VOL. 22. SEPTEMBER, 1887. No. 9.

GOOD HEALTH

A JOURNAL OF HYGIENE

DEVOTED TO PHYSICAL, MENTAL AND MORAL CULTURE

A SOUND MIND IN A SOUND BODY

HEALTH IS WEALTH

PROPER CLOTHING ADEQUATE REST

AMPLE EXERCISE

CLEANLINESS NEXT TO GODLINESS

TEMPERANCE IN ALL THINGS

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MICHIGAN CENTRAL RAILROAD.

GOING EAST.					STATIONS	GOING WEST.				
Mail.	Day Exp s	N. Y. Exp.	Atl'n Exp.	Nig't Exp.		Pa'ic Exp.	Ev'g Exp.	Day Exp.	Chi'o Exp.	Mail.
p. m.	p. m.	p. m.	a. m.	a. m.	Ar. Dep.	p. m.	p. m.	a. m.	p. m.	a. m.
6.00	6.45	10.45	6.00	7.30	Detroit,	9 15	8.00	9.10	1.30	7.00
4.33	5.30	9.45	4.35	6.08	Ann Arbor,	11.38	9.12	10.25	2.32	8.16
3.15	4.20	8.49	3.15	4.50	Jackson,	12.03	10.52	11.35	3.32	9.35
2.00	3.10	7.54	1.58	3.43	Marshall,	1.04	11.47	12.50	4.22	10.38
1.12	2.27	7.33	1.30	3.20	Battle Creek,	1.35	12.12	1.12	4.40	11.03
12.17	1.50	6.58	12.33	2.35	Kalamazoo,	2.35	1.20	1.50	5.15	11.52
10.38	12.15	5.49	11.13	1.55	Niles,	4.18	3.03	3.22	6.27	1.40
9.18	11.11	4.55	10.18	11.27	Mich. City,	5.4	4.32	4.35	7.32	2.58
6.50	9.00	3.10	8.15	9.10	Chicago,	8.05	7.00	6.40	9.3	5.15
a. m.	a. m.	p. m.	p. m.	p. m.	Dep. Ar.	a. m.	a. m.	p. m.	p. m.	p. m.

Gr. Rap. & Kal. Ex. lvs. Kal'm'zoo 6,45 a. m., Bat. Creek 7.31, Marshall 7.57, Jackson 9.15, Ann Arbor 10.30, ar. Detroit 11.50 a. m. Returning, leaves Detroit 4.00 p. m., Ann Arbor 5.30, Jackson 7.10, Marshall 8.20, Battle Creek 8.52, ar. Kalamazoo 9.45.

All trains run by Ninetieth Meridian, or Central Standard Time.

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June 5, 1887.

O. W. RUGGLES, *Gen. Pass., Agt., Chicago.*

CHICAGO & GRAND TRUNK R. R.

Time Table, in effect May 15, 1887.

GOING WEST.					STATIONS.	GOING EAST.				
Chico Pass.	Mail.	Day Exp.	Pacific Exp.	B.Crk Pass.		Mail.	Limtd Exp.	Atlic Exp.	Sun. Pass.	Pt H'a Pass.
.....	am	am	pm	pm	Dep. Arr.	pm	am	am		am
.....	5.55	7.15	8.05	4.10	..... Port Huron	10.20	1.15	7.35	.....	10.50
.....	7.28	8.31	9.34	5.40	.....Lapeer.....	8.42	11.57	6.17	.....	9.17
.....	8.05	9.10	10.15	6.20	.....Flint.....	7.55	11.27	5.40	.....	8.40
.....	8.48	9.35	10.58	7.20	..... Durand.....	7.05	10.58	5.03	.....	8.05
.....	10.00	10.30	11.53	8.26	..... Lansing	5.20	10.07	4.00	.....	6.45
.....	10.37	11.00	12.25	9.03	..... Charlotte.....	4.42	9.37	3.25	.....	6.15
a m	11.30	11.45	1.15	10.05	A | BATTLE CREEK | D	3.45	8.55	2.35	.....	5.30
6.30	am	12.05	1.20	pm	D | | A	3.40	8.50	2.30	.....	am
7.18	.....	12.45	2.21	———	.....Vicksburg	2.41	8.11	1.43	.....	———
7.30	———	12.55	†2.32	VAL.	.....Schoolcraft.....	2.31	.....	1.27	.....	VAL.
8.17	SUN.	1.45	3.19	ACC.	.....Cassopolis.....	1.45	7.26	12.43	.....	ACC.
9.00	Pass.	2.28	4.07	———	..... South Bend.....	1.05	6.50	12.01	.....	———
10.15	am	3.43	.....	am	..... Haskell's.....	11.47	.....	.....	pm	pm
10.30	7.35	4.05	5.52	6.05	.....Valparaiso.....	11.35	5.30	10.29	3.40	8.03
12.40	10.00	6.25	9.10	8.43	.....Chicago.....	9.05	3.25	8.15	1.15	5.25
pm	am	pm	am	am	Arr. Dep.	am	pm	pm	pm	pm

†Stops only on signal. Where no time is given, train does not stop. Trains run by Central Standard Time.

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IN APPLE HARVEST.

GOOD HEALTH

A JOURNAL OF HYGIENE.

MENS SANA IN CORPORE SANO.

Volume XXII. BATTLE CREEK, MICH., SEPTEMBER 1887. Number 9.

THE PHYSICIAN OF THE FUTURE.

OUR readers will certainly be interested in the perusal of the following readable article, which we quote from a recent number of the *Independent* :—

"The progress of the last fifty years has wholly changed the position of the science and the art of the physician. His very name meant nature, and he was so called because his subject for study was the highest one in nature,—the study of man. But there was so little material for that kind of study which deserves the name of science, and there was so much demand for some one who could relieve human pain and diseases, that it is not wonderful that the *art* made *attempts*, even when it had no science to fall back upon. It did come to have observation and experience, and, so far as it availed itself of these, it had a right to exist. But as an art, it had to be empirical, just because it had not enough orderly facts out of which to make a science. Now the situation is greatly changed. Almost every department of natural science, in its modern accumulations, has had much to hand over to the physician. The medical mind became aroused, and soon saw that it, too, had a body of science within itself, waiting the search of the scalpel and the microscope, and capable of being utilized for the purposes of art.

"It is not at all troublesome that this more precise knowledge has narrowed the sphere of drugs, and widened that of natural relief and cure. It is the highest of human mechanism and of human skill so to run a machine that is self-reparative, that it may have the very best chance to repair itself. That is what the true physician of the present day is studying with potential energy. He does not ignore drugs. He knows that there are limitations as to the degree to which the human organism, when out of repair, can mend itself. Hence there never was a time when the physician, finding such a condition, pushed his drugs and other appliances more vigorously. He has more accurately discerned their place and their power, and so when he must employ them, does it all the more effectually. But he has also seen that the occasions for their use are the rare exceptions.

"The great study now is to know what are the precise preservative and curative powers of the human system and of each particular person, and how far and in what way they are most available. Also, how they can be aided by natural methods, such as by air, food, water, exercise, etc. Hence it is that hygiene is no longer a thing to be patronized. It is radical and essential to the practice of medicine. Many a practitioner past fifty years of age has become a poor practitioner because he practices just as he was taught, and knows more about *Materia Medica* than he does about the *Materia Natura*. The profoundest questions now before the medical mind are those of nutrition, of tissue repair, of preservation or renovation by natural processes. Flint and Gross signalized their latest works by insisting upon the change. Weir Mitchell

opens his institution for restorative treatment mostly along the lines of sanitary and dietetic methods. Sargent attempts both prevention and cure by resort to the legitimate ways of body-building as Nature conducts it. These are but specimens of hundreds who have caught the advancing light. They know how important, and yet how narrow, a sphere drugs have on the one hand, and also how superficial on the other are many of the plans of alimentation through pepsin and baby foods, etc. Sir Wm. Gull does not feel his profession compromised when he states that the prince of Wales, when sick with typhoid fever, took only two doses of medicine, because he knows that there is greater skill in conducting the other lines of treatment in all that relates to temperature, rest, food, etc., than there can be in mere medication.

"The greatest mortification and embarrassment to the hygienist of the present day is that so many think that sanitation means skill in finding a nuisance, rather than deep knowledge of causes which prevent their occurrence. He is the modern physician who, finding results in the form of sickness, knows how to deal with them in full knowledge of the curative resources of the sanitary or real medical art. The time has really come when every family that can afford it, should put itself under the care of the physician, with the expectation that he will guide the life in particulars in which every one cannot be expected to have knowledge, and so secure vigor, and ward off disease. It is now more practicable to get more service out of your medical adviser by his investigations of states of health and means of vigor, than it is to depend upon him merely when sickness has arrived. It is thus that the average of human health can be decidedly raised, and so benefit accrue to the family and to the nation. He who thus values his physician as a consultant, not with the view of a dose, but as one capable of preventing disease, or of dealing with it mostly through natural processes, will not fail to secure the greatest advantages of this great art."

CONVERSATION BETWEEN A SAVAGE AND A WHITE MAN.

BY F. N. SCOTT.

White Man. I am very glad to make your acquaintance, sir, although while you are in your present unregenerate condition, I must decline rubbing noses with you. After you have had a bath, it will give me great pleasure to take you by the hand. I understand that you mean to eschew your savage customs, and take up with the ways of civilization.

Savage. That is my resolve.

W. M. And a very commendable resolution on your part, I am sure. I trust that you fully appreciate the superiority of our modern civilization, to the wretched mode of life which you have pursued hitherto.

S. I must confess that at present I have but a vague and incoherent notion of what civilization means. I will be greatly obliged to you, if you will make more clear to me the difference between it and my present condition.

W. M. I shall be delighted to. Savagery, you must know, means ignorance, falsehood, selfishness, degradation, and superstition; civilization means knowledge, truth, generosity, refinement, and reason. Savagery is the triumph of the body over the mind; civilization is the triumph of the mind over the body. As a savage, you eat, and drink, and dress, without knowing why you do these things in one way rather than in another. After you have become civilized, you will do everything because it is the right thing to do.

S. I think I understand.

W. M. Very likely you do not, though. You savages never can understand anything without some visible sign. Let me illustrate my meaning. I have here a picture of some of your relatives,—the Musquito Indians of Central America. Pray notice those ridiculous head-dresses.

S. Very beautiful head-dresses they seem to me.

W. M. That is because you are still a degraded savage, with your æsthetic tastes in a rudimentary stage of evolution. When you have

become civilized, those head-dresses will appear to you hideously ugly.

S. Why?

W. M. For two reasons: first, because they lack the elements of beauty; second, because they are not adapted for their purpose. Such massive towers of feathers, and grass, and wood, and strings, accumulate filth, heat the head unnecessarily, and give rise to scalp diseases. Besides this—excuse my mentioning it—do they not breed a peculiarly prolific and troublesome—ahem—you understand?

S. I am sorry to confess—

W. M. Let us say no more about it. To a civilized mind, I assure you, the subject is quite revolting.

S. Then am I to understand that no civilized person would wear anything of this sort?

W. M. It would be quite impossible.

S. Will you be kind enough to explain to me a passage which the interpreter read to me from one of your books, while we were waiting for you? As nearly as I can remember, it ran as follows:—

"The fashionable Englishwoman of one hundred years ago erected upon her head a massive tower composed of hair, tow, beads, feathers, ribbons, artificial flowers, and glass ornaments, which frequently rose to the height of three feet; so that she could not use a coach as it was constructed, but was obliged to have the roof of it raised. The interior of this monstrous pile was explored only at certain intervals, when the accumulated filth made a sight not to be described, nor yet too vividly imagined."

HEAD-DRESSES OF MUSQUITO INDIANS.

Excuse my mentioning anything so revolting, but is not the reference here to this same peculiarly prolific and troublesome—ahem—you understand?

W. M. But, my dear sir, you forget that this was a hundred years ago.

S. Then I am to understand that your ancestors of a hundred years ago were savages?

W. M. Heaven forbid! I fear these distinctions cannot be made clear to your untutored mind, but I will try another illustration. Perhaps you may know of certain relatives of yours who make a practice of binding a board upon the heads of their children, so that as they grow up, their skulls will be squeezed into an absurd semblance of the peaked roof of a

house, and their mental capacity reduced to that of an idiot.

S. I have heard of this practice. If you will notice the shape of my forehead,—

W. M. Pardon my rudeness. Nothing personal was intended, I assure you. You must see, however, even with your undeveloped reasoning powers, that such a hinderance to the natural development of the body cannot but work harm.

S. Am I to understand that civilized people do nothing of this sort?

W. M. It would be looked upon as a crime.

S. Indeed! but I have been told that among civilized people it is quite common to bind around the waists of young female children a stout bandage made of cloth and bone, by which the ribs are gradually pressed out of shape, the liver almost cut in two, and the lungs compressed to one-half their natural size. And further, that this bandage is worn, not only during childhood, but even until old age. Is not this true?

W. M. You must talk to my wife about that.

S. Ah! I see. It is only the men who become civilized; the women remain savages.

W. M. No, no; you are wholly on the wrong track. It is *principles* that make civilization. I do not deny that these things are wrong, but, do you not see, we *know* they are wrong. That is the important thing.

S. Oh, now I understand the difference. The civilized man does wrong, and knows that it is wrong. The savage does wrong, and does not know it. Is that it?

W. M. (To interpreter.) Take this man away. If I talk with him much longer, I shall make myself out more of a savage than he is.

A Curious Advertisement.—The following sentences are taken from an ancient sign, formerly exhibited over the door of a small shop in North Devon: "Roger Giles, surgin parish clark skulemaster groser and hundertaker respectable, informs ladies and gentlemen that he droos teef without waiting a minute, applies, laches, every hour blisters on the lowest tarms, and viziks for a peni a peesh. He sells Godfathers kordales, kut korns, bunyions. Dokters hosses, klips dunkeys wanze a munth, and undertakes rooater lok teverybody's nayles by the ear."

A HYMN TO THE GODDESS NICOTINE, THE SPIRIT OF TOBACCO.

NICOTINA, Nicotina,
Spirit of narcotic might,
List, a hymn thy power expressing;
Of thy glory I will write.
Wheresoever man doth dwell,
Thou art loved and worshiped well.

Great Diana of the Ephesians
Never could compare with thee;
Bacchus, god of drunken revels,
Can thine only rival be;
Gods of every age and clime
Yield before thy power sublime.

From the Niger and the Congo,
Where the black-skinned pagans stay,
Unto Iceland's dreary regions,
Where the frost-king beareth sway,
Mankind bows before thy throne,
And thy sovereign power doth own.

Naked savage, prince in palace,
Cooly, serf, and mandarin—
Station high, and low condition—
All adore thee, Nicotine.
Priest and people honor thee,
From thy service few are free.

Once, the wand'ring, savage Red Man
Was thine only devotee;
Now, the learned and the pious
At thy bidding bow the knee.
Thou art earth's most potent queen,
Smoke beclouded Nicotine.

Thou requirest not an altar
Builded high of polished stone,
Thou requirest not a temple
For thy service, thine alone;
But wherever man may be,
Thou wilt have him worship thee.

Where the worshipers of Bacchus
Meet, the drink-god to adore,
There thou art, and there thine offrings
Taint the air and smear the floor;
And the poison-laden air
Unto thee is incense there.

When Jehovah's sons and daughters
Present are before his face,
Thou dost also bring thy servants
Often to the self-same place,
That the worship meant for Heaven
May in part to thee be given.

Mortals sacrifice unto thee
Social pleasure, time, and health;
Thou dost glean the poor man's coppers,
Thou dost reap the rich man's wealth;
Naught from thee will they withhold,
Friends or pleasure, health or gold.

With what blessings dost thou answer
All this worship, all this love?
Surely, for such rare devotion,
Man's best friend thou shouldest prove;
As thy gifts are manifold,
Few of them can here be told:

Sickness, poverty, and weakness,
Poisoned blood and foggy brain,
Filthy mouth and filthy habits,
Filth the clothes and floors to stain;
Thou dost aptly play thy part;
Thou of Death the handmaid art.

Eyes grow dim, and hands grow shaky,
Where thy power gains full control;
And the poor, enfeebled mortal
Is thy slave in flesh and soul.
Surely thou art Satan's queen,—
Soul destroyer, Nicotine.

F. G. HARRIS.

Elba, Neb., April 3, 1887.

CONSUMPTION CONTAGIOUS.

DR. PLAYTER, of Ottawa, Canada, has written a pamphlet on consumption, and its prevention in man and animals. The following interesting extract appeared in the May number of the *Canada Health Journal*:—

"From the period of earliest records in the history of medicine, the contagious nature of tubercular consumption has been believed in by physicians of the highest repute. Over two thousand years ago (400 B. C.), Hippocrates, 'the father of medicine,' believed in it. Aristotle (320 B. C.) wrote that the Greeks in his day believed in it, and asks why consumption, sore eyes, and itch, are common to persons who associate with others suffering from these affections. Later (180 A. D.), Galen wrote that 'it is dangerous to pass a whole day with a consumptive person.' Coming down to much more recent periods, Morton, over two hundred years ago, wrote of consumption, that 'a contagious principle often propagates this disease, for, as I have often found by experience, an affected person may poison a bed-fellow by a kind of miasm, like that of a malignant fever.' Riverius, about the same period of time, believed contagion to be the 'chief' cause of consumption. 'We may observe women to be affected by their husbands,' he wrote, 'and men by their wives and all the children to die of the same, not only from infection of their parent's seed, but from the company of him that was first infected.'

"The eminent Italian physician, Valsalva, a professor of Bologna, in the early part of last century, was himself predisposed to consumption, and avoided being present at dissections of the lungs of persons who had died of the disease. Valsalva's illustrious pupil, Morgagni, professor in the University of Padua, declared that he had never dared to make more than a few *post-mortem* examinations of persons who had died of this disease, for fear of contracting it. In Italy a law once existed by which the proprietor of a house in which a consumptive had died, could claim payment for his furniture, which was burned. It was often difficult there for a person supposed to be consumptive to obtain lodgings.

"Over a century ago a reaction regarding belief in the contagiousness of consumption commenced to show itself. Eventually, in Northern Europe and America especially, doubt developed into general disbelief. In the warmer latitudes, however, the opinion favorable to contagion never lost its hold; and the reaction has probably paved the way to more rational and accurate views, based on modern scientific investigations, which will be generally accepted. Within a comparatively few years the belief that the disease is contagious has again become very general. The recent investigations of Kock have resulted in making belief in its contagiousness almost irresistible. If the *bacilli* are the cause of the disease, it can hardly be otherwise than contagious.

"Dr. Wm. Budd, in an article on the nature and propagation of phthisis (London *Lancet*, Oct. 12, 1867), takes strong ground in favor of contagion. He concludes that 'tuberculosis is a true zymotic disease of specific nature, in the same sense as typhoid, scarlet fever,

typhus, syphilis, etc.; and that, like these diseases, tuberculosis never originates spontaneously, but is perpetuated solely by the law of continuous succession.' The evidences of this he finds in (*a*) considerations based on the pathology of phthisis, consisting in the evolution and multiplication in the organism of a specific, morbid matter, with a tendency to elimination, and casting off the same, like zymotic diseases generally; (*b*) actual instances in which there is evidence to show communication from one to another; (*c*) the geographical distribution of phthisis in past and present times, and especially its fatality now in countries which were entirely free from it when first discovered by Europeans; (*d*) its greater prevalence in low levels and crowded communities, and entire absence, except by importation, at high levels—the same conditions which govern zymotic diseases; (*e*) its high rate of prevalence in convents, harems, barracks, penitentiaries, etc.; *i. e.*, in the same social conditions known to propagate zymotic diseases.

"As facts proving his statement about geographical distribution, (*c*) he adds that when the South Sea Islands were first discovered, there was no phthisis there; but that since the aborigines have come into contact with Europeans, the disease has become so wide-spread as to threaten their extermination. This is a striking contrast, only to be explained, he thinks, by the importation of a new and specific morbid germ. The late Dr. Rush, of Philadelphia, who made accurate inquiries, satisfied himself that there was no phthisis among the American Indians when America was discovered, whereas now it is very common and very fatal among them.

"Furthermore: in Africa, everywhere along the seaboard, where the blacks have come into constant and intimate relations with the whites, there has been a large mortality from the disease; but in the interior, where there has been only occasional contact with a few great travelers, the disease has not been found. Of this fact Dr. Livingstone and other African travelers have given Dr. Budd positive assurance. ('Is Consumption Contagious?' by H. C. Clapp, A. M., M. D., Boston.)

"Dr. Bowditch, late chairman of the State Board of Health of Massachusetts, a number of years ago made some investigations relating to the cause of consumption, by sending a list of questions to prominent physicians in actual practice in several of the States and in London and Germany (Fourth Annual Report of the State Board of Health, of Mass., 1872). Of 210 physicians who replied, 28 did not answer the question on contagion. Of the remainder, 110 answered in the affirmative, 45 in the negative, and 27 were doubtful. Many, besides answering 'yes' or 'no,' wrote something like the following: 'I firmly believe that consumption is much more contagious than it is generally thought to be. I have in my mind several cases where there was almost positive evidence of contagion.' 'In very many cases, I have the opinion from my own observation, that consumption is communicable by contagion or infection.' 'I am more inclined than I was at one time to attach importance to the influence of contagion.' 'I am thoroughly convinced that phthisis is frequently caused by contagion, and deserves to be classed with typhoid fever in this respect. I have seen unmistakable evidence where a healthy wife contracted this disease from her husband, and *vice versa*.'"

A Mistake.—A man, overcome by his emotions and bad whisky, lay down beside a fence. A hog, strolling that way in search of food, began rooting about the prostrate figure, as if he thought his discovery was a vegetable product. The drunken man stupidly opened one eye, and observing the grunting beast, remarked:—

"Shu here, piggy, I know that jesh now I'm not your equal in point of dignity; nevertheless, I deshire to shay for varioush reasons that I'm not a puttater, an' to take me for one ish a shlander on the vegetable. If you devour me in my present condition, you'll find me er-very indigeshtible."

The hog moved on.

Seasonable Hints.

—Look up your winter under-clothing, if you have been thoughtless enough to lay it aside entirely during the past three months. See that it is in proper condition to put on at the first suggestion of a "cold wave." A severe cold caught in one of the sudden changes of temperature, which are liable to occur during this month, may hang by you all the fall and winter, and well into next spring; and then lie in wait for you at the beginning of the succeeding fall.

—The cellar should be regarded as one of the rooms of the house, and not as a sort of "dark hole" into which to dump all sorts of perishable material. If the cellar is located under the house, the best plan is to put into it nothing which can undergo decay. If it is impossible to avoid doing so, the householder should at least see that the cellar is thoroughly cleaned and disinfected, and if need be, cemented, before any fruit or vegetables goes into it this fall. Vegetables should not be thrown into a corner, where they will be certain to decay, but placed upon shelves or in shallow bins raised above the floor so as to allow free circulation of air.

—The first week of September generally brings with it a heavy crop of typhoid fevers. The best cure for them is to go back three months and remove the cause, which may often be found in the shape of a cess-pool or privy vault so constructed as to drain into the well from which the drinking supply is obtained. However, as the world is constructed at present, it is somewhat difficult to persuade old Time to turn backward in his flight. He must be seized by the forelock, while he is within reach. Typhoid-fever germs are usually taken into the body in drinking-water. If you are not sure that the source of the supply is perfectly pure, boil the water before drinking.

—To those who have just returned from a summer's outing at the sea-shore, or in the mountains, or the northern Michigan resorts, we would like to make a suggestion: Do not depend on the fresh air, the exercise, and the sunshine that you have enjoyed during the summer, to carry you through the year until next vacation. Nothing is more common than to hear a young lady exclaim, on returning from a summer's camping-out, "Oh! I've had enough fresh air to last me all winter." And she conducts herself all winter as though she really believed it to be true. Perhaps it is true that two months of rational living will enable one to eke out an irrational existence during the other ten months of the year, but how much better to live rationally all the year round. Bring back some of your out-door customs with you. Continue your long walks, your early hours for retiring and rising, your easy-fitting garments. Something may happen to interfere with next summer's vacation, in which case, if you have lived hygienically during the whole year, you will very likely discover that you have accumulated enough vitality to tide you over the summer months.

Bowel Complaint.—The bowel disorders so frequent at this time of the year, are usually attributed to an over-indulgence in the use of fruit; and the first thought of the unhappy victim as he listens to the faint rumblings which portend the approaching gastric cyclone, is generally composed of equal proportions of regret that he has tasted any fruit during the entire summer, and of resolve that he will never taste any more during the remainder of his natural life. It is true that bowel complaint is frequently the result of eating unripe fruit, as many a lad who may be at this very moment lying in a doubled-up posture consequent upon a too-intimate acquaintance with the peach-orchard, could dolefully testify; but that fruit of every sort should be abstained from during the "heated term" is an unfortunate error, which leads many persons at this time of the year to deprive themselves of a most wholesome article of diet. There is plenty of evidence to show any one that good ripe fruit is one of the most efficacious preventives of bowel diseases of all kinds, and that the use of such fruits as grapes (without the seeds), ripe apples, and the other better kinds of fruit, is of value as a means of curing some forms of bowel trouble. Be sure your fruit is ripe, then go ahead.

Any one who is really anxious to set his intestines galloping madly around in the abdominal cavity, can bring about this pleasant state of affairs without the aid of any fruit, ripe or otherwise. Let him sit up late at night; bolt down his breakfast the next morning; fret and worry all day long; take a drink of "moxie," or "acid phosphate," or "malto," or some other "summer drink," every two hours, and a glass of ice-water every thirty minutes; dine on peppery soup, sizzling beefsteak, Saratoga potatoes, soggy pie, and ice-cream, washed down with copious draughts of iced-tea; go home all tired out, and eat a big supper, with more beefsteak and more iced-tea. This recipe is being tried every day at this time of the year by hundreds of people, and seldom fails to accomplish the result promised.

If, on the other hand, you wish to escape the terrors of a bowel disturbance, eat ripe fruits in moderation, together with a light diet of grains and milk. Avoid fats, meats, pastry, and ice-water. Keep quiet and cool, and go to bed with an empty stomach. If neglect of these precautions has already brought on the premonitory symptoms, omit a meal or two, and drink freely of hot water, say three or four pints. Clear out the bowels with a large, hot enema; and as a last resort, have flannels wrung out of hot water, and applied to the abdomen.

THE HAPPY FIRESIDE.

Devoted to Temperance, Mental and Moral Culture, Home Culture, Natural History, and other interesting Topics.

Conducted by Mrs. E. E. Kellogg, A. M.

JUDGE NOT.

(Selections from Alice Cary's writings.)

Do not look for wrong and evil—
You will find them if you do;
As you measure for your neighbor,
He will measure back to you.

Look for goodness, look for gladness,
You will meet them all the while;
If you bring a smiling visage
To the glass, you meet a smile.

The glance that doth thy neighbor doubt,
Turn thou, O man, within,
And see if it will not bring out
Some unsuspected sin.

To hide from shame the branded brow,
Make broad thy charity,
And judge no man, except as thou
Would'st have him judge of thee.

TRIP TO THE TROPICS.

(CONCLUDED.)

THE approach to the Central American ports is very fine indeed. The mountains rise majestically, high above the clouds. This is usually quite a surprise to the traveler, for nearly all suppose the coast to be skirted with low, marshy lands. These mountains are very heavily covered with growths of timber, interlaced with vines and small shrubbery, so much so that it is almost impossible to travel upon them without first cutting out a roadway.

Rich mines are being developed in different parts, and miners of experience bespeak for the country a promising future in mineral wealth.

Lovely streams course their way among the mountains; and as viewed from under those thick canopies of vines, they, in their rapid bounding and leaping over the massive rocks, are indeed a most pleasing sight.

PLANTATIONS.

The term "plantation" is applied to any field, no matter how small. In the valleys the land is very fertile, and but little effort is required to prepare it for the crop. Almost anything will grow, but the banana, plantain, and cocoanut are the principal products.

The plantations are prepared by chopping down the timber and undergrowth, leaving the stumps three to four feet high; thus giving the country a very ragged appearance. The fallen timber, vines, etc., are allowed to lie, during the hot season, till they become "as dry as tinder." A fire is then applied, which soon cleans the ground. It is now ready for the planting. No plow, no harrow, no hoe is needed, nothing but a native with a bundle of banana suckers in one hand and a *machete* in the other.

The *machete* is a knife somewhat resembling our farmer's corn-knife, but a little heavier. To the Honduranian it is his ax, his hatchet, his saw, his plow, his pruning-hook, his shovel, his spade, and his weapon of defense. If not in use, it will almost invariably be seen hanging at his side in a long leather scabbard. With it a hole is made in the ground, in which is placed the banana sucker; and, except to keep the bushes trimmed down till the fruit is gathered, no other care is needed. The fruit usually sells for about thirty-five cents per bunch.

HOUSES.

Almost every variety of house, from the modern western cottage to the most antiquated

style, may be seen in Central America. Some of the last named have stood for hundreds of years. They have very thick walls, large rooms, and tile-covered roofs. Comfort considered, they are far superior to the "yankee cottage" which is being introduced here. The bamboo house, also, has a place among the dwellings, and when properly made, is very comfortable and pleasant. The Caribs live in houses made of mud and covered with bamboo leaves.

One uniform oddity is soon noticed—none of the houses have chimneys.

There are but few iron stoves. Stoves made from mud, or fire-places built in one corner of the "cook-house" upon a platform covered with dirt, constitute the only facilities for heating purposes. The smoke goes out at the doors and windows after it gets the room well filled.

ANIMALS.

Many wild animals of the same species as those in the United States may be found here, though quite different in appearance. The rabbit is red, and has short ears and tail. To the yankee it looks like a cross between our rabbit and fox-squirrel. The raccoon is taller, has a smaller body, and a tail about twice as long as those in the United States.

We saw but few snakes, although, of course, expecting encounters with the boa-constricter, which is said to be quite numerous in the interior and farther south. We saw what is called the "silver snake," which was quite interesting. It was about four inches long, and as large around as fence wire; and as it was perfectly harmless, we took it in our hands, but despite our utmost efforts we failed to hold it, as it baffled our firmest grip. Upon good authority we were told that fowls often eat them, and shortly after can have the pleasure of doing so again, as within a few moments this snake wiggles clear through the alimentary canal, and can perform this feat several times without tiring.

Their horses are like our "Texan ponies," and just about as tricky. The teaming is done with carts drawn by oxen. The yoke is fastened on the head of the oxen in front of their horns, instead of around the neck. Frequently old oxen may be seen with their horns almost worn off.

INSECTS.

Honduras surely has its quota of these pestiferous creatures. Ants are very numerous and often do much damage. One kind prey upon houses; and when they get started, soon eat one down. Another kind, called the "wee wee," are very destructive upon the gardens. Within one night they often spread desolation on every hand. The gardener, retiring at night with bright anticipations, may, upon rising in the morning, find not enough left for breakfast.

Sand-flies, which one writer describes as "little white flies with a red-hot needle for a bill," are, during a calm, exceedingly troublesome. Their bite leaves a burning sensation that is quite annoying.

Another insect quite common in some parts, called the "bottle-fly," is very disagreeable at times. After puncturing the skin, it lays eggs in the flesh; and ere you are aware of it, you are bearing about a family of worms which it is quite difficult to drive out without considerable pain.

We will not attempt to mention all these *personal* enemies; our list, however, would be quite incomplete if we failed to mention the *agarrapata*. They are about as large as a pin head, and resemble the tick, in outline. They are small; but when they get "head and shoulders" into the flesh, they feel "mighty." We do not think it is any exaggeration to say that a person, by a short ramble in the brush, will get *millions* and *millions* on him.

T. H. GIBBS.

—"It may be safely assumed," says W. D. Howells, the novelist, "that most of the novel-reading, which people fancy is an intellectual pastime, is the emptiest dissipation, hardly more related to thought or the wholesome exercise of the mental faculties than opium-eating; in either case, the brain is drugged, and left weaker and crazier for the debauch."

—The hypocrite shows the excellency of virtue by the necessity he thinks himself under of *seeming to be virtuous*.

THE OLD-FASHIONED MOTHER.

BY FANNIE BOLTEN.

I HAVE read an inquiry now and again,
Written out for the papers by somebody's pen,
In most desolate prose and most sorrowful rhyme,
And, indeed, I don't wonder; it's certainly time
To ask, "What's become of the dear little girls,
With their innocent manners and natural curls?"
And, although I can't answer the question, I, too,
Would like to put forth an inquiry to you:
"Please, where are the old-fashioned mothers?"

Perhaps it is long since you saw one, and so
I will tell you the few things about them, I know:
Their dresses were simple, unruffled, and neat;
Their faces were gentle, and wholesome, and sweet,
With hair neatly parted, and combed from the brow,
And intelligence beaming where frizzes are now;
And they smoothed each small pillow, and gently caressed
The dear little girls when they tucked them to rest.
Oh, where are the old-fashioned mothers?

Their homes were both sunny and fragrant with bloom,
And the mother's sweet life seemed like precious perfume;
There were flowers in the windows, and birds in the bough;
And the children looked up to the light of her brow;
And a song from her lips filled the whole atmosphere;
And how happy were all when sweet mother was near!
And like buds softly clustering, when the petals unclose,
Were the children, surrounding their mother, the rose.
Oh, where are the old-fashioned mothers?

What memories sweeten the lives of all those
Who have had such a mother to comfort their woes!
Ah! who that has laid his poor head on her breast,
And sobbed out a sorrow, has not found it blest!
Her children were never found grieving alone,
And the world had to care for affairs of its own—
She must watch all her buds lest a sin-breath should sear,

And each plan and each confidence came to her ear;
And she wept, and she prayed, at their bedsides at night,
That the Father in heaven would keep them all white.
Oh, where are the old-fashioned mothers?

I think as I read of the lost girls and boys,
Who should be at home with their innocent toys,
Who are frizzed up and ruffled, and full of self-caring,
Who are blighted with sin, who are smoking and swearing,
And going to ruin each day on the streets,
Perhaps there's some fault in the mothers one meets;
Perhaps we have lost all the dear little girls
In mother's false paint-box and mother's false curls;
For mother's mock manners and words insincere
Are shaping their characters year after year:
And the dear little girls and the boys would come back,
If some one would set out upon the old track,
And bring back the old-fashioned mothers.

DRESS.

A WRITER in a recent number of the *Quiver*, speaking of the universal homage paid to dress, relates the following incident, which forcibly illustrates this crying evil:—

"It is said that on one occasion Cogia Effendi, a Persian sage, dressed as a beggar, entered a house where a gay feast was being held. He was pushed hither and thither, hustled by one and another, and noticed kindly by no one. So Cogia withdrew, and repaired to his home, where he arrayed himself in his most splendid style, with jeweled shoes on his feet, a robe of cloth of gold on his back, and a turban glittering with a diamond aigrette on his head. Then, having hung at his side his saber, in the hilt of which flashed some valuable jewels, he returned to the feast. His entrance was the signal for attention on all sides. The guests, who before had rudely pushed him aside, now made way for his passing to and fro. The host came hastily toward him, with the words, 'Welcome, my Lord Effendi, thrice welcome; what will your lordship please to take?' In reply, Cogia quaintly, but expressively stretched out his foot, so that the jewel on his shoe sparkled; and then, taking his golden robe in one hand, and holding it away from him, said, with bitter irony, 'Welcome, my lord coat, welcome, most excellent robe; what will your lordship please to take?—For,' said he, turning to his perplexed host, 'I ought to ask my coat what it will take, seeing that my welcome is due solely to it.'"

TO MOTHERS.

IF you say "no," mean no. Unless you have a good reason for changing a given command, hold to it.

Take an interest in your children's amusements; mother's share in what pleases them is a great delight.

Remember that what are trifles to you, are mountains to them; respect their feelings.

* * * * *

Be honest with them in small things as well as in great. If you cannot tell them what they wish to know, say so, rather than deceive them.

As long as it is possible, kiss the children good-night after they are in bed; they like it, and it keeps you very near to them.

Bear in mind that you are largely responsible for your children's inherited characters; so be patient with them.

If you have lost a child, remember that for the one who is gone, there is no more to do; for those left, everything.

Have your boys and girls study physiology; and when they are ill, try to make them comprehend why,—how the complaint arose, and the remedy, so far as you know.

Impress upon them from early infancy that their actions have results, and that they cannot escape consequences, even by being sorry when they have done wrong.

Respect their little secrets; if they have concealments, fretting them will never make them tell, but time and patience will.

Allow them, as they grow older, to have opinions of their own; make them individuals, and not mere echoes.

Find out all their special tastes, and develop them, instead of spending time, money, and patience in forcing them into studies that are entirely repugnant to them.

Mothers, whatever else you may teach your girls, do not neglect to instruct them in the mysteries of housekeeping. So shall you put them in the way of making home happy.—*Canadian Baptist.*

A Cure for Gossip.—What is the cure for gossip?—Culture. There is a great deal of gossip that has no malignity in it. Good-natured people talk about their neighbors because, and only because, they have nothing else to talk about. As I write, there come to me pictures of different persons. I have seen them at home; have met them at the library; passing to and from the bookstore with a fresh volume in their hands. They are full of what they have seen and read. They are brimming with questions; and one topic of conversation is dropped only to give place to another in which they are interested.

After a delightful hour with such people, one feels stimulated and refreshed; and during the whole time, not a neighbor's garment was soiled by so much as a touch. They had something to talk about. They knew something, and were anxious to know more. They had no temptation to gossip, because the doings of their neighbors formed a subject very much less interesting than those which grew out of their knowledge and their culture.—*Selected.*

A Good Pilot.—A Mississippi boat captain advertised for a pilot. A tall, awkward man applied.

"Do you know where the snags and sawyers are?" asked the captain.

"Wa'll, no, cap'in, I reckon I do not;" was the reply.

"You *do not*; well, how dare you apply for the place of pilot? Clear out."

It was the pilot's turn to show a little indignation; straightening himself up, he said:—

"Look-a-here, cap'in, I'll tell you what I *do* know. I know where the snags and sawyers *a'n't*."

The captain's eyes opened wide; he stared at the man a moment, then an appreciative smile chased away the wrathful look, and he exclaimed:—

"You are my man!"

That pilot did not have occasion to reply to another advertisement.

He who lays his course where the temptations and snares of Satan are *not*, will safely bring his boats into a quiet haven.—*Christian at Work.*

Temperance Notes.

—About one seventh of the grain produce of Great Britain is appropriated in the manufacture of strong drink.

—The United States has 500,000 whisky criminals and 800,000 whisky lunatics to care for, at a cost of $100,000,000.

—Dr. Benj. Ward Richardson says that seven out of eight cases of kidney disease are traceable to the effect of alcoholic drinks.

—One of the oldest wholesale liquor houses in Kansas City, Mo., recently failed. The proprietor attributed his failure to the prohibitory law of Kansas.

—Cameron, La., a prohibition parish on the coast, is said to be "a place in which there is no lack of order, a court without a criminal case on the docket, and a jail used only for the storage of rice."

—Mrs. Mary Clement Leavitt, the W. C. T. U. "round-the-world missionary," while upon a recent visit to the Malay Peninsula, had a most interesting interview with the Sultan of Johoro, who is, and always has been, a total abstainer. His Highness said the Mussulmans of his country often amused themselves at great dinners by watching the progress of foreigners toward a condition of drunkenness, and their silly and absurd behavior while intoxicated; he also expressed a wish that all his people might hear of the work of the W. C. T. U., and promised to write an account of it for a leading Malay newspaper.

—Rome, Ga., is rejoicing because of local prohibition secured at a recent election. The agitation was started during a revival, and carried on as a religious crusade. Prayer-meetings were held in all the churches during the entire time on election day. The singing of familiar hymns was a special feature at the polls. Flags and banners with temperance inscriptions were conspicuous. Ladies and children did their utmost to aid the cause of temperance. Many of the places of business were closed; and from the first, the excitement was intense, as the result was doubtful. When the polls were closed, and the people gathered to hear the returns, the scene is described as one of overwhelming excitement. When it was found that the prohibitionists had won, cheer after cheer arose; many were overcome with emotion, and wept. The vast multitude of men, women, and children sang, "Nearer my God to Thee," with thrilling effect, and were then dismissed with the singing of the doxology and the pronouncing of the benediction.

—The Knights of Labor have the following section in their new constitution, which was ratified by a three-fourths vote: "No local or other assembly, or member shall, directly or indirectly, give, sell, or have any ale, beer, or intoxicating liquors of any kind at any meeting, party, sociable, ball, picnic, or entertainment whatever, pertaining to the order. Any member found guilty of violating this clause shall be suspended not less than six months, or expelled. No fine shall be imposed for this offense. Any local or other assembly so offending shall be suspended at the pleasure of the General Executive Board, or shall have its charter revoked by said Board."

Popular Science.

—The indefatigable Edison announces an invention by which electricity sufficient for lighting the house, may be produced from the heat of the furnace with little extra expense.

—According to a French periodical, we are soon to have a journal devoted to mazography, a science by which it is undertaken to determine a person's character by the size and shape of his nose.

—The lowest average temperature known in the world was observed at Workuojanck, Siberia. For 1885 it was 1° F. For January of that year, 56° below zero was the average, 90° below zero being the *maximum* of coldness.

—Photographic plates have been constructed of so high a degree of sensitiveness that it is possible to obtain accurate extensive landscape views by moonlight. The length of exposure required is about one hour. Photographs of limited views have been taken by gas-light, the plate being exposed for about half an hour.

A SCIENTIFIC PUZZLE.

A VERY pretty and, possibly, a true story appeared in one of the monthly magazines some little time ago, which well illustrates how, by the exercise of a little ingenuity, an old trick may be put to new uses. The story relates how the wife of a British officer living in Afghanistan succeeded in inducing one of the native chiefs to liberate and return to her tribe a slave-girl, whom he had taken captive on one of his frequent predatory excursions. Learning that the chief was greatly addicted to the game of chess, the lady played several games with him, and then offered to wager him that she could cut his chess-board into four pieces by means of three straight cuts, and rearrange the pieces so that instead of sixty-four squares there would be sixty-five, all of the same size. To this the chief readily agreed, making the slave-girl the forfeit, if she should succeed. The lady then took a piece of paper the size of the chess-board, and having ruled it off into sixty-four squares, divided it into four pieces by cutting along the heavy black lines as shown in Fig. 1.

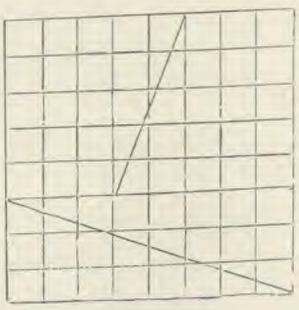


FIG. 1.

These four pieces were then arranged as shown in Fig. 2.

The chief, upon counting the squares, was exceedingly astonished and dismayed to find that one had apparently been added to their number, and at once liberated the slave, not without some suspicion that witchcraft was at the bottom of the mystery. Those of our readers who are not familiar with the puzzle will doubtless find it quite as mysterious as did the Afghan chief. The area of the paper is certainly not enlarged by the re-arrangement. Where, then, does the extra square come from? The explanation will be found in Fig. 3.

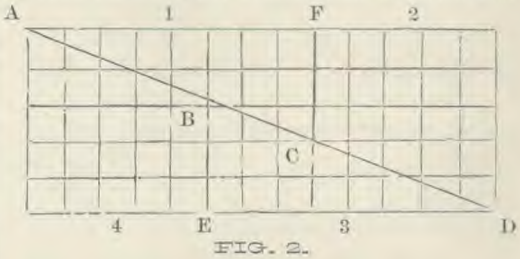


FIG. 2.

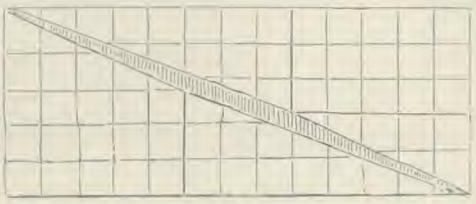


FIG. 3.

A close examination of the squares as arranged in Fig. 2, will show that along the line A D the edges of the paper are not exactly in contact, but are separated by an opening shown in an exaggerated form in Fig. 3. That is, the angles A B E and D C F do not exactly correspond to D B E and A C F; and the application of a little mathematics to the problem, will show that the area of the lozenge-shaped opening is exactly equal to that of one of the squares. No doubt the Afghan chief soon discovered the optical illusion, and thus lost what little faith he may have had in the fair dealing of the subjects of Queen Victoria.

SOCIAL PURITY.

"Blessed are the Pure in Heart."

EVIL THOUGHTS.

THE following pungent paragraphs upon this important subject, we quote from the Rev. C. H. Spurgeon, of London :—

"'We shall not be hanged for our thoughts,' cries one. I wish that such idle talkers would remember that they will be damned for their thoughts; and that instead of evil thoughts being less sinful than evil acts, it may sometimes happen that the man may be worse in the thought than in the deed. He may not be able to carry out all the mischief that lurks within his designs, and yet in forming the design he may incur all the guilt. Thoughts are the eggs of words and actions; and within the thought, lie, compact and condensed, all the villainy of actual transgression. If men would more carefully watch their thoughts, they would not so readily fall into evil habits; but men first indulge the thoughts of evil, and then the imagination of evil; nor is the process staid there. Picturing it before their mind's eye, they excite their own desires after it; these grow into a thirst, and kindle into a passion. Then the deed is speedily forth-coming; it was long in the hatching, but in a moment it comes forth to curse a whole lifetime."

"Instead of fancying that evil thoughts are mere trifles, let us regard them as the root of bitterness,—the still in which the poisonous spirit is manufactured. Our Saviour puts evil thoughts first in the catalogue of evil things; and he well knew their true nature. If we would be lost, we have only to indulge these; if we would be saved, we must conquer these. Let us make a conscience of our thoughts; he that does not do so will not long make a conscience of his words or deeds."

AIMLESSNESS AND VICE.

RESPECTING the influences which lead young girls astray, a writer in a recent number of *The Home Guardian*, makes the following statements:—

"Much of the danger to young girls lies in the fact that their minds are not trained in any channel of continuous thought,—that they often have so little to think of. Lacking systematic home training, having no constant or regular employment, unoccupied and uninterested, they drift outside of home for entertainment. Here is where the mother often fails. Occupied with home duties, fully employed with careful thought for her loved ones, she does not realize how much her daughter's active mind craves employment, and she sacrifices her daughter's best good to secure to her the very leisure which is so dangerous. Instead of training her to the habitual thoughtfulness which industry and economy naturally cultivate, she supplies her with all the money she can obtain, and all the freedom her self-sacrifice can secure for her, and lets her drift about, on the cars, in the stores, to concerts, dances, and the theater, with no object in life but to pass the hours in pleasure-seeking. It may be that the daughter is unwilling to share the home cares. But this, too, is the mother's fault, and the result is the same. And so these young girls, without the balance-wheel of deep thought in any direction, without the habit of systematic action in any line, fall easy victims to the influence of a stronger mind."

"The conventional training of young girls

seems to have been to let them grow up in a sort of haphazard way. Without definite aim, without any positive motive of action, looking in a vague way to marriage as a destiny, to old maidism as a disgrace, the average young girl seems to feel that to win the attention of a young man is the end for which she lives. Instead of demanding the respectful deference of men simply because she is a woman, and accepting admiration as a part of her birthright, she giggles and simpers at attention that is but little better than rudeness, and looks upon an offer of marriage as something for which she must ignobly strive. Instead of growing up with a reverence for her own body in its possibilities of motherhood, she treats it as a lay-form, on which to hang her finery, display her paint, or disfigure with the monstrosities of fashion."

"As we see them, day by day, passing up and down our streets and thronging our places of amusement, knowing as we know the hidden snares and covered pitfalls that lie in their way, the wonder is, not that so many fall, but that so many escape. But if mothers impress upon the minds of their girls in earliest childhood what life really is to an earnest, thoughtful woman, it seems as if by that alone they might be saved from frivolity and sin. Girls should be taught to feel that all through their lives, the very fact of womanhood gives them claim to every queenly dignity, and that they should wear their crown as becomes their rank."

A Word to Mothers.—One important part of the early training of children is the cultivation of self-control, and a habit of self-denial, wherever right demands it. Another most essential part of a child's moral training is the cultivation of right motives. To present a child no higher motives for doing right than the hope of securing some pleasant reward, or the fear of suffering some terrible punishment, is the surest way to make him a supremely selfish man, with no higher aim than to secure good to himself, no matter what may become of other people. And if he can convince himself that the pleasure he will secure by the commission of a certain act will more than counterbalance the probable risk of suffering, he will not hesitate to commit it, leaving wholly out of consideration the question, Is it right, or noble, or pure?

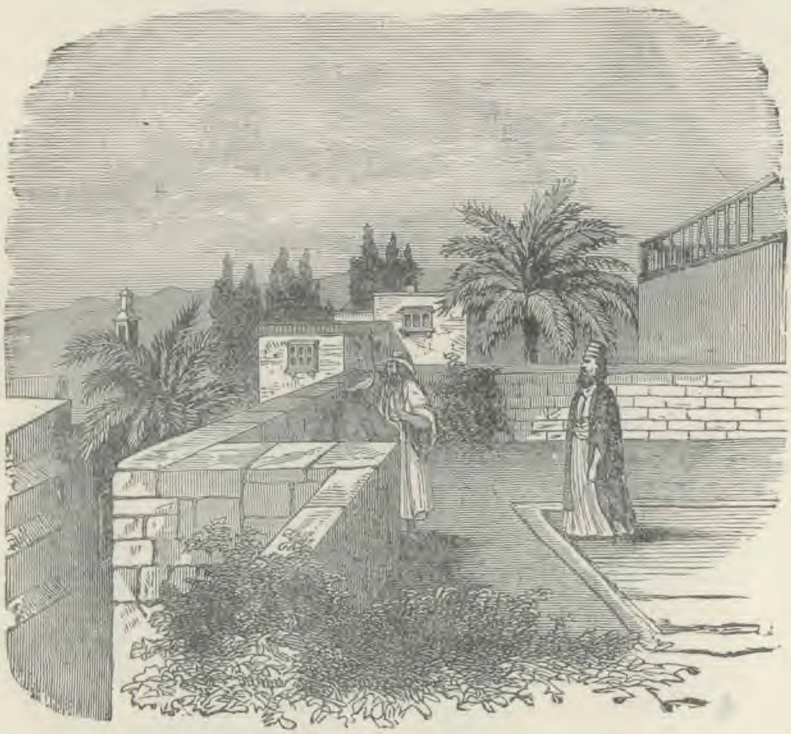
A real love of the right for its own sake is the only solid basis upon which to build a moral character. Children should not be taught to do right in order to avoid a whipping, or imprisonment in a dark closet,—a horrid kind of punishment sometimes resorted to,—or even to escape "the lake of fire and brimstone." Neither should they be constantly coaxed to right-doing by promised rewards,—a new toy, a book, an excursion, or even the pleasure of a future life. All these incentives are selfish, and invariably narrow the character and belittle life, when made the *chief* motives of action. But rather begin at the earliest possible moment to instill into the mind a love of right, and truth, and purity, and virtue, and an abhorrence for their contraries; then will he have a worthy principle by which to square his life; then will he be safe from the assaults of passion, of vice, of lust.

Idleness.—To maintain purity, the mind must be occupied. If left without occupation, the vacuity is quickly filled with unchaste thoughts. Nothing can be worse for a child than to be reared in idleness. His morals will be certain to suffer. Incessant mental occupation is the only safeguard against unchastity. Those worthless fops who spend their lives in "killing time" by lounging about bar-rooms, loafing on street corners, or strutting up and down the boulevard, are anything but chaste. Those equally worthless young women who waste their lives on sofas or in easy-chairs, occupied only with some silly novel, or idling away life's precious hours in reverie—such creatures are seldom the models of purity one would wish to think them. If born with a natural propensity toward sin, such a life would soon engender a diseased, impure imagination, if nothing worse.

BIBLE HYGIENE

THE HOUSE-TOP.

In the East the top of the house is quite as important as any of the lower apartments. The learned Dr. Shaw thus describes an Eastern house-top, an illustration of which may be seen in the accompanying cut:—



THE HOUSE-TOP.

"The top of the house, which is always flat, is covered with a strong plaster of terrace; from whence, in the Frank language, it hath attained the name of "the terrace,"— a word made use of, likewise, in several parts of these countries. It is usually surrounded by two walls; the outermost whereof is built partly over the street, partly making the partition with the contiguous houses, being frequently so low that one may easily climb over it. The other, which I call the parapet wall, hangs immediately over the court, being always breast-high. Instead of this parapet wall, some terraces are guarded in the same manner as the galleries, with only balustrades, or latticed work; in which fashion, probably, as the name seems to import, was the net, or lattice, as we render it, that Ahaziah might have been carelessly leaning over, when he fell down from thence into the court. Upon these terraces several offices of the family are performed,— such as the drying of linen and flax, the preparing of figs and raisins; here, likewise, they enjoy the cool, refreshing breezes of the evening, converse with one another, and offer up their devotions. In the Feast of Tabernacles, booths were erected upon them. Neh. 8: 16. When one of these cities is built upon level ground, we can pass from one end of it to the other, along the tops of the houses, without coming down into the street."

Damascus is the oldest city in the world. The inhabitants still show the "street called Straight" in which Paul lived, and the window in a tower on the wall, from which he was

let down in a basket. Their houses are still built after the ancient pattern, and their customs have been modified scarcely more than their abodes.

The houses described above are those of the better classes. The poor live in the most wretched huts, made of rushes or sticks mingled with mud, which are often blown down by the wind or demolished by the rain.

The Meaning of "Shakar."—This Hebrew word, sometimes written *shekar* or *shechar*, is found in the Old Testament twenty-three times. It is many times translated "strong drink," but has not the significance of this term as modernly used, as the ancients were not acquainted with the art of distillation, and hence could not produce strong liquors. The learned Dr. F. R. Lees, F. S. A., speaks thus of the primary signification of this word:—

"*Shakar*, 'saccharine drink,' is related to the word for sugar in all the Indo-Germanic and Semitic languages, and is still applied throughout the East, from India to Abyssinia, to the palm sap, the *zhaggery* made from it, to the date-juice and sirup, as well as to sugar and to the fermented palm wine. It has, by usage, grown into a generic term for 'drinks,' including fresh juices and inebriating liquors, other than those coming from the grape. Mr. Palgrave, in his 'Arabia,' says, 'Having bought for three farthings a handkerchief full of delicious dates, we hung it up from the roof-beam to preserve the luscious fruit from the ants, and it continued to drop *molten sweetness* into a *sugary pool* on the floor for three days.' Such a beverage was rightly called *shakar*, and naturally and necessarily produced that satisfaction and cloying fullness which is well expressed by the cognate verb, and which has its parallel in the history of the corresponding Greek word, *methuein* from *methu*, 'sweet wine,' 'mead,' etc. The force of the prophet's words may be understood by considering this, the etymological and primary sense of *shakar*:—

"'The *sweet drink* shall become *bitter* to them that drink it.'"

The views of Dr. Lees were adopted or corroborated by Dr. Eadie in his Bible Cyclopedia, by Kitto, and by Bastow and Dr. Fairbairn in their Bible Dictionaries.

HEALTH BIBLE READING.

BY H. F. PHELPS.

VEGETARIANISM.

1. WHAT was the diet of man before the fall? Gen. 1:29.

(*a*) Did they eat flesh meats?—*No.*

(*b*) If not, what could their diet be called?—*A vegetarian diet.*

(*c*) If a vegetable diet was sufficient for man while yet in his innocent state, just from the hand of God, is it not sufficient for his wants now?

2. Where do we find the first permission to eat flesh, and at what period of the world's history? Gen. 9:3.

3. Did God tell them that flesh would be better for them than their previous diet?

4. What did he say he would require? Verse 5.

(*a*) If he should require the blood of our lives, would not this be to shorten life?

5. What was the length of life before the flood? Gen. 5:5, 8, 11, 14, 17, 20, 31.

NOTE.—The average length of time covered by the life of each of these eight men was 907½ years.

6. What was the age of Noah at the time of his death? Gen. 9:29.

7. How many years were covered by the eight generations immediately following the flood? Gen. 11:10–32.

NOTE.—The length of these generations was 438, 433, 464 239, 239, 230, 148, 205 years, respectively; or an average of 299½ years.

8. How old was Abraham when he died?—*175 years.* Gen. 25:7.

(*a*) Was he an old man? Verse 8.

(*b*) Would he have been called an old man at this age before the flood?

9. How old was Isaac at his death?—*180 years.* Gen. 35:28.

10. What was the age of Jacob when he died?—*147 years.* Gen. 47:28.

11. Please give the age of Joseph.—*110 years.* Gen. 50:26.

12. Is it not reasonable to suppose that meat-eating had something to do with shortening the lives of men? Gen. 9:5.

13. When God would separate his ancient people from the nations around them, what diet did he again choose for them? Ps. 78:24, 25.

14. Were they satisfied with the food thus sent them from heaven? Num. 21:5.

15. What did they desire? Num. 11:4–6, 13.

16. Did God grant their desire? Ps. 78:27-29.

17. Did it prove a blessing to them? Num. 30:31; Ps. 106:15.

18. For what does Paul say these things were written? 1 Cor. 10:11.

GOOD HEALTH.

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

BATTLE CREEK, MICHIGAN, SEPTEMBER, 1887.

FLESH DIET FOR CHILDREN.

WITHOUT entering into the general question of vegetarianism, or discussing the propriety of the total rejection of meat as an article of diet, we wish to call attention to the fact that a flesh diet is eminently improper for young children. The evidences of this fact are very numerous and indisputable. We shall not, at this time, enter into a full discussion of the evidences, but we wish to call attention to the following from the pen of Dr. D. M. Camman, of New York, who is entitled to speak authoratively on the subject of children's diet:—

"Are young children under seven or eight years of age best reared on a diet composed largely of meat? or is the best result attained by giving largely of milk, vegetables, and cereals, and reserving meat for a later period? It may be reasonably supposed that the delicate mucous membrane of the child, and the temporary teeth, which are called milk-teeth, are best suited to the latter form of diet. It has been found, too, that the gastro-intestinal complaints so prevalent with children, especialy in the summer, are infrequent in those cases where meat has been omitted from the dietary, and milk constitutes the principal food. Dr. Clonston, after saying that he agrees with Dr. Keith, who has preached an anti-flesh crusade in the bringing up of all children to eight or ten years of age, continues, 'I believe that by a proper diet and regimen, more than in any other way, we can fight against and counteract inherited neurotic tendences in children, and tide them safely over the periods of puberty and adolescence.'

"A few facts are worth more than any *a priori* reasoning. These may be gleaned from the experience gained in the use of the following dietary of the Orphans' Home and Asylum of New York, which has been used without any material change for the past twenty-seven years. During this time the rarity of disturbances of the digestive organs has been remarkable, and the recovery of the children suffering from other diseases, such as scarlet fever, has been exceptionally rapid. Especially would it seem that this diet was suitable for those who show any tendency to disturbances of the nervous system, either inherited or acquired. The death-rate in the institution has been extremely low. The number of children is about one hundred and forty-five. Children are not admitted under three years of age."

In the above-named institution, children over eight years of age are allowed an occasional taste of meat at dinner, but are not allowed milk at the same meal. There is no physiological change in the child at the age of eight years which renders the use of flesh food either necessary or more wholesome than at an earlier age, although it is undoubtedly true that a moderate allowance of flesh may be taken at this period of life with less absolute danger than at an earlier period. It is the candid opinion of the writer, after many years' personal experience and observation, that at least the great majority of large children, as well as small ones, do a great deal better upon a non-flesh diet.

A NEW DEATH TRAP.

MANY so-called improvements, upon trial, turn out to be a step backward instead of forward. Such seems to be the character of the new system for the disposal of sewage, known as the dry-closet system. This system has been advertised quite largely in connection with a very efficient method of heating and ventilating known as the Smead-Ruttan system. The inventors of the dry-closet system undoubtedly suppose that it is a real advance upon the methods in common use, all of which possess features which are more or less objectionable; but from observations which we have made, we believe that it is one with which great dangers are closely and inseparably connected; and believing this to be the case, it is manifestly our duty to call the attention of the public to the fact. The following is a brief explanation of the so-called dry-closet system:—

The closet itself consists of a cement-lined vault placed in the basement of the building, with which the system is connected. One end of this vault is connected with the ventilating shaft, in which an upward current is maintained by the heat from the furnace smoke-stack, which passes through its center, during the cold months of the year, when the furnace is in use; and by a small heater placed in the shaft for use when the furnace fires are not burning. The ventilating system is so arranged that all of the foul-air ducts of the various rooms are collected into one large down-cast shaft, which connects with the end of the vault opposite the ventilating shaft. The purpose of this arrangement is to pass all the warm air of the building through the vault, and by so doing, dry the excreta, and thus render it inoffensive and incapable of mischief. During the cold months of the year, when doors and windows are necessarily kept closed to exclude the cold, and when the difference between the inside and outside temperatures is very great, thus insuring a strong draft in the ventilating shaft, the system works very satisfactorily; but in the warm and changeable weather of spring and fall, this is by no means the case. Indeed, it would seem that a little forethought on the part of the projectors of this scheme would have called their attention to the fact of the utter impossibility that the system should work equally well in summer and winter. As every one knows, an upward draft is created by heat; and the amount of the draft, in the absence of any mechanical means of creating a draft, is exactly proportionate to the amount of heat, or rather, to the difference of temperature between the air indoors and that outside. In cold winter weather, with the thermometer at zero and the temperature inside at 70°, the difference in temperature is sufficient to insure a strong and constant draft, and hence to maintain a constant downward current through the rooms of the building to the vault, and an upward current through the ventilating shaft; thus thoroughly drying the foul contents of the vault, and preventing currents back through the vault into the building. But in the warm months of spring and summer, the state of things is very different. The difference in temperature between the air in-doors and that out-of-doors often does not amount to more than ten or fifteen degrees, and from June to September the out-door air is even warmer than that in-doors, especially in buildings constructed of brick or stone.

Under this state of things, the natural tendency is for the system to work backwards; in other words, for air to pass upwards from the vault through the ventilating ducts, and thence into the rooms of the building. The proprietors of the "system" seem to have recognized the probability of such a result; and to obviate the difficulty, placed in the ventilating shaft a small furnace to be used to create a draft during times when the furnace might not be in use. This arrangement might at first sight seem to be sufficient to obviate the danger from the sources mentioned; but a clear comprehension of the elements which enter into the production of drafts in a building and the difference in the conditions of the draft in summer and winter, will show the utter inadequacy of the means referred to as a preventive of contamination of the air of the building from a reversal of

currents in the foul-air ducts. In the cold months of the year, all the fuel burned in the furnaces contributes to the increase of the draft in the ventilating shaft, by increasing the difference between the internal and external temperatures, upon which the draft chiefly depends. To create the same force of draft in the summer time would require the consumption of at least an equal amount of fuel, as there must be an equal difference in temperature between the air in-doors and that out-of-doors, to create the same force of draft. This would necessitate the consumption of approximately the same amount of fuel the year round; and, of course, the fuel burned during the summer months would be wholly for the benefit of the ventilation of the building. This would render the dry-closet system quite too expensive to be of practical value. This fact the manufacturers readily recognize, and hence have undertaken to carry on summer ventilation by means of the small furnace placed in the ventilating shaft, in which the amount of fuel consumed is quite insignificant when compared with the amount consumed for heating the building in cold weather. The amount of fuel actually consumed to heat the ventilating shaft during the summer months may, perhaps, be estimated at one-twentieth of that used during the cold months. This being the case, we should expect to obtain about one-twentieth as much draft during the summer months as during the cold months of the year,—a fact of much significance as showing the inefficiency of this system during the warm months of the year, a season in which germs are most numerous, active, and dangerous, and when there is much greater danger of infection from many epidemic diseases than at any other season.

In the examination of plans for many public buildings, we have always contended against and condemned any system which connected all or many rooms of the building with a common reservoir for foul air, as this plan exposes occupants of one room to contamination (through reversal of currents in the ventilating ducts) with foul air from the other rooms, thus favoring the spread of any contagious disease which might be introduced into the building, and making it possible, under some circumstances, that a room might get its air supply entirely from the receiving-chamber for foul air, instead of from the fresh-air chamber or from out-of-doors. In the system under consideration, the danger referred to is immensely augmented by two peculiar features:—

1. The receiving-chamber is placed below the rooms to be ventilated, thus increasing the danger of counter-currents through the opening of windows and doors, or through the influence of winds.

2. The receiving-chamber is converted into a privy vault, thus making gross contamination of the air in the receiving-chamber absolutely certain.

It seems very remarkable indeed that persons who claim to have had large experience in the ventilation of buildings, should have overlooked or ignored this very patent source of imminent and constant danger to health and life.

But lest the reader should imagine that our objections to the system under consideration are more theoretical than practical, and for the benefit of those who imagine that a thing which is theoretically wrong and dangerous may prove practically to be both excellent and harmless, we will add that we have recently had an opportunity of making a careful and personal inspection of this system, and found all of the objectionable features referred to, in full operation. The building examined was an elegant school-building constructed last fall. The examination was made in company with the chairman of the Board of Education and the principal of the school, early in June, while school was in session. On entering the building a distinct fecal odor was noticeable. This had been noticed by others, but had been attributed to the fact that the building was new. It seemed very curious indeed that the difference between the wholesome, balsamic odor of pine wood and the sickening and dangerous smell of human excreta had not been recognized. As we penetrated the building, the odor referred to was found everywhere pres-

ent, though in some parts much more offensive than in others. It was particularly noticeable in the upper part of the building. Upon examination of the fresh-air and foul-air registers, we found in some cases little or no movement in either direction. In other cases the movement was uncertain, sometimes into the room through the foul-air registers, and sometimes out of it. The outward current was extremely feeble and scarcely perceptible. In one room, however, there was a strong and constant current inward through the foul-air ducts, and an equally strong current out of the room down through the fresh-air register. In this room the fecal odor, which had been distinct in other parts of the house, was so strong as to produce headache and a sickening sensation after we had remained in the room a few minutes. The same unpleasant symptoms were experienced by one of the other gentlemen present.

The principal of the school, who at the beginning of the examination was very enthusiastic in his praises of the system, declaring that it had been very carefully and scientifically tested, and that the proprietors had visited it, and found the system in perfect working order, was much astonished and chagrined at the results of the examination. It was evident that no critical examination had been previously made, and the fact that the building was obtaining almost its whole supply of air from a privy vault in the basement, was quite a new revelation to him.

It was at first hard for us to believe that this much-vaunted system was faulty, but the evidence of eyes and nose was too strong to be doubted; and the patent fact that some hundreds of young men and women, together with their teachers, had been for weeks pent up in rooms reeking with the odor of human excreta, was of such overwhelming significance that enthusiasm for the dry-closet system rapidly evaporated, we were going to say, into *thin* air, but truth compels us to say, into air heavy with fecal odors, and undoubtedly thick with the germs of disease.

We understand that the proprietors of this insanitary system are vigorously pushing its introduction into many large cities, and that a large number of school-buildings have already been fitted up with privy vaults in their basements; and we think it a duty to raise a warning voice against this misnamed "sanitary improvement." We think it would be well for every School-board to consider seriously before accepting this system, whether it is well to convert a whole school-building into a privy, by placing the vault in the basement, and connecting it with every room in the house by ducts, which, through changes in the weather and season, and at almost any time through neglect of a careless janitor, may become the means of filling the school-rooms with air saturated with the most deadly form of gaseous filth, and abounding in disease-producing germs.

BRAIN FOOD.

MUCH nonsense has been written about food, and especially brain food. We are often asked the question: "What is the best brain food?" The fact is, there is no such thing as brain food, or nerve food, or muscle food, or bone food. Food that is good to nourish any part of the body is good for the whole of it. Really good food contains the elements to nourish every organ of the body. In the opinion of the writer, the typical diet is composed of fruits, grains, and milk. It is true that a moderate amount of lean meat from healthy animals may be habitually eaten without apparent injury to health; and yet it is well enough known that the danger of disease by contamination with disease through the use of the flesh of unhealthy animals is by no means small, and is constantly increasing; and both analogy and experience show that the most healthy diet for human beings excludes flesh foods altogether, while the teachings of comparative anatomy declare unequivocally that man is naturally a fruit-and-grain-eating animal. Probably the most ridiculous of all theories respecting brain food is that which has been attributed to Prof. Agassiz; namely, that fish is brain food *par excellence*. This theory was based upon the fact that fish contains a considerable amount of

phosphorus. Phosphorus is also present in the brain in considerable quantity, and so the conclusion was jumped at that fish must be especially excellent nutriment for the brain. We quite agree with the theory intimated in Mark Twain's letter to a young author who wrote, inquiring respecting Prof. Agassiz's views upon brain food. This was the reply he received from the famous humorist:—

"Yes, Agassiz *does* recommend authors to eat fish, because the phosphorus in it makes brains. So far you are correct. But I cannot help you to a decision about the amount you need to eat—at least, with certainty. If the specimen composition you send is about your fair, usual average, I should judge that perhaps a couple of whales would be all you would want for the present. Not the largest kind, but simply good middling-sized whales."

LIFE SAVING.

It is a source of eminent satisfaction to sanitarians to be able to show a very appreciable saving of life as the result of their labors in behalf of the public health. We quote from the *Annals of Hygiene* the following interesting facts bearing upon this subject:—

"In Michigan, the saving of life from one disease (scarlet fever) has amounted during the last eleven years to 3,718, or 338 per year. In 1886, appropriate sanitary measures saved the lives of 298 persons who would have died of diphtheria, if such measures had not been enforced. In England and Wales, the average annual saving of life due to sanitary measures has amounted in the five years ending 1885, to 62,000. In Baltimore, a marked reduction of deaths from infectious diseases has followed the enforcement of certain sanitary precautions. In Memphis, the death-rate has been reduced in six years from 35 per thousand to 23.80 per thousand. In Chicago, the reduction in mortality in the last five years has been from 25.69 per thousand to 19.46 per thousand, a net saving of 17,214 lives in that city during that period.

"While all advances in sanitary administration have doubtless contributed to produce these good results, the main influence is to be attributed to three factors. These are *compulsory notification of infectious diseases; prompt and effective isolation of the sick and infected; and thorough disinfection of all infected articles and sources of infection.* These must be the watch-words of the practical sanitarian of the future."

Death from Eating Sorrel.—The habit of eating sorrel, so very common among children, is not wholly free from danger, as appears from an article recently published in the *London Globe*. A small boy ate, during the day, quite a quantity of sorrel, which he found near his mother's house. Being thirsty in the night, he drank freely of some water which stood near the bedside, and which, it appears, contained a small quantity of soap. The next day he died, and a coroner's inquest was held. Medical experts testified in the case that death was caused by the oxalic acid in the sorrel, which was rendered active by the alkali in the soap.

A New Test for Arsenic in Wall-Papers.—Recently a number of cases of poisoning from arsenic in wall-paper have been reported in the newspapers, and it seems to be evident that manufacturers are again using the dangerous arsenical pigments in the manufacture of wall-paper. For some years there has been a lull in the agitation of this subject, due to the announcement that arsenic was no longer used for this purpose; but the evidence that the use of arsenic has been resumed, if it was ever abandoned, is too strong to be doubted; and it is quite as necessary now as at any previous time to examine carefully every specimen of wall-paper purchased, before placing it upon the walls of a room. The *British Medical Journal* is responsible for the following description of a simple method of testing wall-paper for this poisonous substance:—

"No apparatus is needed beyond an ordinary gas-jet, which is turned down to quite a pin-point, until the flame is wholly blue; when this has been done, a strip of the paper suspected to contain arsenic is cut, one sixteenth of an inch wide and an inch or two long. As

soon as the edge of this paper is brought in contact with the outer edge of the gas-flame, a gray coloration, due to arsenic, will be seen in the same. The paper is burned a little, and the fumes that are given off will be found to have a strong garlic-like odor, due to the vapor of arsenic acid. Take the paper away from the flame, and look at the charred end. The carbon will be colored a bronze-red; this is copper reduced by the carbon; being now away from the flame in a fine state of division, the copper is slightly oxidized by the air, and on placing the charred end a second time not too far into the flame, the flame will now be colored green by the copper. By this simple means it is possible to form an opinion without apparatus, and without leaving the room, as to whether any wall-paper contains arsenic, for copper arseniate is commonly used in coloring wall-papers.

Croton-Water.—According to the *Sanitary Journal*, a district including 239 square miles, in which the water that supplies New York City is collected, contains a population of 20,000 persons, nearly 2,000 dwellings, the same number of privies and cess-pools, nearly as many barn-yards and pig pens, and, in addition, cemeteries, slaughter-houses, and other sources of animal decay and filth. There is no escape for all this filth except by surface drainage, by which it is conducted directly to the aqueduct, and thence to the great reservoirs in New York City, whence it is distributed to the inhabitants of the metropolis.

Poisoned Salmon.—Five persons were recently poisoned by eating canned salmon. Everybody ought to know that in using canned meats they incur the risk of serious illness. Meats are sometimes partly decomposed before they are canned, and not infrequently undergo a kind of decomposition after canning. Cans in which the meat is spoiled can generally be recognized by the bulging out of the head. More frequently, perhaps, the poisoning occurs from the spoiling of the meat after the can has been opened, which is likely to occur within a few hours.

Fresh Air in Court.—According to the English journals a very important prosecution has recently taken place at Bolton, England. The Public Health Acts of England require proper ventilation of buildings, a matter which is wholly ignored in the Public Health Acts of this country, so far as known to the writer. The landlord was summoned for not providing proper ventilation for a building of which he was owner. On inspection of the premises, it was found that there was no provision for ventilation, even the upper sashes of the windows being immovably fixed. The Court ordered that means of ventilation should be provided within three days, under penalty of five dollars per day for non-compliance. This is a good example for sanitary authorities in this country.

A Case of Mind-Kill.—There are plenty of cases on record in which death has been produced through the influence of the mind. In England a case recently occurred in which a young woman took a quantity of insect powder for the purpose of committing suicide. The powder was carefully examined by an expert chemist, and found to be perfectly harmless, so the cause of death was undoubtedly the patient's imagination. If the same patient had been sick of dyspepsia, or a nervous cough, or chronic inactivity, and had been cured by a mind-cure doctor, the recovery would have been attributed to some occult force, whereas the only force which need to be considered in a case of this sort is the patient's own imagination. If the imagination will kill, why will it not cure as well?

Milk in New York City.—The *New York World* has recently been making, on its own account, an inspection of the food supplies of the metropolis. It announces that more than one-fourth of all the samples of milk examined, were found to be fraudulent, being either watered or skimmed, or both. Much of the milk had been skimmed; watering was found to be very common; and frequently salt, borax, and salicylic acid had been added to old milk to keep it from turning sour

DOMESTIC MEDICINE.

CHOLERA INFANTUM.

PROF. V. C. Vaughan, M. D., who has achieved world-wide fame by the discovery of tyrotoxicon, has also discovered that this poison is the cause of cholera infantum. From an interesting paper on the subject, read by Dr. Vaughan before the last meeting of the Michigan State Medical Society, we take the following important remarks respecting the preventive and curative treatment of this grave malady:—

"Preventive measures will consist for the most part in attention to diet, and especially to milk. I have drawn up the following rules concerning the care of milk:—

"1. The cows should be healthy, and the milk of any animal which seems indisposed should not be mixed with that from the perfectly healthy animals.

"2. Cows must not be fed upon swill, or the refuse of breweries or glucose factories, or any other fermented food.

"3. Cows must not be allowed to drink stagnant water, but must have free access to pure, fresh water.

"4. Cows must not be heated or worried before being milked.

"5. The pasture must be free from noxious weeds, and the barn and yard must be kept clean.

"6. The udders should be washed, if at all dirty, before milking.

"7. The milk must be at once thoroughly cooled. This is best done by placing the milk can in a tank of cold spring water or ice-water, the water being of the same depth as the milk in the can. It would be well if the water in the tank could be kept flowing; indeed, this will be necessary, unless ice-water is used. The tank should be thoroughly cleaned every day, to prevent bad odors. The can should remain uncovered during the cooling, and the milk should be gently stirred. The temperature should be reduced to 60° F. within an hour. The can should remain in the cold water until ready for delivery.

"8. In summer, when ready for delivery, the top should be placed on the can, and a cloth wet in cold water should be spread over the can, or refrigerator cans may be used. At no season should the milk be frozen; but no buyer should receive milk which has a temperature higher than 65° F.

"9. After the milk has been received by the consumer, it should be kept in a place perfectly clean and free from dust, at a temperature not exceeding 60° F. Milk should not be allowed to stand uncovered, even for a short time, in sleeping or living-rooms. In many of the better houses in the country and villages, and occasionally in the cities, the drain from the refrigerator leads into a cess-pool or kitchen drain; this is highly dangerous; there should be no connection between the refrigerator and any receptacle of filth.

"10. The only vessels in which milk should be kept are tin, glass, or porcelain. After using the vessel, it should be scalded, and then, if possible, exposed to the air.

* * * * *

"During the hot months, children who are allowed to take food at will, often drink large quantities of milk, simply for the purpose of quenching thirst. Especially is this true when the parent forgets that a child would sometimes relish a drink of good water. I feel that this overloading the stomach with milk, is often very detrimental.

"Now we come to the discussion of the curative treatment of this disease. The first thing to do is to stop the administration of

milk in any form. Fermentation is present in the alimentary canal; and giving the best of milk, would simply be supplying the germ with material for the manufacturing of the poison. This no-milk treatment is not by any means a new idea. It has been taught for some years by a few of the best authorities; but it has not been sufficiently insisted upon. Moreover, the reason for it has not been hitherto understood. It was believed in somewhat of a vague way, that the digestive organs loose their capability of digesting milk, and experience showed that the exclusion of milk led to improved results. But now that we know that a powerful poison is formed from the putrefaction of milk, the necessity of its exclusion must become apparent to all."

Dr. Vaughan further recommends the use of animal broths, with rice or barley-water as food; cleansing the bowels with enemata; and the use of subnitrate of bismuth or chalk mixture, for the purpose of neutralizing the acid condition of the bowels, and preventing the further development of the poison.

THE FLAXSEED FALLACY.

Prof. A. D. Williams, an eminent oculist, thus exposes the fallacy that a flaxseed is an effective means for removing foreign substances from the eye:—

"If we were to ask every man and woman in almost any community, What is the best way to get any foreign substance out of the eye? probably fully one-half of those questioned would say, 'Put a flaxseed into the eye; it is a sure cure!' Every few days some one who has followed this advice comes to me for relief. Only a day or two ago, a young man with an eye full of flaxseed came to me, stating that the seed had been in the organ all night, and that he could not sleep, because he could 'feel the seed chasing the foreign substance around and around under the lid;' but for some strange reason the substance 'could not be forced out!'

"I have never seen any account of the origin of this superstition,—for it is nothing more,—but it is probably very ancient; yet, in fact, unlike most ancient superstitions of this sort, it has absolutely no basis. Any one who has a foreign substance in the eye, and sends a flaxseed 'to chase it out,' simply adds fuel to the flame. It is fortunate that the seeds are smooth and comparatively unirritating, as otherwise the fallacy would be a more serious one. Another and similar superstition is that foreign matters may be chased out by a 'stone from a crab's eye,' which is nothing more nor less than the crystaline lens of the eye of the crustacean, hardened by boiling. In their eagerness to do something in emergencies, the great mass of people rarely use common sense; if they did, they would know that when one is not absolutely certain what to do, the best plan is to do nothing."

A New Remedy for Rheumatism.—An English writer suggests the following remedy for relieving rheumatic pains: "Add one ounce of powdered alum to a quart of hot skimmed milk. Separate the curd by pouring through a sieve. Wet a compress in the hot whey, and apply to the affected joint. When this is cold, make a poultice of the curds, and apply while hot." We do not know by personal experience whether this sort of poultice offers any particular advantage in the treatment of rheumatism or not. We are inclined to think, however, that any kind of poultice will answer just as well.

Vinegar in Diphtheria.—Engelmann, a German physician, reports success in the treatment of diphtheria by gargling the throat with vinegar and water, one part of vinegar to four of water. The vinegar was also applied with a swab without dilution. The doctor claims to have found by experiment that vinegar is a good germicide. When added to culture-fluids, it was found to prevent the development of germs.

New Treatment of Boils.—A German physician claims that boils may be aborted by injecting beneath the skin around the margin of the inflamed surface a two-per-cent solution of carbolic acid. If suppuration has occurred, incision is avoided by withdrawing the pus through a small needle, and injecting the same solution.

HYGIENE FOR YOUNG FOLKS.

LIVE TELEGRAPH WIRES.

"TELEGRAPH wires all over me!" exclaimed John in response to something I had said. "I'll never believe that."

"Indeed! But had you not better wait awhile before you say that? Shut your eyes.

"Now, how do you shut them? You do not know, do you? Let me tell you. When I spoke, the air

was set in motion, and began to make waves, one striking against another, as the waves of the sea do. These waves entered your ear, where a little tiny drum is stretched to receive them, and this was made to vibrate. In turn, the waves from the drum are taken up into the brain through a perfect maze of telegraph wires; and the brain being the head telegraph office, at once knows my wish, which is, 'Shut John's eyes!' The chief clerk in the office then sends a message to both of your eyelids, saying, 'Go down;' and in an instant they obey.

"But let me see if there are any other telegraph wires in your body besides these."

John shuts his eyes, and I touch first his nose, then his little finger, then his leg, and finally his hair; and each time he says he can feel my touches.

"Of course you can feel them, for all over your body these little telegraph wires are to be found; and in an instant, they send up the message to the head office, the brain, saying, 'Something has touched me on the nose, finger, leg, and hair.'"

These simple experiments fully convince John that he is filled with telegraph wires. Edith and William are also deeply interested, and watch the proceedings as closely as John.

"Now, Edith, I wish to ask you a question. Suppose I were to go out and cut a telegraph wire in two, could a message be sent over it?"

"Of course not," is her immediate reply.

"Suppose it were covered up with snow, or twisted around a tree, could a message then go through it?"

She hesitates a moment, and then replies, "Perhaps it would, and perhaps it would not."

"Well, it might go through, but most probably it would not. Now, did you ever see a man who could not use his arm or leg, and yet to look at it there would be nothing at all to be seen that would indicate disease?"

"Yes; I know a man, Mr. C, whose left arm is paralyzed so that he can scarcely use it at all."

"Paralyzed!" I exclaimed; "what does that mean?"

"Why," replies thoughtful William, "paralysis is simply the stoppage of those telegraph wires you have been speaking about!"

"You are right, Will. But what is the name we give to these wires?"

"Nerves;" he quietly answers, while John and Edith look in wonderment at his suggesting such a thing.

But so it is.

"Now, when a man suffers from paralysis, we say that he is afflicted with a most painful disease; and yet there are men who willfully paralyze themselves, —men who do it purposely."

"Dear me!" cries Edith, "how foolish they must be."

"I think so, too. But let me hasten to explain how they do it. You remember my telling you about that peculiar watery-looking liquid called alcohol?

"Well, that alcohol is mixed with water, sugar, and a few other things, in drinks that are called beer, wine, or spirits.

"Now, when men take these drinks into the stomach, the alcohol that is in them paralyzes the nerves somewhat in the same manner as that man to whom Edith just now referred, was paralyzed. To be convinced of what I have said, you have only to see a man who has taken a quantity of such liquor. Go to him, and ask him if he can walk straight; and then to test him, draw a straight chalk mark twenty yards long, and ask him to walk upon it. He may try, but he will certainly fail. Now, place silver dollars at every ten paces, and tell him he may have them, if he will walk upon the mark; and even then, although he is anxious to walk straight, he will stagger, and leave the line.

"Now what is the reason of this? There is but one answer, and that is given by the leading scientists of the world,—'Alcohol has paralyzed his nerves.'

"Try again, and see if any other nerves are attacked besides those of the legs. Ask him to write his name; and, though he can ordinarily write well, his writing will now look as if you had dipped a fly in the ink, and sent it walking across the paper. The nerves in his fingers and arm are paralyzed by the alcohol.

"Try it once more. Ask him to say, 'This is a truly rural retreat,' and in nine cases out of ten he will bring out, 'This is tooral ooral treat.'

"The nerves of his tongue are paralyzed."

And so I might give you many other similar illustrations of the way in which alcohol paralyzes the telegraph wires, or nerves, of the body. I trust not one of my readers wishes ever to thus injure his body. My advice, therefore, is, "Do not drink any liquid that contains alcohol."—*Rev. George W. James*, in *Temperance Record*.

IN APPLE HARVEST.

(*See Frontispiece.*)

"O ANNA! the Maiden's-blush apples are ripe, let us go and gather some," said Eddie Hart, as he came bounding into the room where his sisters, Anna and Laura, were busy at work one beautiful morning in early autumn time.

"Me do too," prattled wee little Mabel from the corner where she sat building a block house.

"Yes," replied Anna; "we will all go, and fill a basket with nice mellow fruit to surprise Aunt Nellie, when she returns from her drive."

It did not take the children long to reach the tree; and while Anna, who was the tallest, picked the luscious fruit, Laura filled the basket, and Mabel gathered all her little hands could hold. Eddie, with his pockets and arms full, began to eat the tempting fruit.

"O Eddie!" said Laura, "you ought not to eat the apples now, you know mamma does not like to have us eat between meals."

"It does not matter if we eat apples, does it, Anna? Everybody eats apples when they want them."

"I do not believe mamma would want us to eat them except at meal-time; but Aunt Nellie has returned, and we will go and ask her about it," replied Anna.

Aunt Nellie, who was keeping house with the children while their papa and mamma were away on a visit, loved her nephew and nieces very much, and was ever ready for a talk with them; so when Eddie asked her to tell them if it was wrong to eat apples between meals, she said: "Yesterday I heard a little boy say that he did wish people would not be all the time asking him to run on errands; for from morning till night there were so many things wanted he could scarcely get a moment's time to rest or play. Now, I suspect your poor stomach would offer the same plea, if it could talk. God did not intend it to work all the time. He made it to do a certain amount of work, which it is necessary it should do in order to keep your body well and strong; but when that work is done, it needs to have a chance to rest, just as much as you do after you have taken a long walk.

"After you have eaten your breakfast, it takes your stomach and its helpers four or five hours to take care of the food you have put into it. It has to sort it over, churn it up, and do a great deal of hard work before it gets it disposed of. You know your food is used to make blood, and has to be taken to pieces, and fixed over a good deal before it is ready for use. Now, as I said before, it takes four or five hours for the stomach and its helpers to fix over your breakfast, and sometimes even longer, according to the things you eat; for it is a good deal harder work to digest some foods than it is others.

"If we eat anything an hour after breakfast, the stomach and its helpers will have to work on that, and fix that over just the same as they did the food we ate for breakfast; and then the curious thing about it is that it will have to begin at the beginning of the process, and do with that just the same as it did with the breakfast, even though it is half through with the breakfast. Thus the poor stomach is obliged to work a great deal more and a great deal longer than it ought to; and if we keep on eating thus between meals, the stomach will have to keep right on working; and by and by it will get so tired out that it will not do its work well, and the little boy or girl who owns it, will become sick.

"It does not make any difference at all what it is that you eat between meals, whether it is apples, or candy, or cake, or something else. Anything you eat, even just a little taste, will have to go through this whole process of digestion, as it is called, just

the same, though for some things it will take a much longer time than for others."

"Well," said Eddie, "I never knew before that it was treating my stomach so badly to eat an apple between meals, but after this I shall take care not to do so any more." E. E. K.

Question Box.

[☞All questions must be accompanied by the full name and address of the writer, as it is often necessary to address by letter, the person asking the question.]

Needle in the Hand—Granulated Sore Eyes.—A. J. C. writes: 1. I had the misfortune to break off the point of a needle in my hand, and have not been able to find the fragment. Will it do any harm to let it remain? or should it be removed?

2. I am troubled with sore eyes, which I am told is due to granulated lids. What should be done for this difficulty?

Ans. 1. If no pain or apparent injury is resulting from the needle, it may be let alone without any harm resulting, as the iron will in a short time be oxidized by contact with the tissues.

2. You should consult a good oculist concerning your eyes. If this cannot be done, you may obtain some relief by bathing them in hot water for five or ten minutes two or three times a day. The water should be as hot as can be borne.

Intestinal Worms.—M. J. M. R., Texas, is annoyed by small intestinal worms, which seem to appear periodically every two or three months. He wishes a remedy.

Ans. Keep the bowels in a healthy condition by an abundant use of fruit, out-of-door exercise, and maintenance of the general health. To remove the worms, take a large enema of hot water containing a little soap, so as to secure thorough evacuation of the bowels. Afterwards take a large enema of decoction of quassia made by boiling four ounces of quassia chips in a gallon of water. The enema should be taken with the body in a horizontal position, and the water should be worked up in the intestine as far as possible.

Skimmed Milk in Kidney Diseases—Cottage Cheese.—H. W., California, asks:—

1. Will the use of a diet consisting wholly of skimmed milk, effect a cure of kidney disease? If so, how much should be used? and can a person keep up sufficient strength on this diet to enable him to do any labor?

2. How is cottage cheese made?

Ans. The use of skimmed milk to the exclusion of other food has been highly recommended for certain forms of kidney disease, such as Bright's disease of the kidneys, and many cures have been reported. In our own practice, we have seen some good results from this form of dietetic treatment in chronic diseases of the kidneys. However, it cannot be regarded as a panacea, nor as adapted alike to all cases. No exclusive mode of diet should be adopted without the advice of a competent physician. A person whose condition is such that an adaptation of the skimmed-milk diet is required, should not undertake any labor while undergoing treatment, as rest is quite as essential as diet in cases of this sort. Five or six pints of milk are usually taken daily.

2. Cottage cheese is made by boiling curdled milk; afterwards straining out the whey, and adding cream.

Seasickness.—G. H. W., asks: What would you recommend for one who is troubled with seasickness from riding on the cars?

Ans. There are several remedies which overcome the tendency to seasickness by obtunding the sensibilities of the nervous system. They should be taken, however, only under the advice of a physician, as they are capable of working harm as well as good. A horizontal position will generally give relief from carsickness, and a horizontal position on deck is generally efficacious in relieving seasickness.

Hygienic Cook-Book—Condensed Milk—Brittleness of the Bones.—Mrs. A. G. D., New Zealand, inquires:—

1. Is the cook-book Mrs. Kellogg has been preparing yet published?

2. What is the best way to condense milk? I think I remember seeing a recipe for it in GOOD HEALTH some time ago, but cannot find it now.

3. A friend of ours here has a little girl six years old that seems perfectly well and finely developed, excepting her bones. Her arms and legs seem to have no strength, and are so very brittle they have been broken six times, the first time being while she was an infant only a few days old. The other day she fell over, and broke one arm and one leg. Can you tell what will build up her bones, and make them strong and healthy?

Ans. 1. Mrs. Kellogg has for a long time had in readiness the greater portion of the manuscript of her new book. One or two chapters have yet to be added to make it complete; but her duties in connection with the Sanitarium, this Journal, and the Social Purity department of the N. W. C. T. U., are so onerous that she has found it impossible to give to the book the little time necessary to complete it. She hopes, however, to be able to do this at an early date, as the work is very much needed.

2. The only proper method of condensing milk is by what is known as the vacuum process, by which

the milk is boiled at a very low temperature, thus being freed from the water it contains, without acquiring the flavor of cooked milk. This process cannot be satisfactorily conducted on a small scale.

3. The child is suffering with a very serious and probably incurable disease of the bones. Nothing can be done, further than to employ such measures as will improve the general nutrition, taking care to supply such foods as are rich in bone-making materials. Milk and the whole-grain preparations are the best diet. Saline sponge-baths, oil-rubbings, and out-of-door life are means likely to prove helpful toward recovery, although complete recovery is very seldom secured in these cases.

Sanitarium Training School for Nurses.—Miss L. F. J., Illinois, writes: I would like to ask a few questions about the Training School:—

1. Can pupils enter the Training School at any time?

2. Can they work a part of the time, say half of the time, and pay the balance? I would not like to undertake to do full work. I was once a member of a training school where they only gave two weeks' vacation in a year, and my health failed; but I have fully recovered, and would like to engage in the work again.

Ans. 1. Yes.

2. Yes. It is generally preferred that nurses shall pay their way in work, as by this means they acquire a larger amount of practical experience; but special arrangements are made for those who desire to meet a part of their expenses in cash. As a rule, our nurses improve in health after adopting a hygienic diet. Our rules allow nurses one month's vacation during the year. Nursing in the Sanitarium is a very different thing from nursing in a hospital, as the patients are from a wholly different class of society, and the thorough and efficient system of ventilation relieves the surgical and hospital wards of the unhealthful features which exist in most hospitals.

Deafness—Brick-Dust Sediment.—Mrs. J. K., Dakota, asks for information on the following points:—

1. One of my ears has been giving me trouble for the past six months, and I am now nearly deaf in it. What can I do for it?

2. What disease of the kidneys is indicated by brick-dust sediment in the urine?

Ans. 1. You should have your ear examined by some one who makes a specialty of treatment of the ear. You probably require special treatment to prevent deafness.

2. Brick-dust sediment in the urine does not indicate disease of the kidneys, but rather a disordered liver or indigestion. The drinking of liberal quantities of hot water, say two or three pints daily, and the avoidance of the excessive use of meat, will generally cause the sediment to disappear.

Literary Notices.

GEMS OF ART AND LITERATURE: comprising the most curious and interesting facts from all parts of the world, with over four hundred engravings by the most celebrated artists. Magner Publishing Co., Battle Creek, Mich.

The title-page of this handsome work, which we have transcribed above, conveys but a faint idea of the infinite variety of its contents. For subject matter the author has ransacked the heavens, and the earth, and the waters under the earth; he has laid under tribute all climates, and peoples, and periods of history; he has traversed the domains of art, science, literature, biography, history, medicine, and religion, in search of the curious, the interesting, and the instructive; and having arranged this mass of materials in symmetrical order, he has called in the aid of the artist's pencil to reproduce the multiplicity of beautiful forms suggested by the word-pictures of the text. The reader cannot open the book without happening upon something which will amuse, instruct, or gratify the æsthetic sense.

Many of the illustrations are works of art in themselves, presenting graphic full-page reproductions of such subjects as the "Arch of Constantine" "Car of Juggernaut," "Straight Street in Damascus," "Castle of St. Angelo," and many others; while each page is fairly illuminated by charming vignettes and ornamental tail-pieces appropriate to the subject-matter.

Though adapted to all ages, the book presents special attractions for children, who find in its pages an inexhaustible mine of delights. As the work is sold only by subscription, our readers will do well not to shut their doors in the face of the insinuating book-agent until they have learned whether he is canvassing for "Gems of Art and Literature." If such should turn out to be the case, they would do well to receive him kindly, allow him to whisper his alluring story in their ears, and, with as little show of resistance as is consistent with dignity, submit to having their names inscribed upon his book. The work is printed upon heavy paper, and handsomely bound, and is an ornament to any center table.

ROMANTIC LOVE AND PERSONAL BEAUTY. By Henry T. Finck. Published by MacMillan & Co., London and New York.

It is difficult to see just what class of readers this book is intended for, as it is made up partly of abstruse scientific theories regarding the evolution of romantic love, which are of value only to the student of sociology; and partly of silly advice regarding the "symptoms of love," "popping the question," etc., which are of value to nobody. The best that can be said in its favor is that it contains a vast amount of curious information, compiled from a variety of sources. The chapters on dress are sound from a hygienic point of view.

SCIENCE IN THE HOUSEHOLD.

CONDUCTED BY MRS. E. E. KELLOGG.

SEASONABLE DESSERTS.

CRACKED WHEAT AND FRUIT.—A very simple, palatable, and seasonable dish for this season of the year, may be prepared by cooking a cupful of cracked wheat in four cups of water for two or three hours in a double boiler, and adding, just before serving, a small cup of sweet cream and some perfectly ripe blackberries or sliced peaches. The fruit must be stirred in very lightly to prevent mashing it.

If preferred, dish the wheat in saucers, pile the berries over the top, and cover the whole with whipped cream, and sprinkle very lightly with sugar.

PEACH TART.—Pare and pit some nice ripe peaches, sufficient to half fill a small earthen pudding-dish. Cover with a crust which has been prepared in the following manner: Into a cup of thin cream stir a gill of yeast and two cups of flour; let this become very light, and then add sufficient flour to mix soft. Knead for fifteen or twenty minutes very thoroughly, roll out evenly, and cover the fruit; put it in a warm place until the crust has become very light, then bake in a quick oven. Cut and dish so that the fruit will be uppermost, and serve with cream and sugar.

PEACHES AND CREAM.—Pare the peaches just as late as practicable before needed, since they discolor by standing. Always use a silver knife for paring, as steel soon blackens and discolors them. Do not add the sugar until time for serving, as it will start the juices, and likewise turn them brown, and destroy much of their rich flavor. Keep on ice after paring until needed for the table. Serve with cream.

BAKED PEARS.—Hard pears make a nice dessert when baked. Pare, halve, remove the seeds, and place in a shallow earthen dish, with a cup of water to each two quarts of fruit. If the pears are sour, a little sugar may be added. Bake, closely covered, in a moderate oven until tender. Serve with cream and sugar.

—Blood stains upon an article that one does not care to wash, can be removed by applying a thick paste made of starch and cold water. Place in the sun, and rub off in two hours. If the stain is not entirely removed, repeat the process until it disappears.

THE SCIENCE OF THE TEA-KETTLE.

THE boiling of water may, perhaps, seem to the housekeeper to be an insignificant occurrence; but when presented from a scientific standpoint, it is a thing of so much interest we think our readers will enjoy reading the following article upon the subject, which we quote from the *Popular Science News*:—

"When water is first heated, nothing occurs; but as its temperature rises, minute bubbles are given off, accompanied by a simmering noise. These bubbles are not steam, but air which has been dissolved by the water. All ordinary water contains more or less of this dissolved air, which escapes when the temperature is raised. By removing the atmospheric pressure with an air-pump, the air will escape at ordinary temperatures; and, on the other hand, by increasing the pressure, it may be made to dissolve a greater amount, as in the case of ordinary soda-water, which is nothing but water charged with carbonic-acid gas under a high pressure. The familiar 'singing' of the tea-kettle is due to this escape of air from the heated water.

"If we continue to heat the water, no change will be noticed till it reaches 212° F., when bubbles of steam will begin to form at the bottom of the vessel. At first these will be condensed as they rise into the cooler water above, but in a short time will pass entirely through it, and escape from the surface. In this change of water into steam there has been no change of composition: steam as well as water is made up of hydrogen and oxygen gases. It is a purely *physical* difference; the molecules, or particles, of the water being driven apart by the repulsive force of heat to form steam, like the sudden scattering of a swarm of bees.

"Under the usual pressure of the atmosphere, water is changed into steam at the temperature given above; but if we reduce this pressure, either artificially or by ascending a mountain, the boiling-point becomes lower. It will fall approximately 1.7° for every 900 feet that we rise from the sea-level, corresponding to a fall of one inch of the barometer, or a reduction of a half-pound of pressure to the square inch. Housekeepers say that when the water in the tea-kettle boils away rapidly, it is a sign of rain; and it is true that under the low

atmospheric pressure which usually precedes a storm, the water will boil at a somewhat lower temperature; but it is doubtful if the difference would be very perceptible. On the contrary, water may be heated under an increased pressure, far above 212° without boiling. In a boiler in which there is a steam pressure of 105 pounds, the temperature of the boiling water is 339.4° .

"If the water contains substances in solution, the boiling-point is raised; if saturated with common salt, for instance, the temperature of the boiling liquid is 228° . . . . When water once begins to boil, it is impossible to raise its temperature any higher; all excess of heat is absorbed by the escaping steam as so-called latent heat, and is given out again when it condenses.

"We often speak of *seeing* the steam escaping from the spout of the kettle, but this is incorrect; steam is an invisible vapor, and we can no more see it than we can air. What we do see are the minute drops of water into which the steam condenses on coming into the cool air. If we boil water in a glass flask, we shall notice that nothing can be seen in the interior; and, by observing the steam escaping from a kettle, we shall notice that there is quite a distance between the end of the spout and the point where the cloud becomes visible. This cloud of steam is of exactly the same nature as the clouds which float in the sky, and which are formed in the cool upper regions by the condensation of the steam, or aqueous vapor, present in the air.

"The power of dissolving substances which water possesses is greatly increased by heating to the boiling-point; for this reason, hot water is used to extract the stimulating and flavoring substances from the leaf or berry, and in soup-making, where a large proportion of the nutritive elements of the meat enter into solution. In boiling vegetables, the hot water with which they are permeated so acts upon their hard and tough constituents as to render them soft and easy of digestion."

Washing Lace.—Laces rubbed, starched, and ironed, rarely look fit to wear again; but lace, if of good quality, may be done up so as to be kept fresh-looking for a long time. The following is recommended as a good method for accomplishing this result:—

"Laces that require doing up should be basted carefully between folds of thin muslin, and put into cold soft water, to every pint of which must be previously administered a tea-spoonful of aqua ammonia, and sufficient white soap to make good suds. Let the water boil a few minutes, and if the laces are not then clean, pour off the liquid, and put in cold water as before; continue to do so until the articles are thoroughly cleansed.

"Never wring out lace; always squeeze it between the folds of muslin. If clear lace is required, put a little bluing in the rinse water; if the old-time yellowish tinge is wished, a few tea-spoonfuls of strong coffee in the rinse water will give the requisite hue. Lace must never be stiff, but a little of the limpness may be taken off, if desirable, by putting a little dissolved gum arabic in the rinse water. Now press the clean rinsed laces between folds of white muslin, till they are as dry as they can be made in this way; then pin each article out smoothly and in its shape on a pillow, and with a fine needle pick out and raise up every stem and leaf and thread to its proper place."

Measures and Weights.—The following approximate measures, in the absence of scales and measures, will often be found of convenience to the housekeeper:—

"A pint of water or milk will weigh about one pound.

"About sixty drops of thin liquid will fill a common-sized tea-spoon.

"One pint of molasses will weigh one and one-quarter pounds.

"Four table-spoonfuls, or one-half a gill, will fill a common-sized wine-glass.

"Four wine-glasses will fill a half-pint measure, or a common tumbler, or a large coffee cup.

"Ten eggs usually weigh one pound before they are broken. Eight large ones will weigh one pound."

Painted Walls for the Kitchen.—Paint upon the walls of a kitchen is far better than calcimine or white-wash, since the steam from the washing and cooking has less effect upon it, and also because it can be more readily cleaned. Before painting, the wall needs to be washed with soap-suds, then covered with a coat of dissolved glue, which must be allowed to dry thoroughly, before the paint is applied. A broad flat brush does the work well and quickly.

Orangeade.—Take two nice, fresh oranges, rub lightly two ounces of lump sugar on the rind of the fruit to extract the flavor, put this sugar into a pitcher, squeeze the juice from the oranges, and add this and the juice of one lemon to the sugar. Pour over all, one pint of cold water. Stir thoroughly and serve.

Peach Stains.—At this season of the year when table linen and children's clothing are so liable to become stained with the juice of peaches, it is well to remember that the best way to remove such stains is to give the suspected articles a good soaking in cold water, then wash them out with soap, before allowing warm water to touch them.

—It is said that if a small quantity of sugar is mixed with blacking, it will not so quickly burn off a stove.

Publisher's Page.

☞ Those who are interested in the new work entitled "Sunbeams of Health and Temperance," promised some months ago, will be glad to know that it is making rapid progress toward completion, so that it will be ready for the early holiday trade. It is believed that the book will far more than meet the most sanguine expectations of those who are interested in it.

☞ We call special attention in this issue to the advertisement of the Sanitarium Training School for Nurses. It is unquestionably the most thorough training school for nurses to be found in this or any other country. The advantages enjoyed by this school in being in connection with a large sanitarium in which are to be found all the medical appliances known to the profession, are far superior to those which can be offered by any school connected with an almshouse or charitable hospital, in which the treatment necessarily consists of surgical or medicinal measures, and in which the management of patients is naturally very different from that demanded by the most advanced knowledge respecting the care of the sick in private practice. The number of persons who can be received at the school at one time is necessarily limited; but to those who apply at once, positions can be given in which they will be able to meet all the incidental expenses of attending the school. Those who desire further information upon the subject, should address the Sanitarium Training School for Nurses, Battle Creek, Mich.

☞ During the past few weeks the Sanitarium has had the pleasure of entertaining Major G. P. Sanderson, of the British Indian Service, who has come all the way from Decca, India, with no other object in view than to visit the Institution, and add to his already large fund of information regarding matters hygienic. The circumstances which led to this hygienic pilgrimage over many thousand miles of sea and land are of peculiar interest, and we may take occasion in a future number of GOOD HEALTH to detail them at length. Major Sanderson is not without honor in his own country, having had under his charge for many years the important function of catching elephants for the British Military Service. He is also author of a valuable and interesting work entitled, "Thirteen Years among the Wild Beasts of India," which secured him promotion, at the hands of the Governor General, to his present position of honor and responsibility. He warmly resents the aspersions which have been cast upon the climate of India, and asserts that the prevalent liver diseases among the British residents of India, which are commonly attributed to the unhealthful climate, may all be charged to the inordinate use of stimulants, flesh-foods, and condiments.

☞ Some months ago we made two offers for prize stories,—one of twenty-five dollars for the best general health story, and one of fifteen dollars for the best health story for young folks. The conditions were that there should be ten competitors for each. More than ten competitors have appeared for the first prize, but the number required for the second prize is not yet complete. However, the publishers have decided not to wait longer. The manuscripts presented were placed in the hands of a committee of critics, who, after careful consideration, decided that Miss Lou Stormont was fairly entitled to the first prize for the story entitled "Sophy—Baker's Second Cousin." The prize for the best story for young people was given to Miss Fannie Bolton, for the story entitled "Aunt Polly's Experiment." Several other of the manuscripts presented for the first prize were so meritorious that it was difficult to determine which was worthy of first prize. The publishers anticipate making another prize offer soon, in which they will offer two prizes for each class of stories, a first and a second prize. It is hoped that these offers will have the effect of leading persons of literary ability to spend some of their talents in the production of good health literature, of which there seems to be a great scarcity at the present time, aside from that which is of a purely scientific character. Many will be instructed through the means of an entertaining story, whose attention could not otherwise be arrested sufficiently long to make an impression on them.

A FREE HOSPITAL ENTERPRISE.

As many of the readers of this Journal are aware, the Medical and Surgical Sanitarium, the advertisement of which appears on the last page of the cover, differs from other establishments of the sort in the fact that it is not a money-making enterprise, all of its dividends from the beginning to the present time having been devoted to three philanthropic objects: (1) the maintenance and improvement of facilities for the rational treatment of the sick; (2) the promulgation of the principles of hygienic and temperance reform; and (3) the treatment of the worthy sick poor.

The very extensive improvements necessary to place the Institution upon the broad and liberal basis designed by the founders and the large indebtedness thereby incurred, have made it impossible for the managers to expend in the treatment of the sick poor any very large part of the annual earnings of the Institution; and yet the amount spent in this way, some time ago reached a sum more than double the amount of the original capital stock invested in the enterprise, which has constituted its only endowment. The sympathies of the managers of the Institution, and the numerous calls made for the charitable treatment of the sick poor, have kept them painfully alive to the fact that the Institution had not yet attained to the point where it could carry out the charitable purposes of its founders, on the liberal scale which was unquestionably anticipated by them. After due consideration of the matter, however, the managers have recently decided that, although a considerable debt still rests upon the Institution, its financial prospects are such as to warrant the undertaking of a larger amount of work in this direction.

The chief obstacle which has been in the way, has been the want of sufficient room to accommodate any considerable addition to the number of paying patrons, all of the buildings owned by the Institution being filled to their utmost capacity, although the managers have rented a number of cottages, in addition to those owned by the Institution, and from seventy-five to one hundred rooms and suites in neighboring portions of the city. This obstacle has at last been overcome in an unexpected manner,—a friend of the Institution having volunteered to erect at his own expense a building capable of accommodating one hundred beds, and supplied with all the conveniences for carrying out in the most thorough and efficient manner the methods of treatment now employed in the Sanitarium. The building will be erected close by the present main building, but not connected with it; and the management will be quite distinct from that of the Sanitarium, although under the general supervision of its managers.

This building, which will be known as the Sanitarium Free Hospital, will be opened to three classes of patients: (1) those who are able to pay the actual cost of board; (2) those who are unable to pay the full amount of the expense for board, but are able to pay something; (3) those who

are penniless and friendless, and unable to meet any part of their expenses. Medical treatment will be given without charge. The nine physicians constituting the medical faculty of the Sanitarium have volunteered their services for the Free Hospital without compensation. At a helpers' meeting recently held, forty persons volunteered each to contribute two or three months' time to the care of the sick poor. It is expected by the managers that a sufficient number of volunteers may be secured to carry on the work of this enterprise and the expenses reduced to a minimum, so the number of patients treated can thus be proportionately increased. A school of hygiene will be organized in connection with the Hospital, to which those who give their services will be admitted without charge, and where they will receive a very excellent course of training, by the aid of which they may become very useful as nurses, health missionaries, and laborers in other humanitarian fields.

It is hoped that work will be begun on the new building in a few days, so that it can be enclosed by cold weather, finished off during the winter, and made ready for occupancy early in the spring. We shall be glad to hear from those interested in this enterprise, and who desire to contribute to its success by rendering personal service in the care of the sick, or by contributing to the Sick Poor Fund.

ANNUAL MEETINGS OF STATE HEALTH AND TEMPERANCE SOCIETIES.

WITHIN a week of this writing, the editor has had the pleasure of attending annual meetings of health and temperance societies in three different States. August 18th was spent at New Bedford, Massachusetts, where we found, encamped in a beautiful part of the city, between three and four hundred persons interested in health and temperance work, whom we had the pleasure of twice addressing on subjects of interest in connection with this work. The occasion was particularly interesting on account of the meeting's being held near the old home of Capt. Joseph Bates, the veteran pioneer of temperance work in this country. Indeed, so far as known, Capt. Bates was the founder of the first teetotal temperance society ever organized. Capt. Bates was also a strict hygienic reformer, and abstained not only from the use of alcoholic liquors, but from the use of tobacco and all other harmful things. For the last thirty years of his life, he was a vegetarian and lived most abstemiously. His manly form, as straight as an arrow, towering high above men of average height, and the little indication of the weight of years upon him, either physical or mental, even when he had reached the advanced age of more than fourscore years, were living and irrefutable arguments in favor of his temperate and abstemious mode of life.

We had the pleasure of meeting many old friends, and of forming the personal acquaintance of some with whom we had been acquainted for many years by correspondence. We were also glad to meet Mrs. White and other friends just returned from Europe, who, we are glad to say, are in excellent health, notwithstanding their arduous labors.

We were informed that the president and secretary of the Health and Temperance Society of Massachusetts had recently departed on a mission to South Africa, and thus taken the society along with them. Steps were taken, however, by which a new society was organized, and officers elected, with prospects of successful future work. We shall expect to hear soon of the appearance of a health and temperance society in the vicinity of the Cape of Good Hope. If we are disappointed in this, the conclusion will be irresistible, that the society was stranded, cast away, or thrown overboard *en route*. We trust Eld. Robinson will give us information respecting this matter at as early a date as possible.

The return trip was made *via* Cleveland, Ohio, where we had the pleasure of addressing twice during the day an audience of from fifteen to twenty-five hundred people. At noon we addressed a purity meeting for men, at which several hundred were present. The serious attention given to the subject and the readiness with which the purity pledge was received, convinced us that these friends were very ready to engage in the work for the uplifting of the standard of purity.

We came by boat to Detroit, and thence by rail, reaching home on Monday; and after more than twenty-four hours of arduous work, including the examination of a score of new patients who had arrived during our absence, we made a flying trip to Springfield, Illinois, to visit another encampment of health and temperance reformers. We reached the camp-ground Wednesday morning, and there we found eight or nine hundred persons living in a city of canvas houses, the most delightfully and conveniently located of any encampment we have ever visited. On inquiring respecting the State Health and Temperance Society, we received the mournful information that it "died last summer," not having been able to stand the heat and malaria of the warm season. However, steps were taken by which the society was vigorously resurrected, and enough life given to it, it is hoped, to carry it through many years of useful work.

The whole day had been assigned to health and temperance work, and we endeavored to use it to the best advantage possible. The forenoon was devoted to a consideration of the rise and progress of health and temperance reform, and its relation to various religious reforms. The afternoon was devoted to practical hygiene, the subject of discourse being, "Our Homes,—how to make and keep them healthy; and the unsuspected dangers which lurk about them." Pure air, pure water, and pure food were given as the most important desiderata for a healthy home, aside from the home itself. A purity meeting for men was held between six and seven o'clock in the evening. At 7:30 an address was given on the hygiene of the body.

At both New Bedford and Springfield was mentioned the new hospital enterprise which the managers of the Sanitarium are just undertaking, and volunteers to engage in caring for the sick poor were called for. The number of responses in each place indicated the importance and need of an enterprise of this sort, and gave promise that it will receive the cordial support of the friends of the Sanitarium and of health and temperance reform.

A Flattering Compliment.—The *Evening News* thus compliments the newly-installed editor of the *Detroit Evening Journal*:—

"We congratulate our good friends, the prohibitionists of Michigan, who will now have [in the Detroit *Evening Journal*] a straight-out daily organ in the metropolis of Michigan, which as long as Mr. Brearley can control it, will give no quarter to the 'rummies,' and 'whiskyites,' and 'saloonists,' and will ask for none. We can commend Mr. Brearley to the prohibitionists as a man after their own hearts. He hates liquor and all its works and pomps with a holy and righteous hatred. During all the years while he had charge of the advertising department of the *Evening News*, he never received a liquor advertisement of any sort, except for medicinal, mechanical, or sacramental purposes. When presented as a plain liquor advertisement, they were always received by some other department than his. They got there just the same, but he never had anything to do with them."

A PICTORIAL

ENCYCLOPEDIA OF HYGIENE AND TEMPERANCE.

By J. H. Kellogg, M. D.

Chromo-Lithographic Plates, A Series of Ten, Each 32 x 48 inches in Size.

ALL competent teachers of physiology and hygiene have for years felt the need of some more efficient means of illustrating these subjects than have heretofore been afforded, especially as regards the subject of hygiene.

The author of these charts has for years been engaged in teaching physiology and hygiene in the class room and by popular lectures, and has endeavored to fill the gap in means of pictorial illustration by blackboard sketches and charts specially prepared for his own use. In response to the repeated suggestions and requests of teachers and others interested in this line of educational work, he has selected from among the designs which have thus grown out of his practical experience in teaching these subjects, such as have proved the most effective and serviceable, and now presents them in this form, believing that they will be recognized as a very helpful addition to the facilities which teachers have heretofore possessed for making these subjects interesting and attractive. A number of skilled artists were employed for several months in perfecting the designs and coloring, and no expense has been spared to make the charts both

SCIENTIFICALLY ACCURATE AND THOROUGHLY ARTISTIC

in every detail of design and coloring, in which particulars they are quite unequaled.

These charts are specially designed for the school room, but they are equally serviceable for lectures. The whole subject of Anatomy, Physiology, Hygiene, and Temperance are illustrated in these Charts in a manner never before attempted. The following is a bare list of the Charts.

✳ ✳ LIST OF CHARTS. ✳ ✳

CHART ONE.—The Skeleton,—The Muscles,—The Tissues. CHART TWO.—The Digestive System,—The Circulatory System. CHART THREE.—The Nervous System,—The Special Senses,—The Respiratory System. CHART FOUR.—Diseased Animal and Vegetable Foods. CHART FIVE.—Air and Water Contamination. CHART SIX.—Heating and Ventilation. CHART SEVEN.—Effects of Improper Dress and Unhealthful Positions,—Imperfect Physical Development. CHART EIGHT.—Effects of Narcotics and Stimulants. CHART NINE.—Effects of Alcohol Upon the Human Stomach,—Temperance Statistics. CHART TEN.—Nutritive Value of Foods,—Digestibility of Foods.

A complete manual furnished with each set of Charts.

Price per Set, mounted on Cloth with Rollers, $25.00
Price per Set, on Spring Rollers all in one Case, 35.00

For full descriptive circulars, address,

HEALTH PUB. CO., Battle Creek, Mich.

NEW TEMPERANCE CHARTS.

By J. H. KELLOGG, M. D.

AFTER a careful study for several years of the PHYSICAL EFFECTS OF ALCOHOL AND TOBACCO upon the human body, with unusually favorable opportunities for observation through post-mortem examinations, chemical analyses, and microscopical investigations, the author has prepared, by the aid of the best artists to be secured, a series of

TEN COLORED PLATES,

Which depict in the most graphic manner possible, the ravages of alcohol among the delicate structures of the human body. The following is a list of what is exhibited by the several Charts:—

PLATE 1. The Alcohol Family.

" *2. A Healthy Stomach.*

" *3. Stomach of a Moderate Drinker.*

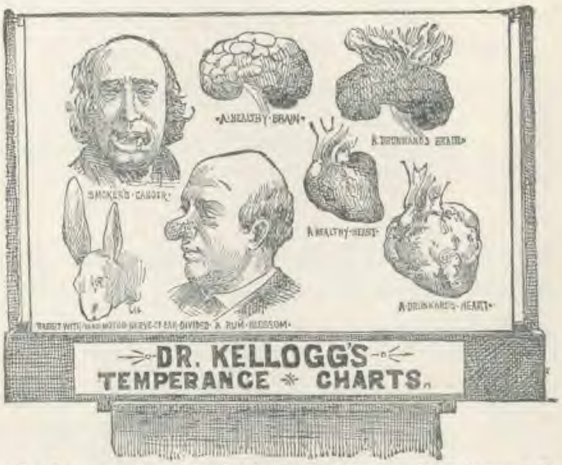
" *4. Stomach of a Hard Drinker.*

" *5. Stomach in Delirium Tremens.*

" *6. Cancer of the Stomach.*

" *7. A. Healthy Nerve Cells. B. Fatty Degeneration of Nerve Cells. C. Healthy Blood. D. Blood of an Habitual Smoker. E. Blood of a Drunkard. F. Blood Destroyed by Alcohol. G. The Drunkard's Ring. H. Healthy Nerve Fibres. I. Fatty Degeneration of Nerve Fibres. J. Healthy Muscle Fibres. K. Fatty Degeneration of Muscle Fibre.*

" *8. Smoker's Cancer. A Rum Blossom. A Healthy Brain. A Drunkard's Brain. A Healthy Heart. A Drunkard's Heart.*



" *9. A. A Healthy Lung. B. Drunkard's Consumption. D. A Healthy Kidney. E. Enlarged Fatty Kidney of Beer Drinker. F. Atrophied Kidney of Gin Drinker. G Healthy Liver. H. Liver of Drunkard showing Nutmeg Degeneration. I. Magnified Section of Fatty Liver of Drunkard. J. View of an Eye diseased from the Use of Tobacco and Whisky. K. View of the Interior of a Healthy Eye.*

" *10. ALCOHOLIC DRINKS, showing the percentage of Alcohol contained in the common Alcoholic Beverages. ADULTERANTS OF ALCOHOLIC DRINKS, showing a list of the various poisons used in adulterating the various liquors. SPHYGMOGRAPHIC TRACINGS OF THE PULSE, showing the effects of alcohol and tobacco upon the pulse. A. Pulse of a Healthy Person. B. Pulse of a Moderate Drinker. C. Pulse of a Drunkard. D. Pulse of an Old Tobacco User. E. Pulse of a Young Smoker.*

STATISTICS OF STIMULANTS AND NARCOTICS. A diagram exhibiting in a graphic way the fact that the annual cost of alcoholic drinks, tobacco, rum, tea, and coffee, exceeds the cost of bread, meat, clothing, education, and missions.

NOTHING SO COMPLETE in this line has ever been attempted before. These ten charts constitute a most powerful temperance lecture, the impressions of which will not be easily forgotten.

TESTIMONIALS.

The following are a few of the many good words which have been spoken for the charts:—

"They are the best yet published, and no temperance educator can afford to be without them. The illustrations of the effects of tobacco are alone worth the money, and when explained, ought to be sufficient to cure any one of the tobacco habit, and I know of some who have thus been cured." GEORGE WOODFORD.

"The Charts you sent I like the best of any issued, and shall commend them everywhere, and your lecture was inimitable."—Miss FRANCES E. WILLARD, Pres. N. W. C. T. U.

"I have carefully examined the Temperance Charts so ably prepared by Dr. J. H. Kellogg, of Battle Creek, Mich., and I am very much pleased with them.—JULIA COLMAN, Chairman of the Literature Committee of the National W. C. T. U.

The accompanying cut illustrates a novel arrangement for exhibiting charts, which is now furnished with this series of charts when desired. It works to a charm, and is just the thing for lecturers. It is only necessary to set it on a stand or table, and in two minutes it can be made ready for operation. It can be operated in either direction equally well. Each set of charts is accompanied by a Key and a stenographic report of a lecture from the charts delivered by Dr. Kellogg at the Lake Bluff Temperance Convocation.

Price of Charts on common rollers,	$12.00
Case extra,	1.25
Charts with Exhibitor,	15.00

HEALTH PUBLISHING CO., Battle Creek, Mich.

Sanitarium Training School for Nurses.

COURSE OF INSTRUCTION.

TERM FOR 1887-8 WILL BEGIN ABOUT NOV. 2, 1887.

THIS School has now been in operation for several years with constantly increasing patronage and success. A large number of young men and women have been fitted for eminent usefulness and are now engaged in positions in which they are proving the value of the instruction received in the relief of suffering and earning an independent support. There is no field of usefulness in which intelligent and well-trained young men and women can more easily find employment and opportunity for philanthropic effort accompanied by fair remuneration.

COURSE OF INSTRUCTION.

The course of instruction comprises two series of lectures continuing through forty weeks each. The whole period covered by the course is twenty-one months, which includes three months vacation during the months of August, September and October.

METHODS OF INSTRUCTION.

The instruction is both theoretical and practical. Three lectures are given each week, and several recitations are held in addition. Lectures are illustrated by means of charts, models, fine French Manikins showing every organ of the body in a manner closely resembling life, and by numerous experiments. Each student is required to become familiar with the subjects taught by actual practice :—

The following are among the leading topics which are taught :—

Anatomy. Physiology. Elementary Chemistry. Nature and Causes of Disease. Language of Disease. Principles of Cure. Management of Common Diseases. Dressing of Simple Wounds and Injuries. General and Individual Hygiene. Ventilation. Disinfection. Air and Water Contamination. General Nursing. Surgical Nursing. Monthly Nursing. Bandaging. Hydrotherapy--Theoretical and Practical. Electricity--Faradic, Galvanic, Static. Diet for the Sick. Massage. Swedish Movements. Calisthenics. What to Do in Emergencies.

SPECIAL ADVANTAGES.

The advantages offered by this school are in many respects superior to those offered by any other, not excepting the older schools in the large cities. Its special advantages may be briefly stated as follows :—

1. This school is connected with the largest Sanitarium in the world, which affords opportunities for practical observation not to be found elsewhere.

2. The methods, appliances and facilities which are utilized here far surpass in extent what can be found anywhere else, affording a better opportunity for gaining familiarity with scientific methods than any other school.

3. Students in this school have an opportunity to acquire a practical knowledge of much that is only taught theoretically in other schools, or is omitted altogether.

4. A pleasant home and agreeable social surroundings instead of the prison-like atmosphere of the ordinary hospital.

5. Permanent employment will be given to those who prove themselves competent and worthy of encouragement.

QUALIFICATIONS REQUIRED.

Persons who desire to enter this school must possess the following qualifications :—

1. A good moral character, with satisfactory recommendations.
2. Ability to become first-class nurses.
3. Good health.
4. Sufficient intelligence and education to enable them to enter upon the course of training with a fair prospect of success.

Those who pass a satisfactory examination at the close of the course will receive a diploma.

TERMS.

As regards expenses, there are two classes of students, those who are well-to-do and take the course simply for the information received, and are able to pay for board and tuition in cash, and those who are in limited circumstances and desire to meet expenses by labor, so far as possible. Terms to the two classes are respectively as follows :—

1. Those who pay tuition in cash, for board and tuition for forty weeks, $200.00.

2. Those who are able to put in full time in work can pay board and tuition in work the first term, and will be paid something in addition the second term, according to the value of their services. There will also be an opportunity for such to earn wages during the summer vacation.

Members of the training school will be expected to conform to the same rules as regular employes.

For any further information desired, address,

SANITARIUM,
Battle Creek, Michigan.

INVALID FOODS.

In the effort to meet the necessities of a large Sanitarium with its great variety of patients, we have produced a number of food preparations adapted to different diseased conditions, the merits of which are such as to secure for them a very large and increasing sale, not only to persons belonging to the invalid class, but to those who wish by "good living" to avoid disease. The following are the leading preparations:—

	cts. per lb.		cts. per lb.		cts. per lb.
Oatmeal Biscuit	12	White Crackers	10	Wheatena	12
Medium Oatmeal Crackers	10	Whole-Wheat Wafers	12	Avenola	13
Plain Oatmeal Crackers	10	Gluten Wafers	30	Granola	12
No. 1 Graham Crackers	10	Rye Wafers	12	Gluten Food	40
No 2. Graham Crackers	10	Fruit Crackers	20	Infant's Food	40
Plain Graham Crackers [Dyspeptic]	10	Carbon Crackers [net]	15	White Gluten Food	25

Sample packages containing specimens of each of our foods sent post-paid for 50c. Selected Samples, 25c.

All grain preparations can be supplied in large or small lots, as we keep a fresh supply constantly on hand of goods which are largely made expressly for us, of a superior quality of grain. Address

SANITARIUM FOOD CO., Battle Creek, Mich.

CHEAP RATES TO CHICAGO EXPOSITION.

THE Chicago and Grand Trunk, and Detroit, Grand Haven and Milwaukee Railways are making very low rates to Chicago and return to those desiring to visit the Chicago Exposition. The rate from

BATTLE CREEK,

for tickets, including an admission coupon to the Exposition, is **$1.50** for the round trip. Tickets are sold on **each Tuesday,** from **Sept. 13, to Oct. 18, 1887,** limited good to return up to and including the following Monday.

THE TEST OF THE ROADS FOR TEN YEARS,

By the majority of American riders of first class machines prove the

COLUMBIA

BICYCLES & TRICYCLES

SUPERIOR TO ALL OTHERS.

Illustrated Catalogue sent free.

POPE MFG. CO., { Boston, New York, Chicago, Hartford.

ORGANS.

UNTIL SEPT. 30.

SPECIAL OFFER on **ORGANS** in "Good Health" for May has elicited so many inquiries and good orders that it is continued till Sept. 30, to accommodate those who cannot purchase till after harvest. We can **SAVE YOU MONEY,** and at the same time give you a **FIRST-CLASS INSTRUMENT.** We have sold Organs in nearly every State, and have yet to find one that has not given the best of satisfaction.

Speedy Correspondence Solicited.

Address, The J. E. WHITE PUB. Co., Battle Creek, Mich.

ORGANS.

DIGESTION AND DYSPEPSIA.

A work of the greatest importance to all who may be afflicted with poor digestion. 176 pp., in muslin, 75 cts. post-paid. Address, **GOOD HEALTH,** Battle Creek, Mich.

SKIRT, STOCKING SUPPORTER & BUSTLE.

New principle in ladies' wear. All the skirts supported, taking the burden of weight off the waist & hips, the tension of the garter on the stocking, caused by the weight of the skirts upon the Bustle, relieves the shoulders, inducing a peculiar lightness and buoyancy when walking. No disagreeable & unhealthful heating of the back. Light STRONG, DURABLE, cannot crush, out of way when sitting. Circulars free. Express paid $1.25. For Misses and medium sized ladies No. 22, for large ladies No. 24. Wanted **LADY AGENTS.** Automatic Skirt Supporter B. Co., 126 State St., Chicago.

CASKET OF JEWELRY FREE!

This elegant Ladies' Jewel Casket, which is imperfectly shown in our small illustration, is made of fine, polished hard wood, beautifully inlaid, and lined inside with dark blue and gold. In its construction the following handsome woods are most artistically joined in mosaic work: *Cherry, Black Walnut, Butternut, Poplar* and *Basswood,* and the casket, in its finished state, forms one of the most attractive and useful ornaments for a lady's dressing case or bureau that we have ever seen. Wishing to introduce into thousands of new homes our large and attractive 16-page, 64-column illustrated paper, **The Ladies' World,** which is ever brimful of the most interesting and instructive reading matter for ladies, being devoted to stories, sketches, poems, fancy work, home decoration, fashions, hygiene, housekeeping, etiquette, reading for the young, etc., we now make the following *extraordinary offer: Upon receipt of only* **Thirty-five Cents,** *we will send* **The Ladies' World** *for* **Six Months,** *and to every subscriber we will also send,* **Free** *and post-paid, the beautiful* **Jewel Casket** *above described, together with the following* **Jewelry** *which each Casket will contain: a handsome imported Pearl Shell Necklace, consisting of a large number of beautiful shells neatly joined together; a pair of Imitation Jet Bracelets, good and durable; a pair of Nickel-plated Sleeve Buttons, neat and handsome, and a Nickel-plated Breast Pin, very neat and attractive.* Remember, the Casket, together with all this jewelry, costs you nothing; it is given *free* with a 6-months' subscription to our paper. Five subscriptions and five caskets of jewelry will be sent for $1.50. You cannot afford to miss this great chance! Take advantage of it at once! *We guarantee double value of money sent.* As to our reliability, we refer to any publisher in N. Y. Address,

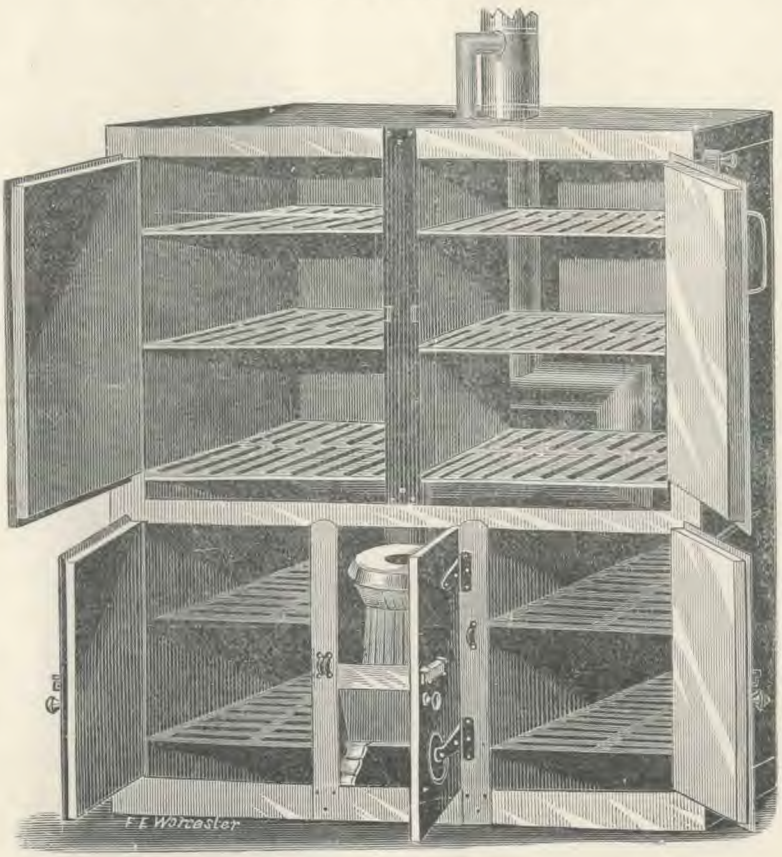
S. H. MOORE & CO., 27 Park Place, New York.

FIVE CENTS' WORTH OF FUEL WILL BAKE A BARREL OF FLOUR INTO BREAD.

To All Interested in Steel Portable Ovens!

SEND FOR 12-PAGE PAMPHLET AND CIRCULAR.

They cost 70 per cent less than Brick. Do not get out of order.
Do the work better and at one-fifth the cost of fuel.



Five cents' worth of fuel will bake a barrel of flour into bread, and roast meat in proportion.

THIS FROM A PRACTICAL BAKER.

LeRoy, N. Y., May 20, 1887.

To Whom it May Concern:—

I bought a No. 70 Oven from Mr. Reid about a year ago. About six weeks ago I bought another No. 70. I am using them in preference to brick. I like them. I have seen all the kinds. This "takes the cake." J. W. BROWNELL.

School of Domestic Economy, Iowa Agricultural College, Ames, Iowa, April 5, 1886.

Adam Reid, Esq.,—

(LETTER NO. 1.)—It is nearly a year since I first used your Bake Oven (No. 60), and I can say now what I have repeatedly said, that in all my experience I have never seen better work than that which your oven turns out. The one in use here works just as well as the one I first used at Chautauqua, N. Y., last year. Yours respectfully, EMMA P. EWING.

May 2, 1887.

(LETTER NO. 2.)—The oven in use here is still in "good shape," and continues to give satisfaction.

EMMA P. EWING.

I have recently sent them to the New Osborne House, and the new Powers Hotel, Rochester, N. Y.; the Central House, Reading, Pa.; the Forest City House, Cleveland, O.; H. C. Austin, Binghamton, N. Y.; James Dick, Dansville, N. Y.; A. A. Alvord, Elmira, N. Y.; W. W. Whittaker, Lockport, N. Y.; W. W. Clemmons, Geneva, O.; Mansion House, Buffalo, N. Y.; Monteagle House and DeVeaux College, Niagara Falls, N. Y.; Geo. Davis, Mohawk, N. Y.; B. F. Simmons, Castle, N. Y.; A. E. Potter, Mansfield, N. Y.; S. K. Kimball, Alexandria, N. Y.; I. G. Corbett, Austin, Pa.; E. E. Proud, Saegerstown; Geo. Truscott, Mackinac, Mich.; Louis Bach, Wellsburgh, N. Y.; Joseph Mecklinberger, Suspension Bridge, N. Y.; Avery & Miller, Kalamazoo, Mich.; H. T. Williamson, Waterford, Pa. Here is a copy of an order for three after the fullest inquiry had been made:—

St. Teresa's Academy, Kansas City, Mo., June 5, 1886.

Mr. Adam Reid,—

DEAR SIR.—Yours received in due time. You may send three ovens as soon as you possibly can. Address one to "Mother Clemence, St. Mary's Orphan Asylum, St. Joseph, Mo."; address the second to "Mother Liquori, St. Joseph's Hospital, Seventh and Penn Streets, Kansas City, Mo."; and a third you may send to the Academy, as also the bill for the three, and I will forward amount. Yours respectfully, SISTER MARY FIDELIA.

THIS FROM THE PROPRIETOR OF THE WHITCOMB HOUSE, ROCHESTER, N. Y.

Rochester, N. Y., December 7, 1886.

Mr. Adam Reid,—

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