



GOOD HEALTH.

H. F. GUNSWORTHY
 May 88

A JOURNAL OF HYGIENE.

CONTENTS OF THIS NO.

DEVOTED TO
 PHYSICAL, MENTAL & MORAL CULTURE.

A SOUND MIND,
 IN A SOUND BODY.

HEALTH IS
 WEALTH.

PROPER CLOTHING
 ADEQUATE REST
 MILD EXERCISE.

CLEANLINESS NEXT TO
 GODLINESS.

TEMPERANCE IN
 ALL THINGS.

	PAGE
General Articles. —Health Thoughts for a Young Man,	289
The Bloodless Feast (poetry),	290
Physical Culture at Vassar,	290
Waists,	291
The Origin of the Tobacco Habit,	292
Maine Liniment,	294
The Aboriginal Miller,	294
Seasonable Hints,	295
The Happy Fireside. —Life (p'y),	296
Mrs. Lane's Children,	296
Autumn (poetry),	299
Temperance Notes,	300
Popular Science. —A Pencil Balanced on its Point,	301
Social Purity. —Bad Hygiene vs. Virtue,	302
Early Training,	303
The Influence of Luxury,	303
Bible Hygiene. —Sleep,	304
Ancient Teetotalers,	304
Dogs in the East,	305
Editorial. —Health Insurance,	306
Strange Notions about Eating,	307
The Cost of Smoking,	308
Contagiousness of Consumption,	309
Poisoning from Sewer Gas,	309
Scarlet Fever from Milk,	310
Milk and Diseased Meat,	311
Domestic Medicine. —Treatment of Severe Burns by Continuous Baths	
—Remedies for Constant Use (poetry)	
—Management for Constipation,	312, 313
Hygiene for Young Folks. —	
June Rogers,	314
A Boy's Logic,	315
Question Box,	316, 317
Literary Notices,	317
Science in the Household. —	
Suggestions Concerning Winter Squash—Cement to Mend China—To Determine the Quality of Silk—Jelly Covering—To Clean Oil-Paintings—Bed Chambers—Waste Barrels,	318, 319
Publishers' Page,	320

HEALTH PUBLISHING COMPANY, BATTLE CREEK, MICH.
 OAKLAND, CAL. PACIFIC PRESS, NEW YORK, AMERICAN NEWS CO., PHILADELPHIA, GENERAL NEWS CO.
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p. m.	p. m.	p. m.	p. m.	a. m.	a. m.	Ar. Dep.	p. m.	p. m.	a. m.	p. m.	a. m.
6.00	6.45	7.05	7.30	8.00	7.30	Detroit,	9.15	8.00	9.10	1.30	7.00
4.33	5.30	6.45	7.35	8.35	6.08	Ann Arbor,	10.38	9.12	10.25	2.32	8.16
3.15	4.20	5.49	6.45	7.45	4.50	Jackson,	12.03	10.52	11.35	3.32	9.35
2.00	3.10	4.54	5.54	6.54	3.43	Marshall,	1.04	11.47	12.50	4.22	10.38
1.12	2.27	3.33	4.33	5.33	2.55	Battle Creek,	1.55	12.12	1.12	4.40	11.03
12.17	1.50	2.58	3.58	4.58	2.35	Kalamazoo,	2.55	1.20	1.50	5.15	11.52
10.38	12.15	1.49	2.49	3.49	1.55	Niles,	4.38	3.03	3.22	6.27	1.40
9.18	11.11	1.45	2.45	3.45	1.27	Mich. City,	5.41	4.32	4.35	7.32	2.58
6.50	9.00	3.10	4.10	5.10	1.10	Chicago,	8.05	7.10	6.40	9.31	5.15
a. m.	a. m.	a. m.	a. m.	a. m.	a. m.	Dep.	Ar.	a. m.	a. m.	a. m.	a. m.

Gr. Rap. & Kal. Ex. lvs. Kal'm'oo 6.45 a. m., Bat. Creek 7.11, Marshall 7.57, Jackson 9.15, Ann Arbor 10.30, ar. Detroit 11.50 a. m. Returning leaves Detroit 4.00 p. m., Ann Arbor 5.30, Jackson 7.10, Marshall 8.20, Battle Creek 8.52, ar. Kalamazoo 9.45.

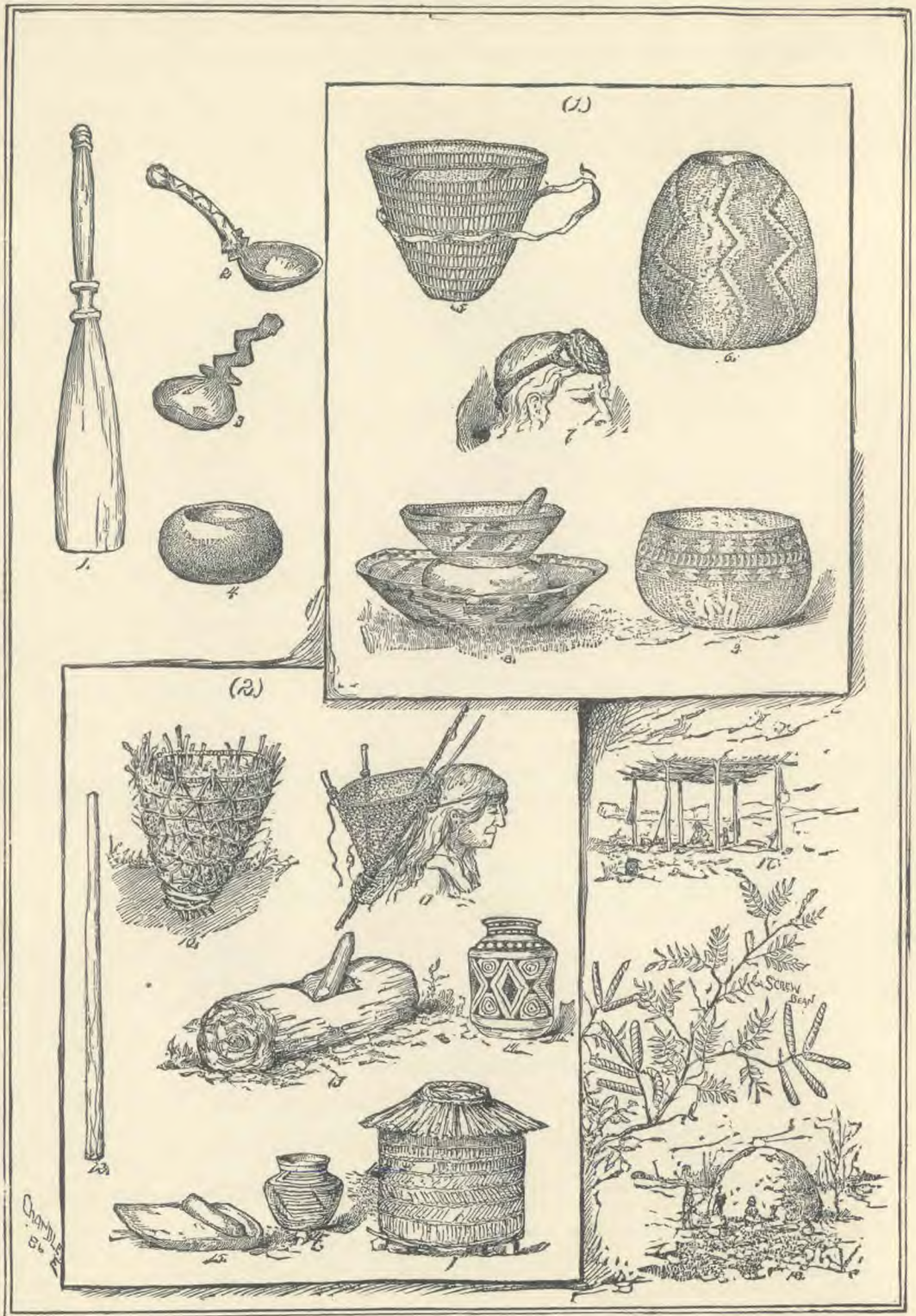
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Time Table, in effect May 15, 1887.

GOING WEST.				GOING EAST.			
Chicago Pass.	Mail.	Day Exp.	Port Pass.	STATIONS.	Mail.	Land Exp.	Atlantic Pass.
.....	am	am	pm	Dep.	Arr.	am	am
.....	5.55	7.15	8.05	4.10	..... Port Huron	pm	am
.....	7.28	8.31	9.34	5.40	..... Lakeport	8.42	11.57
.....	8.05	9.10	10.15	6.30	..... Flint	7.55	11.27
.....	8.45	9.55	10.58	7.25	..... Durand	7.05	10.58
.....	10.00	10.30	11.33	8.25	..... Lansing	5.20	10.07
.....	10.37	11.00	12.25	9.08	..... A. BATTLE CREEK	4.42	9.37
.....	11.30	11.45	1.15	10.05	..... Battle Creek	3.45	8.55
.....	6.30	am	12.05	1.20	..... Vicksburg	2.41	8.11
.....	7.15	.....	12.45	2.21	..... Schoolcraft	2.31	.....
.....	7.30	.....	12.55	2.32	..... Cassopolis	1.45	7.20
.....	8.15	Pass.	1.45	3.19	..... South Bend	1.65	6.50
.....	9.00	.....	2.28	4.07	..... Haskell's	11.47	.....
.....	10.15	am	3.43	.....	..... Valparaiso	11.35	5.30
.....	10.30	7.35	4.05	5.52	..... Chicago	9.05	3.25
.....	12.40	10.00	6.25	8.10	.....	.....	.....
.....	pm	am	pm	am	.....	.....	.....

*Stops only on signal. Where no time is given, train does not stop. Trains run by Central Standard Time. Valparaiso Accommodation, Battle Creek Passenger, Chicago Passenger, Pt. Huron Passenger, and Mail trains, daily except Sunday. Pacific, Limited, Day, and Atlantic Expresses, daily. Sunday Passenger, Sunday only. GEO. B. REVE, Traffic Manager. W. J. SPICER, General Manager.



THE ABORIGINAL MILLER.

GOOD HEALTH

A JOURNAL OF HYGIENE.

MENS SANA IN CORPORE SANO.

Volume XXII.

BATTLE CREEK, MICH., OCTOBER, 1887.

Number 10.

HEALTH THOUGHTS FOR A YOUNG MAN.

LET the young man remember that for every offense which he commits against the laws of health, Nature will bring him into judgment. However graciously God may deal with the heart, all our experience proves that he never pardons stomach, muscles, lungs, or brain. These must expiate their offenses *un-*vicariously. Nay, there are numerous and obvious cases of violated physical laws, where Nature, with all her diligence and severity, seems unable to scourge the offender enough during his lifetime; and so she goes on plying her scourge upon his children and his children's children after him, even to the third and fourth generations. Punishment is entailed on posterity; and neither human law nor human device can break the entailment. And in these hereditary inflictions, Nature abhors alike the primogeniture laws of England and the Salic laws of France. All the sons and all the daughters are made inheritors, not in aliquot parts; but by a kind of malignant multiplication in the distemper, each inherits the whole.

I ask the young man, then, who is just forming his habits of life, or just beginning to indulge those habitual trains of thought out of which habits grow, to look around him, and mark the examples whose fortunes he would covet, or whose fate he would desire. Even as we walk the streets, we meet with exhibitions of each extreme. Here, behold a patriarch, whose stock of vigor three-score years and ten seem hardly to have impaired. His erect form, his firm step, his

elastic limbs, and undimmed senses, are so many certificates of good conduct.—or rather, so many jewels and orders of nobility with which Nature has honored him for his fidelity to her laws. His fair complexion shows that his blood has never been corrupted; his pure breath, that he has never yielded his digestive apparatus for a vintner's cess-pool; his exact language and keen apprehension, that his brain has never been drugged or stupefied by the poisons of a distiller or a tobaccoist. Enjoying his appetites to the highest, he has preserved the power of enjoying them. Despite the moral of the school-boy's story, he has eaten his cake and still kept it. As he drains the cup of life, there are no lees at the bottom. His organs will reach the goal of existence together. Painlessly as a candle burns down in its socket, so will he expire; and a little imagination would convert him into another Enoch, translated from earth to a better world, without the sting of death.

But look at the opposite extreme, where an opposite history is recorded. What wreck so shocking to behold as the wreck of a dissolute man,—the vigor of life exhausted, and yet the first steps in an honorable career not taken; in himself a lazaret-house of diseases; dead, but by a heathenish custom of society, not yet buried!

Rogues have had the initial letter of their title burned into the palms of their hands. Even for murder, Cain was only branded on the forehead; but over the whole person of the debauchee or the inebriate, the signatures

of infamy are written. How Nature brands him with stigma and opprobrium! How she hangs labels all over him, to testify her disgust at his existence, and to admonish others to beware of his example! How she loosens all his joints, sends tremors along his muscles, and bends forward his frame, as if to bring him upon all fours with kindred brutes, or to degrade him to the reptile's crawling! How she disfigures his countenance, as if intent upon obliterating all traces of her own image, so that she may swear that she never made him! How she pours rheum over his eyes, sends foul spirits to inhabit his breath; and shrieks, as with a trumpet, from every pore of his body, "BEHOLD A BEAST!"

Such a man may be seen in the streets of our cities every day; if rich enough, he may be found in the saloons, and at the tables of the "Upper Ten;" but surely, to every man of purity and honor, to every man whose wisdom as well as whose heart is unblemished, the wretch who comes cropped and bleeding from the pillory, and redolent with its appropriate perfumes, would be a guest or a companion far less offensive and disgusting.

Now let the young man, rejoicing in his manly proportions and his comeliness, look on *this* picture, and on *this*; and then say, after the likeness of which model he intends his own erect stature and sublime countenance shall be configured.

Society is infinitely too tolerant of the *roue*,—the wretch, whose life-long pleasure it has been to debase himself and to debauch others; whose heart has been spotted with infamy so much that it is no longer spotted, but hell-black all over; and who, at least, *deserves* to be treated as travelers say that the wild horses of the prairies treat a vicious fellow,—the noblest of the herd forming a compact circle around him, heads outward, and kicking him to death.

But why should not a young man indulge an ambition to lay up a stock of health, as well as to lay up stock of any other kind? Health is earned as literally as any commodity in the market. Health can be accumulated, invested, made to yield its interest and

its compound interest, and thus be doubled and redoubled. The capital of health, indeed, may all be forfeited by one physical misdemeanor, as a rich man may sink all his property in one bad speculation; and it is as capable of being increased as any other kind of capital; and it can be safely insured, on payment of the reasonable premium of temperance and forethought. This, too, is a species of wealth which is not only capable of a life-long enjoyment by its possessor, but it may be transmitted to children by a will and testament that no human judicature can set aside.—*Horace Mann.*

THE BLOODLESS FEAST.

SPREAD me a feast of luscious fruits
That grow and ripen in the light,
And every luxury that suits

A true and natural appetite!
From vineyard, nursery, and grove,
Prepare a dinner fresh and sweet,
Whose tempting odors well may prove
Ambrosias fit for gods to eat!

Away your flesh-pots, steaming hot,
Your soups, your condiments, and wine,
With terrifying ailments caught
From the foul stuff on which ye dine!
Away your tuffies, cakes, and pies,
Your gravies, spices, floating isles;
In them a lurking tempter lies,
That leads ye by his pampering wiles!

Bring apples from the quaint old tree,
Pears, cherries, peaches blushing red,
With figs and tamarinds to be
A substitute for gingerbread;
Bring berries from the garden wall,
And nuts that ripen in the glade,
With never a cheerless shade to fall
Upon the feast that we have made!

—*Eliza Pittsinger.*

PHYSICAL CULTURE AT VASSAR.

It was about five years ago that Dr. Wm. Blakie, of New York, an enthusiast on the subject of "health by exercise," delivered a brief address on this topic before the students of Vassar College. Up to that time, the majority of the students had considered the required course in gymnastics as one in which the greatest honor was due to her who did the least work. The daily constitutional was also regarded as an unnecessary requirement, and

one that was to be eluded as frequently as possible. But after Dr. Blakie's address, all was changed. His enthusiasm was contagious. There was no more sauntering up and down the college campus. Long, brisk walks were taken. Rowing matches on the lake were the fashion. The ranks of the tennis club were greatly enlarged; and within the past few years tricycles are not a strange sight to Vassar visitors. But this was not all. Additions were made to the gymnasium by the college authorities, the regular classes were better attended, and gymnastic exercises became popular.

The next year Mr. Blakie returned, made a more formal address, and added fuel to the fire which was already burning brightly. Up to this time the flame has never flickered; and at the present commencement the alumne, fully realizing the necessities of their younger sisters, have presented the college with the sum of twenty thousand dollars for a new gymnasium. This will be completed under their supervision during the summer vacation, and will be as complete in its appointments as the gymnasia of Yale and Harvard.

We hear so much nonsense nowadays concerning the pernicious influence of higher education upon the health of women, that I wish to make this statement to show that in their desire for intellectual development, the exponents of higher education for women are not forgetting physical culture. At Vassar (I do not know so much about other women's colleges) the old gymnasium is well equipped with health-lifts, poles, dumb-bells of wood and iron, and all necessary appointments. The work done under the supervision of a careful, experienced, and enthusiastic teacher, is of the best; and the students are, for the most part, as healthy and happy a group of young ladies as can be found anywhere.

Nor are they behind in the adoption of new ideas in regard to hygienic clothing. Tennis suits, made in the most comfortable manner, are worn by many during study and recitation hours, as well as for out-of-door exercise. They have also adopted the divided skirts

for gymnastic exercises; and through the influence of Mrs. Miller, the champion of hygienic clothing, who addressed the students this spring, I venture to say that the princess dress and combination garments will form a prominent part in the outfit of many a Vassar student for the coming year.

Thus it is that the students are trying to do their part in improving the general health of the college, and it is sincerely to be hoped that the "croakers" who are continually prophesying the utter ruin of the health of American women through higher education, will at least keep silence until they have given the subject a fair trial.

J. L. M. S.

Vassar College, June 8, 1887.

WAISTS.

UPON this subject the *Youth's Companion* offers the following apt remarks:—

"The girl of the period seems to be a trifle more sensible than her sister of the last decade. Her boots are not quite as pointed at the toe, and their heels are not as distinctively 'French.' She does not as ambitiously emulate the camel, in the wearing of a hump upon her back, and she has discarded the 'rats' and cushions which once were wont to make her coiffure into the semblance of pillows and bolsters. Unfortunately, however, she does not yet realize that beauty is inconsistent with a pinched waist.

"Admirable as the wasp may be in his humble capacity as an insect, there seems to be no legitimate reason for a young woman's modeling herself upon his figure; but she insists upon doing so.

"She is wont to express the most fervent admiration for the Venus of Milo; but even at the moment when she stands rapt in contemplation of the grand creature, she finds it difficult to draw a full breath, so tightly enclosed is she in corsets.

"Napoleon I., who had as much common sense as military ability, was dismayed at the revival of the corset in 1812. He said to an eminent physician in regard to it, 'This wear, born of coquetry and bad taste, which murders

women and ill-treats their offspring, tells of frivolous tastes, and warns me of an approaching decadence.

“Cuvier, whose work on comparative anatomy was published during the Consulate, and who occupied a high official position both at that time and under the Empire, had also the greatest aversion toward this article of dress.



VENUS OF MILO.

“He once endeavored, by practical illustration, to enforce his views upon a young lady who was a victim of tight-lacing. Walking with him in the *Jardin des Plantes*, she expressed her admiration for a very lovely flower.

“‘You were once like this blossom,’ said Cuvier, glancing at her thin, pale face. ‘Tomorrow it will be as you are now.’

“The next day he led her to the same spot, where she found the flower drooping and dying. She asked the cause.

“‘The plant,’ said the great anatomist, ‘is an image of yourself. I will show you the trouble.’

“He pointed to a cord bound tightly about

the stem, and continued, ‘You are fading away exactly in the same manner, under the compression of your corset, and you are losing by degrees all your youthful charms, just because you have not the courage to resist this dangerous fashion.’

“Said the last king of France, in an epigram which should have stung his subjects into common sense, ‘Once you met Dianas, Venuses, or Niobes; nowadays, only wasps.’

“Beauty is always to be revered and sought after, and the woman might be forgiven who, by torturing herself, really attained true loveliness; but when she attempts to improve upon nature, she merely defeats her own object. It is no more possible for her to enhance her charms, save by healthful living, than it is for a river to run up hill.

“The unnatural is always the ugly; it is but another name for deformity. The human figure in the shape of a wasp is as truly deformed as if its spinal column described a semicircle.

THE ORIGIN OF THE TOBACCO HABIT.

THERE is no greater enemy to health, cleanliness, decency, and morality, intoxicating liquors excepted, than tobacco. It is unhealthful; it is uncleanly; it is indecent, and it is immoral; and no one can indulge in its use without doing violence to an enlightened conscience, blunting their moral sensibilities, and seriously retarding, if not putting an end to, all genuine spirituality. Its history ought to convey to us a lesson of value, and induce us to abandon it forever.

Just when and where tobacco had its origin is not clear. Some have supposed that it originated in the fabulous ages of Greece, and to have derived its name from Bacchus, the god of drunkenness. That fabled god is said to have been the first to discover and disclose to mortals the wonderful virtues of this weed.

* * * * *

But Humboldt has shown, and we judge more correctly, that tobacco is a term in the Haytian language, used to designate the pipe, an instrument used by the natives in smok-

ing the herb; which term, he says, was transferred by the Spaniards from the pipe to the herb itself, and has since been adopted by other nations.

The introduction of tobacco into England was by Sir Walter Raleigh, from Virginia. The English, during their stay in Virginia and after their return, are said to have practiced smoking, after the custom of the natives. The introduction of smoking into England, by Raleigh and other young men of fashion, spread as rapidly among the English as it had among the Portuguese, Spaniards, and French. Raleigh was accustomed to give smoking-parties at his own house, where his guests were treated to nothing except a *pipe*, a mug of *ale*, and a *walney*. Here we see the early and intimate relation which tobacco sustained to ale and strong drinks,—a relation it has never abandoned.

The Abbot Nyssens was confident that the devil first introduced tobacco into Europe—a severe charge upon his satanic majesty.

In 1519, Cortez, the illustrious conqueror of Mexico, is said to have sent a specimen of this weed to his king, which is supposed to be the first ever introduced into Europe. America has the dishonor of first producing the weed. But whether its growth was spontaneous here, or whether it came from a more southern soil to Virginia, is not known. It is certain that the English found it in Virginia when they first visited the soil. Mr. Jefferson was of the opinion that it was a native of a more southern climate, and was handed along the continent from one tribe of savages to another, until it reached us.

The comparative value of tobacco in early times, may be inferred from the following fact: We are told that the increase of adventurers in Virginia, from year to year, was so great that the male population far outnumbered the female, making wives exceedingly scarce. To supply this lack, they were obliged to import women, as they did articles of merchandise. In 1620 and 1621, no less than one hundred and fifty girls were imported to the Virginia market, all of whom found a ready sale. The price of a nice young lady,

at first, was one hundred pounds of tobacco. Subsequently, the price of tobacco went down, or the price of young ladies went up, for we find that the price of a nice young lady was one hundred and fifty pounds of tobacco. This fact alone should induce every lady who has any respect for herself to wage eternal war with this foe of a decent, cleanly home.

Smoking was the first form in which tobacco was used, and for a long time it was the only mode in which it was used in Europe. Among the curious things of the past, has been preserved an old epigram on the subject of smoking, which runs thus:—

“ We buy the driest wood that we can find,
And willingly would leave the smoke behind;
But in tobacco a thwart course we take,
Buying the herb only for the smoke's sake.”

During the reign of George III. smoking went out of fashion among the higher and middle classes, and *snuffing* took its place. This was the second mode of using tobacco, and, we must confess, the most objectionable mode, especially when practiced by females. Catherine de' Medici, the person who instigated the horrible massacre of St. Bartholomew's Day, is said to have been the first to invent and introduce snuff-taking. And in order to be very polite, they adopted the method of using a little ladle, or spoon, with which the snuff was applied to the olfactories. This practice prevailed extensively among the English,—so much so that the Rev. Samuel Wesley, with a good deal of sarcasm, says:—

“ To such a height, with some has fashion grown,
They feed their very nostrils with a spoon;
One, and but *one* degree is wanted yet,
To make their senseless luxury complete,—
Some choice *regale*, useless as snuff, and dear,
To feed the mazy windings of the ear.”

So far as we know, this “choice *regale*” for the ear has not yet been discovered, but we cannot tell what may come in the future. We have somewhere heard it said, ironically, we presume, that a substitute for tobacco had been discovered, which was likely to come into general use. Such an expectation is based, it is said, upon the fact that the new article is much cheaper, and twice as nasty.—*Christian Witness*.

MAINE LINIMENT.

THOSE who are opposed to prohibition are continually reiterating that prohibition does not prohibit, and that prohibition in Maine is a failure. The following paragraph, which we quote from a contemporary, indicates that it is not so easy to obtain intoxicating liquors in Maine as many suppose, though it is doubtless possible to get liquor in Maine, just as it is possible to burglarize safes or commit highway robbery in Maine:—

“I was at the house of a friend who had just returned from Maine [says a writer in *The Critic*], and I noticed a bottle labeled ‘Liniment’ standing on her sideboard. ‘What have you been using liniment for?’ I asked. She laughed a musical laugh, and proceeded to explain. ‘That,’ said she, ‘is alcohol for my spirit-lamp. I wanted to make a pot of tea last week while in Brunswick, Maine; and found I had no alcohol for my lamp, so I sent my maid to the nearest drug store to get some. She returned, bearing that bottle marked as you see; and the druggist told her that he had put poison in it. He hoped that I would not care, it was just as good for burning; and unless he did that and called it liniment, he could be arrested.’ As my friend did not want to drink it, it answered her purpose.”

THE ABORIGINAL MILLER.

(See Frontispiece.)

AMONG the North American Indians prior to the advent of the white man, when the principal articles of food were acorns and the grains of the maize, the function of the miller was one of great importance. As the duties of the position were of a laborious character, and as the red man has a constitutional antipathy to anything which partakes of the nature of work, the Indian miller was (and is to this day, where the rude methods of the past still survive) a woman. In the illustration which forms our frontispiece this month, the artist has represented the various milling implements now used among two Indian tribes which still cling to the primitive ways of their

ancestors. The tribes referred to are the Hupas, who are found principally in northern California; and the Pimas, who live about the mouth of the Colorado River.

In gathering her grist, the Hupa miller uses a carrying-basket (Fig. 5) woven of osier. This she sustains upon her back by means of a buckskin strap passed around her forehead, which is protected with an ingenious pad, shown in Fig. 7. Having filled her basket with acorns, she returns to camp, and deposits her load in a large and closely-woven basket (Fig. 6), which serves as a granary. The mill is a quite complicated piece of machinery, consisting of a pestle, a hopper, a mortar-stone, and a receiving-basket tray (Fig. 8). The hopper is sometimes fastened to the mortar-stone by means of pitch. Into this the acorns are poured, and then hulled, and finally reduced to meal by means of the pestle, the meal sifting down through the space between the hopper and the stone, into the basket. Fig. 9 represents a water-tight basket in which the meal is converted into mush, the water being brought to the boiling point by placing heated stones in it. Fig. 1 shows a wooden mush-paddle; Figs. 2 and 3, ladles of horn; and Fig. 4, a small mortar.

The outfit of the Pima miller, represented in the lower half of the picture, is adapted for preparation of the seed of the screw-bean, upon which this tribe largely subsists. The bean crusher (Fig. 10) is a cone of coarsely plaited withes, in which the pods are broken up by means of the long pestle at the left, thus enabling the miller to get a heavier load into her net. The mortar is usually a cavity cut in the side of a log; but in order to reduce the meal to a finer consistency, it is put through a “second process,” by being rolled on the “metate,” or mealing-slab, shown in Fig. 15. The jars for holding the meal are cream-colored, decorated in black. In summer the miller is protected only by an open shed, as in Fig. 17, but in the winter time she takes refuge in a mud-covered hut, like the one shown in the lower right hand corner of the illustration.

Compulsory Ventilation.—An important prosecution under the Public Health Act has taken place at Bolton, England. A landlord was summoned, under the Act, for not causing premises of which he was the owner, to be properly ventilated. It was found that the upper sashes of the windows of houses on his property were immovable, and that the air within the tenements, on the occasion of the visit of the sanitary officers, was foul from want of ventilation. An order was made by the court that the windows be altered within three days, so as to afford sufficient ventilation, under a penalty of five dollars per day for non-compliance.—*C. W. Chancellor, M. D., in Maryland Medical Journal.*

—It may have some influence with fashionable corset-wearers to know that Bernhardt never wears corsets. It is stated that she never fastened a pair of stays around her waist in her life. To this fact is attributed her remarkable suppleness and inimitable grace of motion.

Seasonable Hints.

—Now is the time to get out the stoves which have been rusting in the wood-shed or cellar, and replace them where they belong; namely, in the house. Of course half the stove-pipe has been lost or stolen, and the other half cannot be made to fit together without the exertion of superhuman strength and angelic patience; and very likely the doors have been broken off, and the mica plates punctured, and the stove-legs sold for old iron, and the zincs used to nail over rat-holes in the barn-floor. Why put yourself to all this trouble and expense? Set up your stoves this time with a resolve to let them stay where they are, all the year round. There is not a month in the year which does not contain some days during which a little fire is not only a comfort, but an actual necessity to health.

—There is a popular superstition to the effect that as the cold weather comes on, it is necessary to fortify the system against the influence of cold by increasing the amount of meat and fats consumed. Accordingly, large quantities of fried beefsteak are eaten at breakfast, and still larger quantities of roast beef at dinner; and the use of warm meat for supper, which may have been discontinued during the sum-

mer, is resumed. The usual effect of this large consumption of flesh is just the opposite of that which it was intended to accomplish. The eliminative organs are overworked, the system becomes clogged, the processes of nutrition fall into sluggish habits; and before long, the victim of excessive meat-eating finds himself far more sensitive to changes of temperature than he was before. There is no reason why more meat should be eaten in winter than in summer, since there are grain preparations which contain the elements needed to sustain the bodily heat, in much better proportion than they can be found in any kind of meat.

—The fruits and foliage of thousands of plants, having reached maturity during summer and early autumn, now enter upon the process of decomposition, developing various foul and noxious gases, and thus adding to the causes of disease already in operation. Fortunate it is when an early frost in some degree purifies the miasmatic atmosphere by destroying the septic germs with which the air is filled. If frosts are severe and frequent, autumnal fevers may be somewhat diminished in virulence; but so long as the causes of disease exist, the effect will be seen. The only safe, sensible, and prudent course to pursue, is to carefully avoid, so far as possible, the causes of disease, and keep the system in such a condition of healthful activity, by the use of proper food, pure water, and frequent bathing, that the poisons which give rise to malarious disease may be eliminated from the body as soon as taken in, and without any general disturbance. The causes of disease cannot always be avoided; but their worst effects can be warded off by proper attention to hygiene.

Clothing of Children.—The season of the year will soon be at hand when every mother experiences a great addition in the trouble of caring for her children, in consequence of the colds which are "caught," or acquired in some other way; and all sorts of cough sirups, balsams, etc., are brought into requisition. Most of these colds can be prevented by proper attention to clothing. The clothing at night should be sufficient, but not enough to cause sweating, and should be carefully adapted to the varying temperature of this season of the year. The day clothing should consist of warm woolen under-garments and thick woolen outer-clothing, re-inforced by an overcoat on going out-of-doors. Children should not be allowed to run out-of-doors bare-headed, or without proper protection. They should be taught to keep their feet warm and dry, and if their feet become wet by accident, to dry them and exchange wet shoes and stockings for dry ones. A little attention to these matters will save much serious illness, and the contraction of many chronic ailments of the throat, nose, and lungs.

❖ THE HAPPY FIRESIDE. ❖

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

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

LIFE.

Was it not said by some great sage,
That life is an unwritten page?
We write our fate, and when old age
Or death comes on,
We drop the pen.

For good or ill, from day to day,
Each deed we do, each word we say,
Makes its impress on the clay
Which molds the minds
Of other men.

And all our acts and words are seeds
Sown o'er the past, whence future deeds
Spring up to form our wheat or weeds;
And as we've sown,
So reap we then.

MRS. LANE'S CHILDREN.

BY "BELLE BROWNE."

It was a warm morning in the early autumn when I went to spend the day with Mrs. Lane, at her urgent request. "For," said she, "Henry is going to be away all the week, and I shall be so lonesome."

Mrs. Lane was my nearest neighbor, and the mother of four small children, Charlie, the oldest, being only eight years of age. Eddie came next in order, then Mamie, and lastly baby Ada, who had not yet passed her second birthday. All were bright, blue-eyed children, precocious and intensely nervous.

Charlie was at school, and Eddie and Mamie out to play, when I arrived. I had with me my little daughter Belle, who was about the same age as Eddie, and she went out to find them. About ten o'clock they all came rushing in.

"We want something to eat," said Eddie, in a tone that I thought had more of com-

mand than of entreaty in it. Mrs. Lane brought them each a slice of bread and butter.

"I do not want that," said Eddie rather contemptuously.

"I do not want that either," said Mamie, pouting her lips.

"Do n't want 'at," said little Ada, imitating the looks and tones of her brother and sister.

"Have you not some cake or something?" Eddie continued, nodding his head towards the pantry, with an air that said as plainly as words could have said it, that he meant to have it, if there was any.

"No, Eddie, I gave you and Mamie a slice there was when you came in before. I guess you can eat bread and butter, if you are real hungry," said his mother coaxingly. Eddie swung himself around with an impatient gesture of dissent.

"Then give me one of those apples grandma sent," he said imperatively.

"Give me one, too," said Mamie.

"Div me appie," said little Ada, stamping her tiny foot, and pouting her pretty mouth.

"O children!" said Mrs. Lane, "you have been eating apples all the morning, and I want to save enough to make some pies for dinner. If you eat any more, I am afraid I shall not have enough; and besides, they are so hard, I am afraid they will make you all sick."

"Well, I am not afraid, and I know grandma would give them to us if she were here," said Eddie, beginning to cry. Mamie began to whimper, and Ada to scream.

"Hush, hush, children," said their mother, "I will give you one apiece. Here Belle, is

one for you." Belle looked around at me to see what I thought about it.

"Belle is not used to eating between meals," I said. "You may take the apple, dear, and keep it till dinner time, and then eat it."

"You keep it for me, mamma," said Belle, so I put it in my pocket, and they all ran out again.

"Mother sent me over a basket of apples," said Mrs. Lane to me. "They are the first we have had this season, and the children cannot let them alone. I must make my pies immediately, before they tease them all away from me."

A little after twelve, the children were called to dinner, and soon we were all seated around the table. After Belle and I had been helped, Mrs. Lane turned her attention to her own children, offering them nice bread and mashed potato. Eddie and Mamie leaned back in their chairs, with pouting lips, and refused to eat, with sullen shakes of the head.

"Now, Eddie, do take some bread and butter; you must be hungry." Eddie shook his head again, but said not a word.

"Mamie dear, shall not mother help you to some of this nice potato?" A shake of the head from Mamie.

"Well," continued the mother, "won't you have an egg or a piece of meat?" Another decided negative from both of the children. They did not cry or tease, but sat back with such a sour expression of childish dignity that it was really comical, if it had not been provoking. After coaxing a while longer, Mrs. Lane cut one of the pies, and offered it to them. You should have seen the change that came over their faces. The abused, sad expression vanished, and smiles took its place. It was evident they knew how to manage their mother. They ate their pie with a good relish, but nothing else would they touch, except a second piece which their mother finally gave them. They then slipped away from the table, leaving Belle to finish a hearty dinner, which she was hungry enough to enjoy very much.

"My children never eat much at meal-time,"

said Mrs. Lane apologetically, "so they always get hungry before the next meal comes. I wish they would eat as Belle does, and not be so notional and particular."

"Belle has never been allowed to eat between meals," I said, "and that accounts for her having such a good appetite for her regular meals. She never thinks about being hungry till she sees me setting the table. I have thought that my mother made a dyspeptic of me by allowing me to eat at all hours of the day, so I have tried a different plan with my children. I am convinced that it is much better for them, for their stomachs need rest as well as the other organs of their bodies; and it is so much easier for the mother than to have them nibbling all the time."

"I know it is a great bother," said Mrs. Lane; but fancying she was somewhat prejudiced against my method, I forbore to press the subject further.

Later in the day, when little Ada kicked and screamed on her mother's lap with "stomach ache," and was forced to swallow dose after dose of castor-oil, paregoric, and camphor, I could not help thinking of the old adage, "An ounce of prevention is worth a pound of cure." This delicate, blue-eyed child had always been puny, and suffered much more than the others from her kind-hearted mother's unhygienic ways. She had been sick nearly all her little life, and was almost twenty months old before she could walk. "The crossest, baddest baby I ever saw," her mother used to say to her in playful tenderness. Yet she was such a cute little fairy, I could not help loving the child.

As the foregoing was a fair sample of what took place in the Lane household three hundred and sixty-five times in the year, I did not so much wonder at the formidable "doctor's bills" that Mr. Lane groaned under every fall, and which made them think they had so much bad luck.

Sometimes, as I have had opportunity, I have told them a few of my experiences with water treatment, and its usefulness in the care of children. They never said much in reply.

and I fancied I was not making much impression.

Eddie and Mamie have often stopped to play with Belle, when their mother went to the village on a shopping expedition. They are bright, pretty children, and we all like to have them come. I will own I have been guilty of spoiling them a little. When they have refused to eat anything but cookies, I have humored them, for I hated to have them go without food. But after this visit, I concluded I would try a different plan the next time they came. They came early; and when dinner-time arrived, I knew they must be hungry, for they had played hard all the forenoon without any lunch. When we came to the table, Mamie would not eat the food I placed on her plate, but sat back in her chair and pouted.

"Why do you not eat your dinner, Mamie?" I asked; but Mamie deigned me no answer. There was a plate of nice buns on the table, that I knew she wanted me to offer her; but I did not take the hint, and the child was too polite to tease.

"O well," said I, "Mamie need not eat if she does not want to. Perhaps she is sick, and if she is, it will be better for her not to eat anything."

So we went on with our dinner, and paid no more attention to her. It was not many minutes before she went to eating her dinner, and with a good appetite, too. I gave her a bun after I thought she had eaten nearly enough; and she liked me just as well as though I had indulged her caprice.

Little Ada was cutting her double and eye-teeth, and kept having "awful sick spells," as her mother said. The doctor lanced her swollen gums, and gave her plenty of medicine, but she grew worse instead of better. Through the autumn and winter she became paler and thinner, and more fretful. Night after night her parents tried in vain to soothe the restless child. I certainly thought she would not live till the flowers bloomed again. But one day in early spring I went there, and the frail little creature was playing on the floor with the other children.

"O Mrs. Browne," said Mrs. Lane, "Ada is so much better! All her teeth are through now, and I think she will get well. But you do not know how anxious we have been about her. We have tried everything we could think of, and I got so discouraged I almost gave up all hope; and in my distress I prayed that God would show me what to do for her. Then it came to my mind to give her a warm bath, such as you told me you give your children when they are sick. And it did her the most good of anything I have done for her yet. She quieted down, and slept sweetly all night. I have tried it several times since, and it helps her every time."

Of course I was very glad to hear this; but I cautioned her not to give too much treatment, for her delicate little girl could not stand much.

Little Ada continued to improve; and when warm weather came, she could run and play out-of-doors with the other children. When I was there one afternoon, I noticed Ada was whining about something; and, not mistrusting the cause, I asked, "What is the matter with our little girl?"

"It is nothing," said her mother, "only I am trying to break the children of eating between meals;" and when Ada found her mother was decided about it, she ceased her pouting, and went off to play.

The change that has taken place in this fragile little girl is almost marvelous. With regular meals, frequent bathing, and plenty of air and sunshine, she has grown rosy, and plump, and playful. From being the most fretful and irritable child I ever saw, she has become one of the happiest and most lovable. The other children also have improved in health and temper. They are not so self-willed and ungovernable as formerly.

I would not insist that good health always makes people good-tempered, but it helps a great deal, and especially with children, who have but little self-control. Even grown folks are sometimes cross and unreasonable, when afflicted with dyspepsia and other nervous complaints.

If mothers could always be wise enough to

give their children just what is good for them, there would not be so many growing up with chronic diseases, and breaking down in the prime of life.

Morn on the mountain, like a summer bird,
Lifts up her purple wing, and in the vales
The gentle wind, a sweet and passionate wooer,
Kisses the blushing leaf, and stirs up life
Within the solemn woods of ash deep-crimsoned,
And silver beach, and maple yellow-leaved,
While autumn, like a faint old man, sits down
By the wayside, a-weary.

—H. W. Longfellow.



AUTUMN.

With what a glory comes
and goes the year!

The buds of spring, those
beautiful harbingers

Of sunny skies and cloud-
less times, enjoy

Life's newness, and earth's
garniture spread out;

And when the silver habit of the clouds
Comes down upon the autumn sun, and with
A sober gladness the old year takes up
His bright inheritance of golden fruits,
A pomp and pageant fill the splendid scene.

There is a beautiful spirit breathing now
Its mellow richness on the clustered trees,
And, from a beaker full of richest dyes,
Pouring new glory on the autumn woods,
And dipping in warm light the pillared clouds.

—One night, in a thunder-shower, we thought
the little ones were all asleep, when a little voice
from the trundle-bed called out, "O mamma,
the dark is winking; first it winks up, and then
it shuts down.

—A bright little girl who saw three sisters
with hair of a decided auburn, remarked to her
mother: "Seems to me, mamma, that kind
of hair must be redheaditory in that family."

How to Keep a Situation.—Lay it down as a foundation rule that you will be "faithful in that which is least." Pick up the loose nails, bits of twine, clean wrapping-paper; and put them in their places. Be ready to throw in an odd hour or half-hour's work when it will be an accommodation, and do not seem to make a merit of it. Do it heartily. Though not a word be said, your employer will be sure to make a note of it. Make yourself indispensable to him, and he will lose many of the opposite kind, before he will part with you. Those persons who watch every second of time to see when their working hour is up; who leave, no matter what state the work may be in, at precisely the instant; who calculate the extra amount they can slight their work and yet not get reproved; who are lavish of their employer's goods, will always be the first to receive notice that times are dull, and their services are no longer required.

A Mother's Care.—A woman gifted at running "grab-bag" socials called on a mother, saying, "We have many useless articles that must be disposed of somehow. We've concluded to place them all on one table, under the charge of our most fascinating young ladies. Gentlemen will chat with them, then cannot go away without buying something; and the ladies can put their own prices on the articles. We really want your daughter, she has such winning ways." Seeing indignation gathering in this noble mother's face, and knowing how carefully she had guarded her children from social contamination, she added, "Of course, she will have to play the agreeable to a good many you might not approve; still she need not recognize them afterward." "What!" exclaimed the mother, "allow my daughter to become a decoy to lure money out of men's pockets in return for shams and false smiles? NEVER! I hold my child's moral nature too sacred for that."—*Selected.*

"Our eyes, so very prone to trace in others, signs of sin,
Would see full many a scar, I ween, should they but look within."

Temperance Notes.

—Forty-four of the seventy-five counties of Arkansas have no saloons.

—The State of Pennsylvania has nine hundred and ninety-eight W. C. T. Unions.

—It is estimated that there are five thousand habitual morphine-eaters in New York City, of which nearly four thousand are women.

—It is estimated that if the money spent annually in Great Britain for intoxicating drinks, were put in sovereigns, and placed in a line, they would reach two thousand miles.

—A peculiar liquor law is in force in Rockdale Co., Georgia. Only one person in the county is permitted to sell liquor. He is appointed by the grand jury to sell for medicinal purposes, and cannot keep more than ten gallons of spirits at one time.

—Out of twenty young men from one town in Massachusetts, who competed for a West Point cadetship, ten were rejected by the physician because they had the "tobacco heart," brought on by cigarette smoking, and consequently were unfit for West Point service.

—A Boston paper presents some statistics of the arrests for drunkenness and assault in ten leading cities of the Union. From these figures it appears that in Washington, D. C., one in every eighty persons is arrested for this offense; in Albany, New York, one in every one hundred and twenty; while Columbus and Cincinnati, Ohio, have the least arrests for inebriety of any cities of their size.

Dangerous Drinks.—The *Philadelphia News* is authority for the following: "A bar-tender plaintively bewailed the necessity of having to rub congealed drops of sticky beer off the bar. 'But if I let them remain,' said he, in the tone of one seeking compassion, 'they rot the wood.'"

"'They rot the wood, do they?' fiercely repeated a beer bibbler. 'Then, what in the name of common sense does beer do to my stomach?'

"'Replied the manipulator of drinks: 'It is beyond me to tell. Let me show you something.' He placed a piece of raw meat on the counter, and dropped upon it a small measure of an imported ginger-ale. In five minutes the meat had parted into little pieces, as though hacked by a dull knife."

Popular Science.

—An American engineer has calculated that the material used in the famous Chinese wall would suffice to build a wall six feet high and two feet thick around the globe.

—It is said that in France, whitewash is used to protect the frame and interior of buildings from fire; the beams, joists, and underside of floorings being thickly coated with a lime-wash before they are placed in position.

—Dr. Hock, a German naturalist, finds that the Eastern hemisphere affords two hundred and sixty-nine species of plants and fifty-eight of animals useful to man, while the Western world contributes only fifty-two of plants and thirteen of animals.

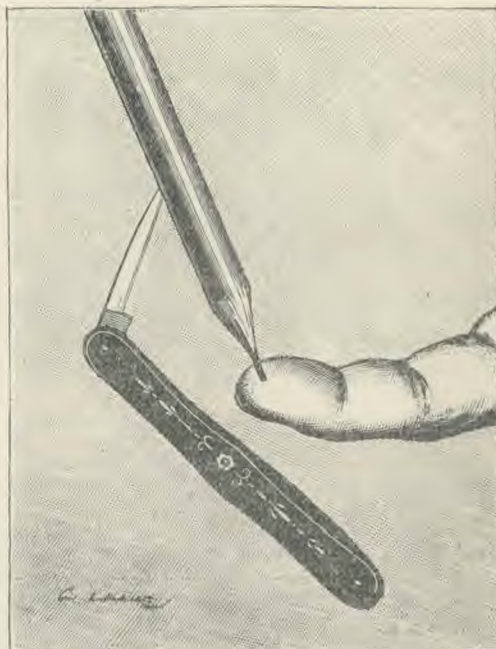
—The earth's internal heat is being used in a practical way at Pesth, where the deepest artesian well in the world is being sunk to supply hot water for public baths and other purposes. A depth of 3,120 feet has already been reached, and the well supplies daily 176,000 gallons of water, heated to one hundred and fifty degrees Fahrenheit.

—Measurements have shown the thicknesses of human hairs to vary from the two hundred and fiftieth to the six hundredth part of an inch. The silk worm's thread is one five thousandth of an inch thick, and that of the spider's web only one thirty-thousandth. Blonde hair is the finest, and red the coarsest. Taking four heads of hair of equal weight, a patient German physiologist found the red one to contain about 90,000 hairs; the black, 103,000; the brown, 109,000; and the blonde, 140,000.

—M. Fizeau, of the French Academy of Sciences, calls attention to a curious acoustic phenomenon, which is sometimes observed at sea, and to which, from its analogy to the well-known phenomena of light, he terms the "mirage of sound." Under the influence of stratas of air of varying temperatures, he finds that the sound waves may be deflected upward to a very marked extent. He considers this phenomenon responsible for the numerous recent collisions between ships provided with powerful fog-signals.

—Experiments show that there is no economy in turning down the wick of a lamp, notwithstanding that the popular theory and practice is to the contrary. When a lamp is lighted, there is, at first, a time when the flame will not burn high without smoking; but after the lamp and chimney are thoroughly heated, and the full supply of oil is established through the capillaries of the wick, a strong flame can be maintained. If, with this supply es-

tablished, we turn down the wick, the supply of oil continues in the same ratio; but owing to the decrease of burning surface, part of it is not consumed in the flame, but is volatilized into gas, which goes to vitiate the air of the room.



A PENCIL BALANCED ON ITS POINT.

Every one remembers the story of Columbus and the Spanish nobles,—how Columbus made the egg stand on its end by the rather unfair method of crushing the shell,—but what would the great navigator have said if somebody had asked him to balance a sharpened lead-pencil on its point? As a matter of fact, nobody could have asked this of him without committing a serious anachronism; because lead-pencils, as we know them, were not invented until some years after Columbus was in his grave; but if such things had been known, and the question had been propounded to him, very likely he would have thought the finding of a new world a very insignificant task compared with the solving of the puzzle. Nevertheless, it can be done. All that is needed to overcome the apparently conscientious scruples of the lead-pencil against disobeying the laws of gravity, is a common penknife, which is opened and the point of the blade inserted in the side of the pencil, in the manner shown in the engraving. The weight of the knife-handle throws the center of gravity below the point of support, and thus the whole system is brought into what the scientists call a state of stable equilibrium. On this account the pencil not only stands upright, but actually refuses to remain in any other position, returning to its original altitude as soon as the restraining force is removed.

SOCIAL PURITY.

"Blessed are the Pure in Heart."

BAD HYGIENE VS. VIRTUE.

THE above is one of the topics laid down for discussion at mothers' meetings, by the Department of Social Purity of the N. W. C. T. F. The following paragraphs are quoted from a leaflet written by Dr. Bessie Cushman, and belonging to their excellent *Mothers' Meeting Series*:—

Fire is fully kindled before it breaks out. Dry material is necessary for kindling. From some source there comes a spark, and a smoldering; then, there is a little blaze; finally, a conflagration. The spark is so small it falls unnoticed; or if it is seen and is the spark of a moral conflagration, it is said, 'There is not enough of it to do any harm.' Outbroken, recognized sin is not the beginning, but rather the end of a course of wrongdoing. Terrible fires of lust are burning, consuming body and soul, strangling the tender loves of the family, blasting friendship, blighting every pure affection, and blackening everything that is white in human nature. In this generation—the product of all the flesh-eating, wine-drinking, sensuous generations that have preceded it—every child is made of seasoned timber. There is no lack of material to foster and feed the fire. We are concerned in finding the source of the igniting spark, which, put out, averts the destruction of the children with us; and gives to children yet unborn promise of cooler blood and calmer brain. The initial spark does not come from the white flame kindled of God, solely for the altar of the family, and which he designed to be guarded as was the vestal lamp of the old temple. It does not come from any natural, unperverted faculty or function. Probably

every unhealthful habit of body or mind, by irritation or enervation, contributes, directly or indirectly, to this sexual fever, which is not vigor, as the delirious fury of the fever patient is not strength. 'Social purity means the best conditions of physical life.' . . . Undoubtedly the bed-rock of reform is non-stimulation. No other foundation can be laid, upon which it is possible to build a healthy body, clean heart, and clear head. And if the foundation be 'generations deep,' the greater will be the integrity and security of the manhood built thereon.

"Alcoholic stimulants are strongly opposed to chastity, by their intense action and by their wide-spread use. Whether disguised in wine, beer, or cider, or unmasked and bold in distilled liquors, alcohol is the deadliest foe of purity. It strikes two ways at one blow. The same glass that lights up sensuous desire fills the eyes of conscience with smoke. It wakes the beast, and stupefies the man. Its demoralizing effect upon brain and body is known and used by debauchees of every caste. . . .

"Coffee should be brought to judgment for its complicity in this crime of uncleanness. When science fortifies the social purity reform as fully as it now does the temperance reform, the aromatic cup will be abolished. The evidence already in is sufficient to condemn it. . . .

"Plain food, pure air, exercise,—the conditions which insure good sleep,—healthful dress, healthful thought, good companions, good books—these are stones of which the wall of defense must be built, and one word names the cap-stone—Health.

•To summarize the dietetic habits most

promotive of chastity : First and most important for all, of whatever age, sex, or circumstance, is total abstinence from every kind of alcoholic stimulants.

Second : The substitution of milk for tea or coffee, or in those comparatively rare cases of indigestion where the former disagrees, hot water with as much cream as can be borne.

Third : The substitution of fruit and fruit flavors for spices and condiments of every sort, and the use of salt in moderation. . . .

Fourth : The substitution of milk for meat, as the animal food of the young—even the tiger mother is wise enough for that. . . . The desideratum is plain, digestible, nourishing, unstimulating, *natural* food,—that which makes and keeps the body at its best. Whole wheat and brown flours of every sort, are good building materials. Fruit is more wholesome raw than cooked, if it can be obtained in thoroughly ripe and fresh condition. If it has been exposed to the filth of the market in great cities, let it be simply cooked. In either way it is preferable as 'dessert' to the pie, which literally creates 'waste places,' and by directly producing indigestion and the fevered, restless sleep so favorable to lascivious dreams, becomes indirectly a moral evil."

EARLY TRAINING.

It is needless to demonstrate a fact so well established as that the future character of an individual depends very largely upon his early training. If purity and modesty are taught from earliest infancy, the mind is fortified against the assaults of vice. If, instead, the child is allowed to grow up untrained ; if the seeds of vice, which are sure to fall sooner or later in the most carefully kept ground, are allowed to germinate ; if the first buds of evil are allowed to grow and unfold, instead of being promptly nipped, it must not be considered remarkable that in later years rank weeds of sin should flourish in the soul, and bear their hideous fruit in shameless lives.

Neglect to guard the avenues by which evil may approach the young mind, and to erect barriers against vice by careful instruction and a chaste example, leaves many innocent souls open to the assaults of evil, and an easy prey to

lust. If children are allowed to get their training in the street, at the corner grocery, or hovering around saloons, they will be sure to develop a vigorous growth of the animal passions.

Children should be early taught to reverence virtue, to abhor lust ; and boys should be so trained that they will associate with the name of woman only pure, chaste, and noble thoughts. Few things are more deeply injurious to the character of woman, and more conducive to the production of foul imaginations in children, than the free discussion of such subjects as the latest scandal and like topics. The inquisitive minds and lively imaginations of childhood penetrate the rotten mysteries of such foul subjects at a much earlier age than many persons imagine. The inquiring minds of children will be occupied in some way, and it is of the utmost importance that they should be early filled with thoughts that will lead them to noble and pure actions.

The Influence of Luxury.—The tendency of luxury is toward demoralization. Rome never became dissipated and corrupt until her citizens became wealthy, and adopted luxurious modes of living. Nothing is more conducive to sound morals than full occupation of the mind with useful labor. Fashionable idleness is a foe to virtue. The young man or the young woman who wastes the precious hours of life in listless dreaming, or in that sort of senseless twaddle which forms the bulk of the conversation in some circles, is in very great danger of demoralization. Many of the usages and customs of fashionable society seem to open the door to vice, and to insidiously, and at first unconsciously, lead the young and inexperienced away from the paths of purity and virtue. There is good evidence that the amount of immorality among what are known as the higher classes, is every year increasing. Every now and then a scandal in high life comes to the surface ; but the great mass of corruption is effectually hidden from the general public. Open profligacy is, of course, frowned upon in all respectable circles ; and yet wealth and accomplishments will cover a multitude of sins.

 * BIBLE HYGIENE *

SLEEP.

THE various forms of rest and sleep are frequently spoken of in the Bible, and that in strong language. Our natural and constant desire for rest, in this world of physical bustle and mental worry (Psalms 55:6), is indicated in the comforting promise of the complete "rest" that is to characterize the future state. Man requires rest, like his Maker, in whose image he was made (Gen. 2:2). And that this law was made for the body as well as for the soul, is shown by the fact that rest is as necessary for the lower animals as for man (Ex. 20:10); and even for the inanimate land (Lev. 25:4). The object in enforcing it for man, beast, and soil, alike, was to prevent mental, corporeal, and physical exhaustion, and to permit complete recuperation of their exhausted energy.

The majority of the Bible references to rest, speak of its advantages in a worldly way, when properly regulated, and of the disadvantages of the reverse; but its effect on health is also clearly included. This is proved indirectly by the texts which praise it, and which show that it is not merely a pastime or a luxury, but necessary and beneficial for the mind and body, as well as for the soul. Rest is one of the rewards promised for faithful service to God (Deut. 25:19). It is the gift of love (Ps. 127:2), and the sure reward of labor (Ecl. 5:12). Rest is a beneficial and, indeed, a necessary blessing (Isa. 28:12; 57:2; Ps. 55:6; 127:2; Prov. 3:29; Ecl. 5:12; John 11:13), while want of it is considered injurious (Matt. 12:43), and its deprivation deemed disastrous (Prov. 4:16; Dan. 6:18).

On the other hand, overindulgence in this enticing luxury is blameworthy (Prov. 6:9, 10;

Isa. 56:10). The Bible corresponds with nature and experience in indicating that night is the best time for sleep (1 Thess. 5:7); but for the above-mentioned reason it does not specify the quantity required, either of this or of ordinary rest, and only indicates that we ought to have enough, though not too much. In short, moderation is inculcated in this, as with all other necessities, desires, and luxuries. An unconquerable desire for rest usually comes when we are tired; and, as with the appetite, the longing for sleep returns at periodic intervals, when the body requires it. There is no necessity for the Bible to enforce this natural law by actual command, seeing that we are more likely to err on the side of somewhat too much, than of too little sleep.—*Selected.*

Ancient Teetotalers.—Dr. Lees offers the following interesting commentary upon 2 Kings 19:24, "I have digged and drunk strange waters," etc.:

"Some think that Sennacherib alludes to the plan, often adopted, of diverting waters intended for the protection of towns, into channels dug for their reception. Others claim that the passage refers to deep (artesian) wells dug by his army, whence he took water never found before, and in that sense 'strange.' The only beverage that his troops required was water.

"Sustained only by such drink, it was that the Saracens, in later ages, swept over the East and penetrated Spain; and so well known was this habit of theirs, that when a certain body of imperial troops complained that they were beaten because they were not allowed wine, their commander caustically asked, 'How comes it, then, that your conquerors drink nothing but water?'"

DOGS IN THE EAST.

THE frequent references in the Bible to the dog, show very clearly that this animal was well known to the people of Bible times. The dog was held in great contempt among them, however, which may have been due to the fact that it was worshiped as a deity by the Egyptians. The following paragraphs on this subject are quoted from a learned author:—

“The state of dogs among the Jews was probably much the same as it is now in the East; where, having no owners, they run about the streets in troops, and are fed by charity or by caprice, or live on such offal as they can pick up. That they were numerous and voracious in Jezreel, is evident from the history of Jezebel.

* * * * *

“The modern Eastern people do not suffer dogs in their houses, and even take care to avoid touching them in the streets, as it is considered a defilement. One would imagine, then, that under these circumstances, as they do not appear by any means to be necessary in the cities, however important they may be to those that feed flocks, there would be very few of these creatures found in oriental towns. They are, notwithstanding, there in great numbers, and crowd the streets. They do not appear to belong to particular persons, as our dogs do, nor to be fed distinctly by such as might claim some interest in them; but get their food as they can. At the same time, the people consider it their duty to take some care of them, and the charitable ones frequently give money every week or month, to butchers and bakers, to feed the dogs at stated times; and some leave legacies at their death, for the same purpose.”

A wholesome lesson may be drawn from the fact that physical contact with these animals is considered a defilement. In countries where the dog is on terms of easy familiarity with human beings, various diseases prevail, which are contracted from these animals, such as hydatids, a parasitic disease, and similar maladies. It is not cleanly, and

from a sanitary standpoint is not safe, to handle dogs, cats, or other animals, without carefully cleansing the hands before they are used for any purpose connected with food, or in such a manner as to incur any risk of contagion of any sort. It is the belief of the writer that many cases of sore eyes, and perhaps other diseases about the face, may be fairly traced to the careless handling of dogs or cats, or the careless use of the hands before they have been properly cleansed.

Moses' Knowledge of Hygiene.—The eleventh chapter of Leviticus and those which follow, are so remarkably replete with the most detailed and yet unimpeachably correct information, that even the ancients have been struck with wonder at the completeness of the knowledge possessed by Moses. These chapters convey most interesting sanitary rules, which are to this day a treasure of infallible truth, and an object of the admiration of all experts. But there is more in these chapters than mere sanitary rules. What entitles them to a place in the holiest of books is their moral import. It is a most mysterious fact in the household of Nature that, to a great extent, man is that which he eats. People rarely think of this fact when they are obeying the dictates of their constitution in their own way, but ethnology confirms this fact sufficiently to make it more than probably true. People who live on the sea-shore, and are compelled to subsist upon mollusks, are found to become foolish; while those Indians who live on a diet of vegetable and animal food, are susceptible of culture. Other tribes that live on meat exclusively are savage, and those living on vegetable food, gentle. What is true of nations applies equally to individuals; it is an established fact that a habitual eater of pork finally assumes the disposition and amiable manner of a hog,—in short, the food makes the man, morally and in regard to habit and intelligence. There are, therefore, numerous sensible men who follow these Biblical commandments, and regard them as excellent rules, which a man must follow in order to be a perfect man.—*Rev. Dr. I. N. Wise.*



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

TERMS, \$1.00 A YEAR.

BATTLE CREEK, MICHIGAN, OCTOBER, 1887.

HEALTH INSURANCE.

In the estimation of the public, the proper business of the physician is to attend upon the sick, and, if possible, to cure them. The idea that the physician might render vastly more valuable service, if employed to preserve the health of the well, seems to have gained little foothold in this country; although it is said that in some half-civilized countries the physician is paid for keeping his patrons in health, rather than for curing them when sick.

Within the last few years there has been in the profession, as well as outside of it, considerable discussion of various propositions looking toward such a change of the present medical practice as will make it the chief business of the doctor to care for the health of his patrons by looking after their conditions and habits of life, giving advice respecting the prevention of disease, and warding off serious illness by giving attention to the first symptoms of disease. The following outline of a scheme of this sort from the pen of Dr. Woods Hutchinson, we quote from a recent number of the *North American Review*:—

“What influence does our present system of attendance give us over the sanitary surroundings, diet, or habits of life of our patients?—Almost none. It is true we have the priceless privilege of giving any amount of excellent advice on these subjects, which they may, perhaps, remember for a week; though usually they regard it simply as a customary and harmless prelude to a prescription, which

they regard as the ‘value received’ for the fee. Such an effect has the proportioning of our remuneration to the number of distinct, definite services rendered, had upon the ideas of the laity, that many of them have no thought of paying for anything except some such tangible benefit as a prescription or an operation. In some instances we are actually obliged to give a prescription in order to secure the right, in their minds, to claim a fee. They will pay a dollar for a prescription, and get the advice thrown in for nothing; and as the immortal ‘Josh Billings’ has sagely remarked, ‘What people gits fer nothing, thare mitey apt too valoo at about what they give fer it.’ Over the home life of our patients we have almost no control, or even supervision, until after the mischief (which often might have been averted by a few timely precautions) has been done; and even that ceases almost as soon as we begin to exercise it.

“What sort of success would we expect from a nursery-man who was not permitted to prune his trees until they were already misshaped, or to destroy their infesting parasites until the foliage was withered; and who was not allowed to water them till they began to droop, or enrich the soil about them till they were almost exhausted? And yet this is the relation to the bodies of our patients in which we are practically placed by our present system. The words ‘cobbler’ and ‘tinker’ are terms of reproach; and yet cobbling and tinkering is about all we are permitted to do to the vital mechanisms of most of our patrons. When we consider this

fact in the light of the deliberate statement of Mr. Chadwick, the distinguished English sanitarian, that he can build a city which shall have any required death-rate from 3 per 1000 up (the present average being nearly 18); when we remember that the 'white plague of the North,' as Holmes aptly calls consumption, which is responsible for the lion's share of our death-rate, is more than analogous to the familiar spindling of plants deprived of air and sunlight; that as much as fifty years ago even a layman like Lord Palmerston declared that 'for every death from typhoid somebody ought to hang;' that an unfailing specific for malaria, diphtheria, and cholera is contained in a six-inch drain-tile,—in short, that nearly one-half of our existing diseases are preventable, does not a re-adjustment of our relation to the public appear urgently pressing?

“How would a system of constant attendance at a fixed sum per year or month, including an annual or semi-annual inspection of the residence and surroundings, and review of the diet and habits of life of the family, if practicable, modify the conditions under which we are now attempting to promote the health of the public? This system, in part at least, is in practical operation in the different lodges and benefit associations; in manufacturing establishments and mines all over the country, with general satisfactory results as regarded from an economic standpoint. As, of course, the principle upon which these plans are adopted is a purely economical one, to get the greatest amount of service for the least possible cost, they could only be expected to be a success in this direction.

“The plan which I would respectfully submit is much wider in its scope, and is briefly as follows: That at the beginning of the calendar year, each individual or family should engage a medical attendant for the next twelve months, agreeing to pay him a specified annual salary in advance, either in full or in quarterly or monthly installments. The physician, on his part, should agree to render any and all professional services required, except operations or manipulations requiring the skill and training of a specialist,

for the annual consideration specified, which might readily be fixed according to some rate *per capita* or *per familiam* laid down in the fee bill. The physician should further agree, in consideration of the sum specified, to make an annual or semi-annual inspection of the sanitary conditions of the house and premises of his client, and to offer such suggestions as he sees fit in regard to the diet or habits of life of his client or the family,—in short, to act as general adviser on all matters of hygiene or therapeutics. The system might briefly, and perhaps not inaptly, be described as a scheme of 'health insurance.'”

STRANGE NOTIONS ABOUT EATING.

MANY people seem to imagine that eating is the great business of life and the chief end of existence, and food a panacea for all the ills of life. We frequently see the misguided friends of a sick person urging him to eat, imagining that if he can only be made to swallow food, he will be all right; when the stomach is really in such a condition that food taken into it will be digested with just about as much readiness as though it were placed in a carpet sack. The writer knew an old gentleman who was in the habit of eating a liberal slice of mince-pie, or some other pastry, just before retiring, after coming home late at night. One evening he came in after his wife had gone to bed. After an unsuccessful search in the pantry, he called to his wife, “Mary, where is the pie?” His good wife timidly acknowledged that there was no pie in the house. Said her husband, “Then where is the cake?” The poor woman meekly confessed that the supply of cake was also exhausted, at which the disappointed husband cried out in a sharp, censorious tone, “Why, what would you do if somebody should be sick in the night?”

Lyman Beecher tells a story of his aunt, which illustrates the popular idea that sick people must be fed with all sorts of dainties no matter what the nature of the disease. When a boy, eight or nine years of age, he was one day suffering in the throes of indigestion, as the result of having swallowed a

large amount of indigestible mince-pie. His kind-hearted aunt noticed the pale and distressed look on his face, and said to him, with genuine sympathy in her voice, "Lyman, you look sick. You may go into the pantry, and help yourself to a nice piece of fruit-cake just warm from the oven."

All persons are not so kindly disposed toward those in distress. A factory girl, in describing to a companion the hard-hearted and vindictive character of another girl whom she pointed out, declared that "she would not give a mouthful of food to a person who was drowning." Really a drowning person has just about as much use for food as have most invalids for the preserves, jellies, sauces, and various dainties and tidbits that are brought to them by sympathizing friends. There seems to be a great want of good common sense in matters of dietetics. It is hoped that the world is growing a little wiser in this direction, but there is still immense room for progress.

THE COST OF SMOKING.

The *American Grocer*, which would certainly not be likely to exaggerate the evil referred to, has recently published some interesting figures respecting the cost of smoking; and also incidentally calls attention to the amount spent for liquor, tea, coffee, and cocoa. We quote from the article referred to, as follows:—

"Last year the losses by reported fires in the United States reached a total of \$120,000,000, or an average monthly loss of \$10,000,000. This is regarded as an enormous waste, and is largely due to incendiarism and carelessness. How to reduce the amount so lost is a matter of constant study. Legislatures, local governments, insurance companies, make regulations and exercise the greatest care to prevent fires. And yet the loss occasioned by fires is \$60,000,000 per annum less than the amount paid by the consumers for cigars, and \$68,500,000 less than the total cost of tobacco consumed in smoke!

"Last year, tax was paid upon 3,510,898,488 cigars. The average smoker is content

with a cigar worth \$30 per thousand, or one that retails at five cents. On that basis there annually goes up in smoke \$180,000,000, or \$15,000,000 every month, or *half a million dollars every day*. In addition, boys waste on cigarettes \$6,500,000, and those who prefer a pipe, a further sum of \$20,000,000.

"How many smoke? If, from the total population, we deduct as non-smokers all children under fifteen years of age, constituting forty per cent of the total population of 60,000,000, it leaves 36,000,000, of whom one-half are females; deducting these, gives a male population of 18,000,000 above the age of fifteen. If six out of every ten males above the age of fifteen smoke, it means that 10,000,000 persons consume 3,510,898,488 cigars, or an average of 325 cigars annually per smoker. This is less than one cigar per day. The average smoker, however, is not apt to be contented with a daily allowance of one cigar, demanding at least two. If the latter basis is the nearer correct, the army of cigar-smokers would number 4,809,449, which is eight per cent of the total population above the age of fifteen.

"What relation the expenditure for the smoking habit bears to the consumption of a few other articles more or less of a luxury, is seen by the following exhibit, the figures showing the estimated cost to the consumer, averaging coffee at twenty cents per pound, tea at fifty cents, cocoa and chocolate at forty cents.

Liquor	\$700,000,000
Tobacco.....	\$256,500,000
Coffee, tea, and cocoa	\$130,000,000

"Alcoholic and malt liquors, tobacco, coffee, tea, and chocolate are non-essentials, or articles consumed for the mere gratification of appetite. For that pleasure a portion of the community pays \$1,086,000,000 annually. Not to exceed one-fourth of the total population habitually use alcoholic or malt beverages, nor more than one-sixth, tobacco. Steadily do the habits of self-gratification increase their growth, stimulated by a higher civilization. The more the masses have, the more are the luxuries of life demanded."

CONTAGIOUSNESS OF CONSUMPTION.

THE growing prevalence of this usually fatal disease renders it of the greatest importance that the public should be educated respecting its contagious character, so that proper precautions may be taken for avoiding danger of infection with this dangerous malady, either through inhalation or by contact. From experiments that have been recently made, it has been clearly shown that consumption is a very contagious disease, and that persons may become infected through wounds, as well as by inhalation of the germs of the disease. A recent medical writer calls attention to a number of cases, of which the following are brief abstracts :—

A strong, healthy servant girl, twenty-four years of age, cut her hand with a fragment of a spittoon, containing the expectoration of her master, who was ill with consumption. A swelling developed near the wound, which was opened and found to contain tubercles. Later, the glands of the armpit became inflamed, and upon examination, also showed the presence of tubercles.

A boy showing no evidence of consumption, entered a hospital, and was subjected to a surgical operation. Three weeks later, he was sent home with a small, healthy, granulating wound. At home he was placed in a room also occupied by his sister, who was dying of consumption, and here his wound was cared for by his mother, who also cared for the girl. Seven months after leaving the hospital, he returned, when the wound was found to be lined with tuberculous material.

A healthy young officer, whose family history was free from any consumptive taint, returning to England from New Zealand, with his wife, who was suffering from consumption and had large cavities in the lungs, occupied with her for four months a small, poorly ventilated cabin. The wife died soon after landing, and the husband then manifested symptoms of the disease.

A young soldier returned to his home in a small hamlet, in the midst of a large forest,

where tuberculosis was unknown. Soon after, he died of consumption. His wife became consumptive, and had a child that showed symptoms of the same disease. Another woman in the same hamlet (which consisted of but ten families), in turn, presented symptoms of pulmonary disease. She had had but little intercourse with the first family, but in the space of four months had eaten eleven chickens raised by them, and had not cooked the meat very thoroughly. Finally, one of the same brood of chickens died, and upon examination the intestines were found charged with tuberculous matter. The fowls had become infected by eating the expectoration of the soldier.

POISONING FROM SEWER GAS.

As the season of the year has arrived when doors and windows are closed, and the fresh-air supply is, in the great majority of homes, largely cut off, the danger from sources of poisonous gas within doors is greatly increased. Careful attention should be given to water-closets, drains, sinks, and all other sources of possible air-contamination. If the soil-pipe passes through the building, it should be carefully inspected to see that there are no leaking joints, and that there is an active circulation of air through the soil-pipe, which should, of course, not stop with the closet or hopper with which it is connected, but should be carried directly upward through the roof, to the open air. It is very important that soil-pipes, drains, and sewer branches should, if possible, be connected with a heated chimney or smoke-stack; as by this means a vigorous circulation through the pipe is secured, which effectually protects the air of the house from contamination by the escape of poisonous gases. We quote the following from the *Medical News* as an illustration of the poisonous effects of sewer gas :—

“A striking instance of the toxic effects of undiluted sewer gas was furnished last week in Paris, where the *concierge* of a house in the Rue de Temple, and his wife, together with their son, narrowly escaped death. In conse-

quence of their non-appearance one morning, their room was broken into by the neighbors, when all three persons were found insensible in their beds. The son was the first to recover consciousness; the other two ultimately rallied, but remained seriously ill. A search was instituted, which resulted in the discovery of a fissure in the soil-pipe, which passed down behind the wall of their room, the gas from which had, in all probability, given rise to these severe symptoms. A persistent bad odor had been noticed for some time previous, but as this is rather the rule than the exception in houses in Paris, except those inhabited by the very well-to-do, no particular attention had been paid to it. This case shows very clearly the danger incurred by allowing a soil-pipe to pass down within a building,—a fact which, notwithstanding its simplicity, does not as yet seem to have dawned upon foreign architects, who, whatever their theoretical knowledge may be, largely ignore the elementary principles of hygiene in their plans for dwelling-houses.”

SCARLET FEVER FROM MILK.

It has long been known that outbreaks of scarlet fever are sometimes traceable to the milk supply; but the supposition has always been that the infection of the milk was due to contamination in some way from the vessels in which it was placed, which had, in turn, been contaminated in handling by persons who had caught the infection in their own families or otherwise. Recent investigations have shown, however, that scarlet fever prevails to some extent among cows, and that milk may become infected in this way. The following paragraphs from the pen of Dr. Klein, the eminent bacteriologist of England, evince the interesting fact that even condensed milk may be the source of scarlet-fever contagion:—

“In October, 1886, Prof. Corfield forwarded to me certain tins of condensed milk, sold under the name of ‘Rose Brand.’ This milk was under suspicion of having produced scarlet fever in a number of persons that had par-

taken of it. From one out of three tins of this condensed milk, I have obtained, by cultivation, a microbe which, in every respect, morphologically and in cultures, is the same as the microbe obtained from the Hendon cows and from human scarlet fever. The action of the microbe of the condensed milk was also tested on animals,—calves and mice,—and it was found that it produced the identical disease that was produced by the microbe of human scarlet fever and of the Hendon cows. I may add that this Rose Brand of condensed milk is, like all condensed milk, obtained from cows’ milk. The Rose Brand is a cheap article, and meant for the poorer classes; probably it had not been sufficiently heated in the tins before sealing; that this is so, may be inferred from the fact that every tin of this brand which I opened, contained some organisms. Thus, for instance, I found that one tin contained the scarlet-fever microbe and another species of micrococcus; another tin contained a harmless species of micrococcus only; and a third tin contained a micrococcus and a species of bacillus.*

“Another piece of interesting evidence concerning the *Micrococcus scarlatina* is this: There occurred during the beginning of this year, a severe epidemic of scarlet fever in Wimbledon. This epidemic was also traced to milk coming from a particular farm. In one of the houses supplied with this milk there occurred cases of scarlet fever among the inmates; and at the same time a pet monkey, which also consumed a great deal of milk, became ill and died after five days. I had the opportunity to make a *post-mortem* examination of this animal, and there could be no doubt about its having died of scarlet fever. From the blood of this monkey I obtained, by cultivation, the same micrococcus as was obtained from human scarlet fever, from the Hendon cows, and from the condensed milk. Experiments made on animals with this micrococcus of the Wimbledon

*It is well known that no species of micrococci hitherto known are capable of surviving a temperature of 212 degrees F.; i. e., of boiling water; many of them are killed by an exposure to 180 or 190 degrees F.

monkey,* showed that the same disease is produced both by inoculation and by feeding.

"It having been proved, then, that the cow is susceptible to infection with scarlet fever from man, the next important question is this :

How does the milk of such infected cows assume infective power? Clearly in one of two ways: first, either the milk becomes infected by the milker during the process of milking, particles of contagium being rubbed off the ulcers of the udder or teat; or the milk *per se* is possessed of infective power; that is, it is a secretion of a constitutionally diseased animal. From previous and from more recent observations, I am inclined to think that both views hold good."

Milk and Diseased Meat.—In a recent number of the *Science*, we find the following communication from Mr. J. J. Janney, of Columbus, Ohio, which we feel confident will be of practical interest to our readers: "Upon my removal to this city, I called upon the butcher of whom I purchased my meat, who was an intelligent man, and asked him if he found the livers of well-fatted cattle in a healthy condition. His answer was that it is very seldom that the liver of a well-fatted beef is fit for human food, especially still-fed cattle. They, he asserted, are always diseased; and he added that he never bought still-fed cattle unless they had been taken off slops and fed on corn some weeks before being killed. He asserted that he could distinguish between still-fed and corn-fed beef by the sight and touch, after it was slaughtered."

—The whisky-lovers are rejoicing in the out-come of the recent investigation made by the *New York World* respecting the adulteration of whisky, gin, brandy, and rum, which gives these liquors a "clean bill" so far as sophistication with harmful substances is concerned. We have always considered reference to the adulteration of liquors as a very weak argument in behalf of temperance, as alcohol itself is really a worse poison than the substances which are ordinarily used in the adulteration of liquors.

An Unconsidered Danger.—The *Boston Herald* is entitled to much credit for the sanitary wisdom exhibited in calling attention to an unconsidered danger, which, though long overlooked, is by no means a matter of small or doubtful importance:—

"What a vile habit that is which one sees indulged in on street-cars by people who certainly ought to know better! That of putting coins in the mouth is the one referred to. It is quite common among women, who under such circumstances never seem to have quite hands enough, and so they press their mouths into service to do what is not only a vulgar thing, but absolutely filthy. The nickel which is taken from the purse may have recently left a hand unwashed since it fondled a child dying with diphtheria or other infectious disease; or it may have come from the hand of a man suffering from the most loathsome disorders."

Baking-Powders.—Everybody does not know that the baking-powders sold in the market are in many instances adulterated with such substances as alum, lime, and other chemicals, which are exceedingly deleterious in character. Baking-powders, even when what they pretend to be, are not wholesome materials to be added to food; and when adulterated with the irritating and caustic chemicals which frequently enter into their composition, they become doubly harmful. The newspapers some little time ago reported a family of five, in Indiana, poisoned by the use of baking-powder. All the family were dangerously sick, and one was dying at the time the account was published.

Use of Tobacco in Europe.—A French statistician has been looking up the statistics of tobacco-using in the various countries of Europe, and finds the quantity used per thousand inhabitants, as follows: Spain, 110 pounds; Italy, 128 pounds; Great Britain, 138 pounds; Russia, 182 pounds; Hungary, 207 pounds; France, 210 pounds; Denmark, 224 pounds; Norway, 229 pounds; Austria, 273 pounds; Germany, 336 pounds; Holland, 448 pounds; and Belgium, 560 pounds.



DOMESTIC * MEDICINE.



TREATMENT OF SEVERE BURNS BY CONTINUOUS BATHS.

W. J. LAWRIE, M. D., of Ayr, calls attention in the *Edinburgh Medical Journal*, of July, 1887, to the treatment of burns by Hebra's water-bed. The bed is simply a form of bath, and from its simplicity and efficiency, is well suited to hospital practice, the patient requiring at the hands of nurses scarcely any attention. It is not merely cases of burning that may be treated in this way—all diseases associated with loss of epidermis; viz., sloughing ulcers, erysipelas, pemphigus, foliaceus, etc., which are associated with severe pain, supply excellent examples. The entire absence of pain and apprehension on the part of the patient, which are associated with the removal of old dressings and the application of fresh ones, is a marked and favorable element in treatment by the bath. The wounded surfaces are continuously out of contact with the air, and as they are not covered with any form of dressing, the discharges escape at once into the water, and the wounds are kept clean. There is scarcely any limit to the time patients may remain in the bath; in more than one case they have been continuously submerged for 385 days and nights, only leaving the water for functional purposes.

In the Vienna General Hospital a separate ward is devoted to their use, and in the Royal Infirmary of Glasgow one has recently been established.

Hebra's water-bed consists of a zinc vessel, constructed in the frame-work of a bed. In the vessel an oblong iron frame is suspended by chains. The frame is so constructed that the portion where the patient's head is to lie, may, by a hinge motion, be raised to an angle with the other part. The whole frame can be

raised or lowered by means of toothed wheels. On the frame a thin mattress is laid; the patient rests on the mattress. When the zinc vessel has been filled with water, the bed carrying the patient is gradually sunk beneath the surface, taking care, of course, to keep the head out of water.

At first, the patient feels the water too hot, upon which it must be cooled. Feelings of rigor now set in, and additional warm water must be added. After this he feels more comfortable—pains have almost entirely disappeared.

The water-bed does not offer a remedy against the severe constitutional effects of all burns, nor against their fatal ending in all cases. Patients die of extensive burns under this treatment as under any other, but they die at least free from pain.

On the other hand, the continual bath is an effectual therapeutic agent, and a real benefit, for patients and attendants, during the long period of suppuration. By the ordinary methods such patients cannot be kept in a state of perfect cleanliness, because the dressing of extensive burns requires much time. Lifting and turning, as well as separation of the adhering bandages, are most painful. All these disadvantages cease on the use of the water-bed. The patient lies and moves as he wishes, sleeps, eats, and enjoys himself, according to his tastes. The wounds are always covered, always clean, and granulate normally, indeed often so copiously that they must be repressed.

Hebra's water-bed is the best agent against pain and the best therapeutic agent. Removal of scabs takes place earlier. Retention of pus is avoided. Danger of septæmia and erysipelas is reduced to a minimum, fever ceases, sleep and appetite return.

REMEDIES FOR CONSTANT USE.

Use patience, for the Pill.
 To relieve every ill.
 Proper care, the Plaster,
 To prevent disaster.
 Good nature, the Ointment,
 To heal disappointment.
 Unselfishness, pure Oil,
 To lubricate all toll.
 Self-help, the Tonic.
 For all that is chronic.
 Faith for the Cordial,
 In every ordeal.
 Hope, the soothing Lotion,
 For painful emotion.

MORAL.

The wise and good will not refuse
 These excellent remedies to use;
 For they have long stood the trial test,
 And always proved, without fail, the best;
 And nothing like *these* will secure
 Health and happiness that will endure.

—Dr. Whittlesey.

MANAGEMENT OF CONSTIPATION.

The majority of cases of constipation are readily cured by the proper regulation of diet and regimen. Respecting the management of cases of simple constipation, Dr. Andrew Clark, an eminent English physician, instructs his patients as follows:—

“1. On rising or retiring, sip slowly from a quarter to a half pint of water, cold or hot.

“2. On rising take a cold or tepid sponge-bath, followed by a brisk general rubbing.

“3. Clothe warm and loose; have no constriction at the waist.

“4. Careful attention should be paid to diet. Avoid pickles, spices, curries, salted or otherwise preserved provisions, pies, pastry, cheese, dried fruits, nuts, and all coarse, hard, and indigestible food taken with a view of moving the bowels, strong tea, and much hot liquid of any kind, with meals.

“5. Walk at least half an hour twice a day.

“6. Avoid sitting or working long in such a position as will compress or constrict the bowels.

“7. Solicit the action of the bowels every day, after breakfast, and be patient in solici-

ing. If unsuccessful the first day, continue the daily soliciting at the appointed time only. On the fourth day assistance may be taken. The simplest and best will be an enema of equal parts of olive-oil and water.

“If the use of all these means fail to establish the habit of daily or of alternate daily action of the bowels, artificial helps may be necessary. The object is to coax, or persuade, the bowels to act after the manner of nature, by the production of a moderate and more-or-less solid-formed discharge. On waking in the morning, try massage of the abdomen, from right to left along the colon; and a dessert spoonful of the best olive-oil may be taken at the greater meals of the day.”

For Scabies (itch).—The following is recommended by a French physician as an excellent remedy for this persistent malady:—

1. Cover the whole body with a lather from strong soap.

2. Apply to the skin with friction the following mixture:—

Glycerine	2 oz.
Gumtragacanth	10 gr.
Flowers of sulphur	1 oz.
Carbonate of soda	½ oz.

3. After leaving the above in contact with the skin for a few hours, take a bath, and put on clean clothes.

4. The next day the skin should be rubbed with powdered starch.

For a Burn.—If a person has been burned by the clothes catching fire, remove the clothing as soon as possible, taking care to keep the burned surface drenched with tepid water; and be sure not to drag upon the injured skin in such a way as to pull it off, as it is the best possible protection for the tender flesh beneath.

When the clothing has been removed, keep the burned surface covered with cloths wrung out of soda-water, made by dissolving a teaspoonful of soda in a pint of water. This is an effectual method of treating burns, and is far superior to the old dressing of carron-oil, a mixture of linseed-oil and lime-water.

gled her throat with water, as she had omitted it, not thinking. Then she went through a formula of exercises, which was written and placed on the dresser before her. The exercises were as follows: Throwing her arms back twelve times, then up and back as many more; swinging them both from right to left ten times; placing her arms in a horizontal position from her shoulders, holding her wrists as stiff as possible, twisting the palms upward and downward seven times; shutting her hands tightly and throwing them to her shoulders so that her fists nearly touched; then dropping them to her side seven times; raising each shoulder alternately seven times; standing stiff and bending forward slowly five times, then very fast five times; folding her arms behind, and bending backward as far as possible seven times; bending the trunk of her body to right and left seven times; rocking from toe to heel ten times; sometimes lying on her back, and rising to her feet without using her hands; and many other movements, bringing into exercise every muscle.

She next threw wide open the blinds of all three windows in her large and richly furnished room, placed the pillows in the sunshine, removed the bedding, piece by piece, spreading it over chairs, so it might be thoroughly aired; then, it being half an hour before the time she was required to be present in the dining-room, she went down to the sitting-room, played the organ and sang:—

"The boat is filled with sail and oar,
And all prepared to leave the shore,
So on we go with wind and tide,
Across the merry waves to glide.
Then row, row, row,
So merrily, merrily, oh!"

Her sweet voice, swelling and diminishing as did also the music, filled the house with rich melody.

Eleven years before in that month, when the scent of roses graced the air, she had come a most welcome gift to her parents, and they called her June.

Her father was an honorable, temperate, successful business man, owning their home near by a thriving village. The evening before the morning in which our story opens, Mrs. Rogers called June to the front parlor, told her she was going to spend the night with a sick lady, and wanted to bid her good-night. "I know," she said, "you will be good to your aunt, and not forget your morning and evening prayers." A kiss, and she was gone.

"How good your breakfast is, aunt!—baked potatoes, cream gravy, strawberry toast, graham gems, and hot lemonade."

"Yes, dear; but you prepared the berries and the potatoes, set the table, and placed the bread in the oven for toast last evening. I think your mother is wise in encouraging you to be useful."

June blushed, for she had not supposed that the little she had done was much saving of care and steps to her "dear good aunt," as she often called her.

June's parents said nothing, but in their hearts they were proud of their daughter, who never knew what the words "to be governed" meant. She had simply been encouraged to do what was right all her life, and when she was in the wrong—and who is not at times?—she was led to see it, and conscience trusted to inflict all necessary punishment.

At eight o'clock a blithe, merry miss, with springing step, rosy cheeks, sparkling eyes, and fawn-like form, wearing a simple blue dress, neatly, but not overtrimmed, blue stockings, low-heeled shoes, and jaunty hat, with bouquet and dinner-pail, was on her way to school.

It was a walk of a mile and a half to the farther side of the village, where the two-story brick building stood on the summit of the long, grassy hill adorned with shade trees.

Half a mile from her home was a maple, large and round, spreading over the short grass and gravelly road the most delightful shade, called the half-way tree; and here, as she tripped along, close against a lonely hedge sat May Crandal, her seat-mate, on the ground. "O June," said she, "I am so glad you have come; I am going to have another of those terrible headaches. What shall I do? I can scarcely see, everything is so black."

"Let me take off your hat, and rub your head; there, I have a bottle of water in my pail."

"How good you are," said May, "my mother said this morning she wished she could say of me as your mother said of you in the night, that you had never been sick."

"Perhaps something you have eaten has disagreed with you. What did you have for breakfast?"

May enumerated a mixture of mince-pie, fruit-cake, pickles, cheese, hash, dried beef, boiled egg, hot biscuit, coffee, orange peel, and onions, saying that she tasted of them all, trying to find something good.

"Now I am better; and the first bell is ringing. You go, June. I shall be marked tardy again."

"I am so sorry; I will carry your pail, and you'd better come slowly."

At noon May was still pale. June had spelled a word May had misspelled, and had asked of the teacher that she might not be required to go above her, but the teacher insisted.

"Are n't you going to eat your dinner, May?"

"Oh, I am hungry enough all the time. I have eaten half of my new slate pencil and the chalk the teacher was asking for; though I could not bring myself to confess I had eaten it."

"May I tell her?" asked June, hesitatingly. "I will do it kindly."

"Why?" inquired May after an awkward pause.

"Only because poor little Willie Adams quailed so under the searching eye of the teacher, that seemed to accuse him. I felt so sorry because his confusion made it worse. I could have cried for him."

May said nothing; she knew it would be useless, for

June was silently felt to be the standing conscience, or permanent committee of justice, for the whole school. Therefore June made an opportunity that very hour, and set the matter all right.

And Willie resolved that he would begin at once to be the best boy in the world, and by and by, the best man. "Why not?" thought he, "I will take comfort in it, and June will know, if no one else does; and that is enough for me."

But the dinner?—May opened her pail, and the sight of just such food as had made her sick, almost sickened her again.

"Take your spoon and eat with me for a change," said June; and then spreading a napkin on the grass, she displayed a half-pint bowl of rice pudding, a large slice of graham and one of white bread, a cup of canned strawberries, a bottle of water, and a small glass. "Take this white bread, May, or part of both."

"Thank you, June, I will try both." She did partake of each article, almost wondering at the feeling of satisfaction, and asked, "Why do you always bring drink?"

"Well, the main reason is my mother thinks that the reason many of our school had the scarlet fever last summer was that the well of water at the school-house was impure; you know three died."

"Yes," said May, as her eyes moistened, for one was her sister. "I almost think," she added, "that the way you live keeps you well. And ma said she had almost concluded to take the GOOD HEALTH, through your mother's influence."

A Boy's Logic.—One day a teacher told her scholars that it was wrong to chew tobacco, when a small boy, with quite an important air, replied that he had seen a fellow chew because his teeth ached, and stoutly averred that it was not wrong for any one to chew tobacco if his teeth ached.

This seemed to please the school very much, and the teacher was at first puzzled to know how to answer such a stunning argument.

At last she said to the bold boy, "Horace, if a girl should have the toothache, and want to chew tobacco, what should she do?"

Horace scratched his head, and then said resolutely, "She ought to have the tooth pulled."

The use of tobacco in any form is just as foolish and wicked for boys as for girls.—*Our Dumb Animals.*

—Little Mamie is sick in bed, but refuses persistently to take the prescribed pill. Her mother, however, resorts to stratagem, concealing the pill in some preserved pear, and giving it to the child to eat. After awhile mamma asks: "Has my little dear eaten her pear?" "All except the seed, mamma dear."—*Texas Siftings.*

Little Dot. "What's the matter with my nose, mamma?"

Mamma. "You went out yesterday without your rubbers, and got your feet wet."

"Well, I do not see why that should make my nose wet."

Question Box.

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

Milk—Solid Food—Honey.—D. P. K., Oregon, asks:—

1. Is milk a good article of food in this western climate? or is it constipating?

2. Does solid food consist of all the elements except the water, or is the water that is cooked in food also included? This question is asked with reference to the statement in GOOD HEALTH, that twenty-two ounces of solid food are sufficient to support the system for one day.

3. What is the nature of honey? and how does it compare with sugar or molasses in nutritive qualities and digestibility? If it is the same as sugar, what gives it its peculiar flavor?

Ans. 1. Yes; milk is a wholesome article of food in any climate, provided it is obtained from healthy cows. The popular prejudice against the use of milk, based upon the idea that it is clogging to the liver, and has a constipating effect upon the bowels, has little or no foundation. There are, perhaps, certain persons with whom the use of milk seems to have this effect upon the bowels, but cases of this sort are extremely rare.

2. The reference in GOOD HEALTH to solid food relates to food from which all the water has been excluded. In the estimates regarding the quantity of food which should be taken, allowance is made for the amount of water which the food contains. For instance, bread contains thirty-seven per cent of its weight in water, potatoes contain seventy-five per cent, etc.

3. Honey has about the same nutritive effect as sirup. Its digestibility is practically the same. It is a mixture of various kinds of sugar, and of less value as a sweetening agent than cane sugar or sirup. Its peculiar flavor is due chiefly to the flavoring substances derived from the flowers. Honey, also, always contains a small proportion of virus from the poison bag of the bee. It is said to be rank when it contains an unusually large proportion of this poison, which is likely to be the case if the bees are much

disturbed or irritated. It is the presence of these foreign substances which occasion the disagreeable effects that not infrequently follow the use of honey by certain persons who are peculiarly susceptible to their influence.

Root Beer.—J. M. W. S., New York, asks about root beer.

Ans. There are various kinds of root beer, all of which, so far as we are aware, undergo more or less fermentation in their manufacture. It is their fermentation which gives them their properties as beer. This being the case, it is evident that all contain more or less alcohol. While its quantity is so small that no person is likely to become intoxicated by their use; yet it is entirely possible that the habit of small tipping, acquired by the use of small beer, may lead to the use of stronger liquors, and so to drunkenness. Consequently this class of drinks is properly included under the head of alcoholic drinks, and should be discarded by all thorough-going temperance reformers.

Nervous Disturbance.—C. R., Colorado, wishes information respecting his condition, which he describes as follows:—

After exertion in the hot sun (sometimes very slight), swelling of the veins, burning and throbbing in the hands, with a weary feeling, particularly in the feet and calves. These symptoms pass away, sometimes as suddenly as they appear, when I become cool. I lived in tropical Australia—a dry, hot climate—nine years, where I underwent considerable work and worry, with much tea-drinking. Since reading your journal, I have come to the conclusion that these two latter items have a great deal to answer for. I have given up tea, coffee, etc., and am following your teaching as far as possible; and now write in the hope that you may have some special remark in reference to my case.

Ans. The symptoms described indicate a profound disturbance in the functions of the vaso-motor system and the spinal cord, and a very great susceptibility to the injurious effects of heat, being due, evidently, to the malign influence of heat upon the nervous system. The application of cold to the head, cool sponging of the body, and alternate hot and cold sponging of the spine, will afford temporary relief.

Permanent relief can only be obtained by building up the general health and nerve tone. Some cases of this peculiar susceptibility to the influence of heat can be readily overcome. Nervous affections are often aggravated by a residence in a high altitude; a lower altitude might be found beneficial.

Soda—Fruits.—R. S., Iowa, asks:—

1. Is it unhealthful to use a little soda with very acid fruits to neutralize the acid?

2. Are there any fruits which contain all the elements of nutrition in the right proportion to support life?

Ans. 1. No.

2. No; nearly all fruits contain an excess of saccharine or farinaceous elements. Life may be sustained, however, on fruits alone, as nature can readily dispose of the excess of farinaceous elements, so that all that is required is that a sufficient quantity of fruits should be taken to secure a due supply of the albuminous or nitrogenous elements, which are essential to the maintenance of life.

Scrofula.—For the treatment of a scrofulous child, see the "Home Hand-Book of Domestic Hygiene and Rational Medicine."

Literary Notices.

SOCIAL PURITY AND THE WHITE CROSS is the title of a bound volume consisting of eighty pages of The Philanthropist Series of social-purity leaflets—one to fifteen inclusive. The authors of the series are Mrs. Josephine E. Butler; Emily Blackwell, M. D.; Rev. Cannon Wilberforce, M. A.; Frances E. Willard; Rev. J. P. Gledstone; Mrs. Elizabeth Powell Bond; Rev. A. H. Lewis, D. D.; Rev. B. F. De Costa, D. D.; the Rt. Rev. Henry C. Potter, D. D.; and Aaron M. Powell. It is a volume of exceptional interest and value, as interpreting the various aspects of the Social Purity and White Cross Movement. Price by mail, post-paid, fifteen cents. Address, THE PHILANTHROPIST, P. O. Box 2554, New York.

LAWN-TENNIS, by Lieut. S. C. F. Peile, New York, Charles Scribner's Sons.

Lawn-tennis has at least one advantage for ladies over most other out-door sports; namely, that it actually compels them to adopt a sensible and therefore healthful costume. There may be ladies who play lawn-tennis in corsets and tight-sleeved dresses, but the probabilities are that they do not play more than one game in the same dress, for the very good reason that such a dress will not survive more than a single game. As Lieut. Peile points out in his convenient little manual, there are two reasons why ladies who play lawn-tennis should wear easy-fitting dresses: first, because any other kind of a dress will spoil the play; and second, because the play will spoil any other kind of dress. Lawn-tennis is also shown to be inimical to tight shoes, high heels, big hats, and rings,—all most excellent reasons why it should be cultivated by the young ladies of this country. The present work sets forth the principles of the game in a simple and lucid manner, and may be recommended to those who are seeking an insight into the mysteries of "serves" and "volleys."

SCIENCE IN THE HOUSEHOLD.

CONDUCTED BY MRS. E. E. KELLOGG.

SUGGESTIONS CONCERNING WINTER SQUASH.

In selecting squashes for table use, always secure those of firm texture. Wash, break in pieces with a hatchet, if hard shelled; or if the shell is soft enough, divide with a knife; remove all seeds, and cook by boiling, steaming, stewing, or baking, as preferred.



It will require from one-half to one hour to boil or steam squash, and from one to two hours to bake.

BAKED SQUASH.—The hard-shell varieties are best for baking. Wash, divide, and lay,—shell downward,—upon the top grate in the oven, or place in a shallow baking-dish with a little boiling water in the bottom of it. Bake until tender. Serve in the shell, or scrape out the soft part; mash, and season with cream, two large table-spoonfuls to the pint of squash.

If preferred, the skins may be removed before baking, and the squash served the same as sweet potato, for which it makes a good substitute.

STEAMED SQUASH.—Prepare the squash as above, and place in a steamer over a kettle of boiling water, which must not be allowed to cease boiling until the squash is tender. Mash the squash, and season with cream, the same as when baked.

Cement to Mend China.—Take a very thick solution of gum arabic, and stir into it plaster of paris until the mixture is of proper consistency. Apply with a brush to the edges of the china-ware, and stick them together. In a few days it will be impossible to break the article in the same place. The whiteness of the cement renders it doubly valuable.

Ironing Cuffs and Collars.—An exchange gives the following excellent suggestions respecting the ironing of cuffs and collars: "Have ready some irons very hot, but not so as to scorch; and let there be enough irons not to have to wait for a second when the first is cool. These must be very clean and with a good polish. To insure the latter have a piece of beeswax, and when the iron is taken off the fire, rub it over the beeswax; then rub the iron on some crushed salt, and it will run smoothly.

"Now on the ironing sheet lay a clean, smooth cloth, a handkerchief will do. Lay a collar on this, fold over a part of the handkerchief, and iron quickly from one end to the other two or three times, to dry it a little. While still steaming, take off the handkerchief, stretch the collar with the hands, and iron briskly on the right side straight across. If the iron is not hot enough, or the collar too dry, the starch will stick. When the right side is smooth, without creases, turn it on the other side, and iron more slowly so as to dry it thoroughly. The irons require constant renewing as the damp cools them quickly. If any starch appears on the iron, it must be scraped off with a knife before going back to the fire.

"If you do not want shirts or cuffs to blister and wrinkle when buttoned, do not make the first, or boiled starch, too stiff, and rub it in well. Of course you know that they should always be dipped in cold starch, *i. e.*, clear starch mixed thin with cold water, before ironing."

—An exchange says: "Ten cents' worth of oxalic acid dissolved in a pint of hot water will remove paint spots from the windows. Pour a little into a cup, and apply to the spots with a swab; but be sure not to allow the acid to touch the hands. Brasses may be quickly cleaned with it. Great care must be exercised in labeling the bottle, and putting it out of the reach of children, as it is deadly poison."

—After an egg has been laid a day or more, the shell comes off easily when boiled. If the contents of an egg adhere to the shell after boiling, it is a sign the egg is fresh.

To Determine the Quality of Silk.—A writer in *Hartford Courant*, speaking of the various kinds of black silk, gives the following directions for detecting the spurious from the genuine article: "Take fibers of the filling in any silk, and if, on breaking, they show a feathery, dry, and lack-luster condition, discoloring the fingers in handling, you may at once be sure of the presence of dye and artificial weighting. Or take a small portion of the fibers between the thumb and forefinger, and very gently roll it over and over, and you will soon detect the gum, mineral, soap, and other ingredients of the one, and the absence of them in the other. A simple, but effective test of purity is to burn a small quantity of the fibers; pure silk will instantly crisp, leaving only a pure charcoal; heavily-dyed silk will smolder, leaving a yellow, greasy ash. If, on the contrary, you cannot break the ten strands, and they are found of a natural luster and brilliancy, and fail to discolor the fingers at the point of contact, you may well be assured that you have a pure silk, that is honest in its make and durable in its wear."

Jelly Covering.—A writer in *Good Housekeeping* says, that "much time may be saved when putting up jellies by using waxed paper, which can be bought at the confectioner's supply store very cheap. Twelve cents' worth will be sufficient for a whole season. Cut a round of the paper to fit the top of your jelly-glass, and have a quarter of an inch or so margin: lay the waxed paper on the jelly, press it with your fingers gently till there are no air bubbles under it, then press the margin closely round the inside of the glass. This is all you need to do; jelly so covered will rarely mold, and will keep in every way better than with the usual brandied paper."

To Clean Oil-Paintings.—The *California Architect and Builder* gives the following as valuable for this purpose: "Thoroughly mix two ounces of wood naphtha, one ounce spirits of salts, and quarter of a pint of linseed-oil. Before being used, the bottle containing them should be shaken. The application is simply with a soft pad of linen, to which should be given a circular motion. When nearly dry, give a second dressing, and the picture will come out in all its details."

—An exchange says: "If the chimney or flue of your house catches on fire, close all the windows and doors first, then hang a blanket in front of the grate to exclude all air. Water should never be poured down the chimney, as it spoils the carpets. Coarse salt thrown down the flue is much better."

—When opening cans of fruit the covers of which do not unscrew readily, place a cloth wet in hot water on the top, and after a few minutes the cover can generally be removed without difficulty.

Bed-Chambers.—Considering the fact that at least one-third of life is spent in bed, it is very essential that all our sleeping arrangements should be such as are most conducive to health. The greatest of care should be taken to arrange for an abundant supply of fresh air at all times and seasons, since the air of an occupied, unventilated apartment very soon becomes exceedingly foul from organic poison, and disease germs are always abundant. It is also of the greatest importance that bed-clothes and bedding be thoroughly subjected each day to the disinfection of the air and sunlight, since the human body throws off, every night, through the pores of the skin, and by the breath, several ounces of waste animal matter, much of which is absorbed by the bed-clothes. If no precaution is taken to rid them of this effete matter, it is re-absorbed by the next occupant of the bed; or, if long neglected, the waste decomposes, and gives the unpleasant, fusty odor often experienced in sleeping-rooms. The use of feather-beds is for this reason especially detrimental to health, since the feathers not only undergo a slow decomposition themselves, but on account of their remarkable hygroscopic properties, absorb the fetid exhalations thrown off from the body during sleep, thus becoming in time a serious source of poisoning.

Waste-Barrels.—A foul-smelling waste-barrel ought never to be permitted; in fact, it is far better to burn all leavings and table refuse as fast as made, which may be done without smell or smoke by opening all the back drafts of the kitchen range, and placing on the hot coals to dry and burn, as they will in a few minutes. If the table refuse must be saved, the receptacle should be entirely emptied, and very thoroughly scrubbed every day with hot suds and an old broom. Never pour the chamber slops in with the kitchen waste; and above all, never allow them to be emptied on the ground in close proximity to the well. Any lady would be horrified to find her servant pouring slops into the well, but she does almost as bad when she pours them on the ground or into a drain leading to a cess-pool only a few feet from the well, since the porous soil allows them to filter through into the well.

—In buying table-linen it is well to remember that the finer and smaller the pattern, the longer it will be likely to last. Table-cloths of any kind are said to wear much longer if a double faced, thick canton flannel is first spread on the table. It smooths the edges, and is much softer and more agreeable than without it.

—Ceilings that have been smoked by a kerosene lamp should be washed off with soda-water. Grained wood should be washed with cold tea.

Publisher's Page.

SUNBEAMS OF HEALTH AND TEMPERANCE.

This new work, which the publishers have had on hand for some months, is rapidly approaching completion. It will be a volume of two hundred quarto pages, profusely illustrated. A large share of the engravings have been made expressly for this work, and depict in an original and unique manner the follies and errors of prevalent habits in eating and other matters relating to health. This work contains a mass of interesting facts, gathered from a great variety of sources, respecting the customs of a vast number of different nations and tribes, most of which is inaccessible to the ordinary reader, and which has never been brought together in this way before. By years of research and a laborious collection of data, the writers of this volume are able to show, by the facts cited, that there is a direct and constant relation between habits and health.

This work is not a prosy dissertation on hygiene, but is a lively presentation of interesting facts and experiences, which cannot fail to interest even the casual reader, and it is believed, will prove an effective means of conveying lessons in health and temperance, which it is hoped, will make so deep an impression that they will not be readily forgotten. Next month we shall be able to give a more complete table of contents of this unique and interesting volume.

The Sanitarium Hospital.—We are glad to announce that work is already begun on a new Sanitarium building, which through the benevolence of a friend of the Institution, is to be erected in the interest of the sick poor. A building of this sort has long been needed, and it is a source of very great pleasure to the managers of the Institution that they see so excellent a prospect for the speedy fulfillment of a purpose which has long been very near their hearts; namely, a large extension of their philanthropic work in the direction of the treatment of the worthy sick poor.

The building will be about sixty-six feet front, and one hundred feet deep, with four stories, and a high basement. It will accommodate about one hundred free beds, besides affording ample room for a parlor, dining-room, treatment rooms, work-rooms, etc. This enterprise will differ from any other hospital enterprise, in several particulars:—

1. Those who enjoy its advantages will receive, in addition to the ordinary medical and surgical care which is given in other hospitals, the benefits of the extensive facilities of the largest Sanitarium in the world.

2. The Institution is not to be an almshouse, and persons who are really able to pay their way will not be received as charity patients, as is the case in many free hospitals. Those who are able to work will be given a chance to meet the expense of their board, in whole or in part, by their labor. All will be expected to contribute such sums as come within their means, even though the amounts may be very small.

It is thought by the managers that the plan of allowing the sick to do what they can for themselves and for others—in other words, helping them to help themselves to the recovery of their health—is the wisest plan of charity. Medical treatment and care, including surgical operations, will be given gratuitously, and whatever income may be derived from the money received from the patients or from the labor of patients, will be applied toward meeting the expense for board and the general running expenses of the building. The managers hope by this plan to be enabled to extend the advantages of the Sanitarium Hospital to large numbers, probably three to six hundred persons annually.

We shall tell our readers more about this project from time to time, as the work of building progresses.

The Sanitarium Training School.—With the beginning of next month, November 1, the Sanitarium Training School will begin its annual session. This school has already grown into prominence as one of the leading training schools for nurses in the United States, and the readiness with which its graduates find lucrative positions indicate the popular estimation of the value of the training received here.

In the early history of this Institution was of no particular pecuniary advantage to an individual, aside from the small income received as weekly or monthly wages. At the present time, however, any competent person who has taken a course in the Training School for Nurses, can command from eight to twenty dollars a week, and can obtain steady employment. The demands received by the managers for nurses are very much greater than they can possibly supply. Between forty and fifty applications to join the Training School at the beginning of the next year of study have already been received, and every mail brings letters from new applicants. The managers are making arrangements to afford ample facilities for instruction to all competent persons who may wish to attend.

On another page will be found an announcement of the school. Special attention is called to the liberal terms upon which instruction is offered. Uniforms, shoes, books, board, and tuition are all furnished for the first year, in return for the labor of the student. The second year the student receives regular wages in addition to tuition. There is no other school which offers so good advantages as this, or which gives so much instruction and on such liberal terms.

Those who wish to join the school should at once correspond with the managers, so as to be on hand at the beginning of the next term. Address, SANITARIUM, BATTLE CREEK, MICHIGAN.

The publishers are about to issue a series of Health Primers, to be sold at twenty-five cents each. The series will include the following, among other important subjects: Consumption, Catarrh, Diphtheria, Biliousness, Germs, The Two Breaths, and The Rum Family. It is hoped that several of these will be ready for more complete announcement by the time the next number of this Journal goes to press.

The publishers call attention to a series of Health Science Leaflets introduced in their advertising columns. Millions of pages of these little tracts have already found their way into thousands of households; and the number of lives which have been saved, and the still larger number of persons whose lives have been rendered more useful, have never been estimated; and unquestionably the good accomplished by the circulation of literature of this sort is beyond estimation. For ten cents, a sample package of these tracts can be obtained. Each package will be found to be a sort of an epitome of the whole subject of hygienic reform.

Within the last six months the circulation of this Journal has been more than trebled, and at the present time it enjoys a circulation of more than four times that of any other journal of its class in this or any other country.

This great increase in its sphere of usefulness is due to the increased efforts of the friends of the Journal and of hygienic reform. We trust our friends will not tire in their efforts to introduce the wholesome influence of this Journal into as large a number of households as possible. The circulation of a journal of this sort is genuine missionary work of the most practical character; and the good seed sown is certain to bring forth fruits sooner or later in the prevention of disease and suffering, and the saving of health. There is no direction in which missionary efforts are more needed, or in which they can be more appropriately or profitably expended, than in the life-saving work of circulating hygienic literature.



Sanitarium Training School

For Nurses.

COURSE OF INSTRUCTION

Term for 1887-8 Will Begin about Nov. 2, 1887.



THIS School has now been in operation for several years with constantly increasing patronage and success. A large number of young men and women have been fitted for eminent usefulness, and are now engaged in positions in which they are proving the value of the instruction received in the relief of suffering, and earning an independent support. There is no

field of usefulness in which intelligent and well-trained young men and women can more easily find employment and opportunity for philanthropic effort accompanied by fair remuneration.

COURSE OF INSTRUCTION.

The course of instruction comprises two series of lectures, recitations and practical instruction,

continuing through two years. Each student will be allowed a vacation of two weeks at such time as shall be agreed upon with the managers.

METHODS OF INSTRUCTION.

The instruction is both theoretical and practical. Two or three lectures are given each

week, and several recitations are held in addition. Lectures are illustrated by means of charts, models, fine French Manikins showing every organ of the body in a manner closely resembling life, and by numerous experiments. Each student is required to become familiar with the subjects taught, by actual practice. The following are among the leading topics which are taught:

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

SPECIAL ADVANTAGES.

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

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

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

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

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

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

QUALIFICATIONS REQUIRED.

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

1. A GOOD MORAL CHARACTER, WITH SATISFACTORY RECOMMENDATIONS.
2. ABILITY TO BECOME FIRST-CLASS NURSES.
3. GOOD HEALTH.
4. SUFFICIENT INTELLIGENCE AND EDUCATION TO ENABLE THEM TO ENTER UPON THE COURSE OF TRAINING WITH A FAIR PROSPECT OF SUCCESS.

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

TERMS.

The first year each student who puts in full time will be allowed board, tuition, books, uniform, and three pairs of shoes.

The second term students will be paid moderate wages, the amount depending upon their ability and proficiency.

Each student is required to become acquainted by practical experience with all the details of the practical subjects taught in the school.

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

For further information desired, address,

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Battle Creek, Michigan.

NEW TEMPERANCE CHARTS.

By J. H. KELLOGG, M. D.

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

TEN COLORED PLATES,

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

PLATE 1. The Alcohol Family.

- " 2. A Healthy Stomach.
- " 3. Stomach of a Moderate Drinker.
- " 4. Stomach of a Hard Drinker.
- " 5. Stomach in Delirium Tremens.
- " 6. Cancer of the Stomach.

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

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

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

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

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

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

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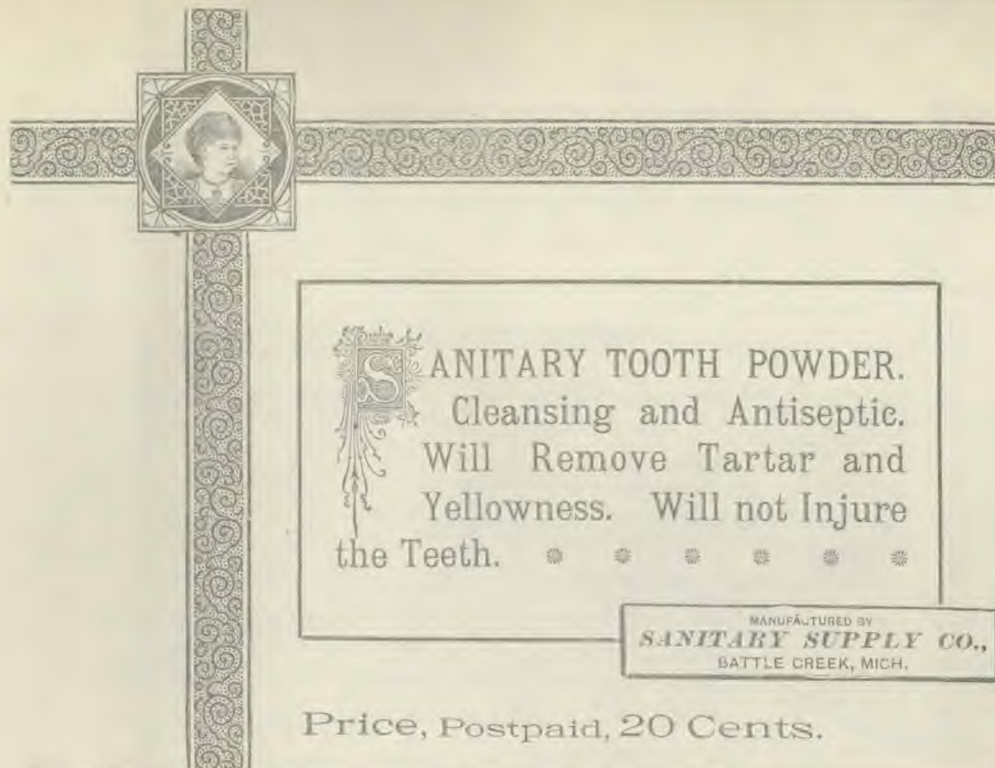
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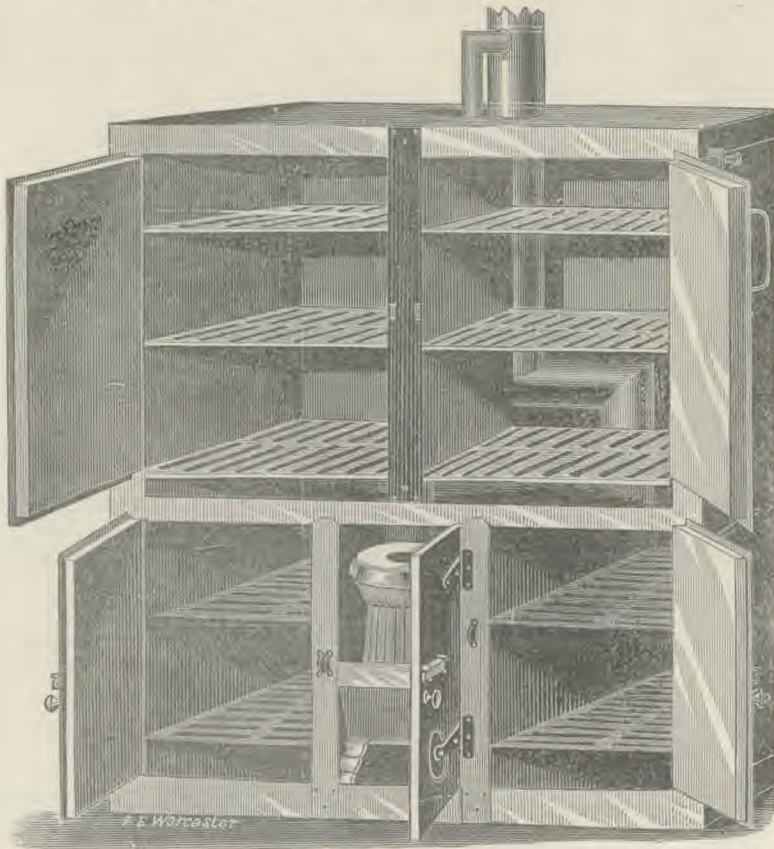
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School of Domestic Economy, Iowa Agricultural College, Ames, Iowa, April 3, 1888.

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

May 2, 1887.

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

EMMA P. EWING.

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

St. Teresa's Academy, Kansas City, Mo., June 3, 1888.

Mr. Adam Reid,—

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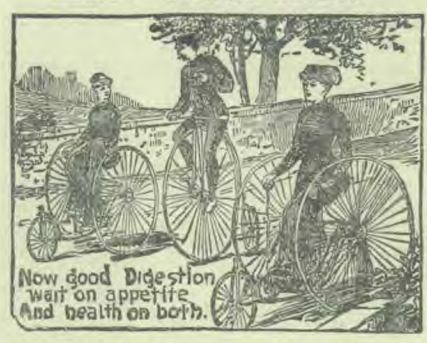
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