THE

HEALTH REFORMER.

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

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The Sanitarium Buildings.

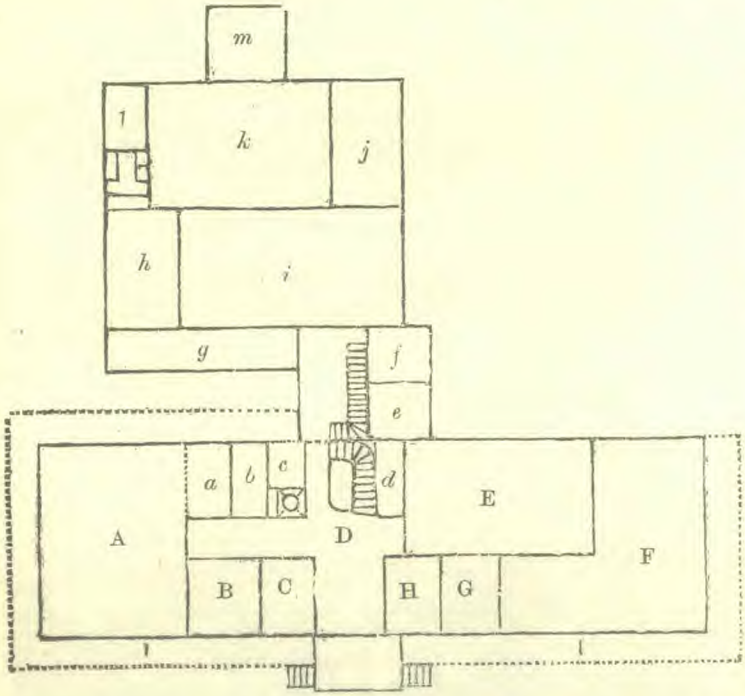
THESE magnificent buildings constitute the largest and most perfectly constructed edifice of its kind in America. In fact, it is the only one, of any note, specially built for, and adapted to, the purpose of a hygienic hospital and home for the sick. It is located on the grounds of the old "Health Institute," so long and favorably known to the public. This location is in the highest, dryest, and healthiest quarter of the town.

MEDICAL AND SURGICAL SANITARIUM.

The Sanitarium is on a mammoth scale. The dimensions of the main building are 150x50 feet, including the verandas. It fronts upon Washington Street, and is opposite the Battle Creek College. The rear extension, containing the bath rooms, is 60x60 feet. The entire depth of the building through the middle is 137 feet. The whole is four stories high, besides the basement. The fourth is the Mansard-roof story. The style of architecture has a Greek simplicity and massiveness quite rare in these days of ornate designs.

Altogether, the building presents an imposing appearance. In the center of the front a tower 20x12 feet is built out, and carried up 15 feet above the roof. This forms an open porch on the ground floor, which is supported by stone pillars, and has a flight of stone steps on each side. This is the main entrance; a smooth carriage drive leads to it from Washing-

ton Street, and one can alight from a carriage directly upon the porch. Massive doors open from here into the main hall. The second story of the tower is a conservatory, and above this it is inclosed like the rest of the building, and has large, ornamental windows. Verandas seven feet wide extend around the three stories of the entire building excepting on the south half of the east side; and the top of the roof is inclosed by a balustrade, making a magnificent promenade deck. There are thirty segment windows to each story, and thirty dormer windows in the Mansard-roof, which is shingled and painted to represent slate. The cornice is plain, ornamented by heavy brackets with dentals.



The above is a plan of the first floor of the building, above the basement. A, parlor; B, reception room; C, counting room; D, main hall; H, physicians' office; G, laboratory; F, dining room; E, gymnasium; *a*, library; *b*, ladies' wash room; *c*, elevator; *d*, cloak room; *e*, wash room; *f*, water closet; *g*, drying room; *h*, electric room; *i*, dressing room; *j*, packing room; *k*, general bath room; *l*, Turkish, Russian, and electro-vapor bath rooms; *m*, clothes room.

Great care has been taken in construction to fortify against the climatic changes of this latitude. The strong, heavy framework of the building is ceiled on the inside with matched lumber. Inside of this is a wall of lath and plaster. The outside of the framework is entirely inclosed by walls of best finishing brick. Between the brick and the ceiling, the spaces between the studding are lathed and plastered, so as to leave two air-chambers, each one and one-half inches in depth. These air-tight chambers secure the greatest possible warmth and dryness to the interior. It is calculated that water will not freeze throughout the building, even without artificial heat, during the coldest weather.

THE BASEMENT.

The interior arrangements have been carefully planned to secure the greatest amount of comfort and convenience. The bakery, kitchens, sculleries, store rooms, and pantries are in the basement, as are also the engine room and coal cellar. The engine is a twenty-horse power, and by the aid of belts and pulleys does all the hard work of the establishment. Two immense boilers are attached, each measuring 14 feet by 54 inches.

A machine for the manufacture of gas from gasoline is also in the basement. The entire building is lighted with this gas, which is superior in quality to the ordinary gas used in cities, giving a clear, white light, and free from all noxious vapors.

The cooking is done by steam, and a dummy waiter elevates the prepared food to the dining rooms above. The perfection of neatness, excellence, and dispatch is attained in the management and execution of business in the kitchen quarters. Bread and crackers are made by machinery, and are baked in a baker's oven of the most improved style.

THE FIRST FLOOR.

On the first floor are the parlors, library, dining room, gymnasium, physicians' office, and business office. Perhaps a detailed description of the several floors would be of interest to the reader. From the main entrance on the ground floor is a hall fourteen feet wide, from which a broad stairway leads to the upper stories; opening from beneath this stairway is a flight of steps reaching to

the basement. On the left of the main hall and opening directly upon it, is the general business office, dimensions 11x15 feet. An open window, through which business may be conducted, facilitates the operations of the clerk, and effectually checks the tendency of idlers to loaf in the office. Half-way down the main hall, a side hall eight feet wide leads off to the left through the center of the building. Opening from this hall on the left is the reception room, 15x16½ feet. This is a front room and adjoins the office. At the end of the hall is the parlor, 27x40 feet, and occupying the entire end of the building. This room is elegantly finished. The side opposite the hall has rounded corners, and ornamental pilasters. Eight windows look out upon the clean-shaven lawn, the gardens and shrubbery. On the right of the hall, and communicating with the parlor by a wide, open archway, is the library, 10x15 feet in dimensions. Adjoining the library, and also opening into the hall, is a room 8x15 feet, devoted to ladies' toilet, and fitted up conveniently for that purpose.

Returning to the main hall, we find the physicians' office directly opposite the business office; this is 12x15 feet. Adjoining it, and communicating with it, is a laboratory of equal size with the office. The next door on the right-hand side opens into a large room, 25x40 feet. This is the gymnasium, which also answers the purpose of a hall, and opens into the dining room, which is in shape a rectangle, and occupies the entire south end of the building, being 20x40 feet on that side, while it extends 21x15 feet additional upon the west, or front. As will be seen, this is a remarkably pleasant, well-lighted, and capacious dining hall. But during the summer rush of guests, the gymnasium, which will not be used for that purpose during the heated season, will be converted into an additional dining hall, making room to conveniently seat in all three hundred guests. A cloak room opens off the hall, next door to the gymnasium; this is 7x16 feet. At the lower end of the main hall on the left hand side is the steam elevator.

TREATMENT BUILDING.

The end of the hall opens upon a passage way fourteen feet wide, leading to the rear extension, and from here a stairway conducts to the upper stories. On the right of this passage are the wash room, water closets, etc., the whole 34x20 feet. This passage way is of equal height with the rest of the building, being carried up through the different stories. It leads directly to the rear building specially designed for the treatment of patients.

A door on the left opens from the hall or passage into the wardrobe, a room 36x9 feet, and lighted by four windows, one on the north and three on the west; these latter look directly upon the north part of the east side of the main building, across an open court. The lower end of the hall opens upon the dressing room, which measures 25x46 feet. This room is lighted by two windows on the south, and is divided into private compartments by means of movable screens. Opening into the dressing room from the left, or on the north side, is a room 12x15 feet, devoted to the electrical treatment of patients. This room is lighted by two windows on the north, and is fitted up with batteries, and all the appliances for the use of electricity in the treatment of disease.

The bath rooms are 25x60 feet, and occupy the entire east part of the building. They communicate with the dressing room, and with the electrical room. The north part is devoted to the Turkish and Russian baths and electro-vapor baths. The remainder is a vast bath room furnished with all the appliances essential to the giving of fifty different kinds of baths. Adjoining the treatment building on the east is a strong structure fifteen feet square, containing the reservoirs in the fourth story. The second floor of the treatment building is a duplicate of the first floor, and is fitted up for the use of ladies, while the first is for gentlemen. The floors of the bath rooms are of tile, cemented and made water tight, and the ordinary partitions do not reach to the floor, but have a base of tiling and cement, which obviates any possibility of leakage from the bath rooms.

SECOND FLOOR.

Returning to the grand hall of the main building, we step into the steam elevator, which is elegantly fitted up, and ascend smoothly, without creak of cordage or smell of machine oil, to the second floor landing. Here we find the halls as below, excepting that the lateral hall from north to south extends the entire length of the building. This story is divided into rooms for guests. An elegant *suite* of rooms occupies each of the four corners, the parlors being fifteen feet square. There are twenty-one rooms on this floor, of which the average size is 11x15 feet. These rooms are all well lighted, the windows on the north, west, south, and part of the east side opening upon the veranda. Every room has an ample closet or wardrobe. The conservatory, as before mentioned, is directly over the main entrance on the first floor, and is reached by the main hall, which opens upon it. A passage two feet wide

extends around the conservatory, connecting the two ends of the veranda, thus making no break in the promenade. Within, rare exotic flowers and shrubs make a summer all the year; delicate vines trail over the sash, and the luxuriance of growth and color, seen through the transparent glass, makes the little *bijou* of a garden seem like a stray morsel of the sunny South.

THIRD FLOOR.

We touch the bell, and like a responsive automaton, the elevator in a moment is at our command. We step in, and ascend to the third floor. Here the arrangements in the main building are similar to those on the second floor. In the treatment building, the main hall opens into a transverse corridor. On the west side of this passage are three well-lighted bedrooms. Communicating with this corridor is a hall which extends down the center of the remainder of the building. On each side of this are three rooms, those on the south are for the Swedish movements, and those on the north are neatly furnished as lodging rooms.

FOURTH FLOOR.

In the main part, the fourth story is traversed by a hall through the center of the building, at right angles with the main hall, which corresponds with those below. Opening upon this hall are twenty-five rooms. The corner rooms have two dormer windows, and each of the others has one.

The rear building, which we have called the treatment building, is divided, on this floor, into apartments for various uses. The sun-baths are given here; for we are now directly beneath the roof, and sky-lights are introduced wherever needed. A compromise is here made with those unscientific souls who continue to rest their hopes upon the efficacy of blue glass. Movable screens are so adjusted beneath the sunlight that the patient can have any color to his order; blue, yellow, or even green if he desires it.

We have now explored the new building from basement to roof, but, having failed so far to give the interior height of the different stories, will do so now. The basement is ten feet high; the first story thirteen feet; the second twelve feet; and the third and fourth each ten feet. The entire building is furnished handsomely and appropriately, and the attendance is the best that can be procured. The persons employed in the bath rooms are experienced in their duties, and in every way trustworthy.

VENTILATION.

We have now arrived at the most important feature of all—the ventilation. All the facilities and appliances for the cure of disease would be of little virtue if the patient were obliged to breathe a vitiated atmosphere. The system of ventilation adopted in the Sanitarium is the newest and by far the most perfect yet known. There are two main ducts, one above the other, running between the floor and ceiling of every story. The lower one is for the ingress of fresh air, and opens at the exterior of the building on the north and south. Small ducts branch off from this main duct, and communicate with every room, entering just beneath the steam radiator, so that in winter all the fresh air is heated before passing into the room. An automatic valve, at each exterior opening of the main duct, is so arranged as to close under the effect of a heavy wind. In case of a gale from the north, the valve on that side closes, and the suction at the south opening is sufficient to supply pure air throughout the building.

The upper duct is for the egress of foul air, and communicates with a shaft five feet square that reaches from the basement to a point fifteen feet above the roof. The smoke stack from the furnaces below, which is three feet in diameter, passes through this shaft. Four vertical divisions separate the shaft into as many compartments. The foul air is conducted from each room by means of lateral ducts into the main duct, which opens into one of the four compartments of the shaft. The air in the shaft is so intensely heated, by the smoke stack passing through it, that a powerful draft is created, which carries away the foul air. The division of the shaft into the several compartments secures the most thorough ventilation possible for each story.

METHOD OF HEATING.

The building is heated by steam, generated by the two boilers in the basement, and distributed by means of pipes. There is a radiator in each room proportionate to the size of the room. To prevent the air from becoming harsh and dry by the heat, a copper reservoir is attached to the side of each radiator. Steam is conveyed into this by means of a small pipe, and by this arrangement the amount of moisture in the atmosphere of each room can be perfectly regulated. The physician finds it in his power to secure to his patient any climate which he deems desirable, from the soft and balmy air of Florida, to the dry, crisp atmosphere of the Rocky Mountains. He can manufacture a perpetual June.

WATER SUPPLY.

The building has all the modern improvements throughout. Every room is supplied

with hot and cold water. The water pipes are of iron, and in every hall is a pipe connecting directly with the main water pipe, and having attached sufficient linen hose to reach throughout every room on that floor. In case of fire within, by merely turning the stop-cock, a stream of water may be directed to any part of the building. Any desired force may be gained by means of the steam pumps.

The enormous reservoirs are furnished with an abundance of water by the steam pump at the wells. The water is conducted to the building by means of underground pipes. In order to secure pure soft water, large wells have been dug at a distance of half a mile from the building, which supply an unlimited quantity of purest water. The engine in the basement furnishes the power, and the steam pipe lying beside the water pipe prevents the water in the latter from freezing in winter. The engineer in the basement controls the pump at the wells half a mile distant. The outside of the building is equally fortified with the inside against fire. By means of the steam pump and the hose, all the buildings may be deluged with water within three minutes after a fire alarm. Additional precautions have been taken by supplying the building with the most improved fire extinguishers. The sewerage is perfect and complete; all the traps and waste pipes are in the best of order, so that no foul vapors or odors can escape to infect the buildings or premises.

The laundry is in a separate building. It is a mammoth affair, and is run by steam, having all the latest improvements in its line, and doing the best sort of work.

PLAN OF BUILDING.

No details have been overlooked or slighted in the construction or fitting up of the Sanitarium. Everything has been brought to a mathematical nicety and precision. The building, with its systems of heating and ventilation, was planned by Dr. J. H. Kellogg, after a careful observation and study of all the principal establishments of the kind in the United States. These plans were submitted to the most scientific men in this country, and met with their unqualified approval. The architect is W. K. Loughborough, and the builder O. B. Jones, both of this city. The entire cost of the building amounts to $50,000. The heating and ventilating apparatus cost $10,000.

This institution is managed by a Board of seven Directors, of which Elder James White is President.

THE SANITARIUM GROUNDS

Occupy fifteen acres, a part of which is in vegetable gardens, grapery, and orchard. Seven very pretty cottages situated on the property are in the immediate vicinity of the main building. The buildings known as the "Twin Cottages" are beautifully located side by side in the grove. They are of Swiss style, and make a picturesque feature in the landscape. All these cottages are for the occupation of guests.

Great care has been taken to beautify the grounds about the Sanitarium. The parlor looks out on the north and west upon a beautiful garden of flowers and ornamental shrubbery; the wide lawn is smooth and clean shaven, and broken here and there by clumps of flowering shrubs and neatly trained evergreens. A fountain plays in front of the building, and tempers the summer air with its cool spray. A natural grove of forest trees extends along the whole street front of the Sanitarium grounds. The trees are nicely cared for, and a thick carpet of green turf covers the ground, which is smooth and level as a floor. Seats are conveniently arranged under the shade, and the patients find this the most charming of summer drawing-rooms. This grove makes also a delightful place in which to hold meetings of any kind, and to set tables for out-of-door dinners. Gravel walks across the lawn and through the grove make pleasant summer promenades.

FUTURE OF THE SANITARIUM.

Altogether, this institution is the *one* par excellence of its kind, in America. With an efficient corps of physicians, at whose head stands a thorough scientific man, in the front rank of his profession—having a Board of Trustees of tried ability and judgment, whose president is acknowledged to be one of the best financiers in the State, and a man whose life thus far has been spent in the successful carrying forward of grand enterprises—with all the facilities that science and long experience can devise—with a wide and enviable reputation, and an ever-increasing patronage—the Medical and Surgical Sanitarium of Battle Creek, Michigan, is destined to wield a mighty influence in the world, and to be a powerful means of breaking down the old, pernicious autocracy of empirical medical practice, and of encouraging sanitary reform.

M. L. C.

— But for the cravings of the appetite not a bird would have fallen into the snare. He who is a slave to his appetite seldom worships God. The appetite is a fetter to the soul.

Fung-Shuy vs. the Missionaries.

BY HON. W. S GEORGE

TYPHOID fever is no respecter of persons. While it mows down multitudes of the poor in our cities, it attacks the rich and comfortable, and spares not even those of the highest rank. Four years ago the Prince of Wales nearly died of typhoid fever, brought on by defective drainage in one of his palaces. This summer his eldest son, Prince Albert Victor (who if he lives will some day be King of England), has suffered from typhoid fever in the same palace from the same cause. The ignorance or indifference of the ruling family in an enlightened nation, upon a matter so vital to health, would be astonishing if it were not more than paralleled among the "sovereigns" of the United States.

One of the first things to be considered in establishing a home should be perfect drainage and the absence of foul smells; but a wet cellar is often deemed no objection, and the proximity of a stable or a foul privy is not shunned as a death-breeder. One of the most pleasant-looking and prosperous cities of our State is built principally over clay soil, and drained into a mill-pond. Every year its people suffer from numerous cases of typhoid fever in the later summer months, when the subtle, invisible poison is rife in the atmosphere. It would be no exaggeration to say that the cost in money of all the sickness, the "doctoring," the nursing, the loss of earnings, and the funerals, would in three years' time establish a perfect system of drainage for that city, and nearly end the reign of terror from typhoid fever which every warm season brings about. This does not take into account the prolonged pain and anxiety of the sufferers and their friends, which no money can compensate, but which ought to spur them as with a whip of scorpions to do away with the danger.

The "heathen Chinee" are not such fools as conceited Christians in regard to the causes of typhoid fever. The N. Y. *Tribune*, in a witty editorial, says that the people of the "flowery kingdom" have paid such fearful respect to malaria as to elevate it into an evil spirit called Fung-Shuy. When Fung-Shuy says, "Build here," or, "Leave that lot vacant," the worshipful heathen obeys, and does not die of typhoid. Some American missionaries lately determined to show what a humbug Fung-Shuy was, and so they built on the ground dedicated to a poisonous effluvia. The Christians died, and the heathen god triumphed. In exchange for the teachers of a better theology who are sent into China, that practical people might be induced to send a few teachers of better hygiene into Christian countries.

It is neither pleasing to our Maker nor beneficial to our race when we die prematurely in battling against Fung-Shuy.

Consumption Contagious.

DR. A. N. BELL, of New York City, read before the late session of the American Medical Association a very interesting and remarkable paper, in which he demonstrated, by the results of a large number of carefully conducted experiments, the following points relating to consumption, or tuberculosis:—

1. The disease is contagious. It may be communicated by expectorated matter, or by means of diseased tissue.

2. Tuberculosis, or consumption, is a very common disease among cattle, horses, fowls, and other domestic animals.

3. This disease is produced in animals by the same cause which occasions it in human beings; viz, bad air, impure food, want of sunlight and other hygienic suroundings.

4. Eating the raw flesh of animals affected with this disease is the surest means of infection.

5. The disease may be communicated by the use of the milk of tuberculosis animals; ordinary cooking does not destroy the poisonous properties of the tuberculosis flesh.

The doctor gave the following account of the dangers to which those who live in large cities are subjected, which we copy from the *Sanitarian* for August:—

"Tuberculosis has long been known to be a no less universal and fatal disease among domestic animals, especially those of the bovine species, than among mankind, and for the most part the conditions of its prevalence are the same in both. Nobody doubts its hereditary character; and in domestic animals, as in the human race, its subjects are characterized by their attenuated figures, long limbs, narrow chests, lymphatic or neuro-lymphatic temperaments, and they are alike the product of cold, damp places, dark, filthy, unventilated dwellings, insufficient food in quantity or quality, and, in adult females especially, prolonged and excessive lactation, or the progeny of those who have been subject to the conditions herein described.

"As representing these conditions in their highest degree of intensity among milch cows, the following is an example:—

"May 23d, 1877, a party from New York, consisting of Mr. Henry Bergh, President of

the Society for the Prevention of Cruelty to Animals; Dr. Janes, Assistant Sanitary Superintendent of New York; Mr. A. Berghaus, Chief of Frank Leslie's staff of artists, and four or five police officers and other persons, visited certain cow stables in the outskirts of Brooklyn. At the first one, at Blissville, one poor white cow was seen with both eyes nearly destroyed by ophthalmia, caused by ammoniacal gases being continually generated under her body. The full proportion of stump-tailed animals was seen, and a great number without teeth.

"The section in which the poor beasts are compelled to stand from one year's end to another is on the average two feet and eight inches wide by six feet long. The height is six feet. Some slimy swill was standing in the troughs, and one of the myrmidons informed Dr. Janes that it had been there since early in the morning. Into it the thermometer was plunged. The temperature was 102 degrees Fahrenheit. Another specimen of the swill gave a temperature of 109 degrees Fahrenheit. The swill, as it ran into the vats, was boiling; one of the officers plunged a thermometer into the filthy mess, and the glass was fractured by the heat.

"After leaving Blissville, the party proceeded to the dens on the corner of Marcy Avenue and Floyd Street, Brooklyn.

"Twenty-eight cows were here confined in one shed which is only a little over seventy feet long. They were fastened with ropes about their necks, to which there were chains six inches long. When the poor animals lie down they go through a sort of hanging process. In another shed, not much larger, there were fifty-one head of cattle. Seventy-nine steers were found in a shed that measures seventy-two by fifty feet, and is filthy enough to turn one's stomach—sea-sickness is preferable to it. The cattle are kept here and fattened on swill by one Block, who keeps a slaughter-house in New York.

"Several wagons were seen about the place, all bearing the inscription, 'Pure Milk.'

"A visit was next paid to the Brooklyn Board of Health, and the following conversation took place between Mr. Bergh and the Secretary of that body:—

"*Mr. Bergh*—Mr. Secretary, I and my associates have been visiting some swill milk dens in your city, and have called to see if your Board intends to take any action in the matter.

"*Mr. Secretary*—What ones have you visited?

"*Mr. Bergh*—We have been to the establishments at Blissville.

"*Mr. Secretary*—Oh, they are out of our jurisdiction.

"*Mr. Bergh*—They are. Well, we have also paid a visit to the filthy pest dens of Ehlers, and I think they are in your district.

"*Mr. Secretary*—Yes, they are in our district, but everything is nice and clean about them.

"*Mr. Bergh*—Everything is not nice. We have just left there, and a more filthy place I never saw in all my life. If the Inquisition should be revived, and if that body should endeavor to institute some means of torture for cows, they could not hit upon a more severe and outrageous plan than the one that is practiced daily at the beastly places in question. The proprietors violate the law daily in feeding their cows distillery waste. I have the law here and will read it to you. The act passed by the Legislature in 186—

"*Mr. Secretary*—Oh, that law has been abolished, as far as this country is concerned.

"*Mr. Bergh*—Well, then, here is another.

"*Mr. Secretary*—When was that passed?

"*Mr. Bergh*—At the same time. I presume that this has been abolished, too?

"*Mr. Secretary*—Yes, sir; all the laws passed prior to June 21st, 1875, at which time this Board was created, were abolished by the creation of this Board.

"*Mr. Bergh*—Then you have no State laws on Long Island, and these swill people can do as they like?

"*Mr. Secretary*—No; we do not allow them to keep cows without a permit from this Board.

"*Mr. Bergh*—I don't think I can do much good, then.

"*Mr. Secretary*—No, sir; I don't think you can, for we are endeavoring to do all we can, and we can't do much.

"*Mr. Bergh*—Very well, sir. My province, I am fully aware, is only the animals; for if the people prefer swill milk, I have no right to interfere with their taste.

"*Mr. Secretary*—I prefer Orange County milk myself, and shall endeavor to keep the swill milk traffic within bounds; but we have very hard work to do it. Only last week we convicted a man named Luke Flannagan, on the corner of Thirty-ninth Street and Third Avenue (Brooklyn). It is hard work to convict these fellows, for we are obliged, when one judge discharges them, to re-arrest them and take them before another judge. Sometimes the judge suspends sentence after they are convicted, and we are virtually defeated.

"*Mr. Bergh*—Well, sir, as all the laws are suspended in Brooklyn in regard to the swill milk establishments, I will go home. Good day.

"The party then withdrew and returned to New York.

"With a knowledge of these conditions, and with the hope of adding somewhat to the reasons for their suppression, some six months ago I secured a privilege with an offal contractor, of making post-mortem examinations of cows. Since which time, of eleven examined, ten evidently died of tuberculosis of the lungs. The other one, which also had the disease, incipiently, died in first calf-birth. One of them was of a choice breed, imported at a cost of about $500; she had been carefully kept, in a small, dark, and close stable, and allowed but little exercise. All the rest were from stables such as those above described. These eleven examinations are too limited in themselves for the elucidation of any doctrine; but, taken in connection with the testimony from other sources, and the conditions common to city cows, they are suggestive of dangers worthy of the most serious consideration. That the milk of cows affected with tuberculosis is likely to induce that disease, usually commencing as intestinal catarrh, is not only rendered probable by the experiments cited, showing that it has this effect when fed to domestic animals, but this evidence receives additional strength from the prevalence of fatal intestinal catarrh, common to infants fed on cows' milk, in most American cities.

"From a physiological standpoint, all observers appreciate the important difference which exists in regard to the requirements of nutrition between the young of all animals and those of mature growth, and in none is it more marked than in the human species. In infancy, and throughout the growing period of life, not only is it necessary to repair the waste of tissues constantly going on in the young as well as in the old, but the frame has to be built up to the degree of development it is destined to reach. To meet this demand on the part of the animal economy, is the foundation of the enormous appetites and rapid digestion common to the young of all animals. Every organ of the body, in addition to sustenance, appropriates the additional amount of nutriment necessary to give it required bulk. The current of nutritive life in the young is, therefore, an exceedingly rapid one, and the especially remarkable feature of it is, that the blood itself, from which the organism is built up, receives its impressions and modifications—its constitutional predisposition—chiefly from the nature of the food during the growing period of life. Such, indeed, is the main foundation of the so-called 'hereditary' diseases, for it is well known that the offspring of progenitors with well-marked constitutional tendencies may often have their hereditary tendencies wholly overcome, and a radical change effected, by a change in the quality of the nutriment and the physical surroundings; and, on the contrary, the offspring of those possessed of the highest degree of physical organization may be dwarfed to the lowest degree of degeneracy, by withholding the necessary conditions of healthful development, or by subjecting them to poor food and a vitiated atmosphere.

"That city cow-stable milk is peculiarly liable to produce diarrhea, debility, and marasmus in infants is well known; but that such fatal affections are *probably due to localized tuberculosis, communicated through the milk upon which they are fed*, appears hitherto not to have been suspected.

"Among the observations now adduced, there appear to be many facts which show that the cohabitation of phthisical cattle with the healthy is a sure means of extending the infection, the expectorated matters of the diseased being the probably active agent. Alsace quotes evidence to the effect, that not only is the disease communicable from phthisical cattle to the healthy, but that stalls and stables may become so infected by animals affected with tuberculosis, that they will infect sound cattle which afterward may inhabit them.* Facts also demonstrate that tuberculous matter preserves its virulence through three or four removes, and that successful inoculations have been made with tubercular matter from a patient who had been dead for thirty-six hours, and with *sputa* which had been in a dried condition for twenty days. In experiments on animals, it was found to produce no effect after having been boiled, provided the boiling was thorough. Villemin is of opinion that transmission of the malady in the human species takes place most frequently by the dry expectorated matter being accidentally reduced to powder and carried by the atmosphere into the lungs. Some veterinarians believe that it is communicated by forage, soiled by the expectorations of diseased animals and consumed by the healthy. It is in some respects anomalous, perhaps, but nevertheless true, that in the marked progress of public hygiene in recent years, veterinary sanitary science has been the vanguard, and chiefly because people are wont to respond with more alacrity and with greater liberality for the suppression of an epizootic among their horses, or a pleuro-pneumonia among their horned cattle, than for the arrest

* Recuil de Méd. Vétérinaire:—Fleming, vol. ii. pp. 390, 391.

of small-pox or the prevention of cholera infantum. Individuals, communities, and States will make liberal appropriations to improve the breed of stock, or contribute to the contest for a prize at a dog-show, while they will refuse assistance or oppose a tax for the admission of air and sunlight into a stunting school, or for the drainage of a marsh which, by its emanations, is a perennial source of human degeneracy, disease, and death. It is therefore fortunate, that in the progress of veterinary sanitary science, it has been discovered that many of the most fatal and loathsome diseases which afflict the human race are equally common to—if, indeed, they do not actually take their rise from and originate in—domestic animals inhumanly treated. Scrofula, small-pox, syphilis, malignant pustule, hydrophobia, trichinosis, and tuberculosis are examples; and, consequently, veterinary sanitary science may be regarded as the right arm of public hygiene."

Hygiene of the Nervous System.

A HEALTHY nervous system requires, first of all, a sound nervous organization by inheritance; secondly, proper nutrition; and, thirdly, due exercise of the mental powers. On the subject of inheritance, Dr. O. W. Holmes has strikingly said that "each of us is only the footing up of a double column of figures that goes back to the first pair;" and observation daily teaches us that children resemble their parents, not only in their features, but also in their intellectual and moral natures. Every peculiarity of body or mind, all intellectual endowments and aptitudes, and all moral qualities are, or may be, transmissible from parent to child. If one generation is missed, the qualities may show themselves in the next. It is important to notice that not only the *natural constitution* of the parents may be inherited, but their *acquired habits* of life, whether virtuous or vicious. And even when the identical vice does not appear, there is a morbid organization and a tendency to some vice akin to it. Not only is the evil tendency transmitted, but what was the simple practice of the parent, becomes the overpowering impulse of the child.

A learned physician, after long study of the effects of excessive tobacco-smoking, says: "The enervation, the hysteria, the insanity, the dwarfish deformities, the consumption, the suffering lives and early deaths, of the children of inveterate smokers, bear ample testimony to the feebleness and unsoundness of the constitution transmitted by this pernicious habit." We are, then, forced to the conclusion that any kind of nervous disease in the parent, seems to predispose to innate feebleness in the child. Care and proper habits do much to avert the diseases to which a bad inherited nervous organization is subject, though it is impossible to entirely remove the original defect. How necessary, then, is it to endeavor to secure that healthy nervous organization, which is not only a blessing to its possessors, but is a source of happiness to succeeding generations.

The second thing essential to a healthy nervous system is proper nutrition to supply the great waste produced by nervous action. As this nutrition must come from the blood, it is evident that whatever lessens the quantity or injures the quality of the blood, impairs the health of the nervous system. It is clear, then, that the nervous system may be impaired (1) by *impure air*, which injures the lungs, and injures the brain still more. The nerve-tissue is the most delicate part of the body, and is the first to feel the effects of blood poorly supplied with oxygen. (2) By *improper diet*, which, poisoning the blood, thus poisons the brain and cheats it of its nutriment; hence, the ideas become confused, the emotions morbid, and the will weakened. The whole man is crippled, physically, mentally, and morally. And if such be the effect of improper food, how much more injurious must be the effects of such poisons as alcohol, tobacco, opium, etc., which act so directly and powerfully upon the nervous system.

Of course, anything which impairs the health of the nervous system, injures in a corresponding degree every other part and tissue of the human body. The nervous system furnishes the stimulus by which the blood circulates in the arteries and veins, the stomach digests the food, the liver secretes the bile, the kidneys separate the urine from the blood, and, in short, by which every change in every organ of the body is effected. And understanding this, it is clear that a large proportion of all diseases to which man is subject may be cured by acting on that part of the nervous system which governs the organ which is the seat of the disease. To the perception of this truth is mainly due the great success of those eminent physicians who have employed electricity for the alleviation of suffering and the cure of diseases, and whose labors have done so much to raise electro-therapeutics to the rank of a science. —*Sel.*

—Woe to the nation where the young have already the vices of old age, and where the aged retain the follies of youth.

LITERARY MISCELLANY

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

DAWN.

THROW up the window! It is morn for life
In its most subtle luxury. The air
Is like a breathing from a rarer world;
And the south wind seems liquid—it o'ersteals
My bosom and my brow so bathingly.
It has come over gardens, and the flowers
That kissed it are betrayed; for as it parts,
With its invisible fingers, my loose hair,
I know it has been trifling with the rose,
And stooping to the violet. There is joy
For all God's creatures in it. The wet leaves
Are stirring at its touch, and birds are singing
As if to breathe were music; and the grass
Sends up its modest odor with the dew,
Like the small tribute of humility.
Lovely indeed is morning! I have drank
Its fragrance and its freshness, and have felt
Its delicate touch; and 't is a kindlier thing
Than music, or a feast, or medicine.

—*N. P. Willis.*

Home Duties of the Father.

BY MRS. E. G. WHITE.

WHILE we have dwelt upon the importance of the mother's work and mission, we would not lightly pass over the duty and responsibility of the husband and father in the training of his children. His efforts should be in harmony with those of the God-fearing mother. He should manifest his love and respect for her as the woman he has chosen and the mother of his children.

Many husbands do not sufficiently understand and appreciate the cares and perplexities which their wives endure, generally confined all day to an unceasing round of household duties. They frequently come to their homes with clouded brows, bringing no sunshine to the family circle. If the meals are not on time, the tired wife, who is frequently housekeeper, nurse, cook, and housemaid, all in one, is greeted with fault-finding. The exacting husband may condescend to take the worrying child from the weary arms of its mother that her arrangements for the family meal may be hastened; but if the child is restless, and frets in the arms of its father, he will seldom feel it his duty to act the nurse, and seek to quiet and soothe it. He does not pause to consider how many hours the mother has endured the little one's fretfulness, but calls out impatiently, "Here, mother, take *your* child." Is it not *his* child as well as hers? Is he not under a natural obligation to patiently bear his part of the burden of rearing his children?

In most families there are children of various ages, some of whom need not only the attention and wise discipline of the mother, but also the sterner, yet affectionate, influence of the father. Few fathers consider this matter in its due importance. They fall into neglect of their own duty, and thus heap grievous burdens upon the mother, at the same time feeling at liberty to criticise and condemn her actions according to their judgment. Under this heavy sense of responsibility and censure, the poor wife and mother often feels guilty and remorseful for that which she has done innocently or ignorantly, and frequently when she has done the very best thing possible under the circumstances. Yet when her wearisome efforts should be appreciated and approved, and her heart made glad, she is obliged to walk under a cloud of sorrow and condemnation, because her husband, while ignoring his own duty, expects her to fulfill both her own and his to his satisfaction, regardless of preventing circumstances.

He feels that his wife belongs to him, and is subject to his order and dictation, and liable to fall under his disapprobation. Who gives him this right of dictation and condemnation? Does the law of God, which commands him to love God with all his heart, and his neighbor as himself? Does he find it among the injunctions of the apostles, who exhort: "Husbands, love your wives, and be not bitter against them"? No, there is no moral or religious defense for such an unjust authority.

Domestic duties are sacred and important, yet they are often attended by a weary monotony. The countless cares and perplexities become irritating, without the variety of change and cheerful relaxation, which the husband and father frequently has it in his power to grant her if he chose, or rather if he thought it necessary or desirable to do so. The life of a mother in the humbler walks of life is one of unceasing self-sacrifice, made harder if the husband fails to appreciate the difficulties of her position, and to give her his support.

But to return to the father who has so unconcernedly resigned the fretful child to its mother. How is his time employed while she is doing the double duty of preparing the meal and quieting the child? Frequently he may be seen, his feet elevated to a level with his head, reading a newspaper and smoking a cigar. Tobacco, then, is his solace. There are his children, of various ages, and of restless, nervous temperament, transmitted to them by the tobacco or liquor-using father. But, after giving those children their stamp of character by his own morbid appetite and selfish indulgence, he shirks the responsibility of training them, and of correcting the faults which they have received as a legacy from him.

Fathers should unbend from their false dignity, deny themselves some slight self-gratification in time and leisure, in order to mingle with the children, sympathizing with them in their little troubles, binding them to their hearts by the strong bonds of love, and establishing such an influence over their expanding minds that their counsel will be regarded as sacred.

The average father wastes many golden opportunities to attract and bind his children to him. Upon returning home from his business he should find it a pleasant change to spend some time with his children. He may take them into the garden, and show them the opening buds, and the varied tints of the blooming flowers. Through such mediums he may give them the most important lessons concerning the Creator, by opening before them the great book of nature, where the love of God is expressed in every tree, and flower, and blade of grass. He may impress upon their minds the fact that if God cares so much for the trees and flowers, he will care much more for the creatures formed in his image. He may lead them early to understand that God wants children to be lovely, not with artificial adornment, but with beauty of character, the charms of kindness and affection, which will make their hearts bound with joy and happiness.

Parents may do much to connect their children with God by encouraging them to love the things of nature which he has given them, and to recognize the hand of the Giver in all they receive. The soil of the heart may thus early be prepared for casting in the precious seeds of truth, which in due time will spring up and bear a rich harvest. Fathers, the golden hours which you might spend in getting a thorough knowledge of the temperament and character of your children, and the best method of dealing with their young minds, are too precious to be squandered in the pernicious habit of smoking, or in lounging about the dram-shop.

The indulgence of this poisonous stimulant disqualifies the father to bring up his children in the nurture and admonition of the Lord. The directions given by God to the children of Israel were that the fathers should teach their children the statutes and precepts of his law, when they rose up, and when they sat down, when they went out, and when they came in.

This commandment of God is too little heeded; for Satan, through his temptations, has chained many fathers in the slavery of gross habits, and hurtful appetites. Their physical, mental, and moral powers are so paralyzed by these means that it is impossible for them to do their duty toward their families. Their minds are so besotted by the stupefying influences of tobacco or liquor that they do not realize their responsibility to train their children so that they may have moral power to resist temptation, to control appetite, to stand for the right, not to be influenced to evil, but to wield a strong influence for good.

Parents by a sinful indulgence of perverted appetite often place themselves in a condition of nervous excitability or exhaustion, where they are unable to discriminate between right and wrong, to manage their children wisely, and to judge correctly their motives and actions. They are in danger of magnifying little matters to mountains in their minds, while they pass lightly over grave sins. The father who has become a slave to abnormal appetite, who has sacrificed his God-given manhood to become a tobacco inebriate, cannot teach his children to control appetite and passion. It is impossible for him to thus educate them either by precept or example. How can the father whose mouth is filled with tobacco, whose breath poisons the atmosphere of home, teach his sons lessons of temperance and self-control? With what dignity can he exhort them to shun the wine-cup, when he himself has fallen beneath the tempter's power, and is bound by an appetite that has no foundation in nature? He is in no condition to rouse moral courage and independence in the young.

When we approach the youth who are acquiring the habit of using tobacco, and tell them of its pernicious influence upon the system, they frequently fortify themselves by citing the example of their fathers, or that of certain Christian ministers, or good and pious members of the church. They say, "If it does them no harm, it certainly cannot injure me." What an account will professed Christian men have to render to God for

their intemperance! Their example strengthens the temptations of Satan to pervert the senses of the young by the use of artificial stimulants; it seems to them not a very bad thing to do what respectable church-members are in the habit of doing. But it is only a step from tobacco-using to liquor-drinking; in fact, the two vices usually go together.

Thousands learn to be drunkards from such influences as these. Too often the lesson has been unconsciously taught them by their own fathers. A radical change must be made in the heads of families before much progress can be made in ridding society of the monster of intemperance.

If tobacco is what it is often claimed to be, a nerve-quieter, instead of a nerve-paralyzer; if it is such a solace to men that they require it just before eating, just after eating, and most of the time between; if it is so great a comforter that large amounts should be expended upon it, and many hours of precious time devoted to indulging in its use,—then why should not women use it? Would it not be as beneficial to them as to their fathers, husbands, and brothers? Women have cares and perplexities to soothe, and, viewed from the standpoint of the tobacco inebriate, they are sustaining great loss, and practicing a useless self-denial, in refraining from the luxury which affords their husbands and sons so much comfort and strength.

If men cannot maintain their energy and spirits without this stimulus, what martyrdom do women constantly practice in letting it alone! The very fact that women do live, and bear the heaviest burdens of mind and body without its aid, and that the best men conscientiously refrain from using it, is evidence that tobacco-using is a necessity to no one, but simply a habit which enslaves its victim in a terrible bondage.

God forbid that woman should degrade herself to the use of a filthy and besotting narcotic. How disgusting is the picture which one may draw in the mind, of a woman whose breath is poisoned by tobacco. One shudders to think of little children twining their arms about her neck, and pressing their fresh, pure lips to that mother's lips, stained and polluted by the offensive fluid and odor of tobacco. Yet the picture is only more revolting because the reality is more rare than that of the father, the lord of the household, defiling himself with the disgusting weed. No wonder we see children turn from the kiss of the father whom they love, and if they kiss him seek not his lips, but his cheek or forehead, where their pure lips will not be contaminated.

Our Children; or, the Power of Habit.

(*Continued.*)

CHAPTER FIVE.

How, like leaves in the eddying winds of autumn, were swept away, as by a sudden blast, the newly awakened hopes of Mr. and Mrs. Greenfield.

The parents of Agnes saw no barriers to the proposed union. The marriage was, therefore, celebrated at an early day, after all the necessary preliminaries were settled. A large and brilliant wedding party graced the occasion. As usual among the wealthy and fashionable at such times, a liberal entertainment was prepared, and wines and liquors of various kinds were used as freely as water. It is hardly a matter of wonder that Henry should have been tempted to drink liberally. At the supper table, he was called upon to take a glass of wine so frequently by one and another, that, had he not been able to bear a good deal, he would never have found his way back to the drawing-rooms in anything like a tolerable state of sobriety. One less fond of wine would have merely sipped his glass with every new compliment; but Henry never failed draining it to the bottom.

When the company returned to the drawing-rooms, the bridegroom showed himself to be in a remarkably good humor. He talked and laughed so loudly as to be heard by every one, and said many things that sounded to other ears than those of his parents exceedingly foolish. Grave old ladies bent their heads together, and then looked toward him curiously; while the younger and less thoughtful laughed aloud at his merry sayings and doings. With what a sudden and painful shock did this come upon the feelings of Mr. and Mrs. Greenfield, who had built so hopefully upon the foundation of this marriage. To see their son more than half intoxicated on his wedding night was a terrible mortification; but they felt a deeper anguish than this mortification occasioned. The hope they had so fondly cherished was gone. If the occasion and the company did not prove strong enough to withhold his appetite from indulgence, what was to restrain him in the future?

While they felt and thought thus, two or three young men withdrew him from the room. Nearly half an hour afterward, as Mrs. Greenfield sat in conversation with the young bride and her mother, a rude shout startled them, and turning their eyes in the direction from whence it came, they saw Henry dancing into the room, and acting

more like a madman than a person in his senses. Everything was thrown into instant confusion. Young ladies screamed as he approached them, while elderly matrons knit their brows severely. Mr. Greenfield went quickly to his side, and taking hold of him, said,—

"Henry! Henry! You are forgetting yourself."

"Forgetting myself!" responded the young man, half inarticulately. "Ho! ho! That is excellent! Why, is n't this my wedding night? Aint I just married? Where's Aggy, the darling?"

And he made an effort to pass his father; but the latter grasped his arm tightly, and spoke to him in a low, stern voice. At this moment, the frightened bride rose from her place beside Mrs. Greenfield, and glided from the room.

"There! There she goes!" cried the young man, attempting to follow her. "Aggy! Aggy!"

A scene of painful disorder followed. Two or three men removed Henry from the room, and took him away to the bridal chamber, where he passed the night alone. Soon after he retired, the company broke up.

When the next day dawned upon the young man, and memory vividly recalled much that had transpired during the preceding night, his mortification and shame were intense. Mr. Greenfield came early to see the parents of Agnes, and to place the conduct of his son in the most favorable light, and he succeeded in removing, to a great extent, the unhappy feelings it had occasioned; but not from his own mind.

Mr. Greenfield made this the occasion of a long interview with his son, in which he represented, in a most vivid manner, the imminent danger he was in, and by every possible appeal and consideration sought to induce him to abandon entirely the use of stimulating drinks. No; not by *every* possible consideration. There was one, and the strongest, that he wished to, but could not urge; for to do so involved a confession of his own weakness, and he was not yet prepared for that.

It was an easy matter to satisfy the mind of the young bride, and make her feel that the lapse from sobriety on the part of Henry was not a very serious affair. In a few days, the light shadow it had thrown upon her feelings passed off, and her heart was again in the sunshine. A number of parties were given, but, previous to each, Mr. Greenfield warned his son against the folly of his wedding night, and thus kept him so much upon his guard that he did not again drink to such an excess, although he partook so freely as to make the effect visible to the eyes of his father and mother, and cause each festive occasion to be one of grief, instead of joy, to them. They went with fear and trembling, and passed the evenings in anxiety and oppression of feeling.

"Oh! This is dreadful! dreadful!" said Mrs. Greenfield, on retiring from the last party, at which Henry had indulged himself with a freedom that made his condition apparent to almost every one. "I hoped that this would save him; but my heart now despairs."

"Nothing will save him," replied Mr. Greenfield, speaking from a despondent feeling.

"Do n't say that. We must not give him up," returned the mother quickly. "He is young."

"So young, and yet so lost to shame; so powerless in the hands of a vicious appetite. Ah me! If he could only be made fully sensible of his danger! If he could understand why he, above others, should be most on his guard!"

This was the nearest allusion yet made by Mr. Greenfield to the subject which had pressed upon his mind, with its weight of trouble, for years. Mrs. Greenfield did not answer, but her heart moved in response. A silence followed, which the former at length broke, by saying, in a low, meek voice,—

"There is one thing, of which I have never spoken, that has very long oppressed my feelings."

Mrs. Greenfield listened, but made no remark.

"Do you remember what Mr. Heartwell said about hereditary transmission?"

"Yes."

"I believe that every word he uttered was true."

"I have often thought of it," said Mrs. Greenfield. "There was force in his arguments."

"And a self-evident force in the position assumed, unsustained by a single argument. It is not a body that we give to our children, but a soul, which forms to itself, from the elements of nature, a body to dwell in. This soul or life, derived from us, must have the qualities of our life, be they good or evil. If we have evil, gross, or merely sensual affections, such affections will we give to our children. Can it be otherwise? Does an evil tree produce good fruit? or a bitter fountain send forth sweet water? No; this would be in opposition to nature's most apparent laws. If then a man habituates himself, as I did for years, to drink large quantities of wine and brandy, until the desire becomes so strong that

it is almost impossible to resist it, will he not curse his children with an inclination to the same kind of indulgence? He will! Does the assertion need proof? Look at our boy! Is it not plain that something more than a mere acquired taste impels him to indulge the pleasure of drinking? He is too young to be enslaved as he is, were there not in him a hereditary weakness. Ah! How this thought has haunted me like a reproving specter ever since the truth came flashing upon my mind."

Mrs. Greenfield bowed her head and listened. Her husband, even though he had spoken these bitter things against himself, half hoped for disbelief on the part of his wife. He wished her to think of him with less of a condemnatory spirit than he indulged toward himself. But she remained silent. Not a word had been spoken that she did not fully believe. Seeing that she had nothing to answer, Mr. Greenfield continued,—

"It is this that makes me so hopeless. If the love of intoxicating drinks were merely an acquired habit with him, it might be broken, as I have broken the same habit, though indulged for more than thirty years. But in this case, the evil lies deeper. A natural inclination, of which he knows nothing, is even stronger than habit, and lures him on to indulgence. If I could only tell him this! But I cannot—no, I cannot!"

Mrs. Greenfield listened, but did not answer. What could she say? For weeks afterward she debated in her own mind, the question whether she ought not to tell her son the real ground of his danger, and thus seek to save him; but every time she resolved to do so, a natural repugnance to exposing to her child his father's weakness and error became so strong that her mind fell back again into indecision.

A few months after the marriage of Henry Greenfield, both his own and his wife's desire to have an establishment was gratified. An elegant house was bought by Mr. Loring, and handsomely furnished, as a present for his daughter. In this the young couple were installed. An interest in his father's business gave Henry the command of money in his own right, and he was, therefore, free to use it as his inclinations might direct. One of his first acts was to stock his cellar with a choice variety of old liquors, selected for him by a wine merchant whose taste in such matters was considered faultless. Wine and brandy he made as indispensable to the dinner table as bread; and he commenced using them very much after the fashion pursued by his father in earlier times. His dining hour was four o'clock; and as he made it a rule not to go back to the store after dinner, he had leisure to sleep off the effects of any over-indulgence he might fall into.

But Henry varied from the old habit of his father in one thing. With Mr. Greenfield, the indulgence of the dinner hour sufficed to a great extent; but it was not so with his son, whose mind was far from being as well balanced. The latter drank on his way to the counting-room in the morning, and repeated this at least two or three times during the hours of business; so that it often happened, on his going home at four o'clock, that his mind was very much unbalanced.

The occurrence of the wedding night, notwithstanding it had been treated lightly by the friends of the young bride, made its impression on her mind. Her first feeling was one of mortification. But that quickly and almost entirely wore off. It was succeeded by a tender concern, as she saw her husband's fondness for wine; and this gave place to something like anxiety, when, after they had commenced housekeeping, she observed the effects of his daily indulgence at the table. Against this she ventured a gentle remonstrance. His reply sent her to her chamber in tears. How long she wept alone he did not know, for he had not calculated the effect of his words, and was ignorant of the force with which they had fallen upon her heart.

There had never been the semblance of unkindness on the part of the young husband before. But his wife ventured, unknowingly, upon forbidden ground. There was one affection of his mind, stronger than even the love of his bride—and that was a perverted affection, derived from his father, and making, as it were, a part of his very life. So long as this was unchecked in its course, no ripple appeared on the surface of his feelings. But the moment it was opposed, the even flow of his temper was disturbed, and he exhibited himself in a new light to the sincere, gentle, loving creature he had taken to his bosom.

Tremblingly she shrunk from him; and when she came next into his presence, there was a timidity in her half down-cast eyes, that only passed away when he spoke to her in his usual affectionate tone.

It was the first and last time Mrs. Greenfield ventured a word in opposition to her husband's too free indulgence in the pleasures of drinking. But, from the moment a fear of the consequences stole into her heart, no persuasion could induce her to join him in a glass of wine at the table, as she had done in the beginning. He therefore drank alone.

Thus it went on, the debasing passion growing stronger and stronger, until its indulgence often exceeded the bounds of all

propriety, and sent its slave reeling to his home in broad daylight.

Sad, sad was the lot of the young, beautiful, accomplished, and loving wife. Henry Greenfield possessed his share of excellent qualities, and they had won and still claimed her affectionate regard. Her love was true and tender, and this made the pain she suffered the more severe. For his honest spirit, for his unselfish regard for the good of others, for his many good and generous qualities, she honored, admired, and loved him. But alas! how was all clouded by the one overmastering passion! How did the fine gold become dim! How, over all that was beautiful, fell a dark, distorting shadow!

In the lapse of time, a babe came, with its blessing of innocence, to the dwelling of Henry Greenfield. The love of offspring was, with him, as with his father, a strong feeling; and when the child was laid in his arms he experienced a thrill of pleasure as exquisite as strong. Even if her own heart had not been filled to joyfulness with a new love, the sight of her husband, as he bent over the dear pledge of affection, would have amply repaid the mother for all she had endured in giving to the world a new being.

Time went on, and the babe grew into the heart of its father; but in one thing the mother was disappointed; he was not won from his sensual indulgence. Another innocent came ere the first had reached its second summer; and still another followed.

But for the weakness under which Henry Greenfield labored, his would have been one of the happiest of homes. He loved fervently the gentle being who moved by his side, and scarcely less than worshiped the sweet children she had brought him.

By the time his eldest boy, a most lovely child, reached his fourth year, Henry Greenfield had become so much enslaved that even he took the alarm, and made some ineffectual efforts to break away from the bondage in which he was held. But he was not as a strong man tied with light flaxen cords; but as a child bound with ropes. He felt, for a time, the struggle to be in vain. As it usually happens, when any long-indulged propensity receives a sudden check, that it runs riot as soon as free, the effort to restrain himself was followed by a deeper indulgence. And this was continued until shame aroused him again into a resistance that proved as ineffectual as the first.

Not understanding that only in a total abandonment of every species of intoxicating drinks was there the least chance of safety, Greenfield sought to reform his habit of indulgence, by placing certain restrictions on his appetite. But he might as well have tried to hold a wild bird from its forest home, with a web of gossamer. To taste was to fall. There was for him no nicely balanced equilibrium between sobriety and drunkenness. The most he could do was to curb his appetite during the business portion of the day; and for this restraint, it claimed a freer indulgence when he retired from the eye of public observation into his home.—*Arthur.*

(*Concluded next month.*)

Royal Common Sense.—Queen Victoria sets an example in the training and education of her children which is worthy of the highest commendation, if the following paragraph from the N. Y. *Sun* is reliable:—

"The education of Queen Victoria's grandchildren is conducted on the principle that the Prince Consort introduced into the family. Particularly is this true of the children of the Crown Princess of Germany. They have to rise early and retire early. During the day they have punctually to perform their duties and to keep strictly the time allotted to the various branches of study and recreation. They breakfast at eight with their parents, and the time between ten in the morning and five in the afternoon is devoted to their lessons, with an interruption of one hour for dinner. Accomplishments, such as riding, dancing, and skating, receive the same attention as art and science. Their meals consist of simple dishes, of which they have their choice, without being permitted to ask for a substitute if what is placed before them does not suit. Between meals they are not allowed to eat. Only inexpensive toys are placed in their hands, and the princesses dress themselves without the aid of chambermaids."

Lord Brougham on Taxes.—Permit me to inform you, my friends, what are the inevitable consequences of being too fond of glory—taxes upon every article which enters into the mouth or covers the back or is placed under foot; taxes upon every thing which it is pleasant to see, hear, feel, smell, or taste. . . . . The schoolboy whips his taxed top—the beardless youth manages his taxed horse, with a taxed bridle, on a taxed road—and the dying Englishman, pouring his medicine which has paid seven per cent. into a spoon that has paid fifteen per cent., flings himself back on his chintz bed which has paid twenty-two per cent., makes his will on an eight-pound stamp, and expires in the arms of an apothecary who has

paid a license of a hundred pounds for the privilege of putting him to death. His whole property is then immediately taxed from two to ten per cent. Besides the probate, large fees are demanded for burying him in the chancel; his virtues are handed down to posterity on taxed marble; and he is then gathered to his fathers—to be taxed no more.

The Sailor's Story.—"I've been fourteen years a sailor, Miss, and I've found that in all parts of the world I could get along as well without alcoholic liquors as with them, and better, too. Some years ago, when we lay in Jamaica, several of us were sick with the fever, and amongst the rest, the second mate. The doctor had given him brandy to keep him up, but I thought it was a queer kind of 'keeping up.' Why, you see, it stands to reason, Miss, that if you heap fuel on the fire it will burn the faster, and putting brandy to a fever is just the same kind of thing. Brandy is more than half alcohol, you know. Well, the doctor gave him up, and I was sent to watch with him. No medicine was left, for it was of no use. Nothing would help him, and I had my directions what to do with the body when he was dead. Towards midnight he asked for water. I got him the coolest I could find, and gave him all he wanted, and if you'll believe me, Miss, in less than three hours he drank three gallons. The sweat rolled off from him like rain. Then he sank off, and I thought sure he was gone, but he was sleeping, and as sweetly as a child. In the morning, when the doctor came, he asked what time the mate died. 'Won't you go in and look at him?' said I. He went in and took the mate's hand. 'Why,' said he, 'the man is not dead! He's alive and doing well! What have you been giving him?' 'Water, simply water, and all he wanted of it!' said I. I don't know as the doctor learned anything from that, but I did, and now no doctor puts alcoholics down me, or any of my folks, for a fever, I can tell you. I'm a plain, unlettered man, but I know too much to let any doctor burn me up with alcohol."—*Alliance News.*

Africans.—Englishmen are very apt to form their opinions of Africans from the elegant figures in tobacconists' shops; I scarcely think such are fair specimens of the African. I think, at the same time, that the African women would be much handsomer than they are if they would only let themselves alone; though unfortunately that is a failing by no means peculiar to African ladies; but they are, by nature, not particularly good-looking, and seem to take all the pains they can to make themselves worse. The people of one tribe knock out all their upper front teeth, and when they laugh are perfectly hideous. Another tribe of the Londa country file all their front teeth to a point, like cats' teeth, and when they grin put one in mind of alligators; many of the women are comely, but spoil their beauty by such unnatural means. Another tribe has a custom of piercing the cartilage of the nose and inserting a bit of reed, which spreads it out, and makes them very disagreeable-looking; others tie the hair, or rather wool, into basket-work, resembling the tonsorial decorations of the ancient Egyptians; others, again, dress their hair with a hoop around it, so as to resemble the gloria round the head of the virgin; rather a different application of the hoop from that of English ladies.

The people of Central Africa have religious ideas stronger than those of the Caffres and other southern nations, who talk much of God but pray seldom. They pray to departed relatives, by whom they imagine illnesses are sent to punish them for any neglect on their part. Evidences of the Portuguese Jesuit missionary operations are still extant, and are carefully preserved by the natives; one tribe can all read and write, which is ascribable to the teaching of the Jesuits; their only books are, however, histories of saints, and miracles effected by the parings of saintly toe-nails, and such like nonsense; but, surely, if such an impression has once been produced, it might be hoped that the efforts of Protestant missionaries, who would leave the Bible with these poor people, would not be less abiding. —*Life of Livingstone.*

Scandal.—It was the saying of an old acquaintance of ours, when his attention was called to anything that had a smacking of scandal in it, "I have so much to do that I cannot hear it. One-half my time is taken up with my own business, the other half with letting alone that of my neighbors."

How many excellent opportunities of letting alone other people's business are slighted, and the world is troubled with the interference of people with what does not concern them! Neighborhoods are driven crazy by reports of idle or mischievous people who watch for occasions of scandal, and lose no opportunity of making it public, regardless of its truth, or of the injury it inflicts upon the feelings of others. Gossip passes for fact, and surmise for history.

—Real happiness is cheap enough, yet how dearly we pay for its counterfeit.

Popular Science.

Electro-Motograph Telephone.

Mr. Edison, of Newark, New Jersey, the inventor of the quadruplex system of telegraphy, has devised a new form of telephone which exceeds in delicacy and power the remarkable instrument invented by Mr. Bell. He calls the instrument the electro-motograph telephone, and it was recently exhibited at the Permanent Exhibition at Philadelphia. This instrument will not only transmit all kinds of sounds, vocal and instrumental, but it greatly intensifies them. Prof. Barker, of Pennsylvania University, explained the working of the instrument while it was in operation. He stated it as his belief that the time would come when, by the aid of this wonderful invention, musical performances given by French and German artists in the large cities of Europe, would be simultaneously listened to in New York, Boston, Philadelphia, and the other principal cities of this country.

Molecules.—An English scientist claims to have demonstrated that the number of molecules of water in a cubic $\frac{1}{1000}$ of an inch is about 4,000,000,000,000,000. These minute masses of matter can never be seen by the aid of the microscope, since the waves of light are two thousand times too long to show them, even in case a microscope should be constructed sufficiently perfect for the purpose.

Distance of the Sun.—According to the most nearly completed deductions from the observations of the transit of Venus in 1874, the mean distance of the sun is 92,113,600 miles. During the first days of September, observations will be made upon the planet Mars, which at that time passes through its perihelion, or the portion of its orbit nearest the sun.

Mars' Moons.—Professor Asaph Hall, of the Washington Observatory, has recently announced the interesting discovery of two satellites attendant upon the planet Mars. At about eleven o'clock on the night of August 16, Professor Hall, by the aid of the great 26 inch refractor telescope, noticed a very small star following Mars by a few seconds. Two hours later he looked again, and to his surprise found that the distance between planet and star had not increased, although the former was moving at the rate of 15 seconds per hour. Hardly crediting his discovery, Mr. Hall delayed further observation until he could bring the matter before his colleague, Professor Newcomb, and that astronomer, being confident that the discovery of a satellite had been made, calculated roughly its time of revolution, which he found to be one day and eight hours. This enabled the prediction of the probable place of the satellite on the following night—a prediction which was verified. On the morning of August 17 another satellite appeared, and its identity was fully recognized.

The distance of the first satellite from the planet is between fifteen and sixteen thousand miles, which is less than that of any other known satellite from its primary, and only about $\frac{1}{16}$ the distance of the moon from the earth. It is exceedingly small, having a diameter of not over one hundred miles. The inner satellite is believed to be still closer to the planet, and to have a period of less than eight hours. The first moon is distant 80, the second 30, seconds from their primary. Further and more accurate details will, however, soon be forthcoming, as probably the keen eyes of astronomers the world over will now be turned upon Mars. Next to our moon, more full and accurate knowledge is possessed regarding Mars than of any other heavenly body. Venus is nearer to the earth, but when most closely approximated she is invisible, being concealed by the solar light. Mars, however, may be examined under favorable circumstances, and during the present year the conditions are especially advantageous, owing to the planet being in opposition to the sun, near perihelion. The apparent disk is now larger in the proportion of 3 to 1 than when the planet is in aphelion, while the illumination is more brilliant in the proportion of 3 to 2. At the same time the planet is nearer perihelion than previously for more than thirty years; so that in the heavens its brightness is but little inferior to that of Jupiter.—*Scientific American.*

—The smallest bodies which can be seen by the aid of the most perfect microscope are fine lines $\frac{1}{110,000}$ of an inch apart.

—A gigantic telescope is being made for Yale College at a cost of $50,000. The flint for the object glass alone cost $6,000. Several years will be required to complete it.

THE

HEALTH REFORMER

BATTLE CREEK, MICH., SEPTEMBER, 1877.

J. H. KELLOGG, M. D., EDITOR. TERMS, $1.00 A YEAR.

Cramming in School.

NOTHING could be more unphysiological or more unhygienic than the popular methods of instruction in vogue in the majority of our public schools. The idea of education entertained by the average teacher is that it consists in infusing into the mind of the pupil the largest possible amount of knowledge which it can be made to contain. Little is thought of the necessity for thorough and systematic discipline of the mental faculties. Consequently, it is generally the case that the student's entire experience at school or college is one continual course of perversion. Instead of being taught how to think and study to the best advantage, how to investigate for himself, how to originate ideas and to become mentally independent, the student is continually discouraged by the methods employed by his instructors, from any attempt at originality or independence of thought, and thus becomes a dogmatic mental dwarf. We sincerely hope that the day will come when our educators will regard the primary object of schools to be culture and training of the human body mentally, morally, and physically.

No system of education can be complete which does not give due prominence to the pupil's culture morally and physically, as well as mentally. The acquisition of knowledge should be regarded not as the primary object of education, but as a useful incidental result, necessitated by the nature of the discipline to be acquired.

Students should be thoroughly imbued with the idea that the object of their school work is not so much to impart to them a knowledge of facts, as to teach them how to acquire facts, how to observe, how to investigate, how to compare, how to reason, how to utilize knowledge after it has been acquired. The methods of education generally followed in our colleges, fill young men with facts, and pack their craniums with the ideas of men who lived two thousand years ago, and then graduate them and send them out into the world destitute of even a modicum of practical knowledge, without the ability to apply the facts which they have gained. Such men have much knowledge, but are unable to use it to practical advantage; and a score of them are of less real use to the world than one practical man whose fund of information is almost infinitely smaller, but who possesses the faculty of utilizing knowledge.

There is great need of reform in our educational institutions, and we are glad to see some evidences of improvement in this direction. The times call for practical men, and the public mind is being aroused to ascertain why there is so great a scarcity of men of this class. We hope the inquiry will continue, and that the agitation of the question which has begun, will increase until conservatism, prejudice, and dogmatism, which are the chief obstacles against educational reform, are swept away by the rising tide of public opinion in favor of progress in this direction.

Our friend, Dr. W. T. Currie, sends us an article on this subject by the editor of the Clinton *Age*, Lyons, Iowa, from which we quote the following excellent remarks:—

"The school-room is made the theater for doing the most work in the shortest space of time. From the moment the pupil gets seated in the morning until the close of the school in the afternoon, nooning and recess out, it is one continual, incessant cramming and stuffing of all manner of book things into tender craniums. The teacher conceives the idea that the whole end, aim, and object of a teacher's life and a pupil's life, is for one to do the stuffing with pleasure and the other to receive it without a murmur.

"The school-room has come to be looked

upon as a sort of penitentiary founded by the State for the purpose of forcing book learning into little children, who have no right to demur, and who are pronounced stupid if they do n't take willingly all that is offered them. It is made a prison-house where to smile is a sin and to whisper a mortal crime. It appears as if the smile or whisper interferes with the stuffing process, just as the gobbling of the stuffed turkey interferes with digestion, so his gobbling is stopped.

"We oftentimes wonder why school children do not rise up in rebellion against such treatment. Their very nature cries out against the cramming process, but Nature, unlike herself, usually sounds the alarm too late; and not until the sick-bed or the grave tells the story, do parents comprehend the real facts."

Softening of the Brain.

NOTWITHSTANDING the frequency of cases of so-called softening of the brain, this disease is a very rare one. Real softening of the brain involves, of course, loss of function to the part diseased. When the disease affects the anterior and upper portion of the brain, the function of which is thought, idiocy will be the necessary result. Softening of other portions of the brain will produce like loss of function in those parts.

Softening of the brain is usually the result of some injury of that organ. It may follow a stroke of apoplexy. It may result from the pressure of a tumor. It may be the consequence of a mechanical injury to the brain. It may result from an interruption of the circulation in a portion of the brain by a clot of blood, brought from some other part of the system. There are a few other rare causes which may occasion softening of the brain; but the cases of real cerebral softening are exceedingly rare. Nearly all of the cases which are called such are of quite a different character.

It has been supposed, from the fact that many of this class of cases are among ministers, students, lawyers, and other literary workers, that softening of the brain is a common result of severe mental labor. We are satisfied that there is a great amount of unnecessary apprehension on this subject. In most cases of so-called softening of the brain, the condition is not one of softening, but congestion. Instead of being due to severe mental labor, it is fairly attributable to insufficient amount of physical labor, together with improper diet and bad hygiene generally.

Less than a year ago we had under treatment a patient whose disease had been pronounced to be softening of the brain. The difficulty was of many years' standing. It had been slowly growing worse, and the patient was a man well advanced in years and had spent a number of months under treatment in an insane asylum in one of our large cities. He left the institution without benefit, and some time afterward came to the Sanitarium for treatment. After careful examination of his case, we assured him that there was no difficulty whatever with his brain, otherwise than a mere functional disturbance, which was due to disease elsewhere. We pronounced his case one of dyspepsia, coupled with great inactivity of the liver. The stomach being inactive, his food was not properly digested, and the consequence was a poor quality of blood and defective nutrition of the nervous system. His liver being torpid, the gross, irritating biliary elements which should have been removed by that organ, were retained in the system, and became a source of irritation. These two great causes of disease were amply sufficient to account for all his many painful symptoms. We began treating him for the conditions described, and were gratified to notice a steady improvement in health, until, at the end of four months, he returned to his friends, cheerful, happy, and nearly restored to health.

So many cases of similar character have fallen under our observation that we have become thoroughly convinced that a great majority of cases supposed to be softening of the brain involve no lesion of the brain whatever, but are wholly due to disturbances of the stomach and liver.

There are, doubtless, scores of patients under treatment in insane asylums for difficulties of this class whose brains are as sound as those of their attendants, and who only need thorough and careful hygienic regimen to restore them to health. Within the last year we have successfully treated four or five such patients who came to us from asylums for the insane.

Rattlesnake Bite.

A SUBSCRIBER requests us to give a proper course of treatment for rattlesnake bites, and especially desires our opinion respecting the use of whisky as an antidote.

When a person is bitten by a rattlesnake, the first thing to be done is to prevent, so far as possible, the absorption of the virus into the system. Apply vigorous suction to the wound by means of the mouth, as quickly as possible. Next, ligate the part very tightly on the side of the wound nearest the heart, and a short distance from it. In order to still farther prevent absorption, a considerable portion of the flesh containing the wound may be removed by a knife; or, if possible, it may be destroyed by the application of a red-hot iron. A heated poker will answer the latter purpose admirably. The application of pure carbolic acid, nitrate of silver, or any other powerful caustic, is also a remedy of value. If the part becomes gangrenous, or mortifies, it should be amputated as soon as possible.

When general symptoms of poisoning occur, indicating general poisoning of the whole system, such remedies should be applied as are indicated by the special symptoms. In general, they should be such as will support the vital forces and aid nature in eliminating the poison.

Electricity is a valuable agent for supporting the system and counteracting the tendency of death from nervous shock, which is not infrequent. The prolonged bath, accompanied by vigorous rubbing, has proved very serviceable in cases of this kind.

Applications to the wounded part should be such as will afford the patient the most relief. In general, fomentations with poultices will be best suited to this purpose. Sometimes, cold applications will be found more comfortable.

The public faith in whisky as an antidote for the poison of the rattlesnake is as baseless as the numerous other notions and superstitions respecting remedies for diseases, which have originated in the ignorance of unlearned and unprofessional minds. The most scientific and reliable physicians have no faith whatever in alcohol as an antidote for snake poisoning. This is true even of those who recommend it as a stimulant. Dr. Hamilton, of New York City, who stands at the head of American surgery, says in his admirable work on surgical practice: "It seems quite probable, indeed, that, up to the present moment, no actual specifics have been discovered." He farther says: "It is absurd to follow the teachings of those who advise absolute intoxication. There is no evidence that stimulants, when used to this extent, have ever served any useful purpose."

People have been led to place great confidence in numerous remedies which have acquired notoriety as specifics. The cause of the error is the fact that a large proportion of the persons who are bitten by rattlesnakes are not poisoned; consequently, they recover speedily, no matter what plan is followed. The number of persons who die of poisoning by snake-bites in this country is very small indeed; but in some Eastern countries, where venomous reptiles are much more numerous than here, this becomes a grave source of mortality. An eminent physician of British India states that not less than twenty thousand persons perish annually in that country in consequence of poisoning by the bites of venomous snakes.

Iron Tonics.

WITH many physicians, the universal remedy for patients suffering with dyspepsia, consumption, chlorosis, or any disease producing general debility with poverty of the blood and defective nutrition, is iron in some form. This practice has been based upon the supposition that iron was an essential constituent of the coloring matter of the red blood-corpuscles. It being observed that the blood of patients of the class described is defective in color, it seemed a very natural conclusion that the morbid condition might be removed by supplying iron to the system; hence its administration as a remedy. Unfortunately for this theory, it has been proved, according to the *Popular Science Monthly*, by the experiments of Malder and Van Gendover, two distinguished chemists, that the coloring matter of the blood contains no iron. If these experiments are reliable, and we have no reason to believe that they are not, the practice of

administering iron to improve the color of blood is left without foundation.

The following paragraphs, respecting the views of a distinguished French physician, M. Dujardin-Beaumetz, on this subject, we quote from the Boston *Medical and Surgical Journal*:—

"M. Dujardin-Beaumetz is not a believer in the therapeutical virtues of iron in anæmia and chlorosis. Notwithstanding the existence of a lessened quantity of iron in the blood of anæmic and chlorotic patients, he says that this diminution is of very little consequence, being ten to twenty centigrammes, at the most, of the total amount of two grammes of iron in five litres of the blood of an average-sized adult. Now, according to Boussingault, the daily food introduces into the body ten to twenty centigrammes of iron; consequently, the loss of iron may be made up by the food alone."

"In young girls, M. Beaumetz is much better satisfied with gymnastic exercises and hydrotheraphy than with ferruginous medicines. Moreover, if the latter are oftener powerless in chlorosis, they produce harm by disturbing the digestive functions."

"A Prescription Fit for ye King."

EVEN so late as the days of Queen Elizabeth, ignorance and superstition continued prime regulating powers in the practice of physic; accomplished as some of the physicians of that day were, it was, as Lord Bacon has affirmed, in every department excepting those that immediately touched their own profession. Sir William Bulleyn was not one of the least prominent and enlightened, but some of the prescriptions which he has left on record, attest a very deplorable state of things, existing little more than half a century before Harvey achieved his great discovery. Take for example this recipe:—

"ELECTUARIUM DE GEMMIS.

"Take two drachms of white perles; two little pieces of saphyre; jacinth, corneline, emeraudes, granettes, of each an ounce; setwal, the sweate roote doronike, the rind of pomecitron, mace, basel seede, of each two drachms; of kedde corall, amber, shaving of ivory, of each two drachms; rootes both of white and red behen, ginger, long peper, spicknard, folium indicum, saffron, cardamon, of each one drachm; of troch diaroden, lignum aloes, of each half a small handful; cinnamon, galinga, zurubeth, which is a kind of setwal, of each one drachm and a half; thin pieces of gold and sylver, of each half a scruple; of musk, half a drachm. Make your electuary with honey emblici, which is the fourth kind of mirobalans with roses, strained in equall partes, as much as will suffice. This healeth cold diseases of ye braine, harte, stomack. It is a medicine proved against the tremblynge of the harte, faynting and souning, the weakness of the stomacke, pensiveness, solitarines. Kings and noble men have used this for their comfort. It causeth them to be bold-spirited, the body to smell wel, and ingendreth to the face coloure."

True Sentiments.—A physician of considerable eminence in New York City, with whom we enjoyed a very agreeable and profitable acquaintance while a student in that city, in a private letter recently gave expression to sentiments so true and withal so encouraging that we venture to give them to our readers, hoping that in doing so we shall not give offense by the liberty taken.

After expressing much interest in the work of reform which is centered at this place, the doctor remarked: "I hope for you an abundant success in the field you have chosen, of popularizing hygiene. After my somewhat extensive experience among the poorer classes here, I have no hesitation in declaring that such knowledge as your publications impart is their greatest need. . . . I am a thoroughly orthodox disciple of the regular school of medicine, as you know; but the successful physician of the future, and even now, is to be the man who is a true eclectic in all departments of his practice. Too straight and narrow creeds will not pass in medicine any more than in theology."

Fevers.—This is just the time of the year when continued fevers abound. Typhoid, typhus, typho-malarial fevers, and in some districts yellow fever, carry scores to their graves daily during this month. Those who wish to avoid prolonged and painful illness will do well to observe careful rules of diet for a few weeks, at any rate. Avoid fats of all sorts, fried food, rich sauces, pastry, preserves, and condiments. Eat only simple food, and be careful not to overeat.

PEOPLE'S DEPARTMENT

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

What's in a Word?—A stanch friend of reform and of the REFORMER is somewhat troubled respecting the new name by which the institution formerly known as the Health Institute has been known for the last year, "Medical and Surgical Sanitarium." The lady objects only to the word "medical;" but we will let her speak for herself:—

"EDITOR REFORMER: I have taken the REFORMER for over six years, and should feel very badly to be without its good advice. I regret exceedingly that the word 'medical' was added to the new name of the Institute, for I do have such a detestation for drugs that I can hardly endure the idea that they are used, for so the name implies, at the Sanitarium. For the last seven summers, save three, I have spent more or less time at the Institute, and feel it to be one of my homes. I rejoice in its usefulness and prosperity."

We notice this reference to the new name of the Sanitarium, not because the lady referred to is especially benighted on the subject, but because it gives us an opportunity to remove what we have apprehended might be a quite general false impression among the old friends of the institution named.

It is true that the term medical is commonly employed as relating to the use of medicines, or drugs; nevertheless, its real significance has a much broader application. The following is Webster's definition of the word: "Pertaining to or having to do with medicine, or the art of healing disease; . . . tending to cure." In the proper sense of the word, a medicine is any remedial agent, and "medical" means, simply, remedial, when used as in the name of the Sanitarium. It has no special reference to drugs, whatever. The new name implies nothing whatever respecting drugs. To quiet the fears of our correspondent, we will say, as we can do safely and truly, that drugs are employed at the institution at present less than they have been at any previous time for the last five years. We hope that she will continue to regard it as a home where she will be most welcome whenever she feels inclined to visit us; and we would extend to her a cordial invitation to attend the dedication of the new building, which we hope to be able to announce for Jan. 1, 1878.

A Good Result.—One of the most useful lessons which the common people can learn is that they can themselves do something not only to prevent sickness, but to aid in recovery when they have once lost their health. People who have never had any experience in this direction are astonished at the effect of simple remedies. The following case, reported to us by Mrs. M. E. McKee, is a good illustration of what such simple applications as are dictated by common sense will do:—

"I send the following for the benefit of those similarly troubled with that distressing complaint known as *summer catarrh*. The case was a chronic one of long standing. At two different seasons the brain became so congested that a settled fever was the result, and it was feared that the mind would not be restored. As the patient was averse to taking drugs, water treatment had been given, and the health reform diet partially carried out. Upon the third attack, the following course was pursued, which differed from all former treatment:—

"Salt and butter were entirely excluded from the diet, and plainly cooked food partaken of very sparingly, with no liquid food and but little drink, as the water was hard. The symptoms were, pain in the head from a spot on top down to the ear, with pain in the forehead, nose, and face. When it was most severe, the feet were put in hot water and the heat increased by dipping out and adding more. When they had been in about twenty minutes, heat and cold were alternately applied to the forehead and over the nose. The hot woolen cloths were so hot as nearly to blister. Changes were made every three minutes for half an hour, the foot bath being continued. This treatment was given on three successive days, when the pain and catarrh entirely disappeared, and have not since returned."

—Opinions founded on prejudice are always sustained with the greatest violence.

The Sanitarium.

—The family at the Sanitarium, including patients and boarders, numbers over one hundred and fifty. The number has not been less at any time during the summer.

—The new building is progressing finely. The portion to be devoted to treatment is already inclosed, and the gas and heating apparatus is being put in. The frame of the main building is also erected, and the work of inclosing has begun. We expect to spend at least the colder portion of the winter in it.

—Last week we enjoyed a very pleasant visit from Mrs. Elvira Bliss Sheldon, of Washington, D. C., niece of Dr. D. W. Bliss, also of Washington, who was eminent as a surgeon in the army, and is just now well known to the public as the physician of Senator Morton. Mrs. Sheldon is a lady of wide culture, and rare accomplishments, and was many years ago a resident in this vicinity, where she enjoyed an enviable reputation as a musician of unusual talent. We were especially pleased with her keen appreciation of the value and bearing of hygienic and sanitary laws. She is now a special correspondent for the *Inter-Ocean*, of Chicago, and several Washington journals, with other leading papers. We hope to receive a call from her again.

—As our readers fully understand, the HEALTH REFORMER is not the organ of any institution, nor of any party; its sole mission is to disseminate true principles relating to the laws of health. Nevertheless, the journal receives so large a share of its support from the friends of the Sanitarium of this place, including patients who visit that institution for their health, that we think it not improper to devote a page especially to the interests of the institution named. Among the hundreds who have already visited us during the present year, there are many scores of persons who look back with pleasure upon the few weeks or months they remained here, and they often wish that they might hear occasionally of the prosperity of the institution and its inmates. Among the thousands who have been treated at this institution since its foundation there are hundreds of such individuals. We propose to make this page a means of meeting the wants of such. As patients recover and leave us, and go to their homes in various parts of the United States and Canada, their cases, when of special interest, will be reported in these columns; and this will also be an appropriate place for the publication of reports from such patients after they return to their homes.

How Do you Do?—We should like to shake hands and chat a few moments with each of the many patients with whom we have formed agreeable acquaintance during their stay with us at the Sanitarium. We often think of them and wonder how they are prospering healthwise, and if they are adhering in their daily practice to the principles which they heard daily inculcated while undergoing treatment here. Though we cannot see the faces of these numerous friends, we hope to hear from them through these columns. Their experiences may be thus made of great benefit to others who are suffering.

A Pleasant Affair.—Last Thursday evening, Aug. 30, the patients at the Sanitarium enjoyed a rare musical treat, which will be long remembered by those who had the good fortune to be present. A number of similar entertainments have been given during the summer, but this, the last, surpassed all preceding ones. For one hour and a quarter the appreciative audience which filled the large parlor of the Sanitarium was enchanted with most charming music, both vocal and instrumental. The performers were Mr. Brainard Skinner, of the city bank, Mr. H. W. Herns, Misses Carrie, Ella, and Louise Skinner, of this city, and Miss Johnstone, of Detroit, with Mr. Frank Duncan, of the Sanitarium, as manager. Misses Ella and Louise Skinner have won an enviable reputation as remarkably fine vocalists. They are gifted with voices of unusual power and clearness, and the manner in which they executed the most difficult passages evinced most thorough culture. Messrs Skinner and Hearns are also well known as the leading male vocalists of this vicinity, and they well sustained their deserved reputation. Miss Carrie Skinner showed herself to be a master of the piano by her brilliant execution of difficult movements, while Miss Johnstone astonished every one by the skillful manner in which she handled the violin. Miss Johnstone, though a young lady, possesses such rare musical genius that she has already acquired a degree of skill in the management of the most difficult of all musical instruments that is seldom reached by professionals after years of training.

The performers were frequently cheered with great enthusiasm, and several were encored. Every one was delighted with the entertainment, and all heartily joined in an expression

of thanks to those who had so kindly endeavored to entertain them.

As the entertainment concluded at half past eight, the hour for retiring at the Sanitarium, many went to their rooms feeling that music has wonderful power to cheer and comfort the desponding, and to charm away the evil spirits which beset humanity in the shape of torpid livers, dyspeptic stomachs, and a hundred other ills. Such entertainments are among the remedial measures employed at the Sanitarium, and are of great benefit to the numerous suffering ones who are gathered there.

Questions and Answers.

Catarrh.—R. M. T., Cal., asks for the proper treatment of chronic catarrh.

Ans. In the treatment of chronic catarrh a throughly hygienic diet is of the greatest importance. You should avoid condiments, and all kinds of greasy food, fat meat, etc. The diet should be mostly composed of fruits and grains. Two meals a day are preferable to more. The greatest regularity should be observed in the time of the meals. You should take abundance of out-door exercise.

Take a pack once a week, also take fomentations over the liver and bowels, followed by the rubbing wet sheet, twice a week. Take a pack on Wednesday and a fomentation with rubbing wet sheet on Monday and Friday. The water employed in treatment should be about 95° in temperature except for the fomentation, which should be as hot as it can be borne.

In addition, take nasal douche daily, adding salt to the water employed in the douche in proportion of half-tea-spoonful of salt to a quart of water. The water for the douche should be about 95°. Great care should be taken to keep the circulation well balanced by proper clothing.

Deafness.—J. M. R., D. T., has had partial deafness with noises in his ears since infancy. He wishes directions for treatment.

Ans. The prospect for benefiting you by treatment is not very good. We could not adventure to give a prescription without making a thorough personal examination.

Diet for Children.—M. H. C., Ia., asks: Is it well to give a delicate child, two years old, but two meals a day? He has always lived hygienically, but has had a very variable appetite for several months, and at times has been very unwell. Has his stomach been injured by too coarse food?

Ans. It is not impossible for a child of two years of age to enjoy good health on two meals a day; but most children at that age will do better upon three meals a day. The meals should be taken at least five hours apart; and the last meal of the day should be very light, consisting simply of fruits if possible, or of fruits with simple proportions of oatmeal or graham flour. Cases are very few indeed, in which graham flour cannot be used beneficially, but occasionally cases occur in which it is better to remove the coarser portions of the bran of the flour by means of a coarse oatmeal sieve before using. This will entirely obviate any irritating effect which might otherwise be produced.

Catarrh.—J. J. T., N. Y., states that he suffers continually with a profuse greenish discharge from the nose. He wishes to know the cause, and what to do for prevention and cure.

Ans. See directions for the treatment of catarrh given in answer to R. M. T., in this number.

Sugar—Mineral Water.—S. A. B., O., asks: 1. Do you think sugar has the same injurious effects, used to sweeten sour fruits, as when eaten alone? 2. Where does mineral water come from? Some people say that they know of mineral water which effects wonderful cures, which comes from scores of feet below the surface.

Ans. 1. Sugar is less likely to produce harmful effects when used with sour fruit than when taken alone, since in the latter case it is likely to be taken in greater excess. 2. There are various kinds of mineral water. The immediate sources of mineral water are also various. Water which contains sulphur in a free state, or combined with hydrogen, is quite likely to have for its origin decaying animal or vegetable matter. It may be derived from a marsh or stagnant pool in which organic matter is undergoing decomposition. The presence of sulphur may be occasioned by the contamination of water with sewage or any other decomposing matter. In some cases, water which is obtained from a very considerable depth below the surface, may be found to contain sulphur compounds in considerable quantity. It is due to the filtration of water through beds of mineral deposits below the surface. Mineral water doubtless effects many remarkable cures. The purest soft water possesses curative properties still more remarkable; and it is probable that the beneficial effects derived from the use of mineral water are wholly due to its properties as water, the mineral constit-

uents having no influence whatever in effecting a cure.

Tomatoes and Cancers.—O. S., Mass., asks: Is there any possible danger in eating tomatoes? Some say it feeds, or creates, cancers. I am anxious to get at the truth, for I have a humor tending in the direction of cancer, as near as I can ascertain. I prize the REFORMER very highly, as I am a great deal better than I was eighteen months ago. It saves ten times its cost.

Ans. The supposition that the use of tomatoes is the source of cancer, although quite generally held in some sections, is undoubtedly without foundation. The only argument we ever heard urged in support of it, is this: Cancers are of much more frequent occurrence now than they were many years ago; at least, they are more often recognized. Thirty years ago, tomatoes were rarely used as an article of food, it being generally supposed that they were poisonous; now, they are very largely used. Consequently, the use of tomatoes must be the cause of cancers. This argument involves the old error of mistaking a simple coincidence for a relation of cause and effect. Cancers have become more frequent since the use of tomatoes has become more permanent; but the same may be said of numerous other articles of food, to which the development of cancer might be attributed with quite as much reason. We scarcely need add that we regard the prejudice against tomatoes, referred to, utterly groundless and most palpably absurd.

Granulated Sore Eyes.—F. N., Texas, says: Please give your treatment for granulated sore eyes.

Ans. Chronic granular inflammation of the eyelids is a very obstinate disease, and yields very slowly to treatment. A measure of first importance is to improve the patient's general health by careful dietary, together with abundance of out-of-door exercise, and good hygiene generally. In many cases, local applications of various kinds are necessary in order to effect a cure; but this should be made only under the direction of a competent physician.

Consumption.—J. R. C., N. Y., writes: One of our leading doctors of this place advised a young man, dying with consumption, to eat pickles with milk, and said that it would not hurt anybody. His reason is that everything taken into the stomach sours immediately. Now I cannot believe this; please give us the truth through the columns of the REFORMER.

Ans. We are surprised that any physician should recommend so foolish and harmful a practice as the one mentioned. Pickles are of themselves sufficiently indigestible to provoke dyspepsia in the most healthful stomach; and their effect when used with milk would be to render it also indigestible. The food never sours in a healthy stomach. Digestion is not a chemical process. It is true that milk, when taken into the stomach, is converted into curd; but curdling is not souring; hence the absurdity of the doctor's theory.

Neuralgia.—L. H., Tenn., writes that he has long been troubled with neuralgia, for which he wishes us to give him a remedy.

Ans. There are numerous causes of this disease, and in each particular case it is necessary to remove the special cause.

Water-Drinking.—L. A., Ohio, sends an article entitled, "Anti-Water-Drinking," which denounces that very ancient custom as exceeding unnatural and pernicious, and asks our opinion.

Ans. It is true that many diseases arise from the use of foul water, iced water, and hard water; but it is also true that water is a necessary aliment which is quite as essential as any solid food. If water is not taken as drink, it must be received into the system in some other way, since the demand for fluid is, with the exception of that for air, the most imperative of all the wants of the system. Life can be well supported without the use of drink in any form, provided a sufficient amount of fluid is supplied by means of succulent fruits of various kinds. We often pass several months without once thinking of drink. Nevertheless, drinking to an extent to satisfy the demands of nature is entirely natural, and in most cases can be productive of no harm.

Diseases Peculiar to Women.—A subscriber wishes to know how this class of diseases is treated at the Sanitarium.

Ans. Just as they are treated by the most thoroughly scientific physicians elsewhere, except that a larger number of remedies are brought to bear upon the case than can be employed in private practice. Cases of this sort make up a large share of the patronage at the Sanitarium, and are treated with marked success.

Deafness.—J. H. H.: Your wife should consult a competent physician, and have her ears thoroughly examined. The cause of her deafness may be an accumulation of ear-wax.

DIETETICS.

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

Bread vs. Beef.

EVER since vegetarians proved to the world, by their teachings as well as by their practice, that human life can be well supported by a diet from which the flesh of animals is wholly excluded, most writers upon dietetics have considered it a special part of their duty to present an array of arguments in support of the popular practice of meat-eating. The most of these arguments consist of dogmatic and empirical statements, in support of which no proof is offered but the writer's assertion. Now and then we see a better attempt at a logical treatment of the subject. Nevertheless, a careful analysis of these more rational arguments does not fail to expose the fallacy in the premises. We have a good illustration of this class of arguments in a recent work on diet by Dr. Chambers, of London. The doctor argues thus :—

"Suppose, for instance, a gang of a hundred average prisoners to excrete in the shape of breathed air, urine, and fæces, daily 71½ lbs. of carbon and 4¼ lbs. of nitrogen, which is pretty nearly the actual amount of those elements contained in the dried solids of the secretions, as estimated in current physiological works. Nitrogen and carbon, to that extent at least, must be supplied. Now, if you fed them on bread and water alone, it would require at least 380 pounds of bread daily to keep them alive for long; for it takes that weight to yield the 4¼ lbs. of nitrogen daily excreted. But in 380½ lbs. of bread there are 128½ lbs. of carbon, which is 57 lbs. above the needful quantity of that substance."

Allowing that the preceding paragraph contains no error, it must be admitted that Dr. Chambers has made a strong argument in favor of animal food; but, upon examination, we find that the doctor proposes to feed his prisoners upon superfine white-flour bread. It is a well-established fact that fine-flour bread contains little nitrogen, while graham bread contains it in a large proportion. If graham bread were supplied to the prisoners in the case supposed, they would obtain the full supply of nitrogen demanded by nature by the use of 175 pounds instead of 380 pounds, as stated by Dr. Chambers. What the doctor's argument proves, then, is not that animal food is required to complete a wholesome dietary, but that graham bread is decidedly preferable to that made from superfine flour.

If a man was compelled to eat fine-flour bread, and was unable to secure other nitrogenized food, it would be better to use a moderate quantity of meat than to attempt to sustain life by so inferior an article of diet; but if graham flour, or unbolted wheat meal, or oatmeal could be obtained, it would entirely obviate any necessity for the use of meat. We make, without fear of contradiction, the statement that the various kinds of vegetable food contain in ample proportion all the elements required for the proper sustenance of the body.

Dining by Lightning.—An ingenious French physician has invented a machine which promises to be a desideratum for that numerous class of dinner-bolting Americans who consider mastication a waste of time, and thus of money, for time is money with the American business man. The invention consists of an electrical dining machine, and was made for a patient who could not swallow on account of paralysis of the muscles of deglutition. The patient "filled his mouth with food and then gave a downward shock through his jaws and throat, when all went down with the velocity of the electric current; that is, at the rate of 4000 miles per second. This man, it is reported, has since dined daily by help of electricity, going through the whole bill of fare of an exquisite French dinner, including the delicacies of the season, wine, coffee, ice-cream, etc., in one minute and fourteen seconds."

Having never seen one of these remarkable machines in operation, we cannot vouch for its success, nor for the soundness of the patient's digestion; but there can be no doubt

that the use of such a machine would be just as compatible with the health of the digestive organs as is the usual mode of hurried eating, bolting the food unmasticated, rinsing it down with hot drinks and iced water, thus alternately parboiling and freezing the stomach. Perhaps some time-saving American will import one of these lightning eating machines, and publish the result of his experience with it.

Flesh or Fruit.—In the warm season, when diseases of the bowels are prevalent, many persons are very cautious about eating fruits, fearing that such food will make them sick, while they eat freely of fresh meat without fear. With such, it may appear that these diseases are induced by eating fruit; but had they been in the habit of using a vegetable diet, the fruit would have done no harm. I believe there is much more danger of inducing disease by eating meat than fruit. I believe, with the editor of the REFORMER, that "one of the best remedies for most bowel disorders is the use of a diet of ripe fruit."

If people would cease to lay the foundation of disease by eating flesh, which is poor food at the best, and is frequently diseased, they might eat freely of ripe fruits, and find such diet agreeable and wholesome. I can speak from experience on this. For several years I have lived almost exclusively on grains, fruits, and vegetables, and I have almost forgotten what pain and sickness are. I let condiments and beverages alone, as far as I can; living in the world with other people, and seeing the good effects of this course, I would encourage others to do the same. I would be glad, indeed, never again to be obliged to eat animal food in any form, any condiment whatever, nor any stimulant. Let me have whole-meal bread without saleratus or other risings, and let all my cooked food be prepared in the most simple manner, with plenty of fruits of almost every kind, and those who will may have the flesh, the condiments, the stimulants, and all the indigestible abominations which a perverted appetite craves. I will not envy them, and they will not envy me; so we shall still remain on good terms. R. F. COTTRELL.

Japanese Method of Cooking Rice.—A letter from Japan says: "They know how to cook rice here. Only just enough cold water is poured on to prevent the rice from burning to the bottom of the pot, which has a close-fitting cover and is set on a moderate fire. The rice is steamed, rather than boiled, until it is nearly done; then the cover of the pot is taken off, the surplus steam and moisture are allowed to escape, and the rice turns out a mass of snow-white kernels, each separate from the others, and as much superior to the soggy mass we usually get in the United States as a fine mealy potato is to the water-soaked article."

FARM AND HOUSEHOLD.

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

—Eggs may be preserved an indefinite length of time by simply smearing them with linseed-oil.

—The best remedy for mosquitoes is crude petroleum, which will prevent the hatching of their eggs when poured upon the water where their eggs are laid.

—A good whitewash for walls is made by adding to fresh-slacked lime and water, a solution of starch, a little salt, and a few drops of dissolved indigo or bluing.

Setting Strawberry Plants.—Just now is the best season of the year to set strawberry plants. The fall rains will give them a good start, so that they will bear quite a crop next year.

To Take off Paint.—One pound of pearl-ash, three pounds of lime slacked in water, and mix to the consistency of paint; lay on with an old brush, and let it remain on twelve or fourteen hours, when the paint can be easily scraped off.

Cleaning Silks.—Take equal quantities black molasses, soft soap, alcohol—about one cup of each, use a soft brush, cleaning each piece separately, and rinse each piece in two waters; place between two sheets, and press on wrong side with hot iron about fifteen minutes.

Plant Wash.—For fruit trees or large plants, boil one tablespoonful of borax in one pint of water, and, while warm, paint the stems of fruit trees or plants. This will destroy the green fungi, and prevent insect life from forming in the bark; it will also make the trees healthy.

A Remedy for Lime in the Eyes.—The highly injurious caustic effect of lime accidentally introduced into the eye, as frequently occurs to those engaged in building, may be entirely neutralized, it is said, by the use of cold sugar water, owing to the formation of a compound of the lime and sugar, which is without any action upon the eyes.

Remember the Germs.—We cannot too often remind ourselves and our neighbors of the vital importance of looking well after the sources of disease germs which have been so often pointed out in these columns. Dysentery, and most other bowel disorders, as well as most fevers, are the direct result of the reception into the system of poisonous germs of some sort. Decaying animal or vegetable matter is the source of these elements of disease. Look out for them.

Mats.—Very durable and neat mats for floors can be made from old coffee sacks. A piece of the bagging of suitable size is bound with some dark fabric and secured to a frame of four laths. By means of a hook of wood or iron, like an enlarged crochet needle, carpet rags are carried through the material so as to skip every other thread and to leave loops half an inch long, the ends, of course, being fastened. Old red flannel can be used to make tasteful borders.

How Poisons are Spread.—Mr. G. Owen Rees, Consulting Physician to Guy's Hospital, London, has called public attention to some unexpected sources of arsenical poisoning. The green calico lining of bed curtains has been found to have produced, for months, severe symptoms, which were treated as those of natural disease, without benefit to the patients. When the curtains were removed, the patients at once recovered their health. The beautiful pale-green muslin, largely used for ladies' dresses, has been found to contain not less than 60 grains of the arsenical compound known as Scheele's green in every square yard. He suggests that, in order to prevent much of the nausea, vomiting, headache, inflammation of the eyes, etc., from which so many suffer, there be a prohibition of the manufacture of such deleterious fabrics. Red, scarlet, and mauve-colored fabrics are not always free from arsenic. He adds that the agitation of skirts in dancing discharges arsenical poison, which probably causes some of the pallor and languor almost always wholly attributed to ill-ventilated and crowded rooms, and to bad champagne.

News and Miscellany.

—Famine and pestilence are devastating some portions of Japan.

—General Grant is traveling in Great Britain. He is now in Edinburgh, Scotland.

—Prof. Riley says that the destruction of birds is one cause of the grasshopper plague.

—A Chinese newspaper has entered upon its two thousandth volume. It has lost all of its original subscribers.

—The newly discovered metal, gallium, though very hard when solid, melts at the temperature of the hand.

—Six persons recently died at Wurzen, Saxony, their death being occasioned by eating the flesh of a diseased cow.

—A farm laborer in Italy receives as compensation seven cents per day, and considers himself very fortunate to obtain labor at that rate.

—Brigham Young died, Aug. 29, of cholera morbus. Had he lived a few weeks longer, he probably would have died of asphyxia at the end of a halter.

—The total production of silver by American mines since the discovery of this country by Columbus has been seven hundred and fifteen millions of dollars.

—7874 persons sell intoxicating liquors in New York; but 2176 of them have licenses; so that 5698 liquor dealers are violating the law every day in the week.

—"Man," says Hazlitt, "is the only animal that laughs: for he is the only animal that is struck with the difference between what things are and what they ought to be."

—The United States produced 198,000,000 pounds of wool in 1876, netting the growers, it is estimated, $40,000,000. Of this, California produced about 58,000,000 pounds, and Texas 13,000,000 pounds.

—The Eastern struggle still continues and no one can determine when the end will be. The Turks have shown themselves much more efficient in military operations than they had previously received credit for.

—It is rumored that Osman Pasha, the commander of the Turkish army, is Marshal Bazaine, the once famous French general who was impeached for his surrender of an important post during the Franco-Prussian war.

—It is stated on reliable authority that over five hundred men were killed during the recent riots, no fewer than forty-six railroads interrupted, and property destroyed to the amount of $60,000,000.

—The *Herald* says that "the striking contagion has been caught up by the cigar makers; but it will all end in smoke." It would be of vast benefit to the country if the strike should become universal and should be prolonged indefinitely.

—Nine hundred and twenty physicians, surgeons, and general practitioners of London have signed a petition for the abolition of the Grocer's License, under which retailers of ordinary groceries are permitted to sell intoxicating liquors in bottles.

—According to the most recent statistics, the inhabitants on the earth number 1,423,917,000, or 28 persons to every square mile of surface. London is the most densely packed spot of population, containing 3,489,428 souls, more than some continental kingdoms.

—The manner in which crime is transmitted and becomes hereditary is illustrated in a case recently looked up in New York, of a girl born and left on the banks of the Hudson, only eighty-six years ago. There have been traced, directly, over seven hundred criminals as this one girl's descendants, who have spent an aggregate of over two hundred years in prison for crime.

—The State Savings Bank of Chicago failed the 29th ult. Depositors will not be able to obtain more than 25 per cent., and that only after a delay of three or four years. The president has fled; and there is good reason to believe that he has been the cause of the failure by enriching himself at the expense of the bank. The failure of several other banks is threatened in consequence of this.

—A Welshman has invented a most terrible instrument of warfare. It is described as a cannon, so arranged as to discharge a sharp sword-blade crosswise in the direction of the enemy, the knife or cutter being so poised in its career through the air as to cover the whole space in a longitudinal direction described by the blade itself. An 8-inch ball would carry a sword 14 feet in length 600 yards, literally mowing down every human obstacle in its path.

Literary Notices.

PLAIN FACTS ABOUT SEXUAL LIFE. By J. H. Kellogg, M. D., editor of the Health Reformer, professor of physiology and hygiene in Battle Creek College, author of "Proper Diet for Man," and several other valuable works. Published at the Office of the Health Reformer, Battle Creek, Michigan. 1877. pp. 356. $1.50.

The topics discussed in this book are of vital importance to the purity, vigor, health, and general welfare of mankind, and they are treated in a delicate yet forcible manner. This is no catch-penny treatise for the purpose of peddling some worthless nostrum or trapping victims for some expensive treatment; it is no salacious description of the apparatus and excitements of animal passion; but it is a scientific explanation of the facts of sexual life, starting with the plants, and rising through the various grades of animals up to man. The light which it throws upon the processes of propagation is very clear, and startling pictures are drawn of the frightful evils growing out of ignorance and the consequent perversion of man's sexual nature. Millions are injured in childhood for want of proper knowledge in season to guard them against corrupting thoughts and vicious practices. The intelligent author of this book has, in an instructive, simple, and concise manner, given the various indices of disease and suggested rational remedies. He has done this in a scientific way, avoiding all stimulus to sensuality and all enticing or voluptuous mystery, so that youth of both sexes may read the work with benefit.—*Lansing Republican.*

GOD'S WORD MAN'S LIGHT AND GUIDE. New York: American Tract Society.

This very instructive volume is the result of a series of lectures delivered before the New York Sunday-school Association during the winter of 1876–7, by a number of the most eminent clergymen of the country. The subjects comprised, "The Inspiration of the Scriptures," by Rev. Wm. M. Taylor, D. D.; "The Languages of the Bible," by Rev. Chas. H. Briggs, D. D.; "The Unity and Variety of the Bible," by Rev. R. S. Storrs, D. D.; "Ancient History in its Connection with the Old Testament," by Rev. Howard Crosby, D. D.; "The Adaptation of the Bible to the Universal Needs of the Soul," by Rev. Robert Russell Booth, D. D.; "Miracles and Prophecies which Show the Bible Divine," by Rev. Noah Porter, D. D.; "Method of Jesus Christ as Teacher," by Rev. Geo. D. Boardman, D. D.; "The Right and Responsibility of the Christian Conscience in the Study of the Scriptures," by Rev. E. A. Washburn, D. D.; "Majesty and Holiness of the Bible," Rev. M. Simpson, D. D., LL. D.

This is a volume of rare interest to the thoughtful student of Bible subjects. It contains many of the choicest thoughts of some of the foremost and best thinkers in the theological world. Every young man and young woman ought to read the volume and ponder well the weighty truths which are presented in so forcible and entertaining a manner as to fix and hold the reader's attention and make a strong impression upon his mind.

We are under especial obligations to our friend, Hon. E. C. Wilder, for a copy of the work. Mr. Wilder has been for many years president of the N. Y. S. S. Association, and it was through his personal efforts that the plan of the lectures was formed, successfully executed, and made so efficient a means of great good through this volume. We hope the work may have the wide circulation which its merit deserves.

Items for the Month.

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

☞ This number has been unavoidably delayed for a few days on account of delay on the part of the engraver upon whom we depended for the picture of the Sanitarium upon the first page. The cut was made in Philadelphia, and for some unknown reason has reached us nearly a week later than the time at which it was promised. We are sure, however, that our readers will excuse the delay in view of the pleasure they will receive by an examination of so fine a representation of the main part of the new buildings now in course of erection at the Sanitarium.

☞ The Family Health Almanac for 1878 is nearly in type, and will be ready by the time orders reach us. We hope to make it excel all preceding ones in practical value. Several improvements are being made in the calendar part, which will enhance its value. Every one who had a copy this year will want the new one for '78. This makes a sure demand for 100,000 at least, and no doubt an equal number might be sold to new patrons. Send in orders in season so there will be no delay.

☞ For the elaborate and faithful description of the new buildings our readers are indebted to the talented pen of Miss M. L. Clough. We copy it from a neat little pamphlet entitled, "The Sanitarium, Patients at Goguac Lake," etc., just published at this Office. It can be obtained in any quantity for the small sum of five cents a copy. The chief feature of the pamphlet is the "Address of Mrs. White," which was delivered on the occasion of an excursion of the patients of the Sanitarium to Goguac Lake, a favorite place of resort near this city. Those who listened to the discourse, which was an extemporaneous effort, pronounced it beautiful and grand. It was most fitting to the occasion, and its effect upon the listeners was greatly intensified by the time and place. The author has so happily described both that those who were not there even can well appreciate and enjoy the remarks which were made. Every one who purchases a copy of the work will find its perusal a real treat.

☞ Our friend, Mr. Ewing Summers, formerly of Lansing, this State, has recently removed to Galesburg, Ill., where he is permanently located in the management of a water-cure establishment. Mrs. Summers has had considerable success as a physician, and both are ardent advocates of hygienic reform. We wish for them abundant success in their new field of labor.

☞ We have been enjoying very much for two or three weeks a visit at the Sanitarium from Hon. W. S. George, of Lansing, Mich., with his wife and sprightly little daughter. Mr. George is a gentleman of very unusual intelligence and breadth of culture, and is widely known in political circles as an authority in any subject relating to politics. He was for some years manager of the Detroit *Tribune*, but is now editor and publisher of the Lansing (Mich.) *Republican*, and State Printer. Under his management, the *Republican* has won a very enviable reputation for reliability as a newspaper, and unusual typographical neatness and accuracy.

☞ We are pleased to hear very encouraging reports of success from our energetic friend, Dr. Rossvally. The Doctor has determined to wage an uncompromising warfare against tobacco-using until the public attention is aroused to this monster evil, which is the ally of intemperance.

A few weeks ago, while stopping in this place, the Doctor devised a plan of operation which, in his hands, at least, is proving a decided success. He has prepared a card upon one side of which are printed twenty short paragraphs descriptive of "What Tobacco Will Do," as they appeared in "The Family Health Almanac" for 1876, while upon the other side is a formal pledge against the use, sale, or culture of the filthy weed. One of these cards is given to every person who signs the anti-tobacco pledge, and he is expected to carry it in his pocket as a reminder of his vow. Although Dr. R. left here but a few days ago he has already made quite an army of converts, as will be seen by the following extract from a letter which we received from him a few days since :—

"The tobacco pledge works beautifully. Over 900 S. S. boys have signed, so far. I have sent a pledge to 162 Superintendents of Sunday-schools in the State, asking them by postal card to read the pledge before their schools and ask boys to sign. At Albion, (Mich.), Springdale, and Springport I obtained thirty-eight pipes, twenty-three tobacco boxes, four tobacco bags, two cigar holders, and eight cigars. All are labelled with date, and name of person and town. I count pipes and tobacco boxes as the Indians count scalps."

We are highly pleased to hear of the Doctor's success, and sincerely hope that he may prosper in the good work he has undertaken.

ERRATUM.—The article in the June number on "Blue Glass," page 185, should have been accredited to Dr. J. S. Galloway.

OUR BOOK LIST.

THE following books, published at this Office, will be furnished by mail, post-paid, at the prices given. By the quantity, they will be delivered at the express or R. R. freight offices at one-third discount, for cash. SPECIAL TERMS TO AGENTS.

Plain Facts about Sexual Life.—A work which deals with sexual subjects in a new and instructive manner. Printed on tinted paper and handsomely bound. 360 pp. $1.50. Flexible cloth, 75 cts. Pamphlet edition, 50 cts.

Uses of Water in Health and Disease. This work comprises a sketch of the history of bathing, an explanation of the properties and effects of water, a description of all the different kinds of baths, and directions for applying water as a remedy for disease. Price, 20 cents. Bound in cloth, 50 cts.

Proper Diet for Man. A concise summary of the principal evidences which prove that the natural and proper food for man consists of fruits, grains, and vegetables. Pamphlet. Price, 15 cents.

The Evils of Fashionable Dress, and how to dress healthfully. Price, 10 cents.

Alcoholic Poison, as a beverage and as a medicine. An exposure of the fallacies of alcoholic medication, moderate drinking, and of the pretended Biblical support of the use of wine. 20 cts.

Health and Diseases of Woman. By R. T. TRALL, M. D. Price, 15 cts.

The Hygienic System. By R. T. Trall, M. D. Price, 15 cents.

Tobacco-Using. By R. T. Trall, M. D. 15 cts.

Healthful Cookery. A Hand-Book of Food and Diet; or What to Eat, How to Eat, When to Eat. The most complete work on Hygienic Cookery published. Price, 25 cents.

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