

Physical Reform, the True Basis of Mental and Moral Reform.

PACIFIC Health Journal AND TEMPERANCE ADVOCATE.

Devoted to Temperance Principles and the Art of Preserving Health.

Volume II.

DECEMBER, 1886, AND JANUARY, 1887.

Number 4.

CONTENTS.

PURE
AIR
FOOD
WATER

	PAGE.		PAGE.
GENERAL ARTICLES —Muscular System, -	91	Effects of Tea, -	105
Man as the "All-Devourer," -	92	Please Stop My—What? -	105
Second-Hand Air, -	94	MISCELLANEOUS —Water, -	106
Eating for Strength, -	94	Forests as Sanitary Agents, -	106
Eating and Drinking, -	96	What Chewing Gum Does, -	107
Disease and Its Causes, -	98	Power of the Sun, -	107
What to Do with Daughters, -	99	What is Real Food? -	108
Catching and Resisting Colds, -	99	Decay of the Teeth, -	108
What to Do in Sickness, -	100	Children and Tobacco, -	108
Babies—Their Food and Sleep, -	100	Rural Health Retreat, -	109
The Best Physicians, -	101	Lie Down and Rest, -	109
Lancet's Prescription, -	101	HOUSEHOLD —Courage, -	110
TEMPERANCE —Echo and the Topper, -	102	New England Home Life, -	110
What Shall We Do for Christopher? -	102	The Use of Essential Nutrients, -	111
Facts Concerning Alcohol, -	103	That Expense Book, -	111
The Pint of Ale, -	104	Improvements at Crystal Springs -	112
Does Alcohol Supply Force? -	104	Shortening, -	112
Cure for Weak Eyes, -	105	Hints, -	113
Luther on Lager Beer, -	105	Granola, -	113

Temperance Leads to Health, Wealth, Happiness and Long Life

RURAL HEALTH RETREAT,

ST. HELENA, CAL.

THE NATURAL SURROUNDINGS



THIS Retreat equal those of any other health resort. Across the valley lies the Sonoma Mountain Range, breaking the sea breeze, and shielding the Retreat from the chilling atmosphere of the coast, and presenting a safeguard against catarrh and lung diseases. The grandeur of its mountain ranges, with shrubby cañons lying in beauty at their feet, the famous Mt. St. Helena rearing its lofty head to the clouds, the grassy plain lying beneath, reflecting the sunbeams like a grand mirror in the valley below, all lend enchantment to the scene.

Malaria is a Stranger at the Retreat,

And in all this beautiful valley. In fact, the purity of the air, on this hill-side and in the upper valley, is a specific for malaria, and all diseases affecting the head, throat and lungs, producing a healthy circulation through mucous passages.

Our Remedial Measures Include

All forms of Baths, by vapor, air, water, electricity, heat and sunlight; Galvanic and Faradic Electricity, Swedish Movements, Massage, Dumb-bells, Indian Clubs, Free-hand Exercises, Mechanical Appliances, and Exercises for Development of Lungs, Vital Organs, and Muscular System, restoring and increasing Nervous Energy, and equalizing Circulation. Appliances for treatment of Eye, Ear, Nasal, Throat and Lung Diseases. Bad cases of Piles, Prolapsus of Rectum Fissure, Fistula-in-Ano, Consumption, Epilepsy, Asthma, Dyspepsia, Enlargement of Liver and Spleen, Abscess of Liver, Constipation, Diseases of Kidneys, Bladder and Genito-Urinary Organs, Varicocele, Impotency, Nocturnal Losses, Spermatorrhœa, Uterine Displacements, Uterine and Ovarian Tumors, Cancers, Nervous Diseases, and Paralysis are successfully treated at the Retreat.

The Physicians

Are not blind devotees to any exclusive "pathy;" have no "pet theories" to follow to the exclusion of the advancing knowledge of Hygienics and Therapy: They employ no patent nostrums, nor countenance quackery in any form. Cures are usually made without resort to medicine. Especial inducement is offered to all females suffering with ailments peculiar to their sex

Lectures

Are given in the parlor on the subjects of Physiology, Disease, Health and Hygiene, showing how to obtain and retain health; and that a multitude of ailments can be cured by proper attention to our habits and judicious treatment.

All Classes May Be Benefited

By stopping at the Retreat. Professional men, Judges, Lawyers, Ministers, or Doctors, suffering from over mental exertion, will find this an excellent place for relaxation. Business men, exhausted mentally and physically by too close application to business, will find Crystal Springs an excellent place to recuperate. Are you troubled with constant thought of your ailments, a dread of life, or fear of death? remember that these are symptoms of disordered nerves, deranged stomach, liver, and other digestive organs, that may be cured and leave you easy and happy. Come to

Crystal Springs,

Where the treatment invigorates you, gives you a light heart, a quiet stomach, and a cheerful countenance. Come, and we will do you good. Especial attention is given to the treatment of

Chronic Diseases.

New facilities are constantly being added to make this a most desirable and efficient, as it now is one of the most natural and healthful Winter Resorts in America. On our grounds Geraniums, Verbenas, and Callas bloom in the open air all winter; and just above our buildings, on the hill-side, we have an orchard of Orange, Lemon, Olive and Fig-trees.

While the Chief Object of this institution is to afford a Sanitarium for those in need of Hygienic and Surgical Treatment, ample means is provided for the entertainment of boarders and order-loving pleasure seekers. There are walks in the shady groves, drives, a spacious croquet ground, swings, hammocks, etc., etc. We are only twelve miles from the famous petrified forest, to which parties may make a nice trip almost any day. While a "radical table" may be furnished to patients whose ailments require a prescribed diet, we have a "wholesome and liberal table" for such as may desire to spend a few weeks or months in recreation and receive benefit from rest and breathing this mountain air, the evenness and purity of which are unsurpassed.

Before you conclude to go to some other place, where "rare mineral waters" are offered, come and see for yourself this beautiful Resort, with water pure as crystal.

Persons desirous of knowing whether their case is one of probable cure can ascertain by addressing RURAL HEALTH RETREAT. All questions cheerfully answered.

EXPENSES:

Rooms, with Board, Regu ar Treatment,	·	·	·	·	·	·	·	·	·	\$15 to \$20 per Week.
“ “ without Treatment,	·	·	·	·	·	·	·	·	·	9 to 15 “

Specially favorable terms for families, and others, by the month. Some rooms in cottages can be furnished at reduced rates. Office treatment and surgical operations extra.

Persons sending notice previously will be met at the St. Helena Depot by a carriage from the Retreat.

For Further Particulars, address RURAL HEALTH RETREAT,

ST. HELENA, CAL.

PACIFIC HEALTH JOURNAL

AND

Temperance Advocate.

PUBLISHED BI-MONTHLY, BY THE
PACIFIC PRESS PUBLISHING COMPANY,
 OAKLAND, CAL.

32 Pages. Price, Fifty Cents a Year.

Entered at the Post-office in Oakland.

EDITED BY A COMMITTEE.

ONE day of honest work
 Is more than years of idleness.

—Indian Wisdom.

WE are apt, like Nelson, to put the telescope to the blind eye when a signal is flying that we dislike.

OUR blunders mostly come from letting our wishes interpret our duties, or hide from us plain indications of unwelcome tasks.

THE Rural Health Retreat was opened under its present management in May, 1885. Since that time over four hundred patients have had, more or less, the benefits of treatment at the institution.

WHEN Shakespeare apostrophized the "Spirit of Wine," with all his flowing wit and command of language, he paused for an appropriate name, and termed it "Devil." This is a very fitting cognomen for it, as alcohol is but a corruption of the original Arabic *Al ghoul*, the demon.

DR. WILLARD PARKER says: "The average life of temperance people is sixty-four years and two months, while the average life of intemperate people is thirty-five years and six months. Thus the average life of the drinker is but little more than half that of the non-drinker; and yet we are asked to believe that brandy, whisky, gin, and beer are wonderful promoters of health, strength, and life!"

THE late civil war in the United States cost the North \$6,165,237,500. It cost the South \$2,000,000,000, or a total to North and South of \$8,165,237,500. For every one of the twenty-one years since the war, the nation's drink bill has been at least \$600,000,000 a year, or a total of \$12,600,000,000, a sum exceeding by nearly one-half the whole cost of the war. It is claimed that on the battle-fields, and in the prisons, 1,000,000 lives were lost; but in the twenty-one years since the war, at least nine times that number have died in the United States as the victims of strong drink.

THE MUSCULAR SYSTEM.

ALL the motions of the human body are caused by the movement of some of the bones which constitute the frame-work of the system. These can change their position only through the action of other organs that are attached to them, and which by contracting draw the bones after them. The organs which perform this remarkable work are called *muscles*.

The muscles of the body are composed of parallel fibers of a deep red color, and these constitute the lean flesh. They give the body its plump appearance, and comprise the greater portion of the bulk of the body. Any person can examine a piece of boiled beef and see something of the structure of the tendons and fibers of a muscle. The fibers and fibrillæ of a muscle are held together by a delicate web, or sheath, which is perforated with minute tissues or cavities; and this becomes so compact together at the end of the muscles as to form glistening fibers and cords, called tendons, or sinews. By these the muscles are attached to the periosteum, or surface of the bones. A few of the muscles resemble in structure a ribbon; others a cord; others are thin and expanded, so that they resemble a membrane.

There are about twice as many muscles of voluntary motion in the human body as there are bones. These are nearly all arranged in pairs, each side of the body having the same kind. They serve not only as a means of moving the body, but in the limbs they invest and protect the bones and some of the joints. In the trunk they are spread out to inclose cavities, and form a defensive wall capable of yielding to external pressure and returning again to their original position. The red color of the muscle is caused by the presence of the numerous blood-vessels which it contains. The muscles are moved by contracting, which we will illustrate by a piece of rubber. When you stretch the rubber out and then let it go, it contracts; so the muscles have power to lengthen and shorten. It is claimed that muscles are capable of contracting about one-third their length.

Examined under a microscope the fine fibrils of muscles are not as large as a hair; each one is composed of a sheath containing minute particles, shaped like beads placed end to end. When the muscle is in its natural position, these beaded particles have their longest diameter lengthwise of

the fibrils; but when the muscle is contracted, the longest diameters are crosswise. This might be illustrated by placing a piece of dry rope in water. Wetting the rope increases its diameter, but shortens its length.

Just what causes the contraction of a muscle is not so clear to the anatomist. It is supposed to be accomplished by the electric or magnetic fluid that is forced into this substance from the nerve centers of the body. It is certain, however, that a good supply of oxygen and electricity in the blood greatly facilitates the action of the muscles, and it is for this reason that muscular exertion can be continued for a much longer time in the open air than otherwise.

There are two kinds of muscles distinguished by anatomists: *voluntary*, or those of animal life, those that are under the control of the will; and *involuntary*, or those of organic life, such as are used in breathing and digestion. Muscles of animal life are composed of bundles of fibers, and are developed on the external part of the body. They are attached to the bones, and are used in the movements of the trunk and limbs. The muscles of organic life are formed from the internal, or mucous layer, and are situated in the hollow organs composing the respiratory, the digestive, and the circulatory apparatus. These muscles of organic life are flat, and their fibers are held together by a dense form of the same tissue.

Around the fibrillæ of the muscle, but not entering into them, is woven a beautiful network of very fine capillaries, communicating with arteries on the one hand and veins on the other, so that a plentiful supply of blood is constantly poured around the contractile elements of the muscle. Thus its exhausted energies are replaced, and its substance nourished. The veins receive the unappropriated blood, and conduct it back to the heart; and thus a continual stream of fresh arterial blood is poured through all the muscular tissue. By this means the vitality of the muscle is maintained.

One of the peculiarities of the muscles is that all the component parts of a muscle do not contract at once, but one portion of the fibrils contracts, then another, and so on. If the whole muscle contracted at once, its action must necessarily be very short. While the muscle is contracted decomposition is going on, and the blood is shut out

of that portion of the muscle; but as different parts of the fibrils take up the process of contraction, there is a partial building up of the muscular structure from the nutriment of the blood, even while contraction of the other parts is taking place.

Using the muscles increases the flow of the blood through them, and thus the waste, or decomposed particles, are carried off, and nutritive particles are placed in their stead. Plenty of exercise in the open air is imperatively necessary for a healthy condition of the muscles in students, professional men, in-door mechanics, and females. Farmers whose work is in the open air, if not overworked, may derive great benefit from the invigorating air of heaven. After the muscles have been used violently, they should gradually be brought into a state of rest. Sleep is one of nature's grandest restoratives, giving back to the muscle its life and strength.

J. N. L.

MAN AS THE "ALL-DEVOURER."

It is with interest that we read clear and concise statements from the pens of those who have been esteemed the great of past ages setting before mankind that mode of eating, and drinking, and living, best calculated to develop the intellectual, physical, and moral powers of the man, and to place him in a position where he will be rightly related to his God, his fellow-creatures, and even the animal world around him.

The great Plutarch, author of the "Lives," who was born about A. D. 40, and whose lectures in Rome were attended by such men as Tacitus, Pliny the younger, Quintilian, and others, in several of his works denounces the gormandizing habits of the people of the age in which he lived.

In speaking of their searching earth, sea, and air to satiate their perverted appetites, he calls man the "all-devourer."

In his "Symposiacs," discussing "whether the sea or land affords the better food," in summing up he says: "We can claim no great right over land animals which are nourished with the same food, inspire the same air, wash in and drink the same water that we do ourselves; and when they are slaughtered they make us ashamed of our work by their terrible cries; and then, again, by living among us, they arrive at some degree of familiarity and intimacy with us. But sea creatures are altogether strangers to us, and are brought up, as it

were, in another world. Neither does their voice, look, or any service they have done us plead for their life. This kind of animals are of no use at all to us, nor is there any obligation upon us that we should love them. The element we inhabit is a hell to them, and as soon as ever they enter upon it they die."

It seems that, later in life, he advanced closer and closer to the non-flesh diet. In his "Rules for the Preservation of Health," he says: "Ill digestion is most to be feared after flesh eating, for it very soon clogs us, and leaves ill consequences behind it. It would be best to accustom one's self *to not eat flesh at all*, for the earth affords plenty enough of things fit not only for nourishment, but for delight and enjoyment; some of which you may eat without much preparation, and others you may make pleasant by adding various other things."

In that remarkable essay entitled, "That the Lower Animals Reason," there is a maintaining of the superiority of the non-human races in regard to their many habits. For an example of his reasoning we refer to what he says of eating and drinking: "Being thus wicked and incontinent in inordinate desires, it is no less easy to be proved that men are more intemperate than other animals, even in those things which are necessary, *e. g.*, in eating and drinking, the pleasures of which we [the non-human races] always enjoy with some benefit to ourselves. But you, pursuing the pleasures of eating and drinking beyond the satisfaction of nature, are furnished with many and lingering diseases, which, arising from the single fountain of superfluous gormandizing, fill your bodies with all manner of wind and vapors not easy for purgation to expel. In the first place, all species of the lower animals, according to kind, feed upon one sort of food which is proper to their natures, some upon grass, some upon roots, and others upon fruits. Neither do they rob the weaker of their nourishment. But man, such is his voracity, *falls upon all* to satisfy the pleasure of his appetite, tries all things, tastes all things; and, as if he were yet to seek what was the most proper diet and most agreeable to his nature, among all animals is the only *all-devourer*. He makes use of flesh *not out of want and necessity*, seeing that he has the liberty to make his choice of herbs and fruits, the plenty of which is inexhaustible; but out of luxury and being cloyed with necessaries, he seeks after impure and inconvenient diet, pur-

chased by the slaughter of living beings; by this showing himself more cruel than the most savage of wild beasts. For blood, murder, and flesh are proper to nourish the kite, the wolf, and the serpent; *to men they are superfluous viands*. The lower animals abstain from most of other kinds and are at enmity with only a few, and that only compelled by necessities of hunger; but neither fish, nor fowl, nor anything that lives upon the land, escapes your tables, though they bear the name of humane and hospitable."

In reprobating the harshness and inhumanity of Cato the Censor, Plutarch said: "For my part, I cannot but charge his using his servants like so many horses and oxen, or turning them off or selling them when grown old, to the account of a mean and ungenerous spirit, which thinks that the sole tie between man and man is interest or necessity. But goodness moves in a larger sphere than justice. The obligations of law and equity reach only to mankind, but kindness and beneficence should be extended to beings of every species. And these always flow from the breast of a well-natured man, as streams that flow from the living fountain.

"A good man will take care of his horses and dogs not only while they are young, but when old and past service. Thus the people of Athens, when they had finished the temple of Hecatompedon, set at liberty the lower animals that had been chiefly employed in that work, suffering them to pasture at large, free from any further service. . . . We certainly ought not to treat living beings like shoes or household goods, which, when worn-out with use, we then throw away; and *were it only to learn benevolence to human kind*, we should be compassionate to other beings. For my own part, I would not sell even an old ox that had labored for me; much less would I remove, for the sake of a little money, a man grown old in my service, from his accustomed place, for to him, poor man, it would be as bad as banishment, since he could be of no more use to the buyer than to the seller. But Cato, as if he took pride in these things, tells us that, when consul, he left his war-horse in Spain, to save the public the charge of his freight. Whether such things as these are instances of greatness or littleness of soul, let the reader judge for himself."

How will the sentiment of the pagan humanitarian compare with the usage of dumb animals in Christian countries?

SECOND-HAND AIR.

BREATH is life. At least the breath is the ostensible sign of the union of spirit and body. With the breath life departs. Added breath gives added life. The power of breathing, or the capacity of the lungs, measures health, strength, longevity, and power of endurance.

Granted that the lungs are doing full duty, *what* are you breathing? the pure oxygen-laden atmosphere so abundant everywhere, or air poisonous with foul breaths, impure odors, or noxious gases?

The lungs of an adult inspire twenty-two cubic inches with each breath. A slight calculation only will reveal how soon one must breathe *second-hand air* if denied access to a fresh supply. How we recoil, and justly, too, at the thought of using even a drinking glass or a towel after another. Cast-off clothing brings to the mind visions of filth, parasites, and contagious diseases. Even the outer habiliments of valued friends are worn reluctantly by sensitive people.

How much more revolting to take into the lungs, the most vital and sensitive organs, air which has been used by the smoker or drunkard; by one afflicted with catarrh, consumption, or scrofula. Such second-hand air is repulsive, and may contain germs of disease, while the absence of oxygen and the presence of carbonic acid gas render it positively injurious.

To conserve heat and yet provide pure air is yet one of the unsolved problems. A lack of oxygen taxes to the utmost the vitality of attendants upon our elegant churches and theaters. Our public conveyances are filled with air not merely second-hand, but hundred-hand. Our luxurious sleepers are whitened sepulchers. Our living and sleeping-rooms are built in reference to the demands of comfort and health, except in regard to the one universal need of fresh air. Indeed, the majority of modern dwellings are sealed habitations. From the weather-strips and other means used to prevent the ingress and egress of air, one would judge the human family to be a kind of perishable fruit, requiring patent hermetical sealing to prevent decay.

For stove-heated homes, a special warning must be given. As the blasts and blizzards of winter are upon us, if life and health are valued, some effectual mode of introducing pure air into dwellings must be sought. The simplest is to raise or

lower a window just sufficiently to allow a current between the two sashes. Especially should the sleeping-room have a constant supply of pure air. Two or three times a day open doors and windows so as to allow the escape of every particle of second-hand air. The loss of heat will be more than compensated in the power to resist colds and acute attacks.

A false idea currently prevalent, is that cold air, fresh air, and drafts cause colds and influenzas. He who is sensitive to drafts, who chills at sight of open door or window, is nearly always one who is striving to live on second-hand air. This produces an inflamed condition of the system, and the life principle is enervated, the power of resistance gone.

It does not require so large an amount of fuel to raise pure air to a given temperature as to raise impure air. But a higher temperature is needed to give a sensation of warmth in a close room than in one that is well aired. Every heating apparatus should be in itself a ventilator. The open grate gives simple, practical, and satisfactory results, and is an economical investment, considered from the standpoint of health. Partial ventilation is secured by connecting the apparatus of the indoor water-closet with the kitchen chimney, thus causing the constant current of warm air to carry off offensive gases.

The prevalent fear of night air is fallacious. Confined and deodorized night air is more to be dreaded than that which comes fresh and breezy from the starlit heavens. Sleeping or waking, fresh air is necessary to existence; it is essentially part of life.—*The Household*.

EATING FOR STRENGTH.

“Blessed art thou, O land, when thy king is the son of nobles, and thy princes eat in due season, for strength, and not for drunkenness!” Eccl. 10: 17.

THIS is a time of increasing inquiry as to what is the most proper diet to impart strength to the body. As a blessing is pronounced on those who eat for strength, it must be possible to ascertain, by careful inquiry, what is best calculated to impart strength. Is it a diet composed of the fruits, grains, and products of the vegetable kingdom, or a mixed diet, with a large preponderance of flesh and its accompaniment—fat?

We quote from an article in the *Dietetic Reformer*,

of July, 1886, some terse words of J. A. Parker, of Isleworth, England, in reply to Dr. Tweedie. The doctor states that "some Hindoo navvies, who were employed in making a railway tunnel, found it impossible to sustain their strength on vegetable diet, and being released by their caste, took to meat, with remarkably beneficial results."

In reply, Mr. Parker says "Now this, to me, is an excessively vague statement. Of what caste the Hindoo navvies were—whether Ragput, Sikh, or Bengali, is not stated; nor is their diet, nor the particular railway, nor the locality, nor the time. But even assuming that the alleged fact is well founded, what does it prove? That the races who subsist principally on vegetable diet cannot compare in strength with the English railway navy? Why, sir, such an assumption is preposterous in the face of an abundance of well-accredited facts. Take, for instance, the Ooriah caste—principally palanquin bearers in Bengal. There are probably 50,000 of these men, either acting as house bearers, or plying for hire in the Calcutta streets. The palanquin itself, with its mattress, pole, drawer, and iron work, I should say, at a rough guess, cannot weigh less than four hundred pounds, and yet four Ooriah bearers will carry, week after week, a Baboo, or a European of fifteen or sixteen stone [105 or 112 pounds] about the city all day, if need be, and think nothing of it. This, too, in the hot weather, when a European dare not expose his body to the rays of a vertical sun, and when the thermometer stands at 100° in the shade. I affirm that this is a feat of strength and endurance that puts your English meat-eating navy completely out of court, and yet the Ooriah never touches meat; he is purely a vegetable, fruit, and rice feeder. I could multiply instances of a similar tenor fifty-fold did space permit."

Mr. Parker closes his letter with "a fact mentioned by John Sinclair, which is within my own knowledge, and will be well in the remembrance of some Anglo-Indians still living, who were in India in the good old days of John Company, prior to the era of railroads, steamships, and telegraph. 'There is a caste of Hindoos,' says Sir John Sinclair, 'called on the western side of India, Pattamars, whose sole occupation is to convey letters and dispatches by land; and they perform journeys almost incredible in the time allotted—as in the small amount of food they subsist on during their journey. They will travel on

foot sixty-two miles per day, for twenty-five days on a stretch—from Calcutta to Bombay. They are generally tall, being from five feet ten inches to six feet high. They subsist on boiled rice."

These facts above quoted certainly show great power of endurance by those who ate no flesh. Let no one conclude from this, however, that we consider that rice alone is a suitable article of food for a continuous diet. As Mr. Parker says in another part of the same article: "India is . . . a congeries of nations, consisting, as far as British subjects are concerned, of 141,000,000 Hindoos, 18,000,000 aboriginal races, 41,000,000 Mohammedans, 1,250,000 Sikhs, and 3,000,000 of Jains and Buddhists. And when it is added that her indigenous cereals, vegetables, and fruits exhibit a wonderful prolificness and variety, and that the food of her various peoples has been more or less determined or modified by the peculiar products of the areas to which the former stand related, it will be seen, I think, how misleading must be a sweeping generalization like that [of Dr. Tweedie] in which the whole people are put down as 'rice eaters.'"

There is another point to which I would call attention. People, like Dr. Tweedie, refer to the English navvies to prove that a diet of flesh meat is superior to one composed of that growing from the soil in the shape of fruits, grains, and vegetables. I affirm that not one-tenth of the diet of the average navy is flesh meat. After five years' residence in Southern England, where I had abundant opportunity to know the dietetic habits of the navvies and other laboring classes, I would state that, in a large majority of cases, they only have meat at their Sunday dinner, and some of the poorer classes substitute 6d. worth of fish for the flesh meat at that. How does a diet of which nine-tenths is from the vegetable kingdom prove the superiority of a flesh over a vegetable diet?

In conclusion, I will paraphrase Solomon's statement in my own words. Blessed art thou when thou eatest, in due season, *for strength*, those things which the Creator designated as the best food for the man of his creation, namely, "Every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed." J. N. L.

CLOTHE the body comfortably; eat good food; let alone quack medicines.

EATING AND DRINKING.*

Most people eat too fast. Recently I observed, at lunch houses in San Francisco, that business men would hastily eat their dinners and luncheons, call "check," rushing off in a hurry with the last morsel either in their throat or fingers. Could they turn their vision within and see how the stomach, that misused organ, wriggles and contorts before it can accommodate itself to the food thrown into it in this manner, they certainly would pursue a different course. Men and women ought not to stumble upon apoplexy at mid-age in this way. Apoplectic fits are caused by eating too much and too fast. There is more indigestion, dyspepsia, and constipation, from too fast and overeating than from most other causes. Rather not eat than eat too fast. Better wait until you have more time to eat.

Excessive exercise should not be taken immediately after eating; because it calls the blood from the stomach, and since the gastric juice is secreted from the blood, if the blood be taken away there can be no secretion in sufficient quantity, and indigestion is the result.

We teach the value of personal cleanliness, yet we are not so far along in sanitary science as was Moses. While we teach to avoid all putrescent and loathsome matter from entering our systems, we do not take the precaution which Moses did. We do not avoid the blood of the flesh. We go so far as to eat blood puddings, and feed the hog foul offal and blood, and after he has been fattened on this revolting diet eat him, and then wonder why we are sick! Better ask why we are not sick. By this mode of living we introduce into our systems *entozoa*,† unclean, putrescent, and loathsome materials, and then pay the price in shortened lives and a painful career of waning vigor.

Again, our climate is so bracing and favorable to physical exercise that we are apt to work ourselves down before we know it. This produces excessive appetite, which is gratified by overfeeding on flesh, and using strong drink, beer, etc., with the idea that this enables us to do more work than a more natural diet. This is not so, for it too often breaks down the constitution in the prime of life and leaves a cup of misery to be drunk at leisure.

*Parlor talk to the patients of Rural Health Retreat, by W. P. Burke, M. D.

†*Entozoa*—animals adapted to living within other animals; worms.

We find that people grow "nervous" who live on the flesh of warm-blooded animals. It is highly stimulating, and is more exciting than nourishing to the nervous system, and is, therefore, a cause of nervous diseases. The meat-eater lives at high-pressure and does not live up to the level of his food, for the reason he cannot take in oxygen enough to satisfy the exigencies of his mode of living. Just here follow the ills of most highly civilized and luxurious meat-eating classes. There can be no doubt that the free use of flesh food is a great evil.

Tea and coffee, used as beverages, give nervousness and peevishness. The whole digestive apparatus of the coffee drinker is chronically deranged, which reacts on the brain, and, as a result, we get fretful and ugly moods. Ladies are too often the victims of tea, and are snappish. The petulant humor of the Chinese is doubtless due to his tea-drinking habit.

The use of beer makes men brutes. Wine impassions; whisky infuriates, and finally downs us. The use of tea, coffee, flesh-meats, spices, peppers, and alcoholic drinks totally subjugates the moral man. It is the physical effect giving expression in the moral.

Milk is a semi-fluid food, and as a rule should be used hot, not boiled. The cow must have *good food. Keep her clean.* Milk her *twice* a day. Cleanse all vessels into which the milk is to be poured; even scald them well after cleansing them. Keep the milk in a clean place, away from all foul vapors, because it will, like water, absorb them, being almost eighty-five per cent water. On a milk diet alone, for the first two weeks sleepiness occurs. For this reason we use it largely in the cure of morphine, chloral, and bromide habits. Milk causes uric acid to disappear from the system, so we use it in the cure of rheumatism. We find creatine, and creatinine also fail from the urine by its use. Urinary pigment (the coloring matter of the urine) almost disappears in its use; we use milk, therefore, in fevers where the urine is highly colored. Urine is greatly increased in quantity by using milk alone, so we find it a valuable agent in scanty urine from any cause.

Milk gives a sweetish taste in the mouth, with a baby's breath and coated tongue, which will pass away in one or two weeks, and no particular attention need be paid to these symptoms. We boil milk used in case of diarrhea because it is then

specially constipating; but milk alone for a week or more, even unboiled, will often give constipation. This may generally be avoided by putting one-fourth water. We may dilute it with rice or barley water, possibly with lime water from oyster shells. The little balls found in constipation are due to the great acidity of the gastric juice, which causes such a solid coagulation of the milk that it will not re-dissolve, and will either produce constipation or diarrhea, but by the use of the above agents, or a few spoonfuls of baked white flour put in the milk for a short time, we avoid these two extremes. This is very important. We are able to see from a diet of milk alone that great alterations in assimilation and destruction of tissue occur.

Wheat, oats, and the allied seed foods, as beans, peas, lentils, and rice, are first-class foods. Next come the juicy fruits, and then in order come the plant foods, commonly called vegetables, and last of all we would mention animal foods.

Baker's bread often has alum, borax, soap, potatoes, and an excess of salt and other things not needed, and becomes a fruitful source of constipation. The "sticks"* are probably as good a form as any in which wheat can be eaten. Wheat, oats, barley, corn, rice, and rye grains are good. Mushes may be eaten if a crust of bread is taken with them, and not gulped down at once. Fermented bread must not be eaten hot, unless toasted, nor fresh, but unfermented bread should be served comfortably warm and let alone when cold. With the grains take the various fruits at pleasure: apples, pears, peaches, grapes, cherries, currants, plums, prunes, strawberries, raspberries, blackberries, whortleberries, figs, dates, oranges, lemons, bananas, tomatoes, etc.

We will now give a model table which we will call

TABLE NO. 1.

Wheat prepared in "sticks," pilot bread, stale light graham bread in the center of the table. Around these place fruits of different kinds; then another and greater circle of barley, corn, oats, rice, and rye. Some would place beans, peas, and lentils on this table, but my advice is to keep them off and make another.

TABLE NO. 2.

Beans, peas, lentils, and honey (when good) if desired, with wheat and other grains and potatoes.

*"Sticks"—a name given to rolls prepared from flour and water.

Josephus says the builders of the pyramids lived principally on lentils.

Here are the highest products of the vegetable kingdom, which is the source of all nutrition. As to the minerals, nature has distributed them through these products in proper proportions for the service of man. Here is nothing but fruits and seeds, the *ideal diet* which should always be kept in view. This diet will not give you any appetite for alcohol, opium, or tobacco. If you are slaves to these things now, this diet will aid you to break away from them. We have another.

TABLE NO. 3.

Milk and grains, *fresh* butter if desired. You cannot have sugar and fruit mixed in this meal. On this table sugar is strictly forbidden.

TABLE NO. 4.

Beets, cantaloupes, carrots, cauliflower, melons, squashes, turnips, parsnips, potatoes, pumpkins, grains, and eggs if necessary. Eggs, melons, and cantaloupes may be added to table No. 1, but eggs do not properly belong to it. Table No. 4, as a rule, is hardly worth the cooking.

We might mention another table. You may number it, composed of flesh meats, and various kinds of fishes with grains.

Cream is the most salutary of animal fats.

Cheese is clogging and should be discarded.

Water is the universal solvent, and should be regularly used on an empty stomach.

The use of condiments is a confession of poor cooking.

Sugar is sufficiently abundant in fruits, and ordinary sugar should be sparingly eaten, if at all.

Vinegar is an insult to the stomach, and cannot be tolerated. Let its use be replaced with lemons and limes.

Our experience teaches us that in considering diet for the sick it must be suited to their peculiar conditions. While this is true, all should educate themselves toward the *ideal diet* as fast as possible.

CUSTOMER—"What do you charge for arsenic?"

DRUG CLERK—"Arsenic! what do you want it for?"

CUSTOMER—"I am a French candy manufacturer."

DRUG CLERK (suspicions allayed)—"Oh, I beg pardon, sir; I thought perhaps you wanted to take it yourself."

DISEASE AND ITS CAUSES.

BY MRS. E. G. WHITE.

SHUNNING physical labor has proved a great injury to many. The do-nothing system is a dangerous one. The idea of the necessity for amusement, in order to occupy the mind, is a fallacy. When certain amusements are substituted for light, useful employments, there is a decided mistake. Some amusements, so-called, excite the brain much more than useful employment requiring light, physical labor, would.

Physical exercise and labor combined have a happy influence upon the mind, strengthen the muscles, improve the circulation, and give the invalid the satisfaction of knowing his own power of endurance; whereas, if he be restricted from physical labor and healthful exercise, his attention is turned to himself. He is in constant danger of thinking himself worse than he really is, and of having established within him a diseased imagination which causes him to continually fear that he is overtaxing his powers of endurance. As a general thing if he should engage in some well-directed labor, using his strength, and not abusing it, he would find that physical exercise would prove a more powerful and effective agent in his recovery than even the water treatment he is receiving.

The inactivity of the mental and physical powers, as far as useful labor is concerned, is that which keeps many invalids in a condition of feebleness, which they feel powerless to rise above. It also gives them a greater opportunity to indulge in impure imagination, which indulgence has brought many of them where they are in point of feebleness. They are told they have expended too much vitality in hard labor, when, in nine cases out of ten, the labor they performed was the only redeeming thing in their lives, and has been the means of saving them from utter ruin. While their minds were thus engaged, they could not have as favorable an opportunity to debase their bodies and complete the work of destroying themselves. To have all such persons cease to labor with brain and muscle, is to give them an ample opportunity to be taken captive by the temptations of Satan.

Close application to severe labor is injurious to the growing frames of the young; but where hundreds have broken down their constitutions by overwork alone, inactivity, overeating, and delicate idleness have sown the seeds of disease in the

systems of thousands that are hurrying to swift and sure decay.

Why the youth have so little strength of brain and muscle is because they do so little in the line of useful labor. "Behold, this was the iniquity of thy sister Sodom, pride, fullness of bread, and abundance of idleness was in her and in her daughters, neither did she strengthen the hand of the poor and needy. And they were haughty and committed abomination before me; therefore I took them away as I saw good." Eze. 16: 49, 50.

There are but few of the youth of this degenerate age who can even endure the study necessary to obtain a common education. Why is this? Why do the children complain of dizziness, headache, bleeding at the nose, palpitation, and a sense of lassitude and general weakness? Should this be attributed mainly to their close study? Fond and indulgent parents will sympathize with their children because they fancy their lessons are too great a task, and that their close application to study is ruining their health. True, it is not advisable to crowd the minds of the young with too many and too difficult studies. But, parents, have you looked no deeper into this matter than merely to adopt the idea suggested by your children? Have you not given too ready credence to the apparent reason for their indisposition? It becomes parents and guardians to look beneath the surface for the cause of this evil.

In ninety-nine cases out of one hundred the cause searched out and revealed to you would open your understanding to see that it was not the taxation of study alone that was doing the work of injury to your children, but their own wrong habits were sapping the brain and the entire body of its vital energy. The nervous system has become shattered by being often excited, and thus has been laid the foundation for premature and certain decay. Solitary vice is killing thousands and tens of thousands.

Children should have occupation for their time. Proper mental labor and physical outdoor exercise will not break the constitution of your boys. Useful labor and an acquaintance with the mysteries of house-work will be beneficial to your girls, and some outdoor employment is positively necessary to their constitution and health. Children should be taught to labor. Industry is the greatest blessing that men, women, and children can have.

Parents have erred in the education of their

children. They have been too indulgent. They have favored them and excused them from labor, until with some of them it is positively distasteful. Inactivity, lack of well-regulated employment, has injured them greatly. Temptations are on every side, ready to ruin the youth for this world and the next. The path of obedience is the only path of safety.

Parents have been blind to the power the enemy is having over their children. Household labor, even to weariness, would not have hurt them one-fiftieth part as much as indolent habits have. They would have escaped many dangers, had they been instructed at an earlier period to occupy their time in useful labor. They would not have contracted such a restless disposition for change and for society. They would have escaped many temptations to indulge in vanity and to engage in unprofitable amusements, light reading, idle talking, and nonsense. Their time would have passed more to their satisfaction, and without so great temptation to seek the society of the opposite sex, and to excuse themselves in an evil way. Vanity and affectation, uselessness and positive sin, have been the result of this indolence.

WHAT TO DO WITH DAUGHTERS.

GIVE them a good, substantial, common education.

Teach them to cook a good meal of victuals.

Teach them how to darn stockings, and sew on buttons.

Teach them how to make shirts.

Teach them how to make bread.

Teach them all the mysteries of the kitchen, the dining-room, and the parlor.

Teach them that the more one lives within his income the more he will save.

Teach them that the further one lives beyond his income the nearer he gets to the poor-house.

Teach them to wear calico dresses—and to do it like queens

Teach them that a rosy romp is worth fifty delicate consumptives.

Teach them to wear thick, warm shoes.

Teach them to foot up store bills.

Teach them that God made them in his own image, and that no amount of tight-lacing will improve the model.

Teach them, daily, hard, practical common sense.

Teach them self-reliance.

Teach them that a good, steady mechanic, without a cent, is worth a dozen oily-pated loafers in broadcloth.

Teach them not to have anything to do with intemperate and dissolute young men.

Teach them accomplishments—music, painting, drawing—if you have the time and money to do it with.

Teach them not to paint and powder.

Teach them to say, No, and stick to it; Yes, and stick to it.

Teach them to regard the morals, not the money of their beaus.

Teach them to attend to the essential requisites of a useful life—truth, honesty, uprightness, then at a suitable time to marry.

Rely upon it, that upon your teaching depends, in a great measure, the weal or woe of their after life.—*Sel.*

"CATCHING" AND RESISTING COLDS.

If the system has been overheated or overburdened, the skin and mucous membrane rendered sensitive by poisoned air and lack of bathing, upon being exposed to a draft, or upon first emerging into cold air, a *resisting thought* will surely ward off the condition called *cold*. The following course pursued will aid the thought: With closed mouth inhale deeply the fresh air and hold the breath for a moment. By doing this repeatedly the sensation of chilliness will disappear and reaction take place. Faithfully followed, this will protect the most delicate from the usual result. If, however, the cold has come unawares, if you have not learned and practiced the preventive, the attack can be arrested by a similar method and quite as easily. When the sneezing first begins and the cold creeps up and down the spine, with a sense of aching and languor, go to the door and with closed lips take a deep, full breath. Hold it to count at least fifty. While doing so, say to yourself: "I cannot have this cold. I cannot afford it, and I am not going to have it. I have other business to attend to."

Follow this up for five or ten minutes. You will often master the attack with the first attempt. Should the sneezing recur after two or three hours, repeat the prescription. Avoid *fear* of the attack. Do not allow yourself to think or say: "Now, I

am going to have a cold. I shall be down sick, my plans will all be spoiled, etc."

Rather convince yourself of the opposite. Hundreds have learned to ward off a cold in this way. It is more sure than any other known therapeutic agency, and is within the reach of all.—*SeL.*

WHAT TO DO IN SICKNESS.

A PERSON who is ailing should be kept in bed in a well-ventilated room where plenty of fresh air is admitted from open windows. If in winter, the temperature can be regulated by artificial heat from an open fire, or otherwise, as most convenient, and the window lowered from the top. In summer, the blinds or awnings should be arranged to exclude the direct rays of the sun. The patient should be encouraged to sleep as much as possible, and never should be awakened under any pretense. If there are children in the house, they should be kept out of the room. When there is headache or pain in the eyes, reading must be prohibited and very few visitors admitted. A warm sponge bath should be given in the morning, and a very light breakfast—oatmeal gruel, bread and milk, a cup of cocoa, with a soda biscuit. If there is no improvement as the day goes on, the food must be very simple and given in small quantities. The difficulty may arise from an over-burdened stomach which requires rest before it can recover tone. When there is nausea, fasting for some hours should be tried, and then a few spoonfuls of cold milk and lime water given cautiously. When the head is hot, relief can be obtained by wringing a strip of linen out of ice water and laying a single thickness on the forehead. In this case the feet will probably be cold, and should have bottles of hot water wrapped in flannel put to them. If the throat is sore, a strip of flannel may be wrung out of cold water and bound around it, covered with a cotton bandage. If there is only slight inflammation, this will relieve it. When there is constipation, a simple enema of warm water may be given as safer than any purgative medicine. No one should be allowed to sleep in the same bed with a person who is even slightly indisposed. The invalid will rest more quietly alone, and it is not fair to expose any one to the chance of possible infection.

If there is no improvement in a few days, a physician should be sent for, as the case is beyond home treatment. It is better to call in a doctor

ten times unnecessarily than once to delay summoning him until it is too late for him to be of use. In China a physician's fee is ten cents a visit, and his patients act upon the principle of no cure, no pay. Medical advice is more expensive with us, and cost deters some prudent people from having it for what they consider insufficient causes. The prescription of a competent, trustworthy doctor in the early stages of a disease, may be the means of preventing a serious illness, and is worth far more than is ever asked for it. When a physician is called in, his directions should be implicitly followed. There is not the slightest use in intrusting the case to him and then acting upon one's own judgment whether to carry out his orders or not. It is unfair both to him and to the sufferer, as the success of the treatment depends upon its being faithfully administered. Every doctor can call to mind scores of cases in which recovery has been retarded, or rendered impossible, by disobedience to his orders.—*Elizabeth Robinson Scovil, in Good Housekeeping.*

BABIES—THEIR FOOD AND SLEEP.

GIVE a baby plenty of food of the proper quality; plenty of sleep at regular intervals; plenty of flannel of suitable length, and your baby should be healthy and jolly. Babies become as much addicted to habits as do old folks; and if you pat them on their backs and sing lullabies in their ears every time they roll over in the cradle, or give a little grunt indicative of restlessness, be sure they will always expect such services of you, and will demand it accordingly.

Most mothers have great times putting babies to sleep; and if you should be writing an article for a health magazine down-stairs, you would imagine that a decidedly unhealthy one had exploded up-stairs, were you to judge from the racket produced in soothing baby into his evening sleep. We believe, because we have seen it demonstrated again and again, that no such measure is necessary, but that babies can be taught habits quite as easily as children of larger growth. They should be fed at regular hours, and not every time they wake, or fret and cry. Babies cry quite as often from being overfed as from hunger; and many times the derangement of the bowels, colic, and other unpleasant symptoms common to infants, are directly attributable to the habit of cramming them with food,

simply as a "soothing process," or for the reason that the mother does not know what else to do to produce peace and quietness in the household. Babies' stomachs are even more sensitive than grown people's, and can digest but a certain amount of food, while the surplus lodged there from the stuffing process must pass into the bowels in the form of undigested material, there to give rise to the various pains and aches with which mothers are so familiar. Therefore, use common sense in the feeding of your baby, and do not force food into its little stomach for every complaint it happens to make.

Baby should have its sleeping hours, which should be regulated according to its age. Quite young babies should sleep nearly all the while—that is their chief design. Those who have attained one year of age can be taught to have their sleeping and feeding hours, and will indicate them as regularly as your best time-piece. Should the baby sleep all night, he should have a long nap in the middle of the day, and then be kept awake until six or seven o'clock in the evening, when he should be placed in his crib, and left to go to sleep without rocking, trotting, walking, swinging, or other hullabaloo. He may rebel against such treatment a few times; but he will very soon learn that no attention will be paid to his outcries, and will fall asleep in spite of himself. Let this plan be persisted in by mothers before they have established bad habits in their babies; good ones are quite as easily obtained, when the mother will be surprised to find how little trouble a baby really is in the house when properly managed.—*Sel.*

THE BEST PHYSICIANS.

ALL physicians give fewer drugs than formerly, and have greater faith in the curative powers of nature and good nursing. A French physician gave good advice to his medical friends.

As the celebrated physician Desmoulins lay on his death-bed he was visited by the most distinguished medical men of Paris, as well as other prominent citizens of the metropolis. Great were the lamentations of all at the loss to be sustained by the profession, in the death of one they regarded as its greatest ornament. But Desmoulins assured his brother practitioners he left behind him three physicians much greater than himself. Each of the doctors, hoping his own name would be called,

inquired anxiously who was sufficiently illustrious to surpass the immortal Desmoulins. With great distinctness the dying man answered: "Their names are Water, Exercise, and Diet. Call in the services of the first freely, of the second regularly, and of the third moderately. Follow this advice and you may be well without my aid. Living I could do nothing without them, and dying I shall not be missed, if you make friends of these, my faithful coadjutors."—*Youth's Companion.*

If physicians have lost their faith in drugs, why not abandon them, and tell the deluded people frankly that all the curative powers are to be found in nature; and that the sick must depend wholly upon God and nature, with good nursing?—*R. F. Cottrell.*

LANCET'S PRESCRIPTION.

DR. LANCET was a blunt old fellow, but an excellent physician, and he never drove around an obstacle when there was need of going through it.

Matilda Jane had just come home from boarding-school and was not feeling well. She was troubled with dizziness and with loss of appetite. In this condition she called in Dr. Lancet, and asked him if he could help her.

"I have been trying to doctor myself," she said languidly, and with a faint, fluttering smile, as the old physician felt her pulse.

"What have you been doing?"

"Well—I have taken Limpshin's sarsaparilla, and Knave's anodyne, and Hummer's pills, and Numhead's balsam, and Fooler's tonic, and the Nonesuch Expectorating Cordial, and Dr. Flathead's universal vivifying, recuperator, and—and—"

"Goodness mercy!" gasped the doctor; "and haven't any of these things given you relief?"

"No," replied the pining fair one; "they have not helped me at all. O dear doctor, what can I take that will be sure to do me good?"

"What can you take?" repeated the old man, moving back and eying her from head to foot. "Take!" he exclaimed, with a flash from beneath his shaggy brows; "my dear girl, take off your corsets!"—*New York Ledger.*

A JAPANESE with an income of \$1,000 a year is considered a wealthy man, and a farmer who has \$100 laid by is ranked among the capitalists of his district. In all the empire, out of a population of 37,000,000, there are less than 10,000 paupers.

Temperance.

ECHO AND THE TOPER.

A TOPER once returning from potations,
 Imbibed with freedom at the Dog and Gun—
 Where jovial comrades on the laws of nations
 Allowed their thirsty tongues to glibly run—
 Was passing through a valley where 'twas said,
 Though he had never put it to the test,
 That echo answered whene'er questioned.
 Quoth he, "I'll see whether 'tis truth or jest."
 He paused a moment, hiccoughed, scratched his head,
 His trembling fingers passed across his vest
 To feel that he was there and not in bed,
 And then and there the Echo thus addressed:—
 "The place we left, say, Echo, dost thou know?"
 Echo—"No."
 "The public house where folks like thee don't go."
 Echo—"Don't go."
 "'Tis after ten, my mates still at their glasses."
 Echo—"Asses."
 "The drink they love before all else is wine."
 Echo—"Swine."
 "Good liquor I enjoy in any shape."
 Echo—"Ape."
 "I wonder what's the end of all this brewing."
 Echo—"Ruin."
 "Would'st have me take the pledge, all drink resign?"
 Echo—"Sign."
 "Methinks I could not live without such stuff."
 Echo—"Such stuff."
 "You may be right, at any rate I'll try it."
 Echo—"Try it."
 He signed the pledge, and very soon he found
 That, like the eagle, he'd renewed his youth;
 He keeps it still, and furthermore has owned
 That what the Echo said was but the truth.
 —*The Good Templar's Watchword.*

WHAT SHALL WE DO FOR CHRISTOPHER?

WHAT shall we do with him? This is a question which presses for answer just now, and you, Mr. Editor, must help us to an answer soon. Christopher is our boy, and if you cannot help us in respect to him, what are you good for, Mr. Editor?

The trouble is this: There is a band numbering three hundred, formed in our town, of men who were well-nigh ruined by drink. They all started as moderate drinkers. They had no thought of ever becoming otherwise than moderate drinkers. They cannot tell now when they became otherwise than moderate drinkers. Nor can their acquaintances tell. They passed insensibly through moderate drinking until they found themselves in drunkenness. And all along they believed in moderate drinking, and in those who advocated moderate drinking, and were associated with such. But having gone thus by insensible degrees down the stream until they have found themselves in the

rapids, they see no way but to keep out of the stream altogether. They have banded themselves together not to drink intoxicants, and to help each other not to drink. Their case, many of them artisans of all classes, and professional men, most of them having families sadly stricken by their drinking, appeals to the tender sympathy of all Christian people. But here is a great difficulty. The saloons are still open. These three hundred men are surrounded by the great army of moderate drinkers, both those who think themselves so, and those who are so. This band with good intentions now are tempted constantly to think that they might safely form the company of those who have not yet fallen into drunkenness—those who praise and practice moderate drinking. Then there is this great army itself of moderate drinkers, all of whom preach, and most of whom think, that they practice moderate drinking, and none of whom expect to go down the stream into drunkenness. For the sake of these two classes, the most of the Christian people of this town have decided themselves to join together; also to touch, taste, or handle no intoxicants.

They do this in the spirit of Paul, because, so far as they can see, moderate drinking of intoxicants, as an example, if not otherwise, is very apt to cause their weak brother to offend. And they are combining their influence and effort to persuade all the army of moderate drinkers, and especially the young men, to take this same position as right and safe for themselves, and best for the good of others.

Now, here is the trouble with our Christopher. He has just come home, and says that all the young men of his set say that this movement is "fanatical;" that "the statement that moderate drinking leads to drunkenness, is atrocious;" that the only difficulty with the drunkards is that they did not have self-control enough to remain moderate drinkers; and that just what is needed is to set the example constantly of the temperate and moderate use of wine, beer, etc., and to teach that moderate use constantly.

Now, Christopher is no sneak. He does not see why this moderate drinking should retire into privacy. He thinks that just where the public—the cold, and the hungry, and the weary—are furnished with entertainment at the restaurant, the coffee-house, and the saloon, the example of the temperate user is needed. Why should not two

young men sip their wine and beer together in the restaurant or the saloon, practice self-control, and illustrate, right in the presence of all, the beauties of moderation? Why not? We tell him that this moderate drinking was preached in this country seventy-five years ago, but in practice it was found to eventuate in drunkenness, extensively, and that this has been the history of moderate drinking; that it eventuated in, and was lost in drunkenness. But he insists that it is absurd to say that moderate drinking leads to drunkenness; the drinking has ceased to be moderate long before the drunkenness ensues, and he glibly quotes good Dr. Crosby to this effect. And here is the source of the present dilemma with our boy and his set. They, in common with many of us, value and admire the able chancellor. They have heard us who know him, praise him. They are prepared to hear favorably what he says. But just now copies of a lecture by him are being circulated assiduously through the saloons of this town to endeavor to thwart this movement, which has already diminished their patronage, and just now his argument is in the mouth of every one there and thereabouts. We are sorry for this, for we know that this is not what the good chancellor intended. And we are sure if he could see the effects right here among the young men, he would be sorry, too. But we are most sorry on account of our Christopher and his companions. What shall we do for Christopher?—*E. L. Hurd, Pres. of Blackburn University, in Ex. and Chronicle.*

DR. MATHEWS, of Rhode Island, in the *Journal of Heredity*, a medical periodical, referring to alcoholism and insanity, says: "In one Swedish insane asylum it was found that fifty per cent of the patients had been addicted to the use of rum." After the removal of the heavy tax on alcoholic drinks in Norway, the percentage of increase during eleven years, was: In mania, forty-one per cent; melancholia, sixty-nine per cent; dementia, twenty-five per cent, and idiocy, 150 per cent. Of the last, sixty per cent were the children of drunken fathers and mothers, thus showing that the sins of the fathers are visited upon the children.

We should not admit the popular reasoning as applicable here, that the abuse of a thing is no argument against its use. All use of ardent spirits as a beverage is an abuse. They are mischievous under all circumstances.—*Dr. Samuel Emlin.*

FACTS CONCERNING ALCOHOL.

ALCOHOL is the one evil genius, whether in wine, or ale, or whisky, and is killing the race of men.—*Dr. Willard Parker.*

Under the names of rum, brandy, gin, whisky, wine, cider, beer, and porter, alcohol has become the bane of the Christian World.—*Dr. Erasmus Darwin, 1800.*

One-third of the students in the universities of Berlin and Halle are once a week what you would call drunk.—*Prof. W. F. Wessen, after seven years' residence in Germany, 1867.*

I have known many persons destroyed by ardent spirits, who were never completely intoxicated during the whole course of their lives.—*Dr. Benjamin Rush, about 1780.*

I have treated nearly seven thousand cases of inebriety, and eight-tenths of that number originated from wine and malt liquors.—*Albert Day, M. D., Superintendent of Washingtonian Home at Boston.*

Judging from my observation, lager beer is quite as likely to generate murder and crime as the stronger liquors. The one drunk on beer is really more dangerous than the one drunk on wine or whisky.—*Dr. M. L. Holbrook.*

Alongside of all the teetotalism that exists, there is an appalling amount of tipping that does not distinctly intoxicate, but saturates the principal organs, and destroys them more quickly than would an occasional debauch.—*Editor London Lancet, December, 1884.*

Don't take your daily wine under any pretext of its doing you good. Take it frankly as a luxury—one that must be paid for, by some persons very lightly, by some at a high price, but always to be paid for. And mostly some loss of health, or of mental power, or of calmness of temper, or of judgment, is the price.—*Sir Henry Thompson, one of the most distinguished of living surgeons.*

I detect alcohol in cider generally when it is twenty-four hours old—sooner still, when the apples are much decayed. Often fermentation begins about as soon as the juice is expressed, both hot weather and advanced decay hastening the process; even when the apples are wholly sound, fermentation usually begins within twenty-four hours after the juice is expressed.—*A. M. Hays, M. D., State Assayer of Massachusetts.*

THE PINT OF ALE.

A MANCHESTER calico printer was, on his wedding day, asked by his wife to allow her two half pints of ale a day as her share of extra comfort. He made the bargain but not cheerfully, for though a drinker himself (fancying, no doubt, that he could not well do without it) he would have preferred a perfectly sober wife. They both worked hard. John loved his wife, but he could not break away from his old associations at the ale-house, and when not in the factory or at his meals, he was with his boon companions. His wife made the small allowance meet her housekeeping expenses, keeping her cottage neat and tidy, and he could not complain that she insisted upon her daily pint of ale, while he, very likely, drank two or three quarts. They had been married a year, and the morning of their wedding anniversary, John looked with real pride upon the neat and comely person of his wife, and, with a touch of remorse in his look and tone, he said:—

"Mary, we've had no holiday since we were wed, an' only that I haven't a penny in the world, we'd take a jaunt to the village, and see the mother."

"Would thee like to go, John?" she asked. There was a tear with her smile, for it touched her heart to hear him speak tenderly as in the old times. "If thee'd like to go, John, I'll stand treat."

"Thou stand treat, Mary! Hast got a fortin' left thee?"

"Nay, but I've got the pint of ale," said she.

"Got what, wife?"

"The pint of ale," she repeated.

Thereupon she went to the hearth, and from beneath one of the stone flags drew forth a stocking from which she poured upon the table the sum of 365 threepence (\$21.90), exclaiming:—

"See, John, thee can have the holiday."

"What is this?" he asked in amaze.

"It is my daily pint of ale, John."

He was conscience-stricken as well as amazed and charmed. "Mary, hasn't thee had thy share? Then I'll have no more from this day."

And he was as good as his word. They had their holiday with the old mother; and Mary's capital, saved from "the pint of ale," was the seed from which, as the years rolled on, grew shop, factory, warehouse, country seat, and carriage—with health, happiness, peace, and honor.—*Sel.*

DOES ALCOHOL SUPPLY FORCE?

MANY years ago, Prof. Liebig announced the theory that alcohol was "respiratory food." By the term respiratory food he meant that it underwent combustion in the body and thus produced heat and developed force. All the moderate drinkers and toppers rejoiced at this supposed discovery, and consoled themselves with the idea that taking a whisky punch was only a pleasant way of eating; and that a man when "gloriously drunk," was merely developing a tremendous amount of force. But scientists ascertained, after a time, that Prof. Liebig, to use the language of Prof. Davy, F. R. S., "adduced no physiological evidence in support of his assertion." Prof. Liebig observed that his neighbors and countrymen loved beer, wine, and brandy; he loved the beverages himself. He observed, also, that nearly every nation employed some kind of alcoholic drink. The very natural conclusion in his mind was, alcohol is used in the body for some good purpose; and his theory was merely an attempt to explain such a use.

If Liebig's theory were true, then alcohol would disappear in the body, and only its ashes, the products of its combustion, would appear. Unfortunately for the theory, MM. Lallemand, Perrin, and Duroy, three French chemists, by careful experiments proved that, when taken into the body, alcohol *passed out again unchanged*. Hence it was not burned; and hence it did not produce either heat or force. Dr. Edward Smith, F. R. S., repeated their experiments and confirmed their results. The fact that alcohol is unchanged in the body, was still further confirmed by the observation that none of the products of the combustion of alcohol, its ashes, were to be found in the blood or the excretions.

The inevitable conclusion from these experiments is that alcohol does not contribute to the production of either heat or force.

Says Dr. E. Smith, M. D., F. R. S., "Its direct action is to lessen nervous force."

"Is 'vital force' augmented by it, or not? All the facts seem to answer in the negative."—*British Medical Journal*.

Says Dr. T. K. Chambers, "Alcohol is primarily and essentially a lessener of the power of the nervous system."

"As their general action is quickly to reduce animal heat, I cannot see how they can supply

animal force. I see clearly how they reduce animal power, and can show a reason for using them to stop physical pain; but that they give strength, that they supply material for the construction of fine tissues, or throw force into tissues supplied by other material, *must be an error, as solemn as it is widespread.* "To resort for force to alcohol is to my mind equivalent to the act of searching for the sun in subterranean gloom until all is night."—*Dr. B. W. Richardson.*

CURE FOR WEAK EYES.

AN elderly gentleman, accustomed to "indulge," entered the room of a certain tavern where sat a grave friend by the fire. Lifting a pair of green spectacles upon his forehead, rubbing his inflamed eyes, and calling for hot brandy and water, he complained to his friend that his eyes were getting weaker, and that even spectacles didn't seem to do them any good.

"I'll tell thee, friend," replied the Quaker, "what I think. If thee was to wear thy spectacles over thy *mouth* for a few months, thine eyes would get well again." The sentiments expressed by the Quaker's words are equally applicable to two-thirds of the ailments at the present day. Were it not that men eat and drink to tickle the palate, disease would hardly be known.

LUTHER ON LAGER BEER.

IN Luther's "Table Talk" we find the following opinion on lager beer: "The man who first brewed beer was a pest to Germany. Food must be dear in our land, for the horses eat up all the oats, and peasants and citizens drink up all the barley in the form of beer. I have survived the end of genuine beer, for it has now become small beer in every sense, and I have prayed to God that he might destroy the whole beer-brewing business, and the first brewer I have often cursed. There is enough barley destroyed in the breweries to feed all Germany."

THE *Norfolk Journal* said: "There is a mule owned by a Mrs. Colton, a lady living within a mile or two of Portsmouth, and driven to market every day, that has been an inveterate chewer of tobacco for many years. Whenever the mule becomes obstinate, it is only necessary to give him a chew, when he becomes perfectly kind and gentle. The lady purchases tobacco for him regularly, and always keeps it on hand."

EFFECTS OF TEA.

IN a longer or shorter time after taking the beverage (from a few minutes to two or three hours), an uncomfortable feeling arises in the stomach—a craving, sinking emptiness—which soon acquires a degree of intensity that is almost insupportable. The hunger-like gnawing and craving are described as being to the last degree painful.—*John Cole, M. R. C. S., London.*

TAKE A CIGAR.

"TAKE a cigar," is a pleasant invitation to almost every man. This politeness, however, is very expensive. The smoker of cigars who does not spend more than one dollar a week for "the weed" is a very rare specimen of a man. Let us consider what that amounts to. In six months, \$26. Bring that in as capital every six months, at seven per cent per annum, compound interest, and in fifty years it will be \$22,423.98. That much for one man. Now figure on (say) a million men who indulge in cigars, and see what an immense amount of men's possible profits ends in smoke.—*Alta.*

PLEASE STOP MY—WHAT?

"TIMES are hard, money is scarce, business is dull, retrenchment is duty—please stop my—" Whisky? "Oh! no; times are not hard enough for that yet. But there is something that costs me a large amount of money every year, which I wish to save. Please stop my—" Tobacco, cigars, and snuff? "No, no, not these; but I must retrench somewhere; please stop my—" Ribbons, jewels, ornaments, and trinkets? "Not at all; pride must be fostered, if times are ever so hard; but I believe I can see a way to effect quite a saving in another direction—please stop my—" Tea, coffee, and needless unhealthful luxuries? "No, no, no, not these; I cannot think of such a sacrifice; I must think of something else. Ah! I have it now—my paper. It costs five cents a month; sixty cents a year—I must save that. Please stop my paper! that will carry me through the panic easily. I believe in retrenchment and economy especially in brains."—*The Christian.*

A MAN recently died at Big Meadows, Nevada, from blood poisoning, caused by an abscess on an aching tooth.

Miscellaneous.

WATER.

WATER'S wonders who has told?
 Naught in nature I behold
 Half so Protean in its forms—
 Each peculiar in its charms.
 Lovely in the placid lake,
 Grand where awful surges break.
 In the ocean it may be
 Type of vast eternity;
 In the river's ceaseless flow,
 Time's perpetual efflux show.
 Through the world's unceasing round
 Ever active it is found;
 Rudest, strongest in its wrath,
 Gentlest in its noiseless path.
 Rocks are powerless to withstand
 Water with its glacial hand,
 Smallest lichen on the stone
 Through the water's aid has grown;
 Tiniest midges o'er it fly,
 Draw from water life's supply.
 In the spring, when flowerets burst
 From the dark and silent earth,
 Each with water slakes his thirst—
 Each to water owes its birth;
 And in winter when the sky
 Pours down countless graceful showers,
 All the snow-storm's vast supply
 Comes from water's magic powers.
 Through the cloud of summer rain
 Rises still the sevenfold arch;
 Morn and eve, with watery train
 Of glory, crown the day king's march.
 Every form that water takes
 Some new sense of duty wakes,
 Since the day when o'er its face
 Godhead moved and left his trace.

—Sel.

FORESTS AS SANITARY AGENTS.

IN the progress of the increase of population in a country, more especially under those circumstances which, taken in the aggregate, we call civilization, there must be more or less interference with natural surface topography. Man is a great disturber of things, and, unfortunately, the changes which he brings about are not always for the better. Among these changes, some of the most important, both in their immediate and their remote results, are those connected with the destruction of the forests, with which large portions of the earth, now comparatively or entirely bare of trees, were once covered. As population increases, the need of food supply requires that forests shall give way for agricultural purposes, and a certain amount of destruction is therefore inevitable; but no one who is familiar with the process of stripping the hills and valleys of their natural growth of trees, which has been going on with an accelerating ratio

in this country during the present century, can doubt that much of this has been unnecessary; that we have been prodigally wasting our inheritance, and that it is high time that steps were taken, not only to prevent further unnecessary destruction, but also, by systematic planting, to repair some of the damage which has been already done.

The presence of forests modifies the climate in their immediate vicinity, tending to prevent extremes of temperature and often of moisture, and in this manner they may affect the character and severity of the diseases of a particular locality. They protect from violent winds and, to some extent, from malarial influences.

Their influence upon temperature is to prevent wide variations between day and night, such as occur upon desert and arid plain; they store heat during the day and radiate it slowly at night.

But it is not only to localities in their own immediate vicinity that forests are important. Their value is perhaps even greater to distant regions, the water supply of which they regulate and control. This regulation is effected, not so much by any great influence exerted by them upon the total amount of rain-fall in their vicinity, or by any effect which they produce upon the total annual evaporation from the surface which they cover, as it is by the fact that they tend to form, by their roots, the plants which flourish in their shade, and the collection of dead leaves, etc., a sort of huge sponge which retains for a time the water falling upon it, and afterward gives it off gradually, supplying springs and streams. In this way they tend to prevent great variations in the size of streams flowing from them, and thus to avert floods and droughts; they are the regulators of the water supply of distant places lying at lower levels in the drainage areas in which they flourish.

In view of these facts it is evidently important that those parts of the country where culture is either impossible or unprofitable, shall be devoted to trees, that a watchful care should be exercised over these regions to prevent unnecessary and useless destruction of the timber by fires, etc., and that the systematic planting of trees to replace those taken for manufacturing purposes should be encouraged as far as possible. This planting of trees must in fact become in this country a commercial necessity at no very distant day to supply the lumber needed for our houses, furniture, etc.—*Sanitary Engineer.*

WHAT CHEWING GUM DOES.

IN the thousand and one shops sprinkled through the narrow streets of this city, where youngsters buy lollipops, where boys invest their savings in base-balls, and cigarettes at a penny apiece, and where the young ladies of tenements purchase the latest yellow-bound literature, there is always for sale a substance known as black chewing-gum. Whether it is done up in spangled tinfoil, or resplendent in gaudy tissue paper, or decorated with parti-colored ribbon, it is still black chewing-gum. It is generally made out of refuse gum arabic—stuff that cannot be used in the apothecary shops, and is flavored variously with the cheapest of cheap extracts, licorice, wintergreen, peppermint, or, more usually, one of those poisonous flavors that are compounded from acids. The manufacturers cut a huge slab of the gum into quadrangular pieces about the size of a domino. In cold weather the bits are friable and break easily; when it is warm, they have the consistence of

A PIECE OF INDIA RUBBER.

It is surprising how much of this black chewing-gum is used. A little girl gets hold of a penny somehow, and she cannot get to a shop quick enough to buy some of it. She chews and chews on it, her jaws working as regularly and vigorously as those of a fourth of July orator. If she has a bosom friend, she may bite off a bit of gum and set the other girl to chewing. If she wishes to show particular favor to her five-year-old sweetheart, she gives him a morsel. The young ladies who devour the yellow-bound novels devour gum, too. They place a fragment of it between the hindermost of their pearly teeth, and while their souls go out to Elvira in her prison, or their hearts flutter in sympathy with Edgar de Montmorenci in his attempt to carry off the heiress, they don't forget to chew that gum. Young beaus, the leaders in tenement-house society, chew it, too; for the men who make it advertise that it perfumes the breath and lends the mouth the odor of a new-mown field, also that it aids digestion and clears the voice and is a harmless and beautiful substitute for tobacco; that it is, in fact, a penny-bit of ambrosial food for the gods.

It isn't. The physicians of Amsterdam, New York, have just declared in solemn conclave that the practice of chewing this black gum is most harmful and pernicious. They have traced directly

to it innumerable cases of sore mouth and sore throat that they have treated of late. Their brethren of the medical profession in New York agree with them, and not only condemn black chewing-gum, but all chewing-gum of whatever color.

The physician who has charge of the throat dispensary in one of the largest hospitals in New York, said: "Day after day, patients, nearly all girls between eight and eighteen years of age, come in here and complain that it hurts them where they swallow, or else that their mouths sting when they drink anything warm. On examining their throats, I find the delicate mucous membrane marked here and there with little inflamed patches. In nine cases out of ten it is caused by chewing gum."

"Why is gum hurtful?"

"The flavoring is usually poisonous," replied the doctor, "and by its constant presence, in however small quantity, it sets up an inflammation. But the habit is otherwise pernicious. The untiring motion of a gum-chewer's jaws provokes a superfluous flow of saliva—just as if there was always a pinch of salt on the tongue—and wears out the saliva glands. Gum-chewing retards digestion. If a woman fills her stomach with water or saliva, she drowns the gastric juices; also the interminable attrition wears out the teeth, and foreign flavor by degrees renders the breath more and more disagreeable. The practice is bad in every way."—*New York Star*.

POWER OF THE SUN.

OF the enormous power of the sun's rays few readers have any adequate conception, but as the time appears now to be approaching when they will be capable of being made directly available in place of coal and steam for the production of power and light, the question is beginning to assume something more than a theoretical interest. The French electrician, M. Deprez, in a recent work, makes some calculations which illustrate the enormous fund of force which the sun's heat is capable of supplying. France, he says, possesses an area of about half a million square kilometers [204,197 square miles].

In one hour the sun's heat will absorb or dry up 2 pounds of water per square meter [or about 10½ square feet], and so, on a fine summer day, the quantity of water the sun is capable of absorbing in one hour over the entire area of France is not less than a

thousand milliards, or a million millions [or one trillion] pounds of avoirdupois. If we had to raise this quantity of water to boiling point in boilers, we should require no less than 60,000,000 tons of coal, which is one-fifth of the entire annual production of coal throughout the world. The sun's rays falling on France would be able to turn so much water into steam as would keep going 80,000,000 locomotive engines of collectively 40 milliards [40 billions] of horse-power.—*Builder*.

WHAT IS REAL FOOD?

WE ought to learn, as a first truth, the truth that the oftener we go to the vegetable world for our food the oftener we also go to the first, and therefore to the cheapest, source of supply. The commonly accepted notion that when we eat animal flesh we are eating food at its prime source, cannot be too speedily dissipated or too speedily replaced by the knowledge that there is no primitive form of food—albuminous, starchy, osseous—in the animal world itself; and that all the processes of catching an inferior animal, of breeding it, rearing it, keeping it, killing it, dressing and selling it, mean no more nor less than additional expenditure throughout for bringing into what we have been taught to consider an acceptable form of food the veritable food which the animal itself found, without any such preparation, in the vegetable world. With the light of these natural facts filling the national mind, the tendencies of all advanced scholars in thrift should be to find out plans for feeding all the community direct from the lap of the earth; to endeavor to discover how the fruits of the earth may be immediately utilized as food; and to impress science into our service, so that she in her laboratories may prepare the choicest viands, minus the necessity of making a lower animal the living laboratory for the sake of gratifying what is just a little higher than a cannibal propensity.—*B. W. Richardson*.

DECAY OF THE TEETH.

THERE is said to be a remarkable change in the condition of the teeth among the negroes at the South since the abolition of slavery. This is attributed largely to changes in food, whereby more fine wheat flour and more sweets are eaten than formerly. In addition to the injurious effects

upon one's teeth from improper food, the *Popular Science News* adds: "Another important cause of dental decay is the undue demand upon nervous energy, probably often combined with insufficient or improper aliment. Recent observations have shown that carious teeth are common in modern schools in proportion to the educational standard adopted, and that the children in the higher grades have (out of all proportion to their more advanced age) worse teeth than those below them; while caries has not unfrequently been observed to begin suddenly, or to extend rapidly, during the period of examination strain. The greater work imposed upon the nervous centers is supposed to divert a portion of the phosphates and other mineral constituents which ought to be devoted to the nourishment and growth of the teeth.

Hygienic reforms promise to accomplish much for us and our descendants, but fashion and folly are doing even more in other directions. Work for the dentists is rapidly increasing, and that branch of the medical profession is increasing in a tenfold more rapid ratio than any other.—*Sel*.

CHILDREN AND TOBACCO.

HOW MANY fathers are conscious of the injury done to the health and lives of their children, by freely and habitually smoking in their presence? Do not call this question a whimsical one. We have in the London *Pall Mall Gazette* the experience of the mother of a little girl not two years old, who, when born, was a healthy child. As soon as she was old enough to be less in the nursery and more with her father, who was a smoker, she began to grow ill. The mother, noticing that she had no appetite and that her stomach and digestion were altogether out of order, took her away to a country town, where in one week she was like another child, for she ate, drank, laughed, played, slept, and kept her mother enlarging her garments.

But in a week after her return home, all the old symptoms reappeared. It was thought that the neighborhood did not agree with her, but, having caught a severe cold and being confined to the nursery, she began to speedily recover, and it was decided that it could not be the neighborhood.

When allowed to go down-stairs again, however, there was a return of all the bad symptoms, and for nearly three months, the mother said, "I racked my brains about drains, wall papers, milk, water,

saucepan, any and everything, in vain—the child slowly wasted.”

Finally the father was called by business from home, and during his absence of a month the child grew well and full of childish spirit. Then the mother became aware of the slow poison her darling child was receiving from the self-indulgence of her doting father.

Babyhood says: “Out of respect to the babies, we wish we had the power to prohibit smoking in every nursery, or elsewhere in the immediate presence of very little children. Now that the excursion season is near, there will soon be seen the usual cigar in the mouth of the ‘gentleman’ carrying the baby to the boat or train, or in the carriage, or along the beach, while the little one keeps turning its head this way and that, occasionally whimpering, making every one wonder what’s the matter.”
—*Light of Home.*

WE have heard a tobacco user claim that the weed was food and drink to him, but never thoroughly believed him until a British parliamentary report on adulteration set forth the following schedule: “Sugar, alum, lime, flour, or meat, rhubarb leaves, saltpeter, fuller’s earth, starch, malt, cummin, chromate of lead, peat, moss, molasses, burdock leaves, lamp-black, gum, red dye, a black dye composed of vegetables, red licorice, scraps of newspapers, cinnamon stick, cabbage leaves, and straw-brown paper.”

This is convincing. Not only is it food and drink, but it is also house and land, paint shop and literature, with drugs, condiments, and chemicals thrown in *ad lib.*—*Boston Transcript.*

PRESERVING AGE.—Grief anticipates age. Dwelling on the inevitable past, forming vain hypotheses as to what might have been if this or that had or had not been, or acquiring a craze for recounting what has occurred—these acts do more to harm future health and effort than many things connected with real calamity. Occupation and new pursuits are the best preventives for mental shock and bereavement.—*B. W. Richardson.*

RURAL HEALTH RETREAT.

UPWARDS of four hundred patients who have had the benefits of this institution during the last eighteen months, and have returned to their homes, are helping us much. They are walking advertisements.

SPURIOUS SUGAR.

IT has long been known to chemists that a variety of sugar could be manufactured from common starch, sawdust, cotton, or woody fiber of any kind, by treating it with sulphuric acid. The sugar thus produced is called grape sugar, and two and a half pounds of it are required to equal one of the cane-sugar in sweetness.

For some years this kind of sugar has been used in the manufacture of candy and of alcoholic liquors. It is also manufactured in Germany for commercial purposes, and more recently a number of manufactories have been established in this country for the purpose of imitating and adulterating the various forms of cane sugar. Several such establishments are located in New York and New Orleans, and one in Madison, Indiana. The greatest fraud seems to be in the article known as golden drip syrup. This syrup is very superior in appearance, but often contains not the slightest trace of cane-sugar, being made entirely from sawdust, paper, rags, starch, and other similar trash, treated with sulphuric acid. This syrup can always be distinguished from the genuine by its reaction with an infusion of tannin. As tea leaves contain a large amount of tannin, a very convenient test is to put a small quantity of it into a little tea. If this syrup is of the kind described, the liquid will become black upon being stirred.—*Herald of Health.*

LIE DOWN AND REST.

DR. HALL says that the best medicine in the world, more efficient than all the potations of the *materia medica*, is warmth, rest, cleanliness, and pure air. Some people make it a virtue to brave disease, “to keep up” as long as they can move a foot or wiggle a finger, and it sometimes succeeds; but in others the powers of life are thereby so completely exhausted that the system has lost all ability to recuperate, and slow and typhoid fever sets in and carries the patient to a premature grave.

Whenever walking or work is an effort, a warm bed and a cold room are the very first indispensables to a sure and speedy recovery. Instinct leads all beasts and birds to quietude and rest the very moment disease or wounds assail them.—*Sel.*

THREE thousand cases of alcoholism are treated yearly in the hospitals.—*Dr. Guttstadt, Berlin.*

Household.

COURAGE.

"LET the road be rough and dreary,
And its end far out of sight,
Foot it bravely, strong or weary,
Trust in God and do the right."

NEW ENGLAND HOME LIFE ABOUT 1820.

FROM "REMINISCENCES" OF THE EARLY LIFE OF
MARY NEAL.

"THE religion that had been established by law was Calvinistic Congregational, then and there termed 'Orthodox.' The minister was settled during the pleasure of his people, which generally was that he should preach to them during his lifetime. A small farm was given him by the town, a substantial parsonage built, and most ministers had sufficient knowledge of farming to make their land yield at least a partial support to their families, farm labor being easily obtained, and sometimes performed by young men who wished to study for the ministry. The minister of our village was also physician and school-master. I was his pupil when six years old, and the tall, grave man was very awful to me. In the large, ugly meeting-house, a pew in the corner of the gallery was set apart for the free negroes, who never presumed to mingle with the congregation.

"A white person of common sense who could not read, write, and cipher might have been looked for in vain through the length and breadth of New England, a much larger area than old England. Poverty was unknown, except as arising from vicious habits or bereavements. I remember a widow who was helped by neighbors and friends till her boys were old enough to work for her. Poor-law relief would have been considered a cruel disgrace. There were drunken men who were repudiated by their families, who wandered about, getting cider and cold victuals at farm-houses. I remember three of these tramps, 'travelers' we called them, all belonging to good families, who had themselves been superior men. There were also two men who had been in the State prison, one for theft, and the other for counterfeiting."

"Every person in our town did some kind of serviceable work, except the drunkard and the counterfeiter. Even the thief worked on his

father's farm, and he and the counterfeiter wrought in the State prison, the first four, and the other seven years. No, this is too sweeping. Here is the exception that is said to prove the rule: There was one young man, very rich, as we counted riches, and very fine looking, who was what was termed very 'smart,' or, as the English say, 'very clever.' He drove fast horses, played cards for money, drank spirits to intoxication, and frequented shooting matches, where the prizes were ducks, turkeys, geese, and, on rare occasions, a fowling piece. He was idle, disrespected, jolly, but unhappy. I remember how we were all shocked one morning by hearing that this young man had hanged himself with the halter of his favorite horse. . . . Some said, 'What a dreadful end!' Others thought the end was not in the hanging; and others, whose minds did not stray beyond the present and actual, remarked, 'Wal, he was of no use.' I do not remember any one who followed his example, either in idleness or suicide.

"A young man who was destined to be our physician, taught our school for four winters in succession, and he always boarded at my father's, and had his chair and a part of our study table in the great kitchen, or living room, which never seemed too full, though there might be a half-dozen kinds of industry going on at the same time. Four spinning wheels, one for cotton, one for linen, another for tow, and a fourth for wool, might be seen, with a girl busily spinning at each.

"The people whose homely life I have tried to describe, prided themselves on not being superstitious. They were Puritan Protestants, and had got so far from primitive Christianity that I did not know at what time of the year Christmas came until I was twenty years old. The more intelligent did not believe in witches; but the lower stratum still had a lingering faith in fortune-telling, witchcraft, and some even in ghosts."

I presume the above very accurately applied, sixty years ago, to other parts of New England, and even to other States than that in which Mary Neal lived. Let it be borne in mind that much of the steady habits herein described was due to the fact that all were usefully employed in some labor. It was just as true then as now that "idleness is the mother of mischief."

GLASS kept wet with camphor dissolved in spirits of turpentine may be cut with metallic tools.

THE USE OF ESSENTIAL NUTRIENTS.

It is vital to the continuance of good health and the general welfare of our people, that the true essentials of foods and drinks be generally understood. The question of drinks is already scientifically settled, and pure water is acknowledged to be the natural and best liquid to cleanse the tissues of the body, slake thirst, and furnish the "solids" of the body with the indispensable moisture so necessary to health, strength, beauty, and easy movements. Sweet wines, as the sweet wines of grapes, apples, and other fruits, contain both food and drink elements, but are largely water. Against the temperate use of sweet wines, those preserved without fermentation, there never can be reasonable objection.

It is the fermentation and the use of foreign, hurtful ingredients that condemn the use of wines, as these mixtures are falsely called. The wines allowed and commended in our Bible, were these: natural, pure, and preserved wines, not the distillations or the abominable mixtures of our day.

In foods the essential articles are the grains, properly ground (not bolted), and healthfully made into bread and other preparations, without the use of poisonous "baking powders," or other mineral and adulterated "yeasts" and "raisings."

Oils are essentials in foods, such as cotton seed oil, olive oil, the fat of lambs, and other clean creatures, not the fat of swine, the unclean! Vegetables are helpful as foods, but too much starchy substance, either from potatoes or fine flour, are the sure producers of kidney disease. The terrible prevalence of Bright's disease of the kidneys is due largely to the excess of starch in our foods, as well as to poisons in strong drinks. Foods must receive attention with reformers equally with drinks.
—Mrs. P. M. Marston, in *Union Signal*.

THAT EXPENSE BOOK.

THE story has been told of a young girl who kept her house accounts so well that, on her father's becoming bankrupt, his creditors gave her a piano in acknowledgment of her painstaking accuracy. Since then many people have kept accounts and many people have been ruined, whilst probably few, if any, creditors have been so generous. Still, the moral holds good, and in every house, accounts should be regarded as necessities of economy, nay, even of comfort. Without

them it is next to impossible to discover how money has been spent, or to so proportion the expenditure on different items as to obtain the greatest comfort at the least cost.

Petty trifles tempt unwary housekeepers to spend on their purchase the money that should have paid the weekly bills, or have been laid aside for servant's wages. "Next week I shall be able to put all right," she says; but "next week" never comes, and the little deficiency quickly grows into a big one, and first one, then another, is left unpaid, till butcher's and grocer's books are all in arrears. Honestly kept accounts must be a check on this. By their aid the tiny leak can be discovered before it attains any magnitude. If the housekeeping account-book is balanced every Saturday, each item carefully considered, unpaid accounts receiving especial attention, serious difficulties can always be avoided, and, if extra expenditures have been incurred, the fact of its acknowledgment will often produce a corresponding self-denial.—*Housekeeper*.

IMPROVEMENTS AT CRYSTAL SPRINGS.

THE improvements at the Retreat in the shape of addition made to its bath-rooms and other facilities, are now about completed. At an extra meeting of the stockholders, held November 12, a move was made to change our charter so as to permit us to bring a larger supply of water from Big Canyon, a mile and a half above the institution. The charter rights desired, and called for, have been granted, and the Board of Directors has decided to put in, immediately, an elevator to be run by water. They have also purchased a forty-horsepower boiler, and are making preparations to heat the bath and treatment rooms, and in fact most of the main rooms of the building, by steam. This will give a more even temperature to rooms than could be obtained by stove heat.

The directors have also contracted for a patent iron oven, with revolving shelves, with capacity sufficient to bake a barrel of flour at one baking. They are also negotiating for a cracker machine. As we now have a first-class baker connected with the Retreat, we shall soon be able to furnish our friends with a superior article of graham and oatmeal crackers, free from lard and other deleterious substances. There are many improvements being continually made which add to the comfort and convenience of patients.

SHORTENING.

WHEN we tell people that neither pork nor lard are fit articles of food, that cooked butter is indigestible, and thus injurious to the stomach, that suets are quite liable to be diseased, as excessive fat in man or beast is really adispose matter instead of a healthful secretion, we are asked, "How shall we make our pastry? We know cream is good if we could get it, but we cannot obtain it in sufficient quantities, and if we could, it is rather expensive."

We are happy to state to our readers that there is an article, *cotton seed oil*, a substance expressed from the cotton seed. It is purely a vegetable preparation, and is used and recommended by all our health institutions. It is exempt from the objections raised against lard, suet, and butter.

The managers of the Rural Health Retreat are negotiating with parties in New Orleans for the purchase of fresh-pressed oil. This will be brought over in casks, and can be reshipped, in five-gallon tin cans, to different parts of the State. The price we shall be able to decide upon on receiving the first lot of oil. If one party does not wish five gallons, two parties can club together, and divide the oil on receiving it. Or more can combine and order a case of ten gallons. It will be comparatively less freight if ten gallons are sent by one consignment. Let parties wishing the oil write at once to RURAL HEALTH RETREAT, St. Helena, California. We hope to have the oil ready for shipment by January 1, 1887.

SAFETY POCKET,

—FOR—

PENS AND PENCILS.

Attached by pin to coat or vest.

Price, with 2 pockets, 15 cents.

Price, with 3 pockets, 20 cents.

Who has not lost pencils and pens? Who is not in constant fear of losing his invaluable stylographic or fountain pen? Here is the preventive—simple, efficient and cheap.

The SAFETY POCKET is usually worn with bottom in the vest pocket, and top fastened with the safety pin, not shown in the cut. The leather, by its elasticity, holds securely any size of pen or pencil. After a trial, no student, clerk, merchant, or lawyer will do without one.

Mailed to any address on receipt of price.

Address RURAL HEALTH RETREAT, St. Helena, Cal.



HEALTH GOODS.

AT THE RURAL HEALTH RETREAT there are kept constantly on hand the following valuable articles, which may be obtained, post-paid, at the prices affixed:—

HYGIENIC CORSET	\$2 00
PEERLESS "	2 50
EMANCIPATION WAIST	1 75
FORM (BOSOM)	50
DR. GRAY'S ABDOMINAL SUPPORTER (H. S.) . . .	2 50
DR. GRAY'S " " (Extra Large)	3 00
NO. 2 HYGIENIC SUPPORTER	3 00
SCHOOL-GIRL SHOULDER BRACES	50
SKIRT SUPPORTERS	35
" " " Silk Stripe)	50
SHOULDER BRACE SKIRT SUPPORTER (Ladies') . .	60
" " " " (Misses')	50
" " " " AND HOSE SUPPORTER	1 00
SKIRT AND HOSE SUPPORTER	75
NO. 90 HOSE SUPPORTER, Daisy Clasp (Ladies') . .	30
NO. 80 " " " " (Misses')	25
NO. 70 " " " " (Children's)	20
NO. 60 " " " " "	15
NO. 17 SHOULDER BRACES, Button (Ladies') . . .	50
NO. 18 " " Daisy (Misses')	40
NO. 19 " " " (Children's)	35
NO. 7 HOSE SUPPORTER, Shoulder B, Button (Ladies')	60
NO. 8 " " " " (Misses')	50
NO. 9 " " " " (Child'n's)	40
NO. 10 " " " " "	35
CORSET HOSE SUPPORTERS (especially for Hygienic Corset)	35
HYGIENIC SAFETY SUPPORTER (monthly bandage) . .	50
SKIRT-SUPPORTING HOOKS, double set of four . . .	25
" " SWIVEL, set of four	20
CORSET LACES (Elastic)	10
CLASPS FOR SUPPORTERS	5
COMBINATION SUIT PATTERNS	40

Ladies who use these Health Goods will realize many times their money's worth in increased health and freedom of action.

In addition to the Health Goods, the Retreat can furnish the following, which should be in every household:—

FOUNTAIN SYRINGE, Glass Tubes	{	No. 1. \$2 00
		No. 2. 2 25
		No. 3. 2 75
FOUNTAIN SYRINGE, Metal Tubes	{	No. 1. 2 25
		No. 2. 2 50
		No. 3. 3 00
FOUNTAIN SYRINGE, Hard Rubber Tubes	{	No. 1. 2 50
		No. 2. 3 00
		No. 3. 3 25
SYPHON SYRINGE, Glass Tubes		3 50
RUBBER WATER BOTTLES, 1 quart		2 25
" " " 2 quarts		2 50
" " " 3 quarts		2 75
" " " 4 quarts		3 00
SANITARY DETECTOR		2 00

Also a Full Line of Health Publications.

Address, RURAL HEALTH RETREAT,
ST. HELENA, CAL.

SPECIAL attention is called to the "Practical Manual of Health and Temperance," containing recipes for hygienic cooking, for sale by the PACIFIC PRESS, Oakland, Cal.

HINTS.

MOTHS do not eat through paper.

HOT wood ashes applied to a stove when it is cold will remove grease.

MORTAR and paint may be removed from window glass with hot, sharp vinegar.

COOKING utensils, after being washed, should be rinsed in clean water and wiped out with a clean, dry cloth.

WATER that has stood in a lead pipe overnight is unfit for cooking or drinking purposes. Let it run for two or three minutes before being used.

A VIGOROUS application of the flesh-brush just before going to bed tends to keep the skin in a healthy condition and is also conducive to sleep.

LENTIL SOUP.—Two pounds split lentils, one-half pound onions sliced, one pound carrots, one-fourth pound turnips, two pounds potatoes. Boil well, and season to taste; when sufficiently boiled, press the whole through a fine sieve. Make it thin as an ordinary soup.

A VERY complete filling for open cracks in floors may be made by thoroughly soaking newspapers in paste made of one pound of flour, three quarts of water, and a tablespoonful of alum thoroughly boiled and mixed. Make the final mixture about as thick as putty, and it will harden like *papier-mache*.

GRANOLA.

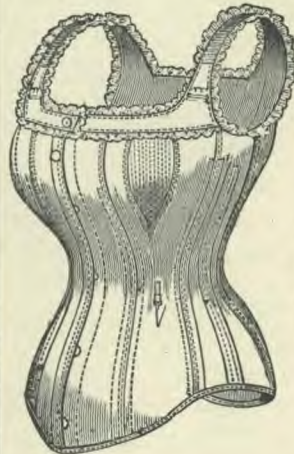
WHAT is it? It is a food prepared from graham flour, oatmeal, and corn meal. It is first baked, then slowly roasted, and then ground. It is a superior article of food for invalids, especially those troubled with indigestion. It is quickly prepared for the table, and is a very toothsome dish. Take a little of it in a bowl or saucer, and moisten it with milk or hot water, then flavor it with well-cooked apples, peach juice, cherry juice, black-berry, or grape juice, and, compared with it, plum pudding is nowhere.

It is especially a nice preparation for traveling by train, or otherwise, being already cooked. We are happy to state that the managers of the Health Retreat are now prepared to furnish this delicious article of diet, in quantities to suit purchasers, at ten cents per pound. Send in your orders. Address, RURAL HEALTH RETREAT, St. Helena, Cal.

LADIES' SKIRT SUPPORTERS.

IT is the unanimous opinion of those who have made *female disorders* their life study, that one of the most fruitful causes of these complaints is supporting the under-garments from the hips. When this burden is transferred to the shoulders, there is at once an improvement in health.

Mrs. E. B. Lyman, the popular lecturer to ladies "on dress, and its relation to female diseases," says: "Pathology demonstrates the fact that during the past 15 years that class of diseases peculiar to females has been steadily on the increase, and the verdict is almost universal among those physicians who make a specialty of these difficulties that they are largely the result of the improper mode of dress adopted by our women. First, from its being too tight, or so inconveniently arranged as to prevent the free action of the internal organs. Second, from the great number of bands, with heavy skirts, resting entirely upon the delicate walls of the abdomen, causing the intestines to fall down upon the organs in the pelvic cavity. Owing to the flexible nature of the abdominal walls, NO WEIGHTY clothing should be permitted to rest upon the hips, but should, instead, be supported from the shoulders entirely."



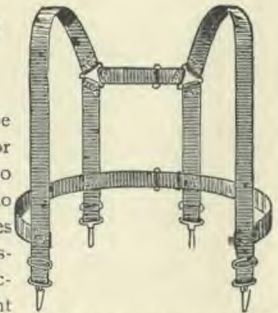
THE HYGIENIC CORSET

Is suspended from the shoulders. It is so arranged that the garments may be attached to it by means of hooks, as shown in this diagram. This useful article, as may be seen in another column, can be obtained from the Rural Health Retreat. Price, post-paid, \$2.00.



A SHOULDER BRACE AND SKIRT SUPPORTER

To which the skirts can be hooked, may be obtained for 60 cents; misses' size, 50 cents, post-paid. Those who have been using these articles could not be induced to dispense with them. Their practical utility must be apparent to all who give them even a careful look and a moment's thought.



Either of the above articles may be obtained, post-paid, for their respective prices, by addressing

RURAL HEALTH RETREAT,
ST. HELENA, CAL.

Publishers' Department.

OUR GENERAL AGENTS.

Australia—International Tract Society, *Bible Echo* Office, Rae and Scotchmer Sts., North Fitzroy, Victoria, Australia.
 British Guiana.—Joseph E. Brathwaite, 37 Brickdam, Georgetown, and Thos. E. Amsterdam, 10 Church St., New Amsterdam, B. G., S. A.
 California Tract Society—1067 Castro St., Oakland, Cal.
 Canada Tract Society—M. L. Cushing, Sec'y, South Stukely, P. Q.
 Colorado Tract Society—Cor. 31st and Champ Sts., Denver, Colo.
 Dakota Tract Society—A. H. Beaumont, Sec., Vilas, Miner Co., Dak. District of Columbia.—International Tract Society, W. H. Saxby, Agent, 1831 Vermont Avenue, N. W., Washington, D. C.
 England—*The Present Truth*, 72 Heneage St., Grimsby, Eng.
 Florida Tract Society—502 West Monroe St., Jacksonville, Fla.
 Hawaiian Islands—International Tract Society, Honolulu, H. I.
 Illinois Tract Society—3652 Vincennes Ave., Chicago, Ill.
 Indiana Tract Society—No. 32 Cherry St., Indianapolis, Ind.
 Iowa Tract Society—1315 E. Sycamore St., Des Moines, Iowa.
 Kansas Tract Society—Box 160, Ottawa, Franklin Co., Kan.
 Kentucky Tract Society—Harry Rupert, Sec., West Clifty, Grayson Co., Ky.
 Louisiana—International Tract Society, Pitt Street, between Valmont and Leontine Streets, New Orleans, La.
 Maine—Mrs. A. J. Goodrich, South Lancaster, Mass.
 Michigan Tract Society—Hattie Howe, Sec'y, Battle Creek, Mich.
 Minnesota Tract Society—336 Lake Street E., Minneapolis, Minn.
 Missouri Tract Society—2339 Chestnut St., St. Louis, Mo.
 Montana—Walter Harper, Box 95, Helena, Mont.
 Nebraska Tract Society—Fremont, Dodge Co., Neb.
 New England—N. E. Tract Society, South Lancaster, Mass.
 New York Tract Society—J. V. Wilson, Sec., Box 113, Rome, N. Y.
 New Zealand—Edward Hare and Eld. A. G. Daniels, Upper Queen Street (Turner Street), Auckland, N. Z.
 North Pacific—N. P. Tract Society, Box 18, East Portland, Oregon.
 Norway—*Sundhedsbladet*, Christiania, Norway.
 Ohio Tract Society—L. T. Dyser, Sec., 259 Adams St., Toledo, Ohio.
 Pennsylvania Tract Society—No. 5 Madison St., Wellsville, N. Y.
 Society Islands—John I. Tav, Papeete, Tahiti, Society Islands.
 Switzerland—Elder W. C. White, 48 Weltherweg, Basel, Switzerland.
 Tennessee Tract Society—Springville, Henry Co., Tenn.
 Texas Tract Society—Mrs. Lee Gregory, Secretary, Denton, Tex.
 Upper Columbia—U. C. Tract Society, Walla Walla, W. T.
 Vancouver Island—Bernard Robb, Victoria, B. C.
 Vermont—Lizzie A. Stone, South Lancaster, Mass.
 Virginia—Lillie D. Woods, Quicksburgh, Va.
 Wisconsin Tract Society—1029 Jenifer St., Madison, Wis.

OXFORD TEACHERS' BIBLES.

PRICES AND STYLES OF BINDING.

Pearl 16mo. (Size 4x5³/₄x1³/₄ inches.)

(Page for Page with the *Minion* 8vo.)

NOS.		
500.	French Morocco, boards.....	\$1.25
501.	French Morocco, circuit.....	1.40
502.	French Morocco, limp, round corners.....	1.85
509.	Persian Seal, limp, solid covers, round corners.....	2.15
513.	Persian Seal, Divinity circuit, silk sewed.....	2.50
514.	As No. 513, with round corners.....	2.60
510.	Turkey Morocco, boards.....	2.20
511 ¹ / ₂ .	Turkey Morocco, limp, round corners.....	2.35
512.	Turkey Morocco, circuit.....	2.70
515.	Levant, Divinity circuit, kid lined.....	4.00
515 ¹ / ₂ .	As No. 515, with round corners.....	4.15
	Postage, 10 cents extra.	

Pearl 16mo. India paper edition. (Size 4x5¹/₂x1 inches.)

NOS. *The smallest Teachers' Bible in the World.*

514x.	Persian Seal, Divinity circuit, silk sewed, round corners.....	\$3.25
515 ¹ / ₂ x.	Levant, Divinity circuit, kid lined, silk sewed, round corners.....	5.50
	Postage, 8 cents extra.	

Ruby 16mo. (Size 4¹/₄x6¹/₂x1¹/₂ inches.)

(An entirely new edition. Page for page with the *Minion* 8vo.)

NOS.		
550.	French Morocco, boards.....	\$1.90
551.	French Morocco, circuit.....	2.30
552.	French Morocco, limp, round corners.....	2.20
559.	Persian Seal, solid covers, round corners.....	3.00
563.	Persian Seal, Divinity circuit, silk sewed.....	3.15
564.	As No. 563, with round corners.....	3.30
560.	Turkey Morocco, boards.....	2.70
561 ¹ / ₂ .	Turkey Morocco, limp, round corners.....	2.85

562.	Turkey Morocco, circuit.....	\$3.75
565.	Levant, Divinity circuit, kid lined, silk sewed.....	4.65
565 ¹ / ₂ .	As No. 565, with round corners.....	4.80
566.	As No. 565 ¹ / ₂ , Brown Levant.....	4.80
571.	Best Levant, Divinity circuit, kid lined, silk sewed, red under gold edges, round corners.....	7.00
	Postage, 12 cents extra.	

Ruby 16mo. India paper edition. (Size 4¹/₄x6¹/₂x1 inches.)

NOS.

564x.	Persian Seal, Divinity circuit, silk sewed, round corners.....	\$4.50
561 ¹ / ₂ x.	Turkey Morocco, loose limp, round corners, silk sewed.....	4.50
563 ¹ / ₂ x.	Levant, Divinity circuit, kid lined, silk sewed, round corners.....	6.50
566x.	As No. 565 ¹ / ₂ x, Brown Levant.....	6.50
571x.	Best Levant, Divinity circuit, kid lined, silk sewed, round corners.....	7.50
	Postage, 9 cents extra.	

Nonpareil 8vo. (Size 4¹/₂x7x1³/₄ inches.)

(An entirely new edition. Page for page with the *Minion* 8vo.)

NOS.

664.	Persian Seal, Divinity circuit, round corners.....	\$4.00
660.	Turkey Morocco, boards.....	4.00
661 ¹ / ₂ .	Turkey Morocco, limp, round corners.....	4.15
662.	Turkey Morocco, circuit.....	5.00
665.	Levant, Divinity circuit, kid lined, silk sewed.....	5.35
665 ¹ / ₂ .	As No. 665, with round corners.....	5.50
666.	As No. 665 ¹ / ₂ , Brown Levant.....	5.50
671.	Best Levant, Divinity circuit, kid lined, silk sewed, red under gold edges, round corners.....	8.00
	Postage, 16 cents extra.	

Nonpareil 8vo. Thin paper edition. (Size 5x7x1¹/₄ inches.)

NOS.

664x.	Persian Seal, Divinity circuit, silk sewed, round corners.....	\$5.75
661 ¹ / ₂ x.	Turkey Morocco, loose limp, round corners, silk sewed.....	5.50
665 ¹ / ₂ x.	Levant, Divinity circuit, kid lined, silk sewed, round corners.....	7.75
666x.	As No. 665 ¹ / ₂ x, Brown Levant.....	7.75
671x.	Best Levant, Divinity circuit, kid lined, silk sewed, round corners.....	9.50
	Postage, 11 cents extra.	

Minion 8vo. (Size 5x7³/₄x1¹/₂ inches.)

NOS.

707.	Persian Seal, limp, round corners.....	\$ 4.30
709.	Persian Seal, limp, solid covers, round corners.....	5.00
713.	Persian Seal, Divinity circuit.....	4.70
714.	As No. 713, with round corners.....	4.85
710.	Turkey Morocco, boards.....	4.50
711 ¹ / ₂ .	Turkey Morocco, limp, round corners.....	4.65
715.	Levant, Divinity circuit, kid lined, silk sewed.....	5.70
715 ¹ / ₂ .	As No. 715, with round corners.....	5.85
716.	As No. 715 ¹ / ₂ , Brown Levant.....	5.85
721.	Best Levant, Divinity circuit, kid lined, silk sewed, red under gold edges, round corners.....	9.00
722.	Seal Skin, Divinity circuit, kid lined, silk sewed, red under gold solid edges, round corners.....	11.00
	Postage, 18 cents extra.	

Minion 8vo. Thin paper edition. (Size 5x7³/₄x1 inches.)

NOS. *The S. S. Superintendents' Edition.*

714x.	Persian Seal, Divinity circuit, silk sewed, round corners.....	\$ 7.00
711 ¹ / ₂ x.	Turkey Morocco, loose limp, round corners, silk sewed.....	6.75
715 ¹ / ₂ x.	Levant, Divinity circuit, kid lined, silk sewed, round corners.....	9.00
716x.	As No. 715 ¹ / ₂ x, Brown Levant.....	9.00
721x.	Best Levant, Divinity circuit, kid lined, silk sewed, red under gold edges, round corners.....	12.00
	Postage, 13 cents extra.	

Minion small 4to. (Size 7x9³/₄x1³/₄ inches.)

NOS. *With Wide Margin for MSS. Notes.*

905.	Persian Morocco, limp.....	\$ 7.50
911.	Turkey Morocco, limp.....	8.75
915 ¹ / ₂ .	Levant, Divinity circuit, kid lined, silk sewed, round corners.....	12.50
	Postage, 32 cents extra.	

Brevier 8vo. (Size 5³/₄x5³/₄x1¹/₂ inches.)

NOS.

810.		
810.	Turkey Morocco, boards, family register.....	\$ 7.00
811.	Turkey Morocco, limp, family register.....	7.00
814.	Persian Seal, Divinity circuit, silk sewed, round corners.....	7.75
815 ¹ / ₂ .	Levant, Divinity circuit, kid lined, silk sewed, round corners.....	10.25
	Postage, 28 cents extra.	

Any books from the foregoing list can be had with Denison's Patent Index. Price, \$1.25 extra.
 When ordering Bibles be sure to give the numbers of those you wish sent.

Address all orders to PACIFIC PRESS, Oakland, Cal.

—THE—
AMERICAN SENTINEL,
 AN EIGHT-PAGE MONTHLY JOURNAL,

DEVOTED TO
 THE DEFENSE OF AMERICAN INSTITUTIONS, THE PRESERVA-
 TION OF THE UNITED STATES CONSTITUTION AS IT IS,
 SO FAR AS REGARDS RELIGION OR RELIGIOUS
 TESTS, AND THE MAINTENANCE OF HUMAN
 RIGHTS BOTH CIVIL AND RELIGIOUS.

This Journal will ever be uncompromisingly opposed to any-
 thing tending toward a Union of Church and State, either in
 name or in fact.

Every position taken will be carefully guarded and fortified by
 sound argument. Due respect will always be paid to the opin-
 ions of others, but **RIGHTS OF CONSCIENCE WILL BE
 FEARLESSLY MAINTAINED.**

We are determined to make this a live paper, and one that
 will be read by all classes.

TERMS:

Single Copy, one year, 50 Cents.
 To Foreign Countries, single subscription, post-paid, 25.

Combination Offer.

The publishers of **THE AMERICAN SENTINEL** being desirous
 of securing a large subscription list *at once*, have made arrange-
 ments with the publishers of **THE MARVEL OF NATIONS**
 whereby they are enabled to furnish this interesting and popu-
 lar book, together with **THE AMERICAN SENTINEL**, for one
 year for only \$1.25.

It will be noticed that the book and the paper virtually treat
 upon the same subject—one showing the wonderful progress
 which our country has made during the past few years, and
 briefly outlining its future, while the other treats more particu-
 larly of passing events and the live questions of the day. The
 two are admirably suited to go together, and are worthy of
 a large circulation.

Address,

AMERICAN SENTINEL,

1059 Castro Street, Oakland, Cal.

OUR COUNTRY,
THE MARVEL OF NATIONS.

ITS PAST, PRESENT, AND FUTURE, AND WHAT THE SCRIP-
 TURES SAY OF IT.

BY U. SMITH,

Author of "Smith's Parliamentary Rules," and other popular
 Works.

This is a new and popular work on a subject of the deepest
 interest to all American Citizens. It takes a brief but compre-
 hensive view of our Government from a

Historical, Political and Religious Standpoint.

It also shows that the United States is a subject of prophecy;
 that an outline of its history was written nearly two thousand
 years ago. It calls the attention of the reader to a

CHAIN OF PROPHECY,

Of which our Government is an important link, and shows that
 the location, the time of its rise, the nature of its constitution,
 and its wonderful growth and subsequent influence, as well as
 its future attitude, were all clearly foreseen and pointed out by
 the Prophet of God, hundreds of years ago. Other great na-
 tions of the world are subjects of prophecy, and *Why not our
 own?*

THE SUNDAY QUESTION,**MODERN SPIRITUALISM AND
 NATIONAL REFORM**

Are prominent among the topics ably discussed in this work.

THE MARVEL OF NATIONS is a work of 282 pages. It con-
 tains a steel plate of the author, and

FORTY-ONE ILLUSTRATIONS.

It is printed in clear type, and elegantly bound. Price \$1.00.

PACIFIC PRESS PUBLISHING HOUSE,

Twelfth and Castro Streets, Oakland, Cal.

AN INTERESTING AND INSTRUCTIVE BOOK.

Thoughts on Daniel AND the Revelation.

BY ELDER U. SMITH.

A Book which Scientists, Historians, Scripturists, and all Lovers of Good Liter-
 ature, can read with Pleasure and Profit.

ALL know that the books of Daniel and the Revelation are two of the most wonderful books in the Bible. The author
 of this work gives us the result of nearly thirty years' study, and throws such a flood of light on these two books as no other
 work in any language has ever done. No fanciful theories are presented, but arguments are drawn from ancient and modern
 history and the most reliable authorities, in great abundance, to make clear the meaning of these important books of the
 Bible, verse by verse, and convey an amount of information which cannot elsewhere be found in so concise a form.

In reading this book, our minds are carried through the history of the rise and fall of four great nations of the past,
 which are represented by the great image of gold, silver, brass, and iron, from the old Assyrian empire down to the division
 of the Roman Kingdom, and on through the Dark Ages in which Roman power and Mohammedan superstition were felt and
 seen all over the earth. The great Revolution in France in 1793-1798, which is fresh in the minds of all readers, and the
 Eastern Question, which is now attracting the attention of all the leading statesmen of the world, are carefully considered
 as waymarks on the great stream of time.

Our own government, the youngest power in history, and the greatest marvel of national development—a nation which
 begun its independent existence just one hundred years ago, with 815,615 square miles of territory and a population of about
 3,000,000, but has now increased its territory to 3,678,302 square miles, and its population to over 52,000,000—is treated
 from a standpoint which will make it a subject of great interest to all. The author believes this nation to be a subject of
 prophecy,—a prophecy which not only describes its present exalted position, but points out its future course and destiny.

It is a volume of 800 pages, printed on fine paper, handsomely bound, and illustrated with colored plates.

Men of thought and culture give it their indorsement as one of the best books of its kind extant.

SOLD ONLY BY SUBSCRIPTION.**Active Agents Wanted.**

Send for Confidential Terms.

PACIFIC PRESS, Oakland, Cal.,

General Agents for Montana, Wyoming, Colorado, New Mexico,
 and West thereof to Asia.

A Beautifully Illustrated Work on California.



500 PAGES OF LETTER PRESS,
WITH 150 ILLUSTRATIONS.

SOME FORTY-FIVE OF WHICH ARE FULL PAGE SIZE,
Twenty-four being produced directly from the Negative by
the New and Beautiful Process of Photo-Lithography.

ALL WHO HAVE SEEN THE VOLUME PRONOUNCE IT

The Most Elegant & Intensely Interesting

Work Ever Published on this Coast.

—*—*—*—*—*—*

BY J. M. HUTCHINGS,

The Old Pioneer and Long Resident of Yo Semite, who not only took the First Sketches of it ever taken, but fortunately was the First to make its Marvelous Grandeur generally known to the World; and after making it a loving study for over THIRTY YEARS, TWENTY from actual residence within it, has presented in this work

A Complete Historical & Descriptive Summary of Great Valley,

AND ITS MARVELOUS SURROUNDINGS.



HOW, When, by Whom and Under what Circumstances it was Discovered—The Characteristics of its Primitive Inhabitants—The Name "Yo Semite," its Derivation and Signification—The Indians, with their Manners, Customs, Systems of Belief, Legends, Names and Native Foods—The First Visitors to Yo Semite, and the Annual Number Since—Pioneer Settlers, their Cabin Homes, and Early Experiences—Voiced Impressions of Eminent Personages Concerning it—Congressional and State Enactments in its Favor—Its Remarkable Scenic Grandeur—Peculiar Geologic Features—Theories Concerning its Formation—Altitude of all its Encompassing Cliffs and Waterfalls—Pictures of its Scenery both in Winter and Summer—Map of Valley and Surroundings—The Action of its Ancient and Living Glaciers, and their old Moraines,—and the Sublime Features of the High Sierra, beyond Yo Semite, with Full Description of Each and Every Route to the Valley, and Scenes by the Way; Tables of Distances and Altitudes of Nearly Every Point Passed; Official Map of the Valley, and Routes thereto, etc. It will be

A VALUABLE ADDITION TO THE LIBRARY,
AN ORNAMENT TO THE TABLE, OR
AN ACCEPTABLE PRESENT TO A FRIEND.

It can be had in six different styles of Binding, viz.: Full Cloth, Embossed in Jet and Gold; same with Gilt Edges; Full Sheep, Library Style, with Marble Edges; Half Morocco, Gilt Edges; Half Calf, Gilt Edges; Full Turkey Morocco, Gilt Edges.

The Designs for the Embossed Covers, English Cloth, in Black and Gold, are by Mr. THOMAS HILL, the well-known California Artist, who has kindly furnished other Sketches for this Work.

SOLD ONLY BY SUBSCRIPTION.

For Terms and Territory, address, PACIFIC PRESS, Publishers, Oakland, Cal.

WHAT OTHERS SAY OF IT:



"And now that I am speaking of books and authors, I beg to call the attention of the country generally, and the Eastern States particularly, to the most reliable and important book of its kind that has ever been issued. This large illustrated work is called, 'In the Heart of the Sierras,' and is the production of Mr. J. M. Hutchings, of Yo Semite.

"Many books have been written about the glorious and wondrous story of the Sierras. But it seems to me that this scholarly and venerable pioneer, who was publishing an illustrated magazine devoted largely to the themes he celebrates, when many of the younger authors were still at their nurse's knee, is the man who is entitled by his culture, his fine tastes, and, above all, his long and wonderful experience, to write the one great

and responsible authority about the heart of the Sierras.

"No, I am not a critic. I have seen too many fools who make a profession of criticising books, to set up for that, even were I qualified for so eminent a position. But, as I could not lay this honest and straightforward book down till I had done with it, I am unselfish enough to want others to enjoy it with me. Besides that, there is a sort of free-masonry between us old settlers that makes me want to see this reliable work widely read. And then, years and years ago I sat by this man's fire-side, and nursed his children on my knee, often-time in his cabin 'In the Heart of the Sierras'; the same old log-cabin from which he now issues this charming book.

—In the *Golden Era* for September, 1886.

JOAQUIN MILLER."

"Nothing of the kind has been written at all equal to this since Starr King's book."

"ALDEN SAMPSON, New York."

"We received your book, 'In the Heart of the Sierras,' and I write to express our delight at its contents. Every one must be charmed with it. Your descriptions are so real that when reading them my husband and I agreed that we were again back in the Valley on our last year's pleasant trip.

BEATRICE E. ROSE, San Rafael, Cal."

From MR. CHAS. T. WHITMELL, H. M. Inspector of Schools, England.

"On the 6th inst., I had the pleasure of safely receiving your book. I am delighted with 'In the Heart of the Sierras.' The style is most interesting and appreciative; and the illustrations are beautiful in their delicate execution. I most heartily congratulate you, and hope your life work will meet with all the success it deserves. I have nothing but praise, and thanks, for your delightful narrative. I am partial to geology, and am glad to see that you support the erosive—not the convulsive—theory of the Valley's formation.

CHAS. T. WHITMELL.

"J. M. HUTCHINGS, Esq., Oakland, Cal., U. S. A."

From MRS. M. LOUISE THOMAS, President of the W. C. T. U., Philadelphia, Pa.

"TACOMY, Philadelphia, Sept. 20, 1886.

"MY DEAR MR. HUTCHINGS—

"I am charmed with your new book, 'In the Heart of the Sierras,' just received. Its mechanical execution is simply perfect—type, paper, binding, and illustrations. I have not yet had time to do more than skim over the pages, but they transport me back to scenes the most wonderful my eyes have ever looked upon, with a power and vividness that commands my highest admiration and respect.

"The thought-pictures behind the types are even more to the life than those drawn by the pencil. No history of that great Western world can ever be written in the future that is not drawn from and based upon this work of yours.

"I am, sincerely,

M. LOUISE THOMAS."

From the Sacramento Bee.

"A BEAUTIFUL BOOK.—'In the Heart of the Sierras' is the title of a large and beautifully illustrated volume by J. M. Hutchings, the well-known mountaineer and pioneer of the Yo Semite Valley. The book has just been issued by the Pacific Press Publishing Company, of Oakland. It abounds in finely executed photographic views of Yo Semite and other scenery, and also contains many wood cuts. The descriptive portions of the work are breezy and interesting. It embraces a wealth of information relating to the wonders of the mountains, and deserves an extensive sale."

From the San Francisco Argonaut.

"The Yo Semite Valley, our greatest attraction for the sight-seeing traveler, has never before been described with such minuteness as Mr. J. M. Hutchings has devoted to it in his work, 'In the Heart of the Sierras.' He gives an historical account of the famous valley, and the surrounding places of interest, showing a careful collection of the Yo Semite's romantic and legendary lore, expressed in entertaining form, and with a more detailed description of the beauties and wonders of the place than we have yet seen."

"It is a truthful, interesting, and instructive work.

GALEN CLARK, Yo Semite Valley.

(For sixteen years the Valley's Guardian.)

SOLD ONLY BY SUBSCRIPTION.

AGENTS WANTED IN ALL PARTS OF THE WORLD.

FOR TERMS, TERRITORY, ETC., ADDRESS,

PACIFIC PRESS, Publishers,

Twelfth and Castro Streets, Oakland, Cal.

MAN, THE MASTERPIECE

-OR-

PLAIN TRUTHS PLAINLY TOLD, ABOUT BOYHOOD, YOUTH AND MANHOOD.

BY J. H. KELLOGG, M. D.

620 OCTAVO PAGES! A PAPER MANAKIN! 30 FULL-PAGE ENGRAVINGS!

17 Copies sold in 4 hrs.
9 in 1 day, and
71 in 1 week,
by one
agt.



It is sure to become one of the most popular of rapidly selling subscription books because of INTRINSIC MERIT AND PRACTICAL VALUE.

This new work is designed to make man better, physically, mentally and morally, and may be very briefly described as follows, to wit: A Brief Description of the Human Body and its Functions; The Mystery of a New Life; Boyhood to Manhood—*dangers which threaten the physical, mental and moral welfare*; Physical Culture; Ethics; Social Ethics; Getting a Wife—if suggestions in this chapter were universally regarded, the divorce courts would close for want of business. An Evil Heritage; How to Make Life a Success; Stomachs—*points out the methods by which the great army of Dyspeptics are recruited*; Invaluable Prescriptions for Disorders of the Stomach; Billiousness—a sure cure; Hygiene of the Lungs—*principles and methods of successful ventilation*; Physical Effects of Alcohol; The Tobacco Habit; Germs—of disease—*sources, dangers, methods of destruction, etc.*; What to Wear for Health; How to Bathe; Sexual Sins and their Consequences; Diseases of the Sexual Organs—*description and treatment*; General Hints about Health—*care of Skin, Eyes, Ears, Rules for Dyspeptics, etc.*; Treatment and Prescriptions for Common Ailments—as Chronic Inflammation of the Throat, Nasal Catarrh, Hay Fever, Granular Sore Eyelids, Boils, Corns, Freckles, Dandruff, Tapeworms, Piles, Baldness, Sleeplessness, Heartburn, Acute Sore Throat, Erysipelas, Sunstroke, Ingrowing Toe Nails, Burns, Sprains, Nervous Headache, Sexual Nervous Debility, etc.

GOOD RELIABLE AGENTS WANTED.

For terms and territory address

PACIFIC PRESS, Oakland, Cal.

PLAIN FACTS FOR OLD AND YOUNG

Embracing Natural History and Hygiene of Organic Life.

By J. H. KELLOGG, M. D.,

Member of the British and American Associations for the Advancement of Science, Editor of "Good Health," and Author of Various Works on Health.

New Edition Revised and Enlarged, containing over 600 Octavo Pages.

No work ever issued from the American Press has met with such a cordial reception by the people. It is indorsed by the highest authority a standard work. It is a necessity, not a luxury. Indispensable to those who would preserve the health and morals of their own children.

BRIEF SYNOPSIS OF CONTENTS.—SEX IN LIVING FORMS—REPRODUCTION—SEXUAL HYGIENE—UNCHASTITY—THE SOCIAL EVIL—SOLITARY VICE—A CHAPTER FOR BOYS—A CHAPTER FOR YOUNG MEN—A CHAPTER FOR OLD MEN—A CHAPTER FOR GIRLS—A CHAPTER FOR YOUNG WOMEN—A CHAPTER FOR WIVES AND MOTHERS—DISEASES PECULIAR TO WOMEN—ONE HUNDRED CHOICE HEALTH THOUGHTS.

☞ "Plain Facts" is sold only by subscription. Agents wanted. For sample copies, territory and terms, address

General Agents for the West.

PACIFIC PRESS PUBLISHING HOUSE, Oakland, Cal.

REVISED AND ENLARGED EDITION.

LADIES' GUIDE IN HEALTH AND DISEASE.

By J. H. KELLOGG, M. D.

One lady sold 205
copies first
month.



No other work combines so much of interest and value to Daughters, Wives and Mothers.

Member of the American Association for the Advancement of Science, American P. Bio Health Association, American Society of Microscopists, Mich. State Med. Association, State Board of Health of Michigan, Editor of "Good Health," Author of "Home Hand-Book of Hygiene and Rational Medicine," "Man, the Masterpiece," and various other works.

672 OCTAVO PAGES! 123 ILLUSTRATIONS!

This new work fills a want long recognized in all parts of the land, and is admitted by physicians to be the most complete and practical work of its kind. An eminent lady physician pronounces it "the best book ever written in the interest of humanity." Another writes, "it is destined to work a great reformation in the rising generation, and to alleviate the ills of the present." The author, in a very chaste and delicate manner, graphically describes the great mysteries of life—the Anatomy and Physiology of Reproduction, and considers the several phases of woman's life under the respective headings, "The Little Girl," "The Young Lady," "The Wife" and "The Mother,"—embracing all subjects of interest pertaining to the health or disease of the sex; as, Education; Moral and Physical Culture; Clothing; Diet; Puberty; Mental Equality of Sexes; Personal Beauty; Marriage; Dignity of Wifehood; Prevention of Conception; Criminal Abortion; Change of Life; Heredity; Signs, Hygiene and Disorders of Pregnancy; Complications of Labor; Symptoms and Treatment for Diseases of Women; and an Appendix, giving Rational Home Treatment for Diseases of Childhood; Instruction for Baths; Swedish Movements; Postural Treatment; Electricity; Massage; many valuable Dietetic Recipes; Medicinal Recipes and Prescriptions.

ACTIVE AGENTS WANTED.

Address,

PACIFIC PRESS,
OAKLAND, CAL.

NEW SUBSCRIPTION EDITION.

THE GREAT CONTROVERSY

Between Christ and Satan

DURING THE CHRISTIAN DISPENSATION.

BY MRS. E. G. WHITE,

Author of "The Life of Christ," "Sketches from the Life of Paul," "Bible Sanctification," and Other Popular Works.

THIS volume presents the most wonderful and intensely interesting history that has ever been written of the great conflict between Christianity and the Powers of Darkness, as illustrated in the lives of Christian martyrs and reformers on the one hand, and wicked men and persecuting powers on the other. Beginning with our Lord's great prophecy given while viewing Jerusalem from the Mount of Olives, in which he outlines the history of the whole dispensation, it sketches the fulfillment. It pictures the siege and overthrow of Jerusalem, and the destruction of the Temple. It calls our attention to the bitter persecutions of the Christians in the first centuries, and notes the rise and growth of the Papacy. It gives a clear conception of the character and influence of the Waldenses, who, through centuries of persecution, maintained the purity of their faith, and by their missionary efforts prepared the nations of Europe for the Reformation.

Brief and life-like sketches are given of the works, the successes, and the persecutions of Wycliffe, Luther, Tyndale, Huss, Jerome, Knox, and other reformers and martyrs. Considerable space is given to the life, work, and influence of later reformers and great religious leaders, such as George Whitefield, the Wesleys, and William Miller, and this is followed by chapters treating upon The Origin of Evil, The Agency of Evil Spirits, The Snares of Satan, Spiritualism, Character and Aims of the Papacy, The Coming Conflict, The Scriptures a Safeguard, Desolation of the Earth, and The Judgment.

The closing chapters give a vivid picture of the warfare of the church, her final redemption, and vividly describe the triumph of the people of God, the destruction of Satan and all his followers, and the renewing of the earth, which ends the awful controversy between the Son of God and the Powers of Darkness. Earnest Christians of all classes and creeds will find in it encouragement and instruction in the delineation of the struggle maintained by men raised up of God in each successive age to preserve the pure and true religion, and they will see that the world has been led to accept one after another of Satan's devices, until her teachers are corrupted with false doctrines and with infidelity.

The period of history covered by this volume, is one of the deepest interest to all classes of readers. The style of the author is clear, forcible, and often sublime, and, although simple enough in its statements to be understood and appreciated by a child, its eloquence calls forth the admiration of all.

Seventh Edition! Contains over 500 pages; 21 full page Illustrations and Steel Portrait of the Author; printed and bound in the very best style.

SOLD ONLY BY SUBSCRIPTION.

Fine English Cloth, red edges,	-	-	-	\$2 00
Library Style, marbled edges,	-	-	-	2 75
Half Morocco, gilt edges,	-	-	-	3 50
Full Morocco, gilt edges,	-	-	-	4 50

ACTIVE AGENTS WANTED IN EVERY TOWN AND COUNTY IN THE UNITED STATES.

For Terms and Territory, Address,

PACIFIC PRESS, Publishers,

12th and Castro Streets, Oakland, Cal.



CRYSTAL SPRINGS

RURAL HEALTH RETREAT,

 ST. HELENA, CAL.



RURAL HEALTH RETREAT, ST. HELENA, CAL.

THIS delightful and popular Summer Resort has been fitted up as a Sanitarium, and offers unrivaled advantages to all classes of invalids. It is situated on the side of Howell Mountain, 1,200 feet above tide level, 500 feet above and overlooking Napa Valley, and two and a half miles from St. Helena, in Napa County. **ITS NATURAL ADVANTAGES** are equal to those of any other health resort. It is noted for its pure water, dry atmosphere, clear and balmy sunshine, even temperature, mild breezes, and the absence of high winds. **OUR REMEDIAL MEASURES** include various forms of Baths, Galvanic and Faradic Electricity, Mechanical Appliances, and exercises for the development of the Lungs, Vital Organs, and Muscular System, the Expansion and Development of the Chest, and the Cure of Deformities.

RATIONAL TREATMENT BY WELL-KNOWN REMEDIAL AGENTS IS EMPLOYED.

Our natural advantages of pure soft water, mild air, even temperature, pleasant and desirable surroundings, are supplemented by thorough and judicious treatment and wholesome diet, and most invalids who avail themselves of these agreeable facilities rapidly recover.

The RETREAT is under a thoroughly competent Director, and patients have the care of two regularly-graduated Physicians of several years' experience in practice, who are assisted by two lady attendants having a two years' course in the largest Medical and Surgical Sanitarium in the world, with six years' subsequent practice. All invalids and tourists may feel assured that they will be courteously received and kindly cared for.

For further particulars address

RURAL HEALTH RETREAT,

Send for Circular.

ST. HELENA, CAL.

