanent dwelling-place. The rites of burial and burning seem to have both been used by the early Romans. With the latter method the body was reduced to ashes. These were quenched with wine, collected by the relatives of the departed, and finally deposited in an urn made of clay, glass, marble, bronze, or silver, according to the standing of the deceased.

The Roman tombs usually consisted of a vault, in which were placed the urns or the sarcophagi, as the case might be, with a chamber above adorned with statues or effigies of the dead, and where all requisite ceremonies for the honor of the departed were held. They varied in size according to the wealth and distinction of the deceased, many of them being large and superbly adorned, both within and without, with statuary, vases, and other works of art. If the family of the deceased was large, a patrimonial tomb was usually provided. The laws of ancient Rome provided that no dead should be burned or buried within the city; hence nearly all their tombs were constructed outside the walls. The gradual extension of the city limits has included some of the older tombs, so that to-day one occasionally sees in Rome a strange commingling of ancient monumental structures and modern architecture. Most of the tombs, however, were erected near some road leading from the city out across the broad Campagna that surrounds it. The *Via Appia* (Appian Way), the military road, constructed by Appius Claudius Cæcus, 312 B. C., seems to have been a favorite site for tombs; and if one may judge from the ruins that remain, they must have been erected as closely together as are the houses on a city street, and were oftentimes as vast in size.

Few places around Rome are possessed of more historic interest than this street of ancient tombs. Although scarcely a single one of the many hundred structures which once lined the road on either side is now aught but ruins, yet their manner of construction was so superior that the ravages of time have not entirely obliterated their original form, and one can gain an excellent idea of their architecture, although the government has removed most of their contents and decorations to safer keeping within the various museums of the city.

We spent the anniversary day of Rome's foundation, which occurred during our stay in the city, in an excursion on the Appian Way among the tombs of her great men. Flags were flying from the Capitol, and the air was redolent with strains of martial music; and other sounds of rejoicing, commemorative of the birth of Rome,

were heard as we rode out toward the broad Campagna through which the Appian Way extends.

Just within the old city wall (indeed it forms a part of the wall, Aurelian having drawn his line so as to cross it) is the tomb of Caius Cestius. It is a pyramid in form, one hundred and twenty-one feet in height, and ninety-six in width at its base. It is built of brick incased with white marble, now blackened by the hand of time. Its interior is adorned with paintings still in tolerable preservation. Of the history of the occupant, little is known, save the information contained in the inscription on the monument, which tells us that he was one of the *Epulones* whose duty it was to prepare the banquets for the gods on any occasion of public joy or sorrow.

The prospect which opened before us after leaving the city was magnificent. The broad, prairie-like Campagna, stretching away on either side for miles and miles, its green verdure flecked with snowy daisies, scarlet poppies, and other brilliant tropical flowers, with the blue of the sky above reflected on the Alban Mountains in the distance, made up a scene of unsurpassing natural beauty. For miles are seen the picturesque ruins of the ancient aqueducts, extending across the plains. By the roadside on either hand are continuous rows of ruined tombs. Fragments of their inscriptions, reliefs, and broken bits of statuary—here a headless trunk, there a marble foot, an arm, or a hand—are scattered promiscuously among the flowers, like leaves in autumn time.

Of the few tombs in tolerable preservation, the most conspicuous is that of *Cecilia Metella*, wife of the younger Crassus. It is a circular structure, sixty-five feet in diameter, resting on a square basement, originally covered with travertine. The wall is twenty feet in thickness, and is adorned with a frieze of festoons of flowers and rams' heads alternating with each other. The original entrance is buried beneath the surrounding soil, but an opening has been made by which the interior can be visited. There is little to be seen other than the vault and chamber, however, as the sarcophagus and statuary have long since been removed to the city museums.

A large tomb near by is conjectured to have been erected for Messalu Corvinus, a distinguished statesman and poet under Augustus. A few of the tombs have a crematory connected with them, where the funeral pile was erected, and the body consumed to ashes. On the top of one immense, ancient tomb, the Normans of more modern times constructed a fortress tower. Upon still another an ingenious Italian has erected a small dwelling-house, in which he lived, in order, by means of the higher altitude, to escape the malaria so prevalent upon the Campagna. In many instances the capacious vaults of these old tombs now furnish a shelter to sheep, donkeys, and goats from the hot summer sun and pelting autumn rains.

Y We extended our excursion much beyond the usual limits, pressing our way on as far as the landmarks which identify the spot where once stood Three Taverns, the apostle Paul's last halt

on the journey toward Rome. The ancient pavement of the Appian Way is well preserved in many places, and one can feel that he is treading upon the same stones over which Nero's chariot thundered, and St. Paul dragged his weary footsteps toward his last earthly home.

Tombs of kings, philosophers, and other persons of note abound, as can be learned from the fragmentary inscriptions to be seen. On our return we visited the tomb of the Scipios, where once were entombed the families of the famous consuls, the poet Ennius, and several members of other families of note. The structure was originally one of great magnificence, but there remains little to be seen, the inscriptions and monuments having been removed to the Vatican museum for preservation.

Adjacent to this tomb are three tombs, arranged to contain a large number of cinerary urns, and termed *Columbaria*, because the niches in which the urns are deposited so greatly resemble pigeon holes (*columbaria*). Such tombs were usually used by great families for depositing the ashes of their slaves and dependents. We visited the one in which were deposited the urns containing the ashes of Caesar's household. The tomb is a square excavation in the earth; around its sides in tiers, one above another, like the pigeon holes of a writing-desk, are the niches for the urns, with the names of the persons whose ashes they contain inscribed over them. The inscriptions are well preserved, and we noted among many others the names of Tryphena and Tryphosa, mentioned by Paul in the last chapter of his epistle to the Romans.

"A TROUBLER IN ISRAEL."

BY ELEANOR KIRK.

MR. AND MRS. GEORGE WESTBROOK were as unlike in character and temperament as in personal appearance. Mr. Westbrook was an exceedingly plain man. His eyes were blue and kindly, his hair sandy, and his complexion as fair as a girl's. He was a philosopher and logician by nature; and his views of life, taken from a long range, were so broad and comprehensive that he was quite oblivious to the little daily frets and inharmonies that so jarred upon his sensitive spouse.

Mrs. Westbrook was a beautiful brunette, tall, slender, and very graceful. Her taste in dress was considered perfect by all who knew her, and was a constant source of delight to her friends and her dressmaker, who often received many valuable hints and suggestions from this profitable customer. Mrs. Westbrook's world was bounded by the four walls of her charming home, though in the generally accepted sense, she was neither unsocial nor ungenerous. Her husband made up in perspective all that his wife lacked; but this, instead of being a benefit and a

blessing, was a chronic cause of aggravation.

Why Mr. Westbrook should give up his time and his influence to any one who needed such assistance, without reference to a particular clique or class, was quite beyond his wife's comprehension. "Charity begins at home," was this lady's favorite motto; and by home in this regard she meant the immediate family and the inner circle of deserving intimates. But it was impossible to disturb Mr. Westbrook's cheerful optimism. If his wife scolded or reproached him,—and Mrs. Westbrook could scold on occasions,—his arm speedily encircled her fragile waist, and a few well-chosen words of endearment would usually put an end to the threatening scene.

Now this tiny-waisted, graceful, and willowy creature knew absolutely nothing that was worth knowing about her physical organism. She had studied Latin and French, geometry and rhetoric; could play after a fashion, sing a little, make jellies and cake, and every kind of pastry known among men; but of physiology she was as ignorant as the Irish girl in the kitchen, who fashioned her calico dresses from her mistress's silk ones, and drew her corset-strings till her eyes seemed ready to bulge from their sockets, in the vain endeavor to "look schlim." Mrs. Westbrook's eighteen-inch stays were the cook's delight. Whenever she had an opportunity, she bowed down at this corset shrine, and prayed with her heart if not with her lips to be whittled off in the neighborhood of the ribs.

Mrs. Westbrook talked fluently about her bronchial tubes when she had a cold, and knew on general principles that she had a pair of lungs, and from some experience in pneumonia, that she could not breathe very freely when either one of them happened to be "affected." But of their size, shape, use, and abuse, she had not the slightest conception. It seemed to be the lady's firm conviction that her body was given her to adorn, and that there was very little if any relation between the inner and outer woman. She was a fine housekeeper, and was called a wonderful cook by those who were fortunate enough—or, more truthfully speaking, those who were unfortunate enough—to be invited to her house. Mrs. Westbrook prided herself on "living well," and had a sharp contempt for those who could afford to do so and did not.

Now Mr. Westbrook was not only a fine student, but a scientific investigator. He knew more about the Bible than most theologians, and his friends declared that he had read everything from Josephus to Darwin. And yet he was almost as ignorant as his wife in everything pertaining to physiology and hygiene. He ate with a keen appetite the indigestible concoctions that his wife placed before him; and when his head ached or his sleep was disturbed, he wondered what in the world could be the matter with him.

There was one thing that Mrs. Westbrook did know, and that was the use of drugs. She had a remedy for every ache and indisposition; and there was seldom a day in the week that she did not dose herself, and her husband also. When her first child was born, a delicate little girl with her father's blue eyes and plain features, she took counsel again with her doctors, and laid in a stock of anise, catnip, colamus, paregoric, rhubarb, castor oil, etc., etc., etc., all of which were freely administered. The baby lived, however, in spite of this barbarous treatment, and proved to be, very early in life, "a troubler in Israel." Before she was a year old, she set her face and her fists stoutly against all the messes, and exhibited a wonderfully natural and healthy taste in the choice of food. For some inexplicable reason—at least inexplicable to Mrs. Westbrook and her physician—the fountain usually provided for the sustenance of infants was practically dry. But the Westbrook baby would not have satisfied her hunger from this source, had everything been favorable; for from the first her distaste—not to say disgust—had been singularly marked. She was fond of milk and fruit, and from her earliest infancy seemed to hunger and thirst for pure air. She was always happy out of doors; but confinement in a close room for hours would develop an amount of nervous irritability quite unaccountable in such a mite. Mr. Westbrook was the first to understand this in the child. His wife was seriously alarmed at what seemed to her an out and out exhibition of temper, and was sure that her husband's explanation of the matter proved him a simpleton indeed.

"What does a child of that age know about pure air?" she asked. "Of course all children like to be taken out; but it is a great mistake to humor these whims."

"The child is comfortable in one atmos-

phere, and uncomfortable in another," her companion responded. "When she is comfortable, she is an angel; when she is the reverse, she is the opposite. She hasn't taken counsel with herself, and formally decided to be a termagant."

"But if she is naturally irritable,—"
Mrs. Westbrook suggested.

"I tell you she is naturally irritable and naturally amiable," said the gentleman. "But I do not believe that she is over-irritable without a cause."

Mrs. Westbrook was a monomaniac about night-air. To breathe it was certain death, sooner or later; and she never tired telling of a man her grandmother had known, who, in defiance of all advice and entreaty, would sleep with his window open one December night, and was found dead in the bed the next morning.

This is a fair specimen of Mrs. Westbrook's logic. Her husband had many times placed this proposition in syllogistic form, and endeavored to show her the absurdity of using such an example as a protest against night-air. But the fact that the man died with his window open of a December night, was irrefutable proof to her that the night-air was the cause of his death.

The Westbrook baby proved to be a bad sleeper. Paregoric, soothing syrup, and Jamaica rum were tried in vain. A short stupor would invariably be followed by a long period of fretful wakefulness. At last an idea occurred to the father. Fresh air had proved an immediate remedy for this condition by day, and how would it do to experiment in a similar treatment by night? It was not quite possible to walk the streets with this obstreperous infant at these unseemly hours, and so Mr. Westbrook decided to take her into a cool, well-ventilated room, and see how that would work. He did not share his wife's horror of night-air, and frequently occupied an apartment where he was at liberty to have a window open. His wife told him on each occasion that he would "catch his death o' cold;" but he always laughed away her fears, and did as he pleased. But the baby was hers quite as much as it was her husband's, and she thought a little more; and she could never allow this experiment to be tried. It took about a week for Mr. Westbrook to accomplish his purpose. But the baby at last grew so seriously indisposed that the family doctor, in sheer inability to bring about a more favorable condition, ordered the pa-

tient taken from its mother, and strongly advised the father's plan to be tried. The doctor's word was law in this establishment, and this, added to the fact that Mrs. Westbrook was completely prostrated by her long watching, made it at last a comparatively easy matter to arrange. The anxious father never forgot this night's experience with his first-born. He left the nurse to take care of his wife, and proceeded to the task alone. It was a snapping cold night, and Mr. Westbrook had arranged the furnace so as to keep the thermometer in the neighborhood of 68° F. That 70° was altogether too warm for his little charge at night, he had demonstrated to his perfect satisfaction. A window in a remote part of the room was raised and lowered so as to furnish a current of pure air from night till morning. The effect on the child was instantaneous. The shrieks which had nearly driven her mother distracted, stopped as if by magic. Mr. Westbrook had provided himself with a glass of water and one of milk. The baby liked both. There was neither a bottle nor a spoon to be seen. The child's eyes grew bright, and a smile hovered around the lips so lately distorted with nervous misery. She saw nothing that she did not approve of; and so, after a minute and satisfactory inspection of the new apartment, and a prolonged conversation with her companion in coos and crows, she seized a parental finger, and went comfortably to sleep. She woke once in the night, and signified her desire for a drink, and then sank placidly off to sleep again.

TO BE CONTINUED.

STANDARD OF EDUCATION.

ACCORDING to Ruskin, an educated man ought to know these things: First, where he is—that is to say, what sort of a world he has got into; how large it is; what kind of creatures live in it, and how; what it is made of; and what may be made of it. Secondly, where he is going—that is to say, what chances or reports there are of any other world besides this; what seems to be the nature of that other world. Thirdly, what we had best do under the circumstances—that is to say, what kind of faculties he possesses; what are the present state and wants of mankind; what is his place in society; and what are the readiest means in his power of attaining happiness and diffusing it.

The man who knows these things, and who has his will so subdued in the learning of them that he is ready to do what he knows he ought, is an *educated* man; and the man who knows them not is uneducated, though he could talk all the tongues of *Babel*.—*Sel.*

WANTED—A LITTLE GIRL.

WHERE have they gone to, the little girls
With natural manners and natural curls;
Who love their dollies, and like their toys,
And talk of something besides the boys?

Little old women in plenty I find,
Mature in manners, and old in mind;
Little old flirts, who talk of their "beaux,"
And vie with each other in stylish clothes.

Little old belles, who, at nine and ten,
Are sick of pleasure and tired of men,
Weary of travel, of balls, of fun,
And find no new thing under the sun.

Once, in the beautiful long ago,
Some dear little children I used to know,—
Girls who were merry as lambs at play,
And laughed and rollicked the livelong day.

They thought not at all of the "style" of their clothes,
They never imagined that boys were "beaux"—
"Other girls' brothers" and "mates" were they;
Splendid fellows to help them play.

Where have they gone to? If you see
One of them anywhere, send her to me.
I would give a medal of purest gold
To one of those dear little girls of old,
With an innocent heart and an open smile,
Who knows not the meaning of "flirt" or "style."
—*Ella Wheeler Wilcox.*

PANACEA FOR TROUBLE.

LIFE is filled with trouble, as a writer in *Our Homes* has said, and we must shoulder our share with the best grace we can. We may only seek to make them as light as we can, since to avoid them is impossible.

There is one sovereign panacea for this. It is work. Brooding over trouble is like surrounding one's self with a fog. It magnifies all objects seen through it. Occupation of the mind prevents this; hard work, manual work even, gives the mind other matters of concern, tires the body so that sleep will come.

Very few suicides occur when men are actively employed. When out of work, they think of their other troubles, and the despondency arising from this added one throws the mind from its balance, and the fatal deed is done. Many a man would have committed suicide if he had had the

time. Work of any kind, especially work for others, is the great panacea for a troubled mind.—*Sel.*

PRESIDENT ARTHUR'S TELEGRAPHIC SPEECH.

THERE was less perfection of arrangement and few of those attractions which draw immense crowds, at the opening of the New Orleans Exposition, Dec. 16, in comparison with the Centennial; but if the programme was less elaborate and more business-like, there were some striking features. A live president could not be obtained, but Mr. Arthur stood at one end of a telegraph wire in the White House, with the heads of departments and the foreign legations about him, while the Exposition crowd was at the other; and his quiet speech sounded just as well as if he had not been so far away. The passing of these messages between two waiting audiences reminds us of the little Sabbath-school book on the telegraph, which very happily used the invention to illustrate the wonderful communication a man may have with his Maker, who, unseen to human eye, regards the faintest message, the humblest cry, and extends the hand which controls all the forces of the universe to aid even a little child.—*Christian Cynosure.*

—He is the best gentleman that is the son of his own deserts, and not the degenerated hero of another's virtues.

—Posthumous charities are the very essence of selfishness when bequeathed by those who, when alive, would part with nothing.

—The greater part of all the mischief of the world comes from the fact that men do not sufficiently understand their own aims. They have undertaken to build a tower, and spend no more labor on the foundation than would be necessary to erect a hut.

—There is no virtue that adds so noble a charm to the finest traits of beauty as that which exerts itself in watching over the tranquillity of an aged parent. There are no tears that give so noble a luster to the cheek of innocence as the tears of filial sorrow.

Popular Science.

—Sir William Thompson, who has been comparing the light of the moon with that of the sun by various experiments, estimates "the light of the full moon as about a seventy-thousandth of the sunlight anywhere on the earth."

—According to an exchange, it is proposed to carry railway trains across the English Channel on steamers; and the London, Brighton, and South Coast railway company are having suitable propellers constructed for that purpose.

—For fastening labels to tin surfaces that are to be exposed to moisture, there is said to be nothing superior to the white of egg. The white, or albumen, of the egg should be thoroughly mixed with an equal part of water, and the mixture used in the same way as ordinary mucilage. When it is nearly dry, a hot iron should be quickly carried over the outer surface of the label, by which means the albumen is coagulated, and rendered insoluble in water.

—The most remarkable experiment in telephony yet attempted was recently carried into effect in Russia, where a conversation was carried on between St. Petersburg and Bologæ, a distance of two thousand four hundred and sixty-five miles. According to *Chamber's Journal*, the Blake transmitting and Bell receiving instruments were used, and conversation was kept up notwithstanding a rather high induction. The experiments were carried on during the night, when the telegraph lines were not at work. The Russian engineers of this company are so confident of further success that they hope shortly to be able to converse with ease at the distance of four thousand six hundred and sixty-five miles; but to accomplish this astonishing feat, they must combine all the conditions favorable for the transmission of telephonic sounds. If it is found possible to hold audible conversation at such extraordinary distances, it is possible that this fact will be speedily improved upon, and we shall be enabled to converse freely between London and New York, and by-and-by between London and the antipodes.

Solar vs. Standard Time.—It is by many supposed that the sun is the most reliable indicator of time; and it is not an uncommon thing to hear a person, in extolling the merits of some watch or clock, say that it was "set by the sun." If, says a writer in *Science*, the orbit of the earth were perfectly circular, and the sun revolved around an axis perpendicular to the plane of the orbit, then the sun would have the reliable character with which it is now credited; but, unfortunately, the orbit is not circular, and the earth revolves about an axis inclined to the plane of the orbit, so that the apparent motion of the sun varies in rate from time to time through the year. As it is convenient for us to have our days of equal length, the mean time to which we set

our clocks differs from solar time by as much as fifteen minutes on the 10th of February, and fully sixteen minutes on the 27th of October.

Influence of Temperature upon Language.—Arbutnot, a well known scientist, has suggested that heat and air have a great effect upon the formation of language. He thinks the serrated, close way of speaking among the Northern nations is owing to their reluctance to open their mouths wide in cold air, which made their speech abound in consonants. From a contrary cause, the inhabitants of warm climates formed a softer language, and one abounding in vowels. The Greeks, inhaling air of a happy medium, were celebrated for speaking with the wide-open mouth and a sweet-toned, sonorous elocution.

The Philosophy of Lightning Rods.—A lightning conductor consists essentially of a long piece of metal, pointed at the end, whose business it is, not so much (as most people imagine) to carry off the flash of lightning harmlessly, should it happen to strike the house to which the conductor is attached, but rather to prevent the occurrence of a flash at all, by gradually and gently drawing off the electricity as fast as it gathers, and before it has had time to collect in sufficient force for a destructive discharge. It resembles in effect an over-flow pipe, which drains off the surplus water of a pond as it runs in, in such a way as to prevent the possibility of an inundation, which might occur if the water were allowed to collect in force behind a dam or embankment. It is a flood-gate, not a moat; it carries away the electricity of the air quietly to the ground, without allowing it to gather in sufficient amount to produce a flash of lightning. It might thus be better called a lightning preventer than a lightning conductor; it conducts electricity, but prevents lightning. At first, all lightning rods used to be made with knobs on the top, and then the electricity used to collect at the surface until the electric force was sufficient to cause a spark. In those happy days, you had the pleasure of seeing that the lightning was actually being drawn off from your neighborhood piecemeal. Knobs, it was held, must be the best things, because you could incontestably see the sparks striking them with your eyes. But as time went on, electricians discovered that if you fixed a fine metal point to the conductor of an electrical machine, it was impossible to get up any appreciable charge, because the electricity kept always leaking out by means of the point. Then it was seen that if you made your lightning rods pointed at the end, you would be able in the same way to dissipate your electricity before it ever had time to come to a head in the shape of lightning. From that moment the thunder-bolt was safely dead and buried. It was urged, indeed, that the attempt thus to rob heaven of its thunders was wicked and impious; but the common sense of mankind refuses to believe that absolute omnipotence could be sensibly defied by twenty yards of cylindrical iron tubing.—*Corndill Magazine*.



BATTLE CREEK, MICH., JANUARY, 1885.

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

TERMS, \$1.00 A YEAR.

GOOD HEALTH FOR 1885.

WITH this number begins the twentieth volume of this journal. For nearly nineteen years it has made its regular monthly visits to several thousand homes, in all parts of the United States; indeed its visits are not confined to this country only, as here and there a reader may be found in almost every part of the inhabited globe. Its subscription list includes names of persons who reside in every country of Europe, and in India, Africa, and even China, and the far distant islands of the sea are already represented among its readers.

During all these years the managers of the journal have sought to make it a store-house of accurate, reliable, and fresh information on the subject of health in all its varied phases. They have earnestly endeavored to give to every fact stated in its columns, the dignity of scientific accuracy, and to give a wide berth to extreme and ultra views. We have not succeeded in bringing the whole world to the acknowledgment of the truth and importance of the principles which we have so long advocated; but we think we have reason for believing that at least a few of the subjects of hygienic truth, which have been scattered far and wide, have germinated and developed to a useful fruition. Indeed, the thousands of letters which we have received from individuals in all parts of the world, testify most emphatically that a multitude of persons have been benefited physically, mentally, and we may even say in many cases, morally, by the perusal of the pages of this journal.

As we look back over the eleven years of our connection with the journal, and review the work of all these years, we see many things which might have been done better, and recall with many regrets that we have not been able to accomplish always what we had planned and earnestly desired. During almost the entire period referred to, we have been burdened with many onerous duties besides those immediately connected with the journal, and have often been able to give to it only the hours which could be snatched from sleep, and should have been devoted to rest and recreation. We have endeavored to do the best we could for our readers with the means and opportunities at our command; and though we have never yet accomplished what we desired, and have, indeed, fallen far short of our ideal, still we feel sure that the intelligent reader who has followed the journal through its entire history, has noted many improvements from time to time; and in comparing this with the last volume of its predecessors, he will not hesitate to pronounce it in many respects superior.

In no department of science has more rapid progress been made within the last decade, than in the science of good living; and knowledge respecting methods of preventing disease, and securing the best possible conditions for the maintenance of health, has increased for a few years back with marvelous rapidity. We have endeavored to present in each number of *GOOD HEALTH* an epitome of the information which we have been able to glean from a thousand sources on every topic relating to human health.

During the year which we are just beginning, our efforts will be untiring to make this volume, not only equal, but superior, to all its predecessors, as will be seen by reference to the prospectus sheet which appears with this number. A number of new writers have been engaged to contribute articles on practical subjects of great interest and importance.

During the past year there have been many additions to our subscription list, and at the present time GOOD HEALTH has a larger circulation than it has had in years past, and larger than that of any other health journal in the land, and probably than that of all others combined. The increased interest in the subject of health, and the activity of the friends of the journal, promise for it a still greater increase in circulation during the year to come; and we trust that its merits will be such as to induce the old subscribers to continue their patronage, and will encourage our new friends to become permanent subscribers.

PHYSIOLOGICAL NONSENSE.

AN exchange thus philosophizes on a subject of which it evidently knows nothing:—

“The notion is widely prevalent that it is unhealthful to eat late at night or just before retiring. This came from the severe denunciation of “late suppers,” contained in nearly all the old popular works on diet. But it was the mid-night debauch that was the object of attack, and even here it was less the gluttony than the drunkenness which alarmed the doctors, and called forth their apprehensions. A man may induce apoplexy by gorging himself with food at any hour of the day.

“Man is the only animal that can be taught to sleep quietly on an empty stomach. The brute creation resent all efforts to coax them to such a violation of the laws of nature. The lion roars in the forest until he has found his prey; the horse will paw all night in the stable unless he is fed, and the pig in the pen re-

fuse all rest or sleep. The animals which chew the cud have their own provision for a late meal just before dropping off to their night slumbers.

“Man can train himself to the habit of sleeping without a preceding meal, but only after long years of practice. As he comes into the world, nature is too strong for him, and he must be fed before he will sleep. A child’s stomach is small, and when perfectly filled, if no sickness disturbs it, sleep follows naturally and inevitably. As digestion goes on, the stomach begins to empty. A single fold in it will make the little sleeper restless; two will awaken it, and if it is hushed again to repose, the nap is short; and three folds put an end to the slumber. Paregoric or another narcotic may close its eyes again, but without either food or some stupefying drug it will not sleep, no matter how healthy it may be. Not even an angel who learned the art of ministering in a celestial choir can sing a babe to sleep on an empty stomach.

“It is a fact established beyond the possibility of contradiction that sleep aids digestion, and that the process of digestion is conducive to refreshing sleep. It needs no argument to convince us of this mutual relation. The drowsiness which always follows a well-ordered meal is itself a testimony of nature to this interdependence.

“The waste of human life by the neglect of the lesson is very great. The daily wear and tear of the body might be restored more fully than it usually is if this simple rule was not systematically violated.”

The writer of the above is very strong in assertion, but very weak in fact and argument. Let us notice a few of his fallacies:—

1. Every physiologist of note clearly states the fact that the process of digestion is greatly retarded during sleep, which is evidence enough that nature never intended man or any other animal to go to sleep on a full stomach.

2. It is not true that all animals require to be fed before going to sleep. When visiting the world-famous Zoölogical Gardens of London, a year or two ago, we noticed that the keepers fed the lions and other animals early in the afternoon, and but once a day. A fine Newfoundland dog, with which we are well acquainted, eats regularly but twice a day, at 8 A. M. and 2 P. M., and never asks for supper, and does not lie awake nights on account of an empty stomach. We have more than once noticed that when a dog goes to sleep immediately after eating, his sleep is apparently much disturbed by dreams. He growls, barks, whines, starts suddenly, pants, and gives every evidence of being made uncomfortable in the same way human beings are who indulge in late suppers.

3. It does not require long years to accustom one's self to sleeping without a stomach full of food: For many years we have been in a position to observe upon this point very extensively; and we are able to say that in at least nine cases out of ten, an individual who has been accustomed to eating an hour or two before going to bed, is, within a week after discontinuing the practice, able to sleep as well or better than before. Exceptions to the rule are very few indeed, probably even fewer than we have indicated. Going to bed with an empty stomach is one of the best remedies for restless, unrefreshing sleep we are acquainted with.

4. Nothing could be more pernicious to the health of infants than the popular notion that a child's stomach must be kept constantly crammed with food. This perpetual stuffing is the most prolific cause of a large share of the diseases and disorders of early infancy. Feeding an infant to make it sleep should never be done. The little one should have its regular, stated meals, and nothing at any other time. After the first week of infant life, feeding during the night is wholly unnecessary. The little one will sleep more soundly, and wake in far better humor in

the morning, if instead of offering it food when it happens to waken in the night, it is given a few sips of water. Babies cry for water much more often than for food. A healthy babe will go to sleep without a narcotic or an angel to sing to it, even if its stomach is not stuffed with food.

5. Our philosopher has wandered so far away from the line of logical reasoning that he mistakes a symptom of disease for a physiological condition. The drowsiness which many persons experience after eating is not a normal condition, but an evidence that the individual is suffering with slow digestion. Drowsiness never follows a "well-ordered meal" taken into a well-ordered stomach. If the dyspeptic yields to the drowsiness which he feels after eating, owing to the diseased condition of his stomach, he awakes unrefreshed, and with his stomach in a ferment.

6. We are willing to risk the statement that the waste of human life from neglect to eat a hearty meal just before going to bed is by no means so great as to be a proper cause for alarm.

Such teaching as this on health subjects is well calculated to do infinite mischief, were it not so patently absurd that most intelligent people will at once recognize its fallacies, and hence give it no credence. Writers who are unacquainted with the most rudimentary principles of physiology ought not to hazard their reputation—if they happen to have any—by undertaking to give instruction on subjects of which they know so little that they can do nothing more than make a display of their enormous ignorance.

—It is said that of the unfortunate men who perished in the Greely arctic expedition, all but one were tobacco-smokers, and that one was the last to die. The seven survivors were non-smoking men. This is certainly an argument in favor of anti-tobacco habits.

BEEFSTEAK AND HEADACHE.

A WRITER in the *Practitioner* has just made the discovery that headache is often the result of the use of flesh-diet, and reports a case as follows:—

“It is no new observation that a diet largely vegetarian will cure, or at least greatly relieve, the pain, and render less frequent the attacks of megrim. The following case tends to show that the headache and other phenomena are the result of a poison circulating in the blood, that that poison is a product of the digestion of certain foods, especially butcher meat, and that a cure is best effected by cutting off entirely the noxious food, and aiding the elimination of the poison by the kidneys:—

“A young professional man, somewhat over thirty, residing in London, the child of healthy parents, but with a distinct history of phthisis in certain aunts on his father's side, has suffered from headache as long as he can remember, and has distinct remembrance of rolling on the floor in the greatest agony with one when about eight years old. At college they were troublesome, and have been so since in professional life.

“He is active and muscularly strong, but light in build and weight; generally pretty cheerful, but subject to despondency at times when attacks of megrim are impending. He is hypermetropic, and the right eye is astigmatic, but he has had glasses for these defects for years, as his eyes first troubled him when he began to read, and he had to get glasses then. The history of an attack, as experienced in recent years, is somewhat as follows: He perhaps wakes in the morning feeling less fresh than usual, and even his cold bath does not bring him up to the mark; he feels very empty just before and after eating, and especially in winter, and sometimes, even in the heat of summer he suffers from cold hands and feet. He is much more easily tired than usual, and toward the afternoon there comes a throbbing headache, which at its worst is commonly

occipital, but when less severe it may be frontal, or over the entire head. At its worst it is right in the center of the occiput, is throbbing, and is increased by exertion or stooping down. If it comes on in the afternoon, it gets worse in the evening and toward night, and is at its worst when first lying down in bed, when the pain may be almost unbearable. If he can sleep, he may wake free from pain in the morning, or he may have a slight headache, which increases during the day.

“Pain is never confined to one side of the head, nor is it, except when very severe, attended by sickness, which is about once in a dozen attacks; but often when pretty bad there is intense coldness of the extremities, and some nausea.

“In addition to the cold extremities, uncertain appetite, and easy fatigue already mentioned, there is often for a few days before the attack some irregularity of the bowels, with flatus, and pain and heat in the right hypochondriac region, and dreams at night, which at other times are very rare. The tongue is clean, or slightly furred and red; pulse slow, and temperature normal or under it; urine scanty, and high in color and specific gravity.”

The writer goes on to speculate as to the cause of the above relation between headache and flesh-eating, and suggests that possibly it may be due to the development in the intestines of certain poisonous substances which are absorbed into the system, as is known to occur in cases of indigestion, chronic constipation, and typhoid fever. He also suggests that a meat-diet may favor the development of bacteria in the intestines in unusual numbers, which may be the cause of the trouble.

It seems to us that no mysterious explanation of the matter need be sought. The symptoms all point unmistakably toward an inactive state of the liver, or disturbances of the biliary secretion. That meat-eating is a common cause of this, ought to be well known by every student

of dietetics. The large use of flesh-food overworks the liver by introducing into the system an excess of albuminous elements, which the overworked organ is compelled to aid in eliminating as urea. Having more work than it can do well, certain excrementitious elements are left to accumulate in the body, and general poisoning, with the symptoms above described, in some instances results. In other cases the same cause produces different symptoms.

The free use of hot water internally, and the adoption of a fruit, grain, and milk diet, is a specific for these causes.

HEALTH FALLACIES.

A WRITER in *Lippincott's Magazine* thinks the people ought to be educated out of the following notions, which he regards as fallacies:—

“The idea that cold baths are healthful in winter and dangerous in mid-summer.

“That rain-water is more wholesome than ‘hard’ water.

“That bedrooms must be heated in cold weather.

“That the misery of everlasting scrubbing and soap-suds vapors is compensated for by the comfort of the lucid intervals.

“That a sick-room must be kept hermetically closed.

“That it pays to save foul air for the sake of its warmth.

“That ‘draughts’ are morbid agencies.

“That catarrhs are due to low temperature.

“That even in mid-summer, children must be sent to bed at sunset, when the air begins to be pleasant.

“That an after-dinner nap can do any harm.

“That the sanitary conditions of the air can be improved by the feter of carbolic acid.

“That there is any benefit in swallowing jugfuls of nauseous sulphur-water.

“That rest after dinner can be shortened with impunity.

“That out-door recreation is a waste of time.

“That athletic sports brutalize the character.

“That a normal human being requires any other stimulant than exercise and fresh air.

“That any plan of study can justify the custom of stinting children in sleep.

“That the torpor of narcotism is preferable to insomnia.

“That the suppression of harmless recreations will fail to beget vice and hypocrisy.

“That stimulation is identical with invigoration.

“That fashion has a right to enforce the wearing of woolen clothes in the dog days.”

We agree with the writer referred to in relation to most of the above popular notions; but in regard to a few we must differ from the popular view as being unsustained by scientific facts.

1. Cold baths are good for some people at any season of the year, and not good for others at any season. Whether they are good or bad depends on the individual and not on the season.

2. That pure soft water is better than hard water is certainly well enough established, not only by scientific facts, but by experience as well.

3. The notion that it is healthful to go to bed in a cold bedroom, which is pretty certain to be a damp one as well, requires something more than assertion for its support.

4. The advantage of scrubbing is not simply comfort, but safety. Cleanliness is the best of all modes of disinfection.

If popular notions happen to be based on fact, and supported by science, it certainly would be best to let them alone, or at least not attempt to correct them by the substitution of errors.

Fur capes ought never to be worn in this climate, except when riding.

The Life of a Brain Cell.—The wonderful activity of the human brain is in large part due to the fact that it is made up of a vast number of cells, each of which lives its own individual life, and in so doing, contributes to the life and activity of the whole. A German physiologist, who has given careful study to the subject, computes that "the cerebral mass is composed of at least 300,000,000 nerve cells, each an independent body, organism, and microscopic brain, so far as concerns its vital relations, but subordinated to a higher purpose in relation to the function of the organ, each living a separate life individually, though socially subject to a higher law of function. The life term of a nerve cell he estimates to be about sixty days; so that 5,000,000 die every day, about 200,000 every hour, and nearly 3,500 every minute, to be succeeded by an equal number of their progeny; while once in every sixty days a man has a totally new brain."

Such a delicately organized structure needs good care and the very best of blood, which can only be afforded by good food, free from unwholesome elements, and well digested.

Stalwart Vegetarians.—The popular idea that beef is necessary for strength is well illustrated by Xenophon's description of the outfit of a Spartan soldier, whose dietary consisted of the very plainest and simplest vegetable fare: "According to the author of the 'Anabasis,' the complete accoutrements of the Spartan soldier, in what we would call heavy marching order, weighed seventy-five pounds, exclusive of the camp, mining, and bridge-building tools, and the rations of bread and dried fruit which were issued in weekly instalments, and increased the burden of the infantry soldier to ninety, ninety-five, or even to a full hundred pounds. This load was often carried at the rate of four miles an hour for twelve hours per diem, day after day; and only in the burning deserts of Southern Syria, the commander of the Grecian auxiliaries thought it pru-

dent to shorten the usual length of a day's march."

The "beef-eaters" of England would hardly consider themselves in good marching trim with a hundred pounds of luggage strapped on their backs.

A Simple Dietary.—According to Count Rumford, the Bavarian wood-chopper, one of the most hardy and hard-working men in the world, receives for his weekly rations one large loaf of rye bread and a small quantity of roasted meal. Of the meal he makes an infusion, to which he adds a little salt, and with the mixture, which he calls burned soup, he eats his rye bread. No beer, no beef, no other food than that mentioned, and no drink but water; and yet he can do more work, and enjoys a better digestion and possesses stronger muscles than the average beef-eating Englishman or sausage-eating Dutchman.

Those who talk about starvation diet when a man simply excludes flesh and a few unwholesome condiments from his dietary, should consider facts of this sort before becoming too loud in their denunciations.

Cost of Intemperance in Europe.—We hear much of the enormous waste of money in the maintenance of the colossal armies which every European government constantly keeps in training as a menace to its neighbors; but if the following paragraph be true, this enormous expense is but a drop in the bucket compared with the waste entailed by alcoholic liquors: "A German statistician, in speaking of the liquor traffic, says: 'Germany spends between 500,000,000 francs annually for her armies, but 2,200,000,000 francs for drink;' *i. e.*, more than four times as much. The French spend three times as much for liquors as for their soldiers, the English four times as much, and the Belgians over ten times as much. Truly such figures furnish a good temperance argument."

DOMESTIC MEDICINE.

HOT WATER FOR SORE THROATS.

WE have for years made use of hot water inside and outside in inflammation of the throat, acute and chronic, and with most satisfactory results. Dr. Geo. R. Shepherd, of Hartford, Conn., writes on this subject to the *Medical Record* as follows:—

“I have used hot water as a gargle for the past six or eight years, having been led to do so from seeing its beneficial effects in gynecology. In acute pharyngitis and tonsilitis, if properly used at the commencement of the attack, it constitutes one of our most effective remedies, being frequently promptly curative. If used later in the disease or in chronic cases, it is always beneficial, though perhaps not so immediately curative. To be of service, it should be used in considerable quantity (a half pint or a pint) at a time, and just as hot as the throat will tolerate. I have seen many cases of acute disease thus aborted, and can commend the method with great confidence. I believe it may be taken as an established fact that in the treatment of inflammations generally, and those of the mucous membranes in particular, moist heat is of service, and in most cases hot water is preferable to steam. All are familiar with its use in ophthalmia and conjunctivitis, as also in inflammation of the external and middle ear; and I feel confident that those who employ it for that most annoying of all slight troubles to prescribe for, viz., a cold in the head, or acute coryza, will seldom think of using the irritating drugs mentioned in the books, nor of inducing a complete anesthesia with chloroform in preference to the hot-water douche.”

FOUL BREATH.

FOULNESS of breath may arise from decaying teeth, ozena, ulceration of the tonsils, foul emanations from the stomach, and from the fetid expectorations of consumption in its advanced stages, or cases of chronic bronchitis in which there is great dilatation of the bronchii, allowing accumulation and decomposition of purulent secretions of mucus.

Treatment.—Decaying teeth should be cleansed and carefully filled. Catarrh, attended by fetid secretions and ulceration of the tonsils, should

receive the necessary treatment. Foul emanations from the stomach may be best corrected by the adoption of such measures as will improve the digestion. The use of charcoal, either in capsules or in the form of charcoal crackers, is an excellent measure for temporary relief. The fetid odors arising from decomposing secretions in catarrh, bronchitis, consumption, and gangrene of the lungs, may be in a great degree corrected by the inhalation of carbolic acid vapor. A few drops of pure carbolic acid or creosote, say four to six drops of either, should be placed in the inner cup of the steam inhaler, shown in the cut on this page, and inhaled three or four times a day.



THE PULSE.

EVERY one should know something about the pulse, as it is a very important index to the condition of the body in various diseases, and is a valuable aid to the determining of a patient's condition in nearly all diseases. In order to know the condition of the pulse in disease, it is necessary for us to examine it in health.

THE PULSE IN HEALTH.—The pulse is about 120 to 140 at birth. It gradually diminishes until it reaches about 90 at the age of seven or eight years. In adult life it is 65 to 75, and in old age, not much over 60. Females have a somewhat more frequent pulse than males, the difference being five or six beats a minute. A difference of five to ten beats is made by changing from a lying position to sitting, and from sitting to standing. By violent running the pulse may be increased to 140 or more.

The pulse is felt by placing the first two fingers upon the artery at the outside of the arm, with the second finger toward the heart. The force of the heart is determined by pressing with the second finger, and noticing how much

force is required to compress the artery so that the pulse cannot be felt by the first finger. The pulse may also be felt at the temple, the neck, and in various other situations.

THE PULSE IN DISEASE.—The following are the principal varieties of the pulse :—

Frequent Pulse.—A pulse diminished in force, increased in frequency. A characteristic of debility.

Febrile Pulse.—In fever, the rate of pulsation, and usually the force, is increased.

Feeble Pulse.—A pulse that is readily extinguished by pressure with the finger. Indicative of great debility or exhaustion.

Thready Pulse.—A pulse which gives the sensation beneath the finger of a vibrating thread. Present in cases of very great debility.

Slow Pulse.—An unnaturally slow pulse occurs in cases of brain poisoning or apoplexy ; it is present in compression of the brain from fracture, and in unconsciousness from opium or liquor.

Quick Pulse.—An abrupt, jerking pulse, either frequent or moderate in rate of pulsation.

Hard Pulse.—A pulse which seems to indent the finger. Indicates great excitement of the circulation.

Intermittent Pulse.—A pulse which now and then loses a beat. Indicative of either functional or organic disease of the heart.

Irregular Pulse.—A pulse which is irregular in frequency and force. The irregularity may be only slight, or may be extreme. Is generally found in heart disease. Is very often the result of the use of tobacco and of strong tea and coffee.

Irritable Pulse.—A pulse which is both frequent and hard.

Wiry Pulse.—A pulse which gives the impression of a vibrating wire.

Sneezing.—This symptom consists in an explosive expiratory effort, the air being expelled through both the mouth and nose, but chiefly through the former. It is oftenest occasioned by irritation of the nasal and mucous membrane. It may arise from titillation, inhalation of dust, congestion incident to taking cold, or congestion present in influenza and hay fever. It is, in some cases, a purely nervous symptom. With many persons, sneezing is excited by looking at the sun or at a bright light.

Treatment.—This symptom rarely becomes so

troublesome as to require special attention by way of treatment, and yet it is often at least convenient to be possessed of a remedy to check or relieve it. The disposition to sneeze can ordinarily be relieved by rubbing the nose between the thumb and finger. It may also be checked by pressing the finger against the upper lip, just below the nose. In some cases, the nasal douche, administered with a fountain syringe, is essential. The best solution employed is a teaspoonful of common salt, dissolved in a pint of tepid water, or fifteen to twenty drops of carbolic acid, well dissolved.

Pain in the Chest.—Pain in the chest may be stinging, burning, or lancinating in character ; it may be dull and continuous, or sharp and only occurring at intervals. Patients also frequently complain of weight, oppression, constriction, and tightness in the chest. Sharp pain is most often due either to neuralgia or pleurisy. Dull pain in the right or left side, beneath or between the shoulders, may be due to affections of the liver, spleen, or stomach, as well as to pulmonary disease. A stinging or burning pain beneath the breast-bone is one of the symptoms of chronic bronchitis.

Treatment.—The best remedy for pain in the chest is the application of hot fomentations once or twice a day ; and if the pain is chronic, the application of a warm compress to be worn through the night. Extensive pain in the chest may require a chest pack. A stitch in the side and the acute pain of pleurisy are often very greatly mitigated by the application of a soft woolen bandage, drawn tightly about the chest, in such a way as to restrain the movement of the affected part in respiration. The same end may be reached by applying a large pitch plaster or several adhesive strips over the affected part.

Santonine, when used as a vermifuge, should always be mixed with castor oil, which renders it more efficient in destroying the vitality of the parasites, and prevents its absorption into the system, thus precluding the possibility of poisoning.

Glycerine for Coryza and Hay Fever.—The season for hay fever is past, but acute colds in the head are now in order. An East India physician claims to secure relief in these cases by the application of plugs of cotton wool saturated with glycerine, retaining them a few minutes after each application.

Follicular Tonsilitis.—This common malady of the throat is at the present time exceedingly prevalent, giving the following symptoms, as summarized by Dr. F. P. Atkinson:—

“The patient complains of chilliness, followed by heat and dryness of the skin, pain in the head and limbs, more especially the shoulders, and occasionally there is congestion of the eyes and nose, together with herpetic eruptions about the lips. The temperature is above the natural, often as high as 103°. The tongue is coated, and on the tonsils, which are somewhat red and swollen, are some small, round, slightly elevated buff-colored patches. There is generally some pain in swallowing, but as a rule it is not very great.”

In addition to the above symptoms, we have observed soreness and stiffness of the back of the neck in many cases, and in some instances this has been the leading symptom, the throat presenting only a moderate degree of redness, with only here and there a white point.

In our experience the hot gargle constitutes by far the best local remedy for this disease, and the results seem to be not at all affected by the addition of chlorate of potash or any other of the usual throat remedies in moderate quantity. The temperature of the water must be as high as can be borne, at least 115° to 125°, and a half pint should be gargled every quarter or half hour at the beginning of the attack. The pains in the neck, throat, and back may be relieved by fomentations, and in the body generally by hot blanket packs.

The patient should drink large quantities of hot water or weak herb teas, so as to induce perspiration; at least two or three quarts should be taken daily. The nourishment should consist of milk, gruels, and fruits.

As the disease seems to be slightly contagious, the patient should be isolated, and the sick-room and patient's clothing disinfected.

Question Box.

Wild Hairs.—J. S. P. asks for a description of wild hairs, and how to get rid of them.

Ans.—Wild hairs are straggling eyelashes, which grow in such a direction as to strike the eyeball, and by their constant contact, irritate it so as to produce in the end serious disease. The common remedy is to pull out the hairs, but they quickly grow in again; and while short and fine, they are more irritating to the eye than after they have attained a longer growth. By persistently pulling the hairs out, they will sometimes cease to grow, but the only radical means of cure is a surgical operation, by

which the hairs are transferred to a different position, and made to grow higher up on the eyelid. We have found the results of this operation very satisfactory in a number of cases in which we have employed it upon persons who have suffered with this trouble for many years, and until the eyesight was seriously impaired.

Dyspepsia.—Mrs. C. J. asks for advice respecting the cure of dyspepsia; is very emaciated, and suffers with palpitation of the heart, headache, fermentation of the food, gas in the stomach, etc.

Ans.—It would be impossible to make an intelligent prescription without further knowledge of the case. Would advise the questioner to obtain a copy of “Digestion and Dyspepsia,” after reading which, if further information is desired, we should be glad to impart it either through these columns or by letter.

Pain in the Side—Kidney Disease—Milk Diet.

—A California subscriber writes, 1. “I have an aching in my back and left side. Is there any way in which I can tell whether it is an indication that my kidneys are diseased? 2. Is it beneficial in kidney disease to drink a large amount of water, three or four quarts daily? 3. Do you consider milk injurious in kidney troubles?”

Ans.—1. Pain in the back very rarely indicates disease of the kidneys. In the worst cases of kidney disease there is seldom any pain in the region of these organs. 2. In most forms of disorder of the kidneys, the free use of water is advantageous. From two to four pints is generally an ample quantity. 3. The use of milk in moderate quantities is not contra-indicated in ordinary cases of kidney disease.

Cold Hands.—Mrs. J. A. H. inquires: What causes the blood to leave my fingers, so that they become perfectly white and numb whenever I go into the cold, or become a little chilled? and what remedy would you recommend?

Ans.—The causes of the trouble are probably poor blood and deficient circulation. The proper remedy is to improve the general health, get a better quality of blood by a liberal diet of wholesome food, and invigorate the circulation by proper exercise. The use of the alternate hot and cold hand bath two or three times a day, with vigorous rubbing afterwards with olive-oil, is a remedy which may be of some value.

Gluten Flour.—J. D. H., of Oregon, requests us to describe the process of manufacturing gluten flour, and wishes to know if it is practicable to make it for one's own use.

Ans.—Gluten can be prepared in small quan-

ties by a very simple process, as follows: Stir wheat flour and water together into a mass as thick as can be stirred, taking care to mix very thoroughly. Allow it to remain three hours, then place upon a fine sieve, and knead under a small stream of water until the water which runs away ceases to be white. By this means the starch can be washed out. The elastic adhesive mass which is left is almost pure gluten. This should be spread out thin on tins, and dried in a slow oven. It can then be ground in a common coffee-mill, and is ready for use. It will of course be thoroughly cooked, and only requires softening by means of hot water or hot milk. It may be used in a variety of ways.

Food for Infants.—Mrs. C. J. M. B. inquires as follows:—

A mother who has insufficient food for her babe, which is six weeks old, would like to know if light oatmeal gruel can be given to the child occasionally without injurious results. Also in case the natural nourishment should entirely fail, would you advise the use of the gruel altogether?

Ans.—Well-boiled oatmeal gruel with a little addition of cow's milk, is an excellent food for young infants so unfortunate as to require artificial feeding. It is important that the gruel should be boiled a long time, at least four or five hours, and it is best in most cases that it should be strained through a coarse cloth. It is important that a portion of cow's milk should be added to the gruel while it is hot. When milk disagrees with the child, a diet of cream, diluted with sweetened-water and lime-water, is a good substitute. The following are good proportions for a young child: cream, four tablespoonfuls; lime-water, two tablespoonfuls; milk, four tablespoonfuls; sweetened water, four tablespoonfuls. Sugar of milk is better than ordinary sugar for preparing the sweetened water. It should be used in proportion of two ounces to the pint of water. This formula we have found very useful, and it will seldom disagree with even the most delicate stomach.

Moth Patches.—Mrs. E. W. C. K. inquires for the cause and cure of moth patches.

Ans.—Moth patches, or chloasma, in general arise from disorder of the liver. Occasionally in women they are the result of pregnancy, and are sometimes a symptom of some forms of nervous disease. They are quite apt to disappear after the cause is removed. When congenital, they are of course persistent. When they occur during pregnancy, they usually disappear after parturition, though not always. We know of no remedy which can be safely recommended for use at home.

Electrical Currents—Electricity for Protruded Uterus—Protruding Piles.—Mrs. O. B. makes inquiries as follows: 1. Please explain the meaning of faradic and galvanic electricity.

2. Is it injurious to the system to employ electricity from a battery in which bi-sulphate of mercury is used? 3. Is electricity beneficial for prolapsus of the uterus? 4. Is there any cure for protruding piles?

Ans.—1. Galvanic electricity is produced wholly by chemical action, and in use, is conducted from the battery in which it is generated directly to the body. Faradic electricity is galvanic electricity modified by passing through one or more coils of wire so arranged as to greatly intensify the current.

2. No. A compound of mercury used to generate electricity could have no effect upon the system.

3. Electricity is useful in the treatment of some forms of displacement of the womb, but is by no means a panacea or cure-all for this class of troubles.

4. There are two forms of hemorrhoids which sometimes protrude, the form known as *internal*, and the less common and more painful *external*. A bad case of hemorrhoids is only curable by a radical operation for the removal of the tumors. Most cases can be palliated by the employment of astringent ointments, and by the use of such means as will keep the bowels loose and regular.

Weeping Sinews.—What is the cause of small tumors or lumps about the wrist, and how can they be successfully treated?

Ans.—These enlargements, known as weeping sinew, are often caused by strains or blows, and hence are most likely to occur in mechanics and laborers, and those who are accustomed to lifting heavy weights. They sometimes disappear of themselves; but in such cases they usually return. A cure may sometimes be effected by pressure by means of an elastic bandage. The most common method of treatment is rupture of the sack by a blow with a flat stick, or the back of a book. The affected part should be given complete rest after an operation of this sort, and a bandage should be worn about the seat of the disease for some time, so as to prevent the sac from refilling.

Nightmare.—What causes nightmare?

Ans.—Usually late suppers and indigestible food. Those who are subject to nightmare usually observe that they are most likely to have an attack when sleeping upon the back. This position should be avoided. No food should be eaten within three hours before retiring. A glass or two of hot water taken just before going to bed is likely to be serviceable as a preventive.

Whole-Wheat and Graham Flour.—J. C. Mc. G., of Mo., inquires:—

1. What is the relative value of whole-wheat and graham flour?

2. Which do you consider best for general use?

Ans.—1. Whole-wheat flour differs from graham only in that the wheat before grinding is deprived

of the rough outer layer, which is wholly innutritious, and, to a sensitive stomach, is somewhat irritating. The removal of this wholly innutritious matter naturally increases the proportion of valuable nutritive elements of the remainder, so that whole-wheat flour possesses a little higher nutritive value than the same weight of graham flour.

2. For ordinary use, graham flour is undoubtedly wholly unobjectionable; but if an individual's digestive organs are in such a condition that only bland, or unirritating food can be taken without danger, whole-wheat flour is to be preferred to graham.

Well-Water—Charcoal Filter.—J. H., of Mass., states that he observes that when at home, the urinary secretion is very high colored, and emits a very bad odor, which is not the case when he is away from home, and suspects that the water which he uses at home is the cause of the difficulty. Has had the water examined, and finds it free from lead and organic matter. He wishes to know what the water can contain which might occasion the difficulty described, and inquires whether a filter cannot be constructed which will render water absolutely free from all impurities which it may have before filtration.

Ans.—It would be quite impossible for us to determine the character of the water in question without making a careful analysis of it. It is quite possible that the difficulty mentioned may be due to other causes than the water supply. The use of hard water containing salts of lime or magnesia often produces the effect noted.

It would be impossible to construct a filter which would render very impure water absolutely free from impurities without repeated filtration. As a rule, it must be said that water absolutely dangerous to health before filtration is not rendered pure enough by the filtration to be safe. Really foul water should never be used under any circumstances; for if the attempt is made to improve it by filtering, the filter soon becomes choked with the impurities retained from the water, and may even become a source of contamination. Filters are of great service, as they remove from water such slight impurities as while not absolutely dangerous to life, may, if used continuously for a long time, result in disease. Full directions for making a filter will be given in a future number of the journal.

Alcohol for Snake Bites.—Mrs. E. K., of Iowa, inquires: Is alcohol or whisky the only cure for snake bites?

Ans.—No. We have very good reasons for doubting whether alcohol is in any sense an antidote for the bite of any snake. There are plenty of other measures of far greater efficacy which may be resorted to, with every confidence that whatever alcohol will accomplish, they will accomplish, and more. These measures are given at length in the "Home Hand-Book," page 1406.

Horse-Radish.—An inquirer asks: "Is horse-radish wholesome as a relish?"

Ans.—Horse-radish owes its popularity as a relish to the fact that it contains a pungent acrid oil similar to, if not identical with, the essential oil of mustard. Its effects are essentially the same as those of mustard, and it should be discarded on the same grounds.

"Cuticura"—Face Lotion.—W. D. S., of Vt., inquires our opinion respecting the merits of the remedy advertised as "Cuticura." He also inquires for a lotion which will soften the skin of the face, and remove pimples.

Ans.—1. "Cuticura" is by no means all that is claimed for it, but is undoubtedly a useful remedy in some cases.

2. The occurrence of pimples on the skin may be the result of dyspepsia, torpid liver, or inattention to general hygiene. We would advise one annoyed in this way to avoid the causes, and to employ in addition a simple measure which we have found very effective in numerous cases, namely, bathing the face in hot water two or three times a day. The water should be as hot as can be borne.

Ivy Poisoning.—A. R. C., of Cal., would like to know the best mode of treatment for cases of poisoning by poison-oak; and inquires why it is that some persons are not affected by it, while others cannot pass within several rods of it without being badly poisoned.

Ans.—The susceptibility of poisoning by poison-oak seems to be due in a large degree to a sort of idiosyncrasy. Very few persons are likely to be poisoned unless they come in immediate contact with it. The result of poisoning with this plant is a vesication of the skin, which in some cases is very violent. The best remedy in such an attack is application of cloths wet in cold water, or iced lime-water. Alternate hot and cold sponging of the part is frequently effective. The patient should take a quantity of hot water, which is effective in producing perspiration, which should be followed by a wet-sheet pack or a vapor bath. Sponging the parts alternately with hot and cold water is of use in removing the swelling after the acuteness of the attack is passed.

Hives.—Mrs. J., of Neb., is suffering with a disorder which she describes, and from her description we believe it to be hives, or urticaria, sometimes called nettle-rash. She wishes to know the cause and cure.

Ans.—The cause of this disorder is usually indigestion. The use of particular articles of food sometimes precedes the attack. The best remedy for the affliction is sponging the parts with a hot solution of soda, one teaspoonful to the pint of water. This usually gives quite speedy relief. Sponging with hot salt water is also frequently effective.

SCIENCE IN THE HOUSEHOLD.

CONDUCTED BY MRS. E. E. KELLOGG.

THE IRISH POTATO.

Composition.—

Nitrogenous matter,	2.1
Starch,	18.3
Sugar,	3.2
Fat,	0.2
Salts,	0.7
Water,	75.0

Total nutritive value, 25 parts in 100

Description.—The potato, a plant belonging to the order *Solanaceæ*, is supposed to be indigenous to South America, and to have extended thence to North America. It appears probable that it was first introduced into Europe by Spaniards early in the sixteenth century, and to have been cultivated in gardens only as a curiosity. To Sir Walter Raleigh, however, is usually given the credit of its introduction as a food, he having imported it from Virginia to Ireland in 1586, where its valuable nutritive qualities were first appreciated, and hence it is most commonly known as the *Irish* potato.

The portion of the plant used for food constitutes the tuber, a thick, fleshy mass, or enlarged portion of a subterranean branch, having upon its surface a number of little buds, or eyes, as they are commonly called, each capable of independent growth. The substance of the tuber is made up of little cells filled with starch granules, surrounded and permeated with a watery fluid containing a small percentage of albuminous or nitrogenous food elements. In the process of cooking, the heat coagulates the albumen within and between the cells, while the starch granules absorb the watery portion, swell up, and distend their cells. The cohesion between the cells also becomes destroyed, and they easily separate from each other. When by proper cooking these changes are complete, the potato becomes a loose, farinaceous mass, generally designated as "mealy." When, however, the liquid portion is not wholly absorbed, and the cells are but imperfectly separated, the potato appears waxy, watery, or soggy. In a mealy state, the potato is easily digested; but when in a waxy or water-soaked condition, it is exceedingly trying to the digestive powers.

It will appear obvious from these facts that the great desideratum to be attained in cooking

the potato is to promote the expansion and separation of its cells, or, in other words, to render it "mealy." Young potatoes are always waxy, and consequently less wholesome than older ones. Potatoes which have been frozen, and allowed to thaw quickly, are much sweeter and more watery than before, because in the process of thawing, the starch is changed into sugar. Frozen potatoes should be thawed in cold water, and cooked at once, or kept frozen until ready for use.

General Rules for Preparation and Cooking.—

In paring potatoes, always pare very thin. Much of the most nutritious part of the tuber lies next its outer covering, and consequently much care should be taken that as little as possible of this best portion be wasted.

Potatoes, to be pared before cooking, unless very muddy, are better peeled before washing, always remembering to drop at once into cold water and rinse thoroughly. It is a very careless habit to allow the pared potatoes to drop back among the skins before washing, as in this way they become stained, and appear black and discolored after cooking. Scrubbing with a brush (an old tooth-brush does admirably) or coarse cloth is by far the best means for cleaning potatoes to be cooked with the skins on.

Steaming, roasting, and baking are much better methods than boiling for cooking potatoes, since their fine flavors are more easily retained, and they suffer less diminution in food value. However, when boiling is employed, the skins should be left on whenever practicable, as their removal favors the extraction of the juices of the potato by the surrounding water. The waste, when boiled in their skins, according to Letheby, is about three per cent, while without them it is not less than fourteen per cent, or from two to three ounces in every pound. Potatoes boiled without skins should be cooked very gently.

Very old potatoes are best stewed or mashed. When withered or wilted, they are improved by being allowed to stand in cold water for an hour or so before cooking. If diseased or badly sprouted, they must be pared, and all germs and diseased portions removed.

Always dry potatoes to be baked with a dry cloth after washing, before putting in the oven. Bake in a moderately hot oven; with a slow oven the skins will become hardened and thickened, and much of the nutritious portion which lies next to them will be wasted when they are removed.

In boiling potatoes, use just as little water as

possible, never more than just enough to cover them, and a little less is preferable. Cover tightly, and cook quickly until they can be easily pierced with a fork. Drain thoroughly when done, and let them stand in a moderate heat several minutes, covered with a clean cloth, shaking them frequently.

Let the process of cooking *always* be continuous. If when boiling potatoes, any water must be added to replenish, let it be *boiling* hot. Nothing is so deteriorating to potato as to allow it to cease boiling, and lie soaking in water before the cooking process is complete. In steaming potatoes, observe the same rule: if the water in the kettle becomes low, always replenish with some from the teakettle boiling hot. To allow the potatoes to stop steaming will spoil them.

Use soft or filtered water for cooking, and, except for soups, let it be of boiling temperature. We know this is a point upon which cooks disagree, as to whether cold or boiling water shall be used; but the albumen and other nitrogenous elements of the potato are dissolved by standing in cold water, and thus the most nutritious part of the vegetable is lost in the water; while on the contrary, boiling water at once coagulates the albumen, and thus promotes its retention within the vegetable. For the same reason we do not recommend, as do most cook-books, the plan of soaking potatoes for a time in cold water before using, except when they are so wilted and old as to be almost unpalatable when cooked without freshening. Drop the potatoes into the boiling water, one at a time, so as not to stop the boiling at the first boil of the water, because in boiling, water evaporates its alkali and gases, and after a short time becomes inferior for cooking purposes.

Always serve potatoes as soon as done, but not in a porcelain dish with close-fitting cover, since the steam from the potatoes will collect on the dish, and very soon be reabsorbed into the potatoes, rendering them less mealy. If desirable to retain the heat, cover with a folded napkin to absorb the moisture.

In cooking potatoes by any method, always select those of uniform size and similar variety to be used together, that the same length of time for cooking will suffice for each.

In selecting potatoes, choose those that are perfectly ripe and of firm flesh, for as a general rule those with the smallest eyes are best. Smooth, medium sized potatoes and those heaviest in proportion to size, are best. Sprouted potatoes are hardly fit for food, because the sprouts draw all their substance from the starch cells which make the healthy potato mealy.

Time.—The time required for cooking potatoes will vary somewhat with the size, age, and freshness of the vegetable; but the following is the approximate length of time for the various methods of cooking:—

Boiling: old potatoes, about half an hour; new potatoes, twenty minutes.

Steaming: about one-half hour.

Stewing: from twenty minutes to one-half hour.

Baking: about three-fourths of an hour.

E. E. K.

RECIPES FOR COOKING POTATOES.

At this season, when the main dependence for vegetables is upon such as are dry or stored, different ways of preparing that most common of all vegetables, the potato, will add much toward variety in the bill of fare.

Stewed Potatoes with Celery.—Pare and slice the potatoes. Put them in a sauce-pan, with a tablespoonful or two of minced celery (the inner white portion of the celery is best), and salt if desired. Cover with milk enough to cook them well and prevent their burning. Cover closely, and stew until, on trying with a fork, the potatoes are found to be tender.

Potatoes with White Sauce.—Steam potatoes in their jackets until tender. Then remove the skins, cut in slices, and turn a hot white sauce over them. Serve at once. Potatoes steamed over a kettle in which beets are boiling, and served in this way, will be found exceedingly sweet and nice.

Breakfast Potatoes.—Slice cold boiled or baked potatoes evenly, cutting off all discolored or hardened spots. Turn a pint of rich milk, part cream if it can be afforded, into a sauce-pan, let it come to a boil, and stir in a level tablespoonful of flour, rubbed smooth with a little milk. Add salt if desired, and when the sauce has thickened, turn in a pint of potatoes, boil up together for a few minutes, and serve.

Stewed Potatoes.—Pare, slice, and, if the potatoes are old, let them stand in cold water for a half hour before using. Drop into just sufficient boiling water to cover. When about half done, drain off the water, and pour over enough rich milk to nearly cover them, season to the taste with salt, thicken with a little flour rubbed smooth in milk, a level tablespoonful to a pint of milk will be sufficient, cover closely and stew gently till perfectly tender. A little minced parsley may be added a few minutes before serving if desired.

Molded Potato, No. 1.—Cook, mash, and season the potatoes. Oil a handsome mold, (a scalloped cake tin does very well), sprinkle brown bread raspings over the inside, then press the potato lightly into it. Turn the molded potato out, and brown it equally all over in the oven.

Molded Potato, No. 2.—Boil, mash, and season with cream, a sufficient quantity of potatoes; wet some teacups in cold water, and fill with the potato, pressing the potato well into the mold. Turn the molded potato carefully on a pan, wet with a little well-beaten egg, and brown nicely in the oven.

Potato Rice.—Steam nice potatoes until tender. Have ready a hot dish to receive them, and a hot coarse wire sieve or colander. Rub the potato through with a spoon or beetle as quickly as possible. Be careful that the sieve does not touch the potato, and do not disturb it as it falls, but send at once to the table, or if

preferred, brown in the oven a few moments before serving.

Stuffed Potatoes.—Prepare large, smooth potatoes, bake until tender, and cut them in halves. Scrape out the inside carefully, so as not to break the skins, mash smoothly, mix thoroughly with one-third freshly prepared cottage cheese. Season with nice sweet cream, and salt if desired. Fill the shells with the mixture, place them, with the cut side uppermost, in a pudding dish, and brown in the oven.

The Kitchen.—It is a mistaken idea to suppose that any room, however small or unpleasantly situated, is "good enough" for a kitchen. This is the room where most of the time and labor is required, and it should be one of the brightest and most cheerful in the house; for upon the results from no other department of woman's domain depends so greatly the health and comfort of the family as from those of this "household work-shop." If it be true, as is often said, that the character of a person's work is more or less dependent upon outward surroundings, is it to be greatly wondered at that a woman immured for the greater part of the time in a small, close, dimly lighted room, whose only outlook may be the back alley or the woodshed, supplies her household with products of her labor that fall far below a high standard of health and housewifely skill?

Every kitchen should have plenty of windows, and the sun should have free entrance through them; for light and fresh air are among the chief essentials for success in all departments of the household. Good drainage should also be provided, and the ventilation of a kitchen ought to be as carefully attended to as that of a sleeping-room.

Undoubtedly, much of the distaste for, and neglect of, "house-work" so often deplored in these days, arises from the unpleasant surroundings accompanying this department of labor. If the kitchen be light, airy, and tidy, and the utensils bright and clean, the process of compounding from the raw materials those articles of food that grace the table and satisfy the appetite, and all the labor connected therewith, will be a pleasant task, and one entirely worthy of the most cultivated woman.

Literary Notices.

"Alden's Juvenile Gem" is the title of a new illustrated weekly paper for young people, the publication of which begins with the new year. It is a new departure of the prolific "Literary Revolution," and will therefore be examined with particular interest by some hundreds of thousands of readers who have come to look to that enterprize almost exclusively for their reading matter. Its subscription price is only 75 cents a year, though it will rival the high priced magazines in the amount and quality of its attractions. A specimen copy will be sent to any applicant forwarding his address by

postal card to the publisher, John B. Alden, 393 Pearl St., New York.

HOW TO TEACH READING: Clark and Maynard, 734 Broadway, New York City.

Through the courtesy of the author, Caroline B. Le Row, late instructor in Elocution in Smith and Vassar Colleges, we have received a copy of the above pamphlet. It is a model treatise on the subject, concise and practical on all points. The author emphasizes the fact that physical development is a matter of first importance to the successful teaching of the art of reading, and gives implicit directions for the use of such exercises as will secure proper position of the body, and develop the power for deep breathing and correct vocalization. We know of no book of this character in which the principles of true hygiene are so fully recognized, and we can heartily commend Miss Le Row's work to all teachers, and others interested in the subject.

JAILS: By Levi L. Barbour.

This is the title of a paper, a reprint of which lies before us through the courtesy of the author, a member of the Board of State Charities and Corrections. Mr. Barbour presented this paper before the recent convention of county agents, held at Kalamazoo, Mich. The author makes a vigorous attack upon the present jail system of the country, which he depicts in graphic but truthful colors, and pronounces a disgrace to civilization. From what we have seen while acting as a member of a committee to visit various jails of the State on sundry occasions, we feel certain that the writer's statements are not at all exaggerated, and that his conclusions are quite correct. Every intelligent citizen ought to raise his voice in condemnation of the present system. If vigilant committees should be formed for the purpose of razing to the ground certain jails which we might name, and liberating the prisoners, the act would be justified by every man possessed of humanitarian sentiments and acquainted with the facts. Certainly we never encountered anywhere more unsanitary conditions, viler filth or more intolerable stenches, than we have met in Michigan jails, where dozens of human beings were congregated. A short time after a visit to one of these horrible pest-holes, we saw in a newspaper an account of the escape of some of the incarcerated, and felt that a man confined in such a veritable cess-pool was fully justified in making his escape by fair means or foul. A man may be deprived of his liberty as a punishment for crime, and may even give up his life in expiation of the crime of murder; but no authority under heaven has the right to torture a human being with disease-producing germs and gases, with vermin and vile odors.

We hope Mr. Barbour's able paper will receive the attention it deserves, and that this subject of prison reform, or at least that section of it which relates to jails, may be agitated until the monstrous evils of the old system are abated.

Publisher's Page.

☞ We wish all our readers a **HAPPY NEW YEAR**, and hope that each one is willing to make us happy for the new year, by sending in promptly a renewal of his subscription to the journal. Nothing could afford us greater happiness than to keep with us for the new year every one of our old friends and patrons; and we feel certain that few things will contribute more to the happiness of any household than the maintenance of its health; and we know of no one means which will do more in the accomplishment of this good end than the regular visits of a journal which, like this, is devoted to imparting instruction on this most important theme. So send in your dollars, friends, at once, if you have not already done so, and let us have another happy year together.

☞ We wish to call attention to the prospectus of this journal for 1885, to be found on the first leaf of the advertising pages. Read carefully what we propose to give you during the next year; and if you have not already made up your mind to subscribe for the journal for next year, decide the matter at once. You have also undoubtedly received, or will shortly receive, a polite invitation to send in your subscription, and we trust you will favor us by doing so as promptly as possible. It is true there is a general cry of hard times and scarcity of money; but if this is true, there is all the more necessity for economizing, and there is no more profitable method of saving money than by getting rid of doctors' bills, and lost time, or suffering through sickness. One dollar paid out for **GOOD HEALTH** may fairly be calculated to save certainly not less than ten dollars in various ways during each year. We have often received letters from subscribers, stating that the journal saved them at least one hundred dollars a year. Anything which will economize human life and health is cheap at any price.

☞ **ONLY TWO CENTS A WEEK.**—Did you ever think of it? This journal, furnishing 32 large pages of choice reading matter each month, or 384 for the year, costs less than two cents a week! We never did, until the other day. A friend of the journal awoke the other morning just in time to discover this idea popping into his head. It struck him with so much force that he got thoroughly waked up, and broad day-light found him busting about among his friends with a copy of the journal and a sheet of paper and pencil, and in less than two hours he had obtained fifty yearly subscribers for the journal. Everybody said, Why, two cents a week is so cheap—only the cost of a postage stamp—I cannot afford to get along without it. If ev-

ery reader would go and do likewise, the addition to our subscription list in the next four weeks would be beyond precedent.

. Suppose you try the experiment, reader. Show the journal to your friends, and tell them that it will cost them but *two cents a week*, and see if you cannot get six, eight, ten, or a dozen of them to subscribe for it; and when sending in the names, do not forget to send the two cents a week for your own subscription also.

Something Elegant.—The publishers of **GOOD HEALTH** have this year issued an elegant monthly calendar, the beauty and utility of which entitle it to a place in every home, office, counting-room, or other place where calendars are needed. It is gotten up in excellent taste, and contains besides the calendar matter, useful health hints for each month in the year, and a good assortment of wholesome and healthful fun.

Sent securely wrapped, post paid, on receipt of ten cents.

A New Year's Gift to Every Subscriber.—Every subscriber who will send in his subscription for 1885 before February first, including two two-cent postage stamps to cover cost of postage, mailing, etc., will receive a beautifully printed monthly calendar. Subscriptions may be paid in advance if not now due, and those who have already renewed for 1885 may receive the calendar by sending the postage stamps as stated.

☞ The large new building of the Sanitarium was completed early last month, and dedicated with appropriate ceremonies. Dec. 18, 1884, a report of which will be found in the supplement to this number.

☞ This number has been delayed, owing, in part, to extra labor in connection with the supplement.

☞ Subscriptions for 1885 are coming in at a rate almost unprecedented. Let each reader carefully examine the paper on his journal or its wrapper, and see if it is not time for him to send in his dollar for a renewal also.

☞ Now is the time to renew your subscription for 1885. Better attend to the matter before you forget it.

☞ Not a single subscriber can afford to get along without **GOOD HEALTH** for 1885. See prospectus for the year on another page.

☞ Every subscriber who will send us one subscription besides his own, will receive a credit of four months on his subscription.

☞ Quite a large number of subscribers receive this number whose subscriptions expired with December, 1884. This courtesy is intended as an invitation to renew their subscription for another year, and we trust will not be extended in vain.

☞ Is there a single reader of this journal who during the year has read it carefully without obtaining more than the worth of the small sum invested in it? If there is one such person, let him invest his money in something which he is prepared to appreciate, and not waste any more in the same manner.

☞ White Seal Burning Oil costs a few cents more a gallon than common oils, but it gives a more brilliant light, and burns much longer. No explosion has ever occurred from its use. Read the advertisement in another column.

REPORT OF THE DEDICATION

OF THE

NEW SANITARIUM BUILDING.

PROGRAM.

- 1:00 P. M.—Dinner.
2:30 P. M.—Dedicatory Exercises.
4:00 P. M.—Viewing the Building and Various Departments.
6:30 P. M.—Entertainment: A Trip through Europe with the Stereopticon.

FOR months, builders, helpers, physicians, and managers had been looking with anxiety for the day when the mammoth structure which had grown up so rapidly as almost to suggest the idea of magic, could be pronounced complete, and ready to be dedicated to the purposes for which it had been erected. For the last few weeks, extra workmen had been employed, and, although to the superficial observer the building might seem to be completed, an army of busy workers was engaged, scattered here and there over the great structure in nooks and corners and out-of-the-way places, finishing up, retouching, smoothing, and perfecting the work which for various causes might have been left incomplete.

The work had at last reached a stage of completion which made it possible to set a day for the dedicatory exercises. Dec. 18 was the date selected, and hundreds of invitations were sent out to the old patrons and friends of the institution. As the appointed day approached, there still remained very much to be done, and it seemed almost impossible that everything could be made in proper readiness, and all of the one hundred and twenty regular employees—in addition to the carpenters, the mechanics, steam-fitters, etc.—exerted

themselves to the utmost, sometimes working long into the night, and, under the masterly management of the efficient matron, MRS. L. M. HALL, accomplishing every day seeming impossibilities. Whole stories were cleaned, floors waxed and polished, carpets laid down, and rooms furnished, where a few hours before a crowd of workmen had been planing and hammering, making a change as great and almost as rapid as the marvelous transformations one reads about in the "Arabian Nights."

The day before the dedication was one which will be remembered as long as the event itself, by those who participated in its labors. The next day was to be perhaps the most notable in the whole history of the institution. The numerous friends who were expected as guests, were many of them to have an opportunity to contrast, after an interval of many years, the small and struggling institution, with its meager facilities and limited patronage, with the grand establishment which had grown to such mammoth proportions, and now stood with unequaled facilities, a multitude of patrons, and an established reputation, unapproached by any similar establishment in the world.

Every department was to be on exhibition, and was to appear at as good an advantage as possible, notwithstanding the slight demoralization which had naturally grown out of the extra care and labor connected with the improvements which have been going on during the summer.

Mrs. MURPHY, in charge of the dining-room, assisted by Mrs. K., found her hands more than full with the training of thirty or forty extra girls, and the arranging of tables and other accommodations for the four or five hundred expected guests.

The energetic steward, MR. HALL, had already made sundry trips to Chicago and other places in search of the rarest and freshest productions in the line of fruits and vegetables, and still found his time fully occupied in getting together all the materials necessary for feeding at one time half a thousand or more people. His well-laid plans came near being quite frustrated, however, by an accident on the railroad, in consequence of which the freight car containing a large part of the supplies had been left in a snow-bank a hundred miles away. However, by a representation of the necessities of the situation to the accommodating officials of the Michigan Central Railroad, they were induced to provide a way out of the dilemma by opening the car, and transferring the much-needed, supplies to a passenger train, which delivered them here in good condition upon the very morning of the day on which they were to be consumed.

MR. MURPHY, in charge of the business office, found time amid his other busy cares to arrange for an extra supply of ushers, and for the reception of the hundreds of guests, orderly management of cloak-rooms, etc.

MRS. SAWYER, MISS MARTIN, MISS ALDRICH, and others exerted themselves to the utmost, not only in their own departments, but wherever their services were needed.

The members of the faculty also considered it not damaging to their professional standing to be seen busily engaged with the rest in putting the great house in order, whenever a moment could be spared from their regular duties. The whole establishment was like the inside of a beehive during the honey-making season. Patients shared in the general interest and anxiety for the successful issue of the event of the long-looked-for day, and demanded less attention than is usually required by a community of chronic invalids, in many instances even offering to help in the busy labors which occupied the hearts and hands of the entire family of workers, besides many who had been brought in to aid in the duties of the special occasion.

MRS. HALL, the ever busy matron of the institution, seemed omni-present, flitting about from basement to garret and from one end of the long hall to the other, organizing squads of helpers, and keeping them busy in a dozen different places at the same time.

The question, Shall we be ready on time? was asked and doubtfully answered

scores of times. When the morning of the long-expected day dawned clear and cold as any December morning could be, there still remained very much to be done, and it seemed impossible that it could be accomplished. Ten o'clock arrived, and still the halls and many public rooms were by no means presentable; but in another half hour a hundred workers had wrought a marvelous transformation, and by the time the first guests from the city began to arrive, an hour before dinner time, there were to be seen no traces of the bewildering confusion which had reigned for forty-eight hours previous.

The day before, old patients had begun to come in from a distance, and during the night had continued to arrive. Early morning and forenoon trains brought constant additions to the number, so that the public rooms were already filling up some time before the numerous invited guests from the city began to make their appearance.

As the guests arrived, they were received at the door by gentlemanly ushers, who directed them at once to the elevator in the new part, by which they were carried up to the second floor, where spacious dressing-rooms had been arranged for both ladies and gentlemen, in which hats, wraps, etc., were disposed of and carefully ticketed, so that in the hurry and confusion of the departure no one should find himself embarrassed by a hat too large or an overcoat too small, as is frequently the case at large gatherings like this.

From the dressing-rooms guests were shown to the large parlors and waiting-rooms, to await the announcement of dinner, which, owing to the unfortunate delay of freight expected some days previous, before referred to, was not ready for nearly an hour after the appointed time. The interval was well filled up, however, by pleasant converse and the registration of visitors' names, so that no great embarrassment occurred in consequence, and the number of guests was constantly reinforced by those who had been necessarily detained by delay of trains and other causes. Fortunately, the large parlors and spacious halls offered ample capacity for the accommodation of the great company, so that there was no crowding or jostling, and all were comfortable.

When, at last, dinner was announced, the guests were brought in in small parties, and seated so quietly and systematically that all were placed so as to afford the greatest amount of social as well as

gustatory pleasure during the dinner hour.

ELD. U. SMITH occupied the place of honor at the head of the grand dining-room, and in appropriate words asked the divine blessing upon the occasion and the repast.

Dinner was served simultaneously in the new dining-room and the large gymnasium, both of which are connected with the adjacent serving-room in such a manner as to facilitate systematic serving in the highest degree. The tables were set for five hundred guests, and every seat was full. Fortunately, there was just room for all—not one seat to spare, and not one guest without a seat. The new dining-room was seated for more than three hundred, and with a little crowding might have contained a hundred more.

Fifty serving girls brought on the food in courses, in accordance with the following

❖BILL OF FARE.❖

Soups.

Cream Pea Soup. Vegetable Oyster Soup.

Grains.

Rice. Cracked Wheat. Graham Grits.

Vegetables.

Sweet Potatoes, baked. Irish Potatoes, mashed.
Squash, mashed. Sweet Corn, stewed.

Macaron a l'Italienne.

Breads, Leavened.

Graham. White. Buns. Oatmeal Biscuits.
Dry Toast. Cream Toast.

Breads, Unleavened.

Rolls. Graham Crackers. Gluten Crackers.
Oatmeal Biscuits. Dyspeptic Wafers.

Meats.

Roast Beef. Stewed Lamb.

Relishes.

Celery. Cream. Milk.

Beverages.

Hot Milk. Cereal Coffee. Lemonade.

Prepared Foods.

Gluten. Granola. Avena.

Dessert.

Cranberry Pie. Fruit Cake, leavened. * Gluten Cup Cake.
Tapioca Custard Pudding. Farina Blanc Mange.

Fruits and Nuts.

Peaches, canned. Whortleberries, canned. Apples.
Raisins. California Grapes. Bananas. Florida Oranges.
Figs. Brazil Nuts. Almonds. Filberts.

Many of the guests were little accustomed to food so plainly and simply prepared as that served to them on this

occasion; yet all seemed more than satisfied with the repast spread before them, and ate with a zest which demonstrated more plainly than words could express the possibility of preparing food so simply and wholesomely as to be in no way injurious to health, and at the same time so skillfully and daintily as to render it acceptable to the most fastidious taste.

To those who were present on this occasion, the scene was one which will never be forgotten. The capacious dining-room, its massive pillars festooned and nearly covered with evergreens and roses, its snowy white paneled ceiling, its waxed and polished floor, its heavy natural oak finish, its massive mirrors, and its broad windows letting in floods of sunlight, presented a sea of heads with kindly intelligent faces, among which were deftly flitting two score of waiter girls with their neat white caps and tasty uniform dresses. Among the throng were to be seen old and tried friends of the institution, a few of whom had been present at the dedication of the original small wooden building which constituted the entire establishment at its inception eighteen years ago. Among the rest appeared the honest, kindly face of our old friend and former patient, MR. PEDICORD, who was present at the dedication of our first large building, and had come from his distant home in the West for the express purpose of being present on this occasion. Numerous other old patients, some of whom we had not seen for years, and whose faces had almost faded from our memories, were also present, together with scores of those who had been numbered among our more recent friends and patrons.

Among the guests were also a large number of the leading citizens of the city, of whom we mention with pride our honored fellow-townsmen, HON. B. F. GRAVES, a man of world-wide distinction as a jurist through many years of efficient service upon the supreme bench of our State, of which he was for years Chief Justice. The presence of JUDGE GRAVES was a matter of special interest on account of the fact that as a pioneer in this country, then a wilderness, he had more than thirty years ago purchased and cleared the site upon which the institution now stands, and erected a substantial building, then one of the handsomest in the city, which was purchased of him by the founders of the institution, and constituted the first main building, standing exactly on the spot now occupied by the

*Unleavened, without soda or baking-powder.

mammoth new structure which was this day to be dedicated. Of the original incorporators, only one was present on this occasion, and only three or four of the entire number have survived to see the mammoth proportions of the little enterprise which they planted nearly a score of years ago. The JUDGE, who resides in a beautiful home near by the institution, has watched its development with a sort of fatherly interest from its small beginning to the present time; and we thought, as we looked at his kindly face, beaming with good nature, and rare good sense, that we discovered a gentle sprinkling of pride that he had converted a lonely place in the wilderness, covered with underbrush and gigantic forest trees, into a spot so lovely and attractive as to make it the choice above all others for the site of an institution which had grown into such a great and beneficent enterprise as was here this day exhibited. We were sad to be reminded by his snowy locks that if another score of years should roll around to bring occasion for an event similar to the present, it was hardly to be expected that the occasion could be so honored as the present one.

At the close of the sumptuous but wholesome repast, it was announced that the dedicatory services would be held in the gymnasium half an hour later, the interval being necessary to allow time for removing the tables from the gymnasium, and arranging seats. In due time everything was in readiness, and the dedicatory services were held, a nearly verbatim report of which was taken by the Sanitarium stenographers, as elsewhere given. The commodious hall, forty-five feet in width, and eighty-five in length, was barely large enough to accommodate the audience of guests, though the extremely severe cold weather undoubtedly prevented the attendance of a very large number, who otherwise would have been present. Perhaps it was fortunate, however, that the number was no larger, as there was just room for all to be comfortable.

Notwithstanding the severity of the weather, the heating and ventilating apparatus worked to such charming perfection that there was no complaint anywhere, of either heat or cold, and the most crowded rooms were wholly free from the oppressive closeness which generally gives rise to much discomfort on occasions like this.

At the conclusion of the exercises, the

guests were invited to view the building, both the old part and the new, and were soon strolling about in companies through the long halls and corridors, inspecting many new and interesting things which were presented to their view. This part of the program was facilitated by the presence in every part of the building of suitable persons who had been detailed for the purpose, and who were able and ready to answer any inquiries respecting the workings of the various departments of the establishment.

Among the items which attracted most attention were the mechanical exercise departments, the heating and ventilating apparatus, the elegant furnishing of the suits in the new building, and the powerful electrical machines, which were exhibited by DR. W. H. MAXSON, who presided in this department, with his accustomed skill.

The time was thus occupied until the hour for the evening entertainment arrived, when MRS. KELLOGG, by the aid of the stereopticon, took us on an ideal trip through Europe. One by one the chief cities of England and Continental Europe were visited, and their principal objects of interest presented upon the canvas, and described in so graphic a manner that one could almost feel himself upon the very spot from which the various views were taken by the photographer, and viewing with his own eyes the quaint scenes, odd manners and customs, antique structures, and grotesque costumes of the Old World cities, in which one finds a strange commingling of modern ideas, and the outgrowths of modern discoveries, with the fossil civilization of twenty centuries ago.

After an hour thus pleasantly spent, a brief intermission was allowed, during which those who desired betook themselves to the refreshment stand for lemonade, and preparations were made for an exhibition of calisthenic and Indian club exercises, with MR. LOUIS BELKNAP as master of ceremonies. The large gymnasium was filled with skillful performers with clubs and dumb-bells, leaving only a narrow space along the sides and ends, which was packed as full as possible with spectators. The various movements were dexterously executed, all keeping time with the music of the piano. The performance was not only creditable to the trainer of the class, but highly entertaining to those of the guests who remained to witness it.

With this exhibition closed one of the most notable days in the whole history of

the institution. After many struggles through years of adversity, its prosperity has at last reached a point where its friends can look upon it as assured; and now, with an established reputation, a large and growing patronage, and the recently completed most magnificent structure for the purpose ever erected in any land,—an enterprise which had once been looked upon by many with doubt, perhaps scorn,—has reached a position where it may be said to have triumphed over all its foes, and surmounted every obstacle which stood in the way of its success. This was at least the feeling of the hundreds of friends who gathered upon this triumphal day to celebrate its success, as they prepared for departure homeward, and bade a friendly good night to those who had entertained them.

THE DAY AFTER THE DEDICATION.

A considerable portion of the day following the dedication, was devoted to securing photographic views of various portions of the inside of the new building, including views of the dining-room, gymnasium, mechanical exercise department, patients' gallery, etc., a skillful artist having been secured for the purpose. A group of old patients, who had returned to attend the dedication, was taken in the patients' gallery, the walls of which were nearly covered with photographs of patients who had been guests of the institution in years gone by. These photographs are valuable mementoes of the day, and will be cherished years hence by many of those who were present on this memorable occasion.

The afternoon train carried off all but one or two of the old patients, some of whom had come several hundred miles to be present; and the work in various departments, which had been more or less interrupted for several days, dropped at once into the regular routine. Thus ended the third Dedication of the Medical and Surgical Sanitarium.

A Pound a Day.—A patient the other day walked into the physician's office at the Sanitarium, and reported that during the seventeen days of his sojourn there he had gained in weight seventeen pounds, and felt a still greater increase in strength and in buoyancy of spirits.

—A lady left the institution the other day weighing thirty-five pounds more than when she came.

DEDICATION OF THE NEW SANITARIUM BUILDING.

THE dedicatory services were opened with an anthem by the choir. Prayer was offered by ELD. LAMSON. ELD. U. SMITH then delivered the following address:—

Had it not been for one consideration, I should have felt under the necessity of declining the courtesy of the invitation to address you at this time. If this occasion were of such a nature that the interest manifested in it, and the good to be derived from it, and the impressions to be made by it, depended upon what was said, I think consistency, at least, would require that I should not undertake to meet the demands. But what makes this an occasion of interest is what is seen and felt, rather than what may be heard. Under these circumstances, an effort to meet any real *necessity* that exists for remarks to be made, is comparatively a pleasant and easy task.

No words occur to my mind that would better express my own feelings, and I presume also the feelings of those who have had charge of the Sanitarium, and who have invited us here to-day, than words found in the third epistle of John. Writing to his friend Gaius, he says: "Beloved, I wish above all things that thou mayest prosper, and be in health, even as thy soul prospereth." The apostle seems here to regard man as possessing a dual nature, physical and spiritual. Having good evidence that his friend was in a good spiritual condition, his next best wish for him was, that he might enjoy an equal degree of physical health. This has been the great object of search by the people of the world,—to secure health, and enjoy it in its full measure.

What, then, is health? Webster says: "To be sound or whole in body, mind, or soul; especially, the state of being free from physical pain or distress." This is health. This is what the people of the world are all seeking after. But how have they come into this position and condition, which requires them to seek after health? Why is it that we see so much disease, suffering, and deformity all about us? It is because of transgression. Transgression was first introduced into this world by the fall of Adam, and its consequence was death. But how much is involved in that? How much is included in the sentence that is based upon the words, "In the day thou eatest

thereof thou shalt surely die"? Does it contemplate sickness and disease? Does it contemplate acute suffering? It does not seem thus. The sentence was, that man's life should end. This period of existence was to come to a close; but was it not to come gradually? Should not the human machinery, after running until it exhausts its strength, then cease to exist because it is worn out? Was not this all that was contemplated or necessarily included in the sentence? We read of the antediluvians. Were they ever sick and prostrated by disease? There seems to be no evidence of any such thing; but they had their body in health, and were in full possession of their powers of mind. This seems to have been man's first condition. How came it to be otherwise?—Because man has, by his own perversity in yielding to appetite and passion, and by many false methods of living, added to the primal curse, and brought upon himself evils which he might have escaped.

There are many who reflect upon the course of Adam very severely. But is our suffering all due to him? I think not. If men had not, by their own course of action, shown themselves to be the descendants of Adam and his posterity, they might have some reason for charging upon him the evils they have to endure. And so with our ancestors. Are we not guilty in having involved ourselves in evils and sufferings that we have, by our own actions, brought upon ourselves?

We look around, and see disease and suffering everywhere. We see that the world is sadly in need of reform; but the question arises, How much can reform legitimately attempt? What must it submit to? We have the original sentence of death in ourselves. Of course we cannot try to avert that, and live forever in this state of being. But when we come to this condition in which suffering and disease are preying upon the human family, they are not involved in that primal sentence. Here, therefore, is a field to engage the attention of reformers,—to correct these false habits of life; to instruct people so they may become intelligent respecting the way to live; how to best care for themselves and attain to the condition described in the adage of the ancients, "A sound mind in a sound body." This is the problem to be solved. Upon this reformers have been engaged in every age, and this, doubtless, from a physical standpoint, is the most important work in which

men can engage, or have been engaged in any age of the world. The healing art has been called one of the fine arts. It entered into the mythology of the ancients, and one of the divinities which men of old worshiped was the Goddess of Health. They built temples and shrines in which to pay honor to her. We go to the Christian Scriptures and find this question of the healing of disease made a very prominent one there. It was considered one of the special favors which men might properly ask of their Creator. Hence the many petitions recorded in the Old Testament, addressed to the Most High, that he would heal them of all their diseases. It is made equally prominent in the New Testament, and is brought out especially in the ministry of the Son of man. Isaiah prophesied of him: "He hath borne our griefs and carried our sorrows." Isa. 53:4. And Matthew, finding a fulfillment of this in the work of Christ, says (8:17), "That it might be fulfilled which was spoken by Esaias, the prophet, saying, Himself took our infirmities and bear our sicknesses." He brought succor to mankind in their distress. He ever went about doing good and healing the sick. He took special pains to relieve the suffering. They came to him in full faith, and none were turned away unanswered. He realized their need. He pitied their distresses, and relieved them from sickness and suffering. This was a part of his divine mission, and to his exalted titles of "Priest and King," he added this other, equally divine, "The Great Physician,"—the sympathetic healer of the people.

Unless we have good physical health, we cannot expect to attain the highest position in other respects. From this standpoint, then, the hygienic reform lies at the foundation of all reform. It is to this idea that this institution owes its existence. It was my fortune to be one of the original incorporators of the Health Reform Institute, now known as the Sanitarium; and my memory serves me quite well in regard to the motives which prompted the inaugurators of this enterprise. They saw the connection between physical and moral reform. They saw that men could never reach the highest moral position, unless they had clear minds and sound bodies. As an agency to secure these ends, especially, this institution was founded. It was not erected for any selfish gain. It was designed to establish here an institution which should be founded upon correct principles of liv-

ing, and which would be conducted in accordance with scriptural hygiene, and which, while strictly scriptural, should also take a broad view and be entirely undenominational, thus becoming a blessing to all those who might come within its reach.

While we do not give homage to the Goddess of Health, whom the ancients worshipped, we have the same end in view, and hope to gain it by more rational methods. We all know that wonderful advancement has been made in these latter years in all the sciences; but perhaps no advancement has been greater than that in the healing art. In evidence of this, we have but to look at this institution which we are here to dedicate to-day. As you go through these rooms, observe the therapeutic means which are here employed, and compare them with those used several years ago. You can pass your own judgment in this respect. It is now as it was when Christ was on the earth; this question of health and hygienic reform is closely connected with Christianity. In this field we can exercise that feeling of pity for the suffering, and love them as the Son of God did.

These objects have been kept in view through the whole history of the institution, since its foundation, Sept. 5, 1866. It has been in operation eighteen years, the fifth day of last September, with varying degrees of prosperity, but always seeking to accomplish the important end it had in view. We have now come to a time which especially calls upon us for thankfulness, for the prosperity that has been attained; and as we look at this, it is well to remember those who have so faithfully labored, whose zeal has been untiring, and whose ardor has never flagged to bring this institution up to its present degree of efficiency and advancement. I know that the remarks I here feel impelled to make, he, and they who are especially concerned, would rather I would not make; but you know the Bible says that we should give honor to whom honor is due.

Several years ago this institution was so fortunate as to secure the services of its present physician-in-chief. Such has been his concentration of purpose that, as he has studied to prepare for his duties, as he has labored to acquaint himself with the best methods, exploring the whole field of medical science to secure the best facilities, he has attracted to it such a patronage that now we can make a statement

which we believe is excluded from the category of boasting, because it is a simple fact, and that is, that we now have an institution that stands at the head of its class in the new world as well as the old. To his arduous efforts, seconded by the efforts of earnest helpers, this success is largely owing, and is entitled to recognition. And however much they may be disinclined to this publicity, that does not relieve us from the obligation of acknowledging their efficient work and ability, and their personal and professional worth in this matter. Now a cause which has undertaken the preparation of such an institution as this, is certainly a cause in which our people ought to have a large degree of interest; and if it is right that these facilities should be provided, as they have been, and that this is a rational and proper mode of dealing with the sick and inculcating principles of health, then we certainly ought to have a deep interest in this work. We ought to stand by it, and try in every way to contribute to its success. The friends of health reform should be staunch friends of all reform.

We have on the presses in our publishing house what are known as loose pulleys. All machinists are familiar with them. There is the same revolving of the belt and moving of the wheel, and often just about as much noise; but the machinery does not move; nothing is accomplished; because they do not have the grip upon the shaft that puts the other parts in motion. Now, my friends, we must not, in this matter of hygienic reform, be loose pulleys; let us have that firm grip upon principle, that our influence will be felt, and we thus contribute to the progress of this great work.

There is only one other question that is of greater moment than this, which pertains to this present life, and that is the question of the life to come. I received, a few days ago, a pamphlet from our former fellow-townsmen, MR. PEEBLES, entitled "How to Live a Century." That is a noble question, How to fight successfully the battle of life, and how to maintain these physical frames of ours so that they shall run on and on, till we reach a hundred years. But there is one question greater than that; that is, How, not simply to live a hundred years, but how to live forever. We must answer the former question before we can answer the latter.

Let us press on to that glorious life to

come, and which God grant we may all reach.

DR. KELLOGG then made the following remarks:—

I do so much talking here, I thought I might fairly keep still to-day, but some of the remarks of ELD. SMITH seem to make it necessary for me to say a word or two. I was very sorry to hear the remarks he made concerning myself. I assure you that so far as the success of this institution is concerned, very little is due to myself. If we look back to its commencement, it will seem almost incredible that so much progress has been made in so short a time. If you could look out of the window over there, you would see a small building that used to contain all our patients, with some room to spare. Eighteen years ago, at the dedication to which ELD. SMITH has referred, there were just twelve patients. We have more than twelve times as many here to-day, though our number is smaller than usual, as many of them have gone home to spend the holidays with their friends.

The institution has prospered in a most surprising manner; but I assure you that it is not because either myself or my associates can claim any remarkable skill, ability, or genius. We are all very common people here. The success of this institution is attributable to the fact that there is a genuine principle at its foundation. Eighteen years ago the success of the principles upon which it is based was a problem yet unsolved. Many of our citizens heard of a people in this part of town who lived on two meals a day, and ate bran bread; and they laughed at them, and called them fanatics. They heard of our eating oatmeal mush, and commiserated us for living upon "horse diet." Now there is scarcely one who does not enjoy a loaf of graham bread or a dish of oatmeal mush for breakfast.

The institution was founded as a water-cure, and was at first looked upon by many with distrust on this account. But during the last eighteen years great advances have been made in the healing art. We have endeavored to keep pace with these, and have added new appliances and methods until at the present time our *armamentarium* includes, as we believe, every rational means of cure known to the scientific world.

Our efforts have been untiring to accomplish this result, but the success attending the work has been due, I assure

you, to the fact that its principles were sound. No matter how earnest efforts or how many sacrifices have been made, the institution would have been a failure unless the principles upon which it was based had been sound. Eighteen years is long enough to try the principles of an institution. You can travel all over the United States, and find the ruins of hundreds of sanitariums. They possessed no vitality, because they had no fundamental principles. They had no mission. As you examine carefully the history of the few institutions which have had a reasonable degree of success, you will find that they started just as this institution did, with sound principles. But their success has been waning in some degree, and that just in proportion as they have fallen back from the principles they at first espoused.

We have tried to keep this in mind, that we had something to do besides curing people. This is indeed a very small part of our work. We aim to teach the people, not only how to get well, but how not to get sick. You might say that so far as teaching the people to keep well is concerned, it might injure our success, as it would lessen the number of sick people. I visited a doctor once, and asked him how he was getting along. "Well," he said, "of course this is confidential,—I am obliged to say that we are having a dreadfully healthy time." Now we are trying to make a dreadfully healthy time for the whole country. In doing so, we have not convinced all the people in the United States nor in our own State, of the correctness of our principles; but we have convinced a sufficient number of people of the fact that this institution is founded upon sound principles to establish a large and permanent patronage. Our success has not been the result of newspaper advertising. We do very little of that, indeed. One or two thousand dollars would probably cover the total expense of advertising up to the present time. We have believed that if we did our work honestly and earnestly, people would patronize us. We have labored to make those who come to us better men and women, physically, mentally, and morally.

Our success has been almost phenomenal. The first years we had seventy-five to one hundred patients annually. We have now over one thousand. But this does not include a tenth part of the people who are benefited. We receive letters

every day from people in all parts of the world who want a home prescription, and advice. A man writes, and says he is sick. We endeavor to ascertain how he is sick. If he is suffering as the result of abuse of his stomach by bad diet, and needs only good advice, we write to him to stop doing this or that, and do this or that, and take good care of his stomach, then his stomach will serve him well, and he may recover at home. Or, if his case requires, we say to him, Come, and stay with us a time, and we will teach you how to get well; and if he comes, we instruct him in better ways of living, and he goes home and gets well.

A great share of those who come to us go away cured or greatly benefited, and they say to their invalid friends, by their improved looks as well as by their words, "Go and do likewise, and you may get the same results." This is the way we advertise. And when we have several thousand such persons scattered over the country, saying good words for us, we think we do not need to say much for ourselves.

Sometimes we have people come here who do not get well. But they do not regret coming. If they can only prolong their lives a little while, they are contented, and what they learn is of inestimable value to them in this way. So they say to their friends: "Make a visit to the Sanitarium, and you will not regret it. What you will learn will more than compensate you for the time and money expended."

What we are trying to do is not to make money. There is not a person in the world who has ever had any of the profits of this institution. All the stockholders have assigned their dividends to the institution to be used for improvements and in treating the sick poor. The original stock taken in the institution was about \$35,000. The amount of charity treatment given amounts to more than \$50,000, much more than the original stock.

We have laid out much in improvements. The total amount invested in this enterprise now amounts to more than \$260,000.

Some six years ago, when we put up the first new building, we thought perhaps it was a little too large. Some thought it a great mistake. I recollect many such remarks, made by friends in the city, as "Too much money invested there," "It is going to be a grand failure." Well, it has not been a failure. During the past

four or five years we have been obliged to occupy fourteen cottages in addition to our large building. This new building has been constructed, not to fill up with new patients, but to accommodate more comfortably those we have already with us. We do not want a larger number of patients. In fact, our family to-day is large enough to fill every room in the house. There never has been a day since the erection of our first large building when we could put all of our family into it. This addition has been made to better accommodate those who come to us, so they may have better conditions for getting well.

I will just say two or three words more in regard to our principles. In the first place, we have not originated a single new thing. We have only gotten hold of some of the old fashioned notions which were held thousands of years ago. Hippocrates, and Pythagoras, and Esculapius were teachers of hygiene hundreds of years before Christ. They taught the same things we now teach. We have not originated any new principles. We have simply picked up the fragments of the precious truths taught by ancient philosophers which had long been neglected, and cemented them together into a symmetrical whole by the aid of the discoveries in various branches of modern science. The men who originated these truths, who worked out these principles from the great storehouse of nature, were giant minds. One of them accomplished more in the line of real original discovery of principles than has been done by all the genius of the present day. Those men loved simplicity, and this is what we are trying to teach the people. We are trying to lead the world back into the good old ways of unsophisticated innocence and simplicity. Our modern civilization has invented a multitude of artificial conditions, which are destructive of human life and happiness. We are earnestly working against these unwholesome influences, and endeavoring to lead humanity back into nature's ways. We do not profess to cure anybody. What we profess is, that when people come here, we undertake to find out what made them sick, and then to aid them in avoiding the causes of disease, and supply to them healthful conditions.

A man comes to us who has been indulging in some bad habit, perhaps the use of tobacco or whisky; or perhaps a woman who has been leading a fashion-

able life. We find out what the trouble is, and tell the individual to *stop doing this, and do that*. We tell him we cannot cure him, but *nature* can, if he has enough of what the old doctors used to call the *vis medicatrix naturæ*; and if he obeys orders, he pretty soon begins to get well. These principles are not peculiar to us, nor in any way novel, every scientific physician in the land recognizes their correctness. The same truths were entertained by the foremost philosophers of olden time; but, unfortunately, they were buried up in the rubbish and ruins of ancient temples and dead philosophies, along with other truths in every branch of human knowledge.

Pythagoras taught that the world revolves about the sun, instead of the sun about the world, and believed the world to be round. During the long years of darkness and superstition, concerning which an eminent historian remarks, "For a thousand years the bath was unknown in Europe," all sorts of erroneous doctrines crept into every branch of science.

What we are trying to do is to correct some of these errors, and to rescue from oblivion some of the valuable truths which have so long been buried in an ocean of error. In this we are not alone. There are eminent men all over the world who have, for years, been teaching the same truths from different standpoints. But we take great courage from the fact that these principles are being recognized, and men everywhere seem to be reaching the same conclusions at which we have arrived. But I have extended my remarks quite too long; we wish to hear from some of these old patients and friends of the institution who are present with us to-day.

Remarks were made by several as follows:—

MR. KINGMAN: I am very thankful to be a citizen of Battle Creek, a city which contains such an institution as this—one that is based on the principles of common sense. We shall hope to hear of its success in the future.

EX-MAYOR W. C. GAGE: I hope I may be pardoned for taking a few moments to express my pleasure in being present and enjoying this social interview.

In looking over the progress of this institution, a little incident comes to my mind that happened in my own experience some years ago, in which my friend,

ELD. SMITH, had a part. I had the pleasure of entertaining him at my New England home, and we had prepared for him a good, old-fashioned New England dinner. After spending some considerable time at the table, I asked ELD. SMITH if I should help him to something more. He heaved a sigh and exclaimed, "Oh for capacity!" I have been thinking of the many times the managers of the Sanitarium have groaned for capacity, which is now afforded them in the structure which we are here to dedicate.

As I sat here this afternoon, I asked myself the question, Is not the progress of this institution in no small degree typical of the progress of the principles upon which it is founded? I believe this to be the case. If these principles are correct, indeed society has been made better by it. It has won a large place in the minds of the people. I travel all over the country, and seldom sit down to a meal at a hotel without seeing graham bread. At Port Huron, yesterday, the first thing that was handed me when I asked for bread was graham bread, although there was white bread also on the table. This fact shows the advancement of their ideas.

As we see the prosperity of this institution, we have reason to congratulate ourselves that such is the case. The Doctor says that nothing should be credited to him. I say praise is due to those who have labored to build up this institution. We praise God for the blessings of this day.

MR. MORLEY: I believe this institution has been a great benefit here, and I think I can speak for the people of this city, in saying that they have no other desire than for its welfare and future prosperity.

HON. S. S. HURLBURT: The Doctor has referred to me as a sort of legal father to the institution, and I take pride in the fact that just about one year ago I was engaged in preparing the legal papers which effected the incorporation of the Sanitarium Improvement Company, by which this building has been erected. It has been asserted that a corporation has no soul; but I feel sure that this corporation has a soul, and this I think is evidenced by the beneficent work in which it is engaged.

[A few complimentary remarks by this speaker we are not permitted to publish.]

DR. K.: I must still protest that no praise is due either to myself or my asso-

ciates. We have done only our duty in our work in this institution. So far as I am concerned, any success which I may seem to have achieved, must be wholly attributed to the success of the principles for which I have worked. My belief is that the only true success comes from a steadfast adherence to sound principles. A number of years ago I had the good fortune to get aboard of a genuine principle which was framed to succeed, and have been carried along with it; and here we are to-day.

Interesting remarks were made by MESSRS. BUCKLEY and SAUNDERS, and representatives of the press, also by several old patients, which our space does not permit us to report.

In conclusion, DR. K. presented a large number of letters of regret from old

friends and patrons who were unable to attend the dedicatory exercises, some of which are herewith published. He expressed himself in terms of high praise for the energy and skill manifested by the contractors, MESSRS. BUSH & PATTERSON, of Kalamazoo, Mich., in the prosecution of the work of the building; and complimented the architect, MR. L. D. GROSVENOR, of Jackson, and MR. LOUIS SARGENT, who has had the immediate charge of the work, and to whose masterly management and anxiety to have everything done as well and expeditiously as possible, the rapid and satisfactory completion of the work to its present state of perfection is due.

After the announcement of the program for the balance of the day, the exercises ended with an anthem by the choir and benediction by ELD. SMITH.

DEDICATION LETTERS.

THE following are a few of the many letters received from old patients and friends of the institution, regretting their inability to be present at the dedicatory exercises, and yet unwilling to be wholly "left out" upon that occasion:—

From Hon. B. K. Elliott, Chief Justice of the State of Indiana.

It gave me sincere pleasure to receive a letter from you, and I am proud and grateful to know that I am so kindly remembered by you. It is with keen regret that I am compelled to deny myself the pleasure of joining in the dedicatory ceremonies of the 18th inst., for an engagement, long since made, and which cannot be denied, calls me to Cincinnati on that day.

I am profoundly grateful to you for having remembered me among your friends, and for having assigned me a place among those worthy to take part in your dedicatory ceremonies.

The great and good work in which you and your associates are engaged, and in which you have so faithfully labored, is one which all good men must earnestly desire to see crowned with the amplest measure of success. Without ostentation, and without the regard of self, which is so often the sole power that impels men to action, you have done a grand work,—grand not merely because it has done so much to alleviate human misery and conquer disease, but because the elevating and refining influences which are cast about those who come within your doors purify and exalt the mental and moral part of man. It is devoutly to be wished that the circle of

your influence may widen with the lengthening years of existence, and that its power for good may extend far over the land; I trust that you may grow in strength, and that the dawn which now promises so brightly may "widen into a clear and boundless day." My memories of the Sanitarium are those of restful peace and quietness, and of freedom from the evils and cares which lie so thick along the pathway of all who are out in life's continuous strife. The example which you and the founders of the institution have set before the world is, it is not too much to say with all the force the word implies, *sublime*; and it is one which will, I doubt not, do much to promote the cause of temperance, morality, and religion. I care not how good a man may be when he crosses your threshold, he will pass from it out into the world a purer and a better man, and his heart will glow with more kindly regard for his fellow-men, and the fires of selfishness, which so often consume the virtues, will be subdued if not extinguished. May the God of good works give you and your associates that high success and grand reward which, of right, is so richly merited.

Should any of those whom it has been my good fortune to meet at the Sanitarium still remember me, I shall esteem it a favor if you will bear to them from me a kindly message of remembrance.

From Rev. J. L. Douthit, Illinois.

Thanks for your cordial invitation to attend the dedication of the new Sanitarium building. Rest assured it would afford me very great pleasure to be present with you on that occasion. I was with you as a patient but a

very brief time, a few years since, and yet I shall always remember gratefully the wise advice and kind nursing I received. I then hoped to visit you often, rest awhile, and receive fresh hints of how to care for and make the most of a somewhat frail body. But in this busy world we never realize our best hopes. There is always something better farther on, and I shall still indulge the hope that I may visit the Sanitarium, and see you once more before I become an invalid. But you will know how to excuse one who is trying with little strength to act the part of pastor, preacher, editor, publisher, and Sunday-school superintendent,—and all in one scene during the approaching holiday season. I do regret sincerely that I cannot be with you on so interesting an occasion as that to which you invite me. However, I am glad to send this word of congratulation on the completion of the new building. I rejoice with you, for the sake of sick humanity, in this enlarged means of accommodating patients. Thanking you again for your urgent and kind invitation, I remain ever,

Yours most cordially.

From Leonard Lee, Esq., Wisconsin.

I am in receipt of your kind invitation to be present at the dedication of the Sanitarium on the 18th inst. I am aware that the occasion will be one of rare interest, and it would afford me the greatest pleasure to be in attendance, but business and domestic cares seem to forbid. Allow me, however, to embrace this opportunity to speak a word favorable to the institution, and to express my entire satisfaction for personal benefits received from treatment there. In the spring of 1881, I had been an invalid two years. My early demise had been freely spoken of, and not without reason. Physicians agreed upon the nature of my disease, but the case baffled the arts of the most skillful to effect a cure. A friend suggested that I should try the Sanitarium, which I did, as a last resort. In less than four months I returned home, restored to complete health, requiring only the natural process of the system for a short time to restore me to full strength and vigor. This was accomplished by *treatment alone*, without the aid of a single dose of medicine. My appearance was so changed as to surprise my friends, and I was looked upon as one raised from the dead. During the time of my treatment, the institution, the inmates, employees, and surroundings all contributed to personal enjoyment, which seemed more like a protracted holiday vacation, than what might naturally be expected at a medical institute, and it was with feelings of regret that I was obliged to leave such associations. Under such circumstances, I should be ungrateful indeed if I cherished other feelings than those of affectionate regard for the institution, the skillful physician who conducted my case, and the assistants who carried out his instructions, and safely passed me over the most critical period of life.

From Judge and Mrs. Scott, Indiana.

With pleasure we have received your invitation to attend the dedication of your new building. We are glad to know we are so kindly remembered, but regret that we cannot be a part of that reunion, where so many old friends will meet, and those that we have become so much endeared to after seven years' acquaintance, finding each year a warmer welcome, and returning home with the feeling that we were greatly benefited.

From Hon. Geo. Woodford, Illinois.

It was very kind of you thus to remember me with this invitation to your dedication and reunion. My honest regrets at my inability to be present and enjoy the occasion are in a measure relieved by the thought that while the known hospitality of your good people would certainly be equal to the occasion, the present R. R. facilities are quite inadequate should all the friends desire to reach you that day. With this same mail comes a letter from a former patient there, full of rejoicing for restored health, new life and fresh endeavors for the Master's service; and I am grateful, not only for the quiet restful hospitality extended to myself, but for its more beneficent acts upon my friends and fellows. Oh, how many of earth's afflicted ones turn to your Sanitarium as to the shadow of a great rock in a weary land; and 'mid to-day's moral eclecticism and loyalty to the loaves and fishes, how like a great luminous finger-board your institution points us to Him who, as He trod this earth, charged with no less a mission than a world's redemption, knew no moment too precious in which to touch the leper or to pity the poor. To spare the waste of human life, to add by jot or tittle to the sum total of human happiness, is to weave another song into eternity's long, deep thanksgiving psalm. But I only intended to say a word expressing my thanks, and my best wishes for the enjoyment of the occasion and the success of your future work with your increased facilities.

From Mrs. A. C. Winsor, Michigan.

Your invitation to the dedication and reunion is just received. Nothing could give me more pleasure than to be present on that occasion. But under existing circumstances it will be impossible. I hope and trust you will have a grand and glorious time. Long may the dear old Sanitarium stand in its majesty, with its doors open to receive the sick and suffering sons and daughters of humanity to its motherly care.

From A. S. Dunbar, Attorney at Law, Indiana.

Your kind invitation to the dedication of the new building and reunion of old friends and patients of the Sanitarium, Dec. 18, is just received; and while gratified and thankful that my name is enrolled among the friends of your noble institution, my circumstances at the present are such that I feel compelled—very unwill-

lingly—to deny myself the pleasure of being present on that delightful occasion. Permit me, through you, to convey my best wishes and kind remembrances to each and all assembled with you, with whom I have the honor of an acquaintance, and believe me

Very truly yours.

From Chas. H. Topping, Wisconsin.

Nothing would afford me more pleasure than to be present at the dedication of the new building, and join in the reunion of old friends on that occasion. I notice that the new building occupies the ground on which the first Sanitarium stood to which I wended my way in the summer of 1869, doubtful whether I should leave it in a carriage or a coffin. Old memories come freighted with the varying experiences of that eventful summer, during which I gradually changed from a hopeless invalid, weak in body and weak in will, to full manhood. As I emerged from that institution full of hope and courage to face life's struggles, I compared myself to one on whom a miracle had been performed! Never while I live can I forget, or cease to be grateful for the new life I received at your institution. And although it is not compatible with my business engagements to be present with you, I send you cordial greeting, and trust that the blessings of the Great Physician may rest upon you and all your efforts to alleviate the sufferings of humanity.

From Prof. George P. Browne, President of the Indiana State Normal School.

It would give me very great pleasure to accept your invitation to the dedication of your new building, and reunion of old friends; but it occurs at a time when it is impossible for me to leave my post. I remember with great pleasure my short stay with you, and well I may; or I have not been so well for many a year as I have become from your treatment and advice while a member of your institution. I shall long remember with gratitude the Sanitarium.

From Prof. Samuel Johnson, of the State Agricultural College, Mich.

I beg to acknowledge your kind invitation to the dedication of your new building. While my stay with you was brief, it proved so beneficial that I shall not soon forget the Sanitarium. I regret that a prior engagement will not permit my being with you on this "festal day." Accept my cordial congratulations and best wishes.

From Fred N. Scott, A. B., Michigan.

Your kind invitation received. I am very sorry that my duties here will prevent my attending the dedication; but if my congratulations, best wishes, and all that sort of thing, will be of any service, you can draw on me for an unlimited amount. From reports that have come to my ears from time to time, and from the

ocular evidence furnished by the cut at the head of your letter, I judge that the Sanitarium has quite outgrown its youthful roundabout and knickerbockers. I trust it has passed into a serene and mellow middle-age that shall prove to be perennial.

From Judge H. G. Wells, Michigan.

I regret that the inclement weather will preclude my presence at the dedication of the new building and the reunion of the friends and patients of the Sanitarium the 18th inst. I cordially thank you for the invitation extended to Mrs. Wells and myself, and you will please accept our wishes that the occasion may prove (as it undoubtedly will) one of great pleasure to all interested; also for the future success and prosperity of the institution.

From Hon. and Mrs. T. J. Cox and Family, Iowa.

We wish to tell you how sorry we all are that the invitation to the dedication of the new building of one of the noblest institutions of the country, cannot be accepted.

From Miss Jessie Conant, Ill.

I regret that it is impossible for me to be present at the dedication and reunion to which you so kindly invite me. The new addition must be a fine improvement. I am always pleased to hear of the prosperity of the Sanitarium. I spent many pleasant days there, and formed many pleasant friendships, and I shall always be grateful for the benefit Mrs. Acers and myself received.

From Rev. W. E. Blackstone, Ill.

Please accept my sincere thanks for your kind invitation to attend the dedication of the new building. I regret that I cannot accept the same. I hope you may have an enjoyable and profitable occasion.

From O. F. Conklin, Michigan.

I am in receipt of your kind invitation to attend the dedication of the largest Sanitarium in the world, and thought until this morning that I would certainly be with you. I very much regret that I cannot make one of your number. I think of visiting the South in a few days to spend a little time; and should I do so, I shall be pleased to call and leave a chromo for your "Rogues' Gallery."

From D. P. Gibson, Pennsylvania.

Your very clever invitation to attend the dedication of the new, or improved Sanitarium, just received. We regret very much indeed to say that we cannot be with you. Had we received the invitation in time, we certainly would have tried to be on hand, as nothing would have given us more pleasure than to have met you,

together with many of the old patients who I presume will be there, many of them, like myself, no doubt, enjoying good health, and owing their present life to the treatment received at the Sanitarium. I feel very thankful to that institution for the life I now enjoy. Hoping you all may have a very pleasant time, I am very respectfully yours.

From Hon. N. D. Parkhurst, Iowa.

Many thanks from my sister and myself for the invitation to the formal opening of the new building. We greatly regret not being able to be present.

From Mrs. Bell Warner Reynolds, M. D., Michigan.

Your kind invitation to be present at the reunion and dedication of the new building, is just received. I cannot tell you how much pleasure it would afford me to accept it, but circumstances will not permit. Please accept the regrets of my husband and self. We shall hope to visit you at some future time. I always think of the dear old Sanitarium as one of my homes, and pleasant memories are connected with my stay among you.

From Mrs. Sheridan, Illinois.

It is with extreme regret that I find I am not able to attend the "dedication and reunion" at Battle Creek on Dec. 18. My memories of the Sanitarium are all of the most pleasant kind, and I date my firmer health and strength from my sojourn there.

Wishing you abundant success in your great and noble work,

I remain most sincerely yours.

From Benj. Beeson, Indiana.

Your kind invitation to be present at the dedication of your new building was received, and I would gladly be with you and the old patrons of the institution on that occasion. Although I was an invalid, I look back with pleasure to the few weeks spent in the Sanitarium in 1881. The beginning of my recovery to fair health also dates back to the same time.

From Prof. O. B. Clark, of Indiana University, Indiana.

Your very kind and cordial invitation to be present at the dedication and reunion renews my strong desire to revisit the institution which in a few weeks did me so much good. I promise myself the pleasure and the gain of a stay of some time with you in the near future, but present engagements prevent my acceptance of your welcome for the 18th inst.

From Mrs. C. H. Tyler.

"Some lives are like ships that pass in the night, and speak each other in passing."

In my life I have met and passed many without a thought cast back. Not so in the pleasant experience of the healing virtues of the Sanitarium, and of the kindly ministrations to myself and son by physician and nurses,—all, indeed, with whom I came in contact. Accept grateful remembrance, and the earnest hope that the Sanitarium may prove a home of comfort and hope to many a suffering one.

COMPLETION OF THE LARGEST SANITARIUM IN THE WORLD.

JUST one year ago, at a meeting of the Board of Directors of the MEDICAL AND SURGICAL SANITARIUM, among other subjects of interest and importance the question of an addition to the main building for the purpose of providing larger and better accommodations for the invalid patrons of the institution, was considered. For several years the accommodations had been quite insufficient to meet the demands of the rapidly growing patronage. On this account it had been necessary to hire a large number of cottages in addition to those owned by the institution, and during the summer more than one-half the entire number of patients had rooms outside the main building, which even in winter would receive less than two-thirds of the family of invalids, notwithstanding the fact that the pressure for accommodations in the warm and comfortable main building during the cold months of the year had led the managers to use for patients every possible corner where a bed could be placed, including several rooms ordinarily used as treatment rooms, and often so used during the day, though occupied by patients as lodging rooms at night. A half-dozen skylight rooms, intended only as store-rooms, were at last demanded, the pressure became so great, and were fitted up, though with great reluctance on the part of the managers; and at the time referred to at the opening of this article, these little rooms were all occupied, and some contained two persons, although scarcely large enough for one. Every part of the institution was in the same crowded condition. The medical offices, originally planned in such a manner as to be commodious and convenient, had long been given up, and sofa and cabinet beds were placed in the public rooms and made to do service at night for the accommodation of new arrivals, who frequently found not a nook or corner to which they could be assigned.

This embarrassment had been growing from year to year, and had finally become so great that it was necessary to refuse admittance to many who desired to visit us in the winter season, on account of the lack of proper accommodations for them. These facts were presented to the Board of Directors by the managers, and a unanimous vote was passed that a suitable addition to the building should be made, provided it could be done without increasing the present indebtedness. After due deliberation, a plan was decided upon, and within an almost incredibly short time a sufficient amount was raised to insure the success of the enterprise. MR. L. D. GROSVENOR of Jackson, was employed to put in architectural form the plans prepared by the managers; and as soon as these were in readiness, copies of the plans were placed in the hands of several large contracting firms for bids, the contract for the work being awarded to MESSRS. BUSH & PATTERSON, of Kalamazoo, men whose reputation for energy and enterprise is certainly not excelled by that of any in the State.

The quiet grounds of the Sanitarium were now quickly transformed into a scene of activity as great as that which always exists within its walls. The original Main Building, which many well remember with love and veneration as the spot where almost a generation ago they first learned the principles of right and good living, and where they exchanged the aches and pains and uselessness and despondency of disease for the comfort and happiness and bounding energy of health, occupied the site where it was proposed to locate the new structure, and the first work was to remove this somewhat ancient structure to another location. This was soon accomplished, and April 8, 1884, witnessed the breaking of the ground on the work for the erection of the new building, the contractors having agreed to finish it in six months from the date of beginning.

Favorable weather enabled the workmen to make excellent progress with the work, and the walls soon began to climb up among the trees of the surrounding grove, and within six weeks from the time the foundation was begun, the traveler coming in on a railroad from the west would readily discover the top of the new wall lined with workmen almost as thick as they could stand, overtopping the surrounding trees and the cottages of the city. July twenty-six, the portion designed

for the gymnasium was reported ready for use, and was occupied as such for a day or two, then given up to be used for a dining-room, as the old one was quite too meager in proportions to accommodate the guests who were flocking in as the warm season advanced. In accordance with the plan laid when the improvements were begun in the spring, the old dining-room was now divided up into offices. The work was easily accomplished, and with comparatively small expense, as those who planned the first large building had sufficient faith to believe a future enlargement not out of the reach of possibilities, and so had provided for many of the changes needed.

As the time for the completion of the work approached, many anxious inquiries were made of the builders as to the possibility of the building's being ready for occupancy by the time expected. Encouragement was given that the work would be done very nearly on time, although a little delay might occur, owing to the extra pains required in the construction of ventilating ducts, and the arrangement of the heating apparatus.

As the cold weather began to make its appearance, the cottage patients began to clamor for admittance to warmer quarters, and by extra efforts room was made for them by occupying the fifth story of the new part while the other stories were still incomplete. A short time later the fourth story was likewise occupied, and by degrees the building was taken possession of from above downward, so that some time before the date of dedication, each story and every part of the building was in use, with the exception of the new dining-room, the oak finish of which had required a much longer time for its completion than had been expected.

THE OLD AND THE NEW.

THE three accompanying cuts show better than words can express, the material changes which have taken place in the institution between its beginning and the present time.

In the summer of 1866 the building shown in the first cut was purchased, and became the nucleus of the present mammoth institution, under the name of the "Health Reform Institute." Although at first organized upon the water-cure plan, the institution flourished for several years. Hundreds came to its doors, sick, infirm-

and suffering, and after a few weeks or months returned to their friends restored to sound health, and informed as to better modes of living for the promotion of health.



First Main Building.

After a few years it became evident that improvements were needed. New methods were introduced, and new appliances added. As a result, patronage increased. Those who came were pleased and cured, and on returning home, sent their invalid friends to the same source whence they had found relief.

Very soon the few small buildings of the institution were quite inadequate to accommodate the scores who flocked to its doors for admittance. Although little had been accumulated as the result of the years of labor for the sick, the small profits having been all consumed in caring for



Second Main Building.

the sick poor, the urgent demands of the case made the erection of a new building an unavoidable necessity. Over \$100,000 was expended for the purpose, almost the

entire amount being raised on loans, thus involving a large indebtedness.

Patients still increased, however, so that within a year the new building was insufficient to accommodate all who came, and it became necessary to rent a large number of cottages. These, too, soon proved inadequate to accommodate a family which now reached, at some seasons of the year, several hundred, and a plan was devised by which a large addition might be made to the New Main Building, which in its complete form is shown in the cut below. During the past season this addition has been made, enabling us to accommodate fully one-half more than before, and yet we have no surplus room.

This grand result has not been achieved by sensational advertising. Very little advertising has been done. The managers have depended upon the recommendations of those who have visited them, whose interest for their sick friends naturally leads them to call their attention to the merits of meth-



Third, or Present Building.

ods which have brought to them health and happiness, after both had been long dissipated by disease. Of the thousands who have visited the institution, very few indeed have left without receiving substantial benefit, at least when they have done their part.

As the institution has grown from its modest beginning to its present mammoth proportions, new methods and appliances have been gradually developed, and are now offered to the suffering classes in a state of completeness and efficiency of which its managers feel a just pride, and which finds no equal in this or any other country.

—One of the most attractive features of the improvement recently made at the Sanitarium is the rustic summer house.