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General Articles.	Page	361
The Stimulant Delusion, by FELIX L. OSWALD, M. D., 361—The Petition of the Goose, <i>Illustrated</i> , 364—Oxygen Encrusts as a Remedy in Certain Diseases of the Liver and Intestinal Tract, by THE EDITOR, 366—Digestion in Plants, 368—The Black Hole of Calcutta, 372.		
Dress.		370
Health in Shoes, 370—History of Costume, <i>Illustrated</i> , 371—Working Dresses, An English Clergyman on Tight Lacing, 372—An Abused Liver, A Soldier in Trouble, Saved at Last, Opposed to Small Waists, 373.		
The Happy Fireside.		374
Counsel, D. eds of Mercy, by "AURORA LEIGH," 374—A Primitive Asiatic House, <i>Illustrated</i> , 377—Benares, <i>Illustrated</i> , Where Are You Living? by FANNIE BOLTON, 378—A Happy Home, 379.		
Temperance Notes.		380
Horace Greeley and Prohibition, 380.		
Popular Science.		381
The Nicaragua Canal, Cloud Telegraphy, A Huge Flower, How Storms Are Made, 381.		
Social Purity.		382
State Regulation of Vice, Vice in Art, 382—Young Animals, 383—A Sensible Law. Abolition of State Vice, The Same Standard, 384—Emancipation, A Black Heart, Compulsory Shame, 385.		
Editorial.		386
Deep Breathing, 386—Unnatural Sleep, Faith Cures, 387—Causes of Catarrh, 388—The Need of Fat Foods, 389—Evils of Tobacco-Using, Alcoholism in France, Military Testimony against Smoking, 390—Tea and Skin Diseases, Tea, Coffee, Cocoa, and Digestion, Sore Throat from Milk, Typhoid from Milk, 391.		
Domestic Medicine.		392
A New Rectal Irrigator, <i>Illustrated</i> , 392—Look Out for Typhoid Fever, Green Stools, Don't Drown, Granular Lids, 393.		
Hygiene for Young Folks.		394
The Corn-Field and Tobacco-Field, How Careless Kate Became Careful Katie, <i>Ill.</i> , 394—Puzzle, Something to Avoid, 396.		
Question Box.		396
Literary Notices.		397
Science in the Household.		398
Seasonable Bills of Fare, 398—Waxing Hardwood Floors, 399.		
Publisher's Page.		400

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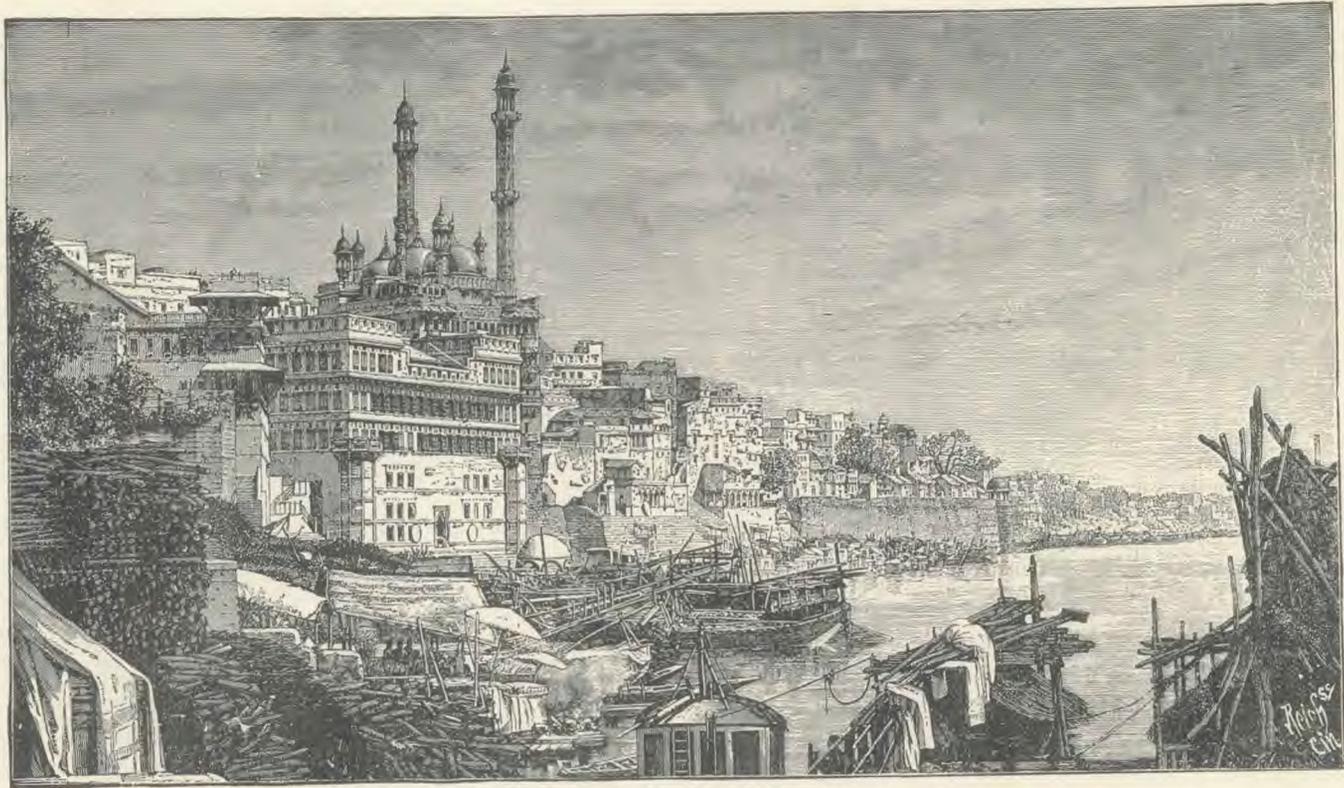
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MOSQUE IN BENARES.



Volume XXIII

Number 10.

BATTLE CREEK, MICHIGAN.

OCTOBER, 1888.

THE STIMULANT DELUSION.

BY FELIX L. OSWALD, M. D.*

FIRST PART.

LESSONS OF INSTINCT.

THERE is a story of a Buddhist missionary who cured the skepticism of his disciples by raising a troop of dancing devils; and a disbeliever in the existence of unqualified evils might be as readily converted by studying the infernalism of the poison-vice, in all its moral and physical consequences. The deliverance from the curse of that evil is so clearly the main problem of social reform, and in its importance so evidently outweighs the importance of all other reforms taken together, that the indifferent success of our temperance apostles justifies the suspicion that their efforts to attain a worthiest of all ends, must, thus far, have been hindered by some serious mistake in the choice of their means.

Nor is the basis of that suspicion confined to a study of results. A few months ago I attended a revival meeting of an eloquent prohibitionist, whose line of argument fairly illustrated the tenets of those modern Puritans, whom only the native common sense of our temperance unions preserves from a re-

lapse into mediæval anti-naturalism. After depicting the evils of drunkenness in a most impressive summary, clinched by an equally stirring panegyric of total abstinence, the orator implored his audience to remember that their hopes of reform were based upon the rock of revealed religion, and that the path beset by the passions of unregenerate nature would infallibly lead on from vice to vice, to the abyss of alcoholism.

The exhorter was unmistakably in earnest; but I went away with the impression of having listened to an argument in favor of the "Personal Liberty" sophists. Class the poison-habit with the "passions of nature,"—with sexual love, with ambition, with the love of independence, of sport and good cheer,—and you prejudice nine out of ten hearers in favor of free beer gardens.

"Have ascetics not for centuries sacrificed earth to ghostland?" the proprietors of such gardens would argue. "Have they not tried to suppress the love of knowledge and freedom? Did they not attempt to demonstrate the merit of celibacy? Are they not trying to abolish round-dances and dramatic entertainments, and every cheerful pastime? Have they not afflicted mankind in every possible way? And are they now going to deprive us of our last solace,—our care-dispelling wine and beer? Why, their own spokesmen

* Author of "Physical Education," "Household Remedies," etc.

are forced to admit that nature prompts us to such indulgences!"

But has science ever distinctly vetoed that fatuous concession? Has common sense? Moralists who would think it absurd to justify avarice or arson, on a plea of natural impulse, still speak of the difficulty of mastering the innate passions of gluttony and intemperance, and hope to cure the poison-vice by preaching the duty of self-denial. The morbid cravings of the confirmed drunkard are constantly quoted, even by intelligent defenders of the natural-depravity dogma; and yet that argument illustrates nothing but the truth of Dr. Carpenter's axiom,—that the weight of all evidence depends upon the pre-conceived theories and prejudices of the investigator. "Just as we may accept or decline a piece of furniture," he says, "according to its fitness for a special recess of our apartment, so we try a new proposition which is offered to our mental acceptance. If it can be brought to fit into some recess of our fabric of thought, we give our consent to it, by admitting it to its appropriate place. But if it neither fits, in the first instance, nor can by any means be brought to fit, the mind automatically rejects it."

In other words, our faculty of investigation is biased by the influence of dominant ideas, and a most obstinate idea of that sort is the prevalent belief in the depravity of our natural instincts. The artificially-acquired passion of the stimulant vice is persistently adduced in support of that pre-conceived dogma, while the fact that nature emphatically protests against the incipience of every poison-habit is as persistently ignored. Arsenious acid, and a few other mineral substances of the class, which we might define as "*out of the way*" poisons (not temptingly displayed in woods and fields, but hid away in the bowels of the earth), are not distinctly repulsive, but only insipid; yet, with that exception, the virulence of every poison is proportioned to the offensiveness of its taste. Bring up a child on the usual produce of our north-land farms,—milk, bread, and wholesome vegetables; then offer him a specimen of a novel tropical fruit, say a banana or a bunch

of ripe dates. He will nibble it with some hesitation, but the evidence of his senses will soon obviate all scruples, and he will eat away, with the full approval of his hygienic instincts. Next offer him a glass of brandy. The "fruity" smell of the liquid might encourage further investigation; but after taking a single drop, he will reject it with all symptoms of horror. Induce him to smoke a cigar, and the first whiff of the nicotine fumes will blanch his cheeks with the shudder of nausea. Hand him a piece of opium, "the solace of life-weary Orientals," and you might as well tempt him to cheer his soul with a dose of corrosive sublimate. Is it then the depravity of our natural instincts, that tempts us to destruction?

"Yes; but how is it," objects my orthodox friend, "that nature at last *does* consent to our indulgence in pernicious habits? You cannot deny that dram-drinkers and opium-smokers in the advanced stages of their vice are swayed by a passionate hankering after a repetition of the ruinous dose; and that, in the course of time, the taste of the poison, if not agreeable, becomes at least decidedly endurable."

The logic of that objection can be best illustrated by an anatomical analogy. The "vital organs,"—heart, liver, lungs, etc.,—are not as sensitive to mechanical injuries as the importance of their functions might seem to warrant. A knife may cut its way through the entire length of both lungs, without causing half as much direct pain as the mere scratch of a pin would cause on the surface of the eye. Yet the laceration of the pulmonary tissue would cause the death of the victim, while the injury to the eyeball might heal in two days. "Why, then," it might be asked, "has nature failed to warn us against the more serious danger?" The simple answer is that the entire body has been covered with a sensitive skin, intended to protect the deep-seated organs, as well as the superficial tissues, and to warn us against the first touch of a lacerating instrument, *exactly as the protest of the palate warns us against the first taste of a health-destroying poison.*

Nature then repeats that warning: the senses of the incipient toper revolt against the second and third glass; fits of nausea convulse the young smoker again and again; but those warnings are persistently ignored, and their protest at last ceases; nature, as it were, relinquishes a hopeless task, and abandons the sinner to the consequences of his folly. The organism becomes more and more dependent upon the irritating effects of the poison, and at last seems to perform its functions only under the influence of the abnormal stimulus. The secret of that result is found in the debilitating reaction of the irritating drug. For a time, the system labors with feverish energy to expel the life-endangering poison; but after the imminence of that danger is past, the vital strength sinks exhausted. That depression of spirits may continue for days, as a retributive after-effect of the poison-outrage, though the influence of a nutritious, non-stimulating diet would, in the course of time, restore the vigor of the abused organism. But, in the meantime, the patient frets under the burden of self-caused afflictions, and too often yields to the temptation of rousing his flagging energies by a repetition of the stimulant process, till finally the jaded nerves fail to respond to the spur, and the stimulant-dose has to be increased, either in quantity or in the virulence of the poison. Thus a horse, worn out by the brutalities of its driver, will at last refuse to stir, and break down, heedless of curses and blows; but even in that exhausted condition, a more than usually hellish cruelty may, for a short time, rouse it to its legs, as when the Mexican teamsters prod up a fainting jade by means of a "carracco-pole," a long-handled goad, tipped with a four-inch blade of sharp steel. The organism of a worn-out toper will at last fail to heed the stimulus of tea, coffee, or beer, but may still momentarily be roused by the carracco-pole of rectified alcohol. The ensuing reaction, however, will be more incurable, by just as much as the remaining pittance of vital strength has been still further depleted by the repetition of the insane outrage.

By what logic, then, can the passion of the dram-drinker be ascribed to the promptings of unregenerate nature? The natural instincts of the youngest heathen, as well as of the hoariest saint, will urgently and repeatedly resist the incipience of the fatal habit, and avenge the disregard of their protest by ever-increasing penalties. The lethargy of the poison-jaded system can *momentarily* be broken by a revival of the stimulant-fever; but can that revival be interpreted as nature's endorsement of the poison-vice? We might as well try to demonstrate her sanction of the carracco-pole crime by pointing out the momentary effects of the fiendish expedient. No verbal interdict could be more distinct than the emphasis of our senses in their protest against the first steps on the road to ruin; and the blind disregard of that protest can be explained only by our fatal *mistrust in the competence of our natural instincts*,—the deep-rooted delusion which tempts us to suspect a masked evil in every physical pleasure, and accept every form of pain as a blessing in disguise. "Whatever is natural is wrong," was for ages the shibboleth of orthodoxy; and I have no hesitation in saying that the prospective progress of human happiness could be anticipated by half a century, if the studies of our would-be moral guides could be supplemented by a weekly lecture on the sixth chapter of Herbert Spencer's "Data of Ethics."

"By recognizing only the evils caused by exceptional modes of conduct," says that high-priest of nature, "men at large, and moralists as exponents of their faith, ignore the suffering and death daily caused around them by disregard of that guidance established in the course of evolution. Led by the tacit assumption that we are so diabolically organized, that pleasures are injurious and pains beneficial, people on all sides yield examples of lives blasted by persisting in actions against which their sensations rebel. . . . Many and conspicuous as are the cases in which pleasures serve as incentives to proper acts, and pains as deterrents from improper acts, these pass unnoticed; and

notice is taken only of those exceptional cases in which men are directly or indirectly misled by them. The well-working in essential matters is ignored, and the ill-working in unessential matters is alone recognized." (*Data of Ethics*, pp. 97, 98.)

"Under normal conditions of life, all good things are attractive, all evil is repulsive," is an axiom destined to form the corner-stone of natural religion; and there is no danger that its general acceptance would promote temperance at the expense of industry. For we should not forget that repugnance to momentary discomfort (as in toilsome enterprises) may be outweighed by considerations of future advantages, thus leaving a surplus of positive attraction. Work may be relished for its own sake; there are men who toil and labor from free choice, from habit, or with an exclusive view to hygienic benefits. To more indolent natures, the objective *rewards* of labor will always remain a potent argument in favor of industry.

But what should tempt the votaries of nature to endure the repulsiveness of health-destroying poisons? Could the prospect of pain, disease, and penury,—the well-known fruits of alcoholism,—be supposed to palliate the bitterness of the root? Even without the knowledge of such results, in the absence of any known benefits, the testimony of the palate should decide the question.

"Wormwood is not fit to eat,"—is that a fact needing the endorsement of supernatural revelations? Yet to the palate of an un-seduced child, wormwood is not a whit more repulsive than alcohol.

Ethics and natural science should go hand in hand; and the efforts of our temperance orators will remain hopeless till our system of education consents to inculcate the duty of heeding the monitions of our natural instincts.

(TO BE CONTINUED.)

School-Teacher. "What do we call those scientific men who have adopted the germ theory?"

Master Kirby. "I know: Germans."

THE PETITION OF THE GEESE.

WE find the following interesting bit of history relating to the cruel specialty of Strasburg, in *Harper's Bazar*:—

"Everybody knows that the *pate de foie gras* of Strasburg is the best in the world, but very few of us have more than a vague idea of the methods employed for enlarging the livers of the geese from which it is made. Now the liver of a goose so "trained," if we may use the expression, is twelve times as large as nature intended it to be. In order to obtain this result, the unfortunate geese are subjected to torments unknown even to the early Christians. The first thing done is to nail the feet of the geese fast to planks, so that they may not arrest the desired tumefaction of the liver by even the slightest movement. Secondly, their eyes are put out, that no glimpse of the world they have left may disturb them. Finally, they are crammed with nuts, a delicacy of which they are extremely fond, but they are not allowed to drink a drop of water, although they suffer such tortures from thirst that they utter piercing cries of agony.

"That wittiest and most erudite of gourmands, the Comte de Courchamps (author of the *Memoirs of Madame de Crequy*), wrote, in behalf of the Strasburg geese, the following petition. It was actually presented to the *Chambre des Pairs*, but received no notice.

"THE PETITION OF THE GEESE.

"Presented to the *Chambre des Pairs* in the Year of Grace, 1797.

"NOBLE SEIGNEURS: In contempt and defiance of the laws of nature as already adopted by the two Chambers of Peers in France, and ratified by the common consent of all humanity, the inhabitants of Strasburg exert their utmost ingenuity for the purpose of enlarging one of our internal organs to a monstrous and unnatural extent. This organ, composed of two inert lobes, is enlarged at the expense of the heart, which is, with us, peculiarly sensitive; of the stomach, which is revolted by such cruel injustice; of the lungs, which are essential to our comfort; of

the spleen, which cannot expand as it should; finally, at the expense of the honor of the French nation, which is fatally compromised by such atrocious cruelty.

“Alas! what have we done, poor unhappy birds that we are? Our eyes are put out, we are suffocated, tortured. What would *you* say, noble peers, if *you* were devoured; if the pinions upon which you soar to such great heights were ruthlessly clipped; if you were bound firmly, nay, more, if your feet were even nailed fast to planks; finally, if your eyes were put out, in order that your liver might the more easily be the prey of your enemies — in one word, if you were treated as the vulture treated Prometheus? Assuredly, in such a case you would cry, “O Jupiter, what cruel injustice!”

“And of what, then, have *we* been guilty? Have we, all unconsciously, extinguished the sacred fire? And because it is no longer to be found anywhere in France, is it to be supposed that *we* have made away with it? We, too, are French, noble peers, and we most solemnly conjure you to permit us to participate in the privileges which are the pride of our race.

“We are a by-word among the British geese, a subject of mockery to the Lincoln turkeys; even the Irish poultry gives itself airs, and looks down upon us, and we assure you that the smallest English gosling is prouder than an imperial eagle. “We are free,” they say with emphasis, “and never have the British geese been forced to apply to the House of Lords for protection.”

“Ah, England! England!” is the cry of

the commonest poultry which has the honor of belonging to that great power. England, they affirm, is the abode of liberty and equality. In England, it is true, they seize upon able-bodied men as they pass along the streets, and without consulting their wishes or those of their friends, compel them to become soldiers and sailors. It is true, also, that,



Stuffing the Geese.

should a soldier or sailor fail ever so little in his duty, he is whipped like a dog. True, also, that if a peasant permit himself to be seen in his lord's preserves with a gun in his hand, he is at once transported. True, also, that a man who steals a loaf of bread may be hung. But then the oxen, the sheep, the pigs! In England, every *vatable* animal has the right to a well-ordered death, in conformity with the laws of the Constitution. In the year 1796, Parliament laid down a law for the proper killing of animals, and decreed that it must be done with quickness, gentleness, and dexterity. In a subsequent bill, it is ordered that calves be carried to market in a net. The crowding of animals into too

small a cart is also forbidden. Further, it is ordained that they shall be placed in a comfortable position, and that their heads shall not be allowed to hang down uncomfortably, as is too often the case on the Continent.

“An English cook would not dream of wringing the neck of a pullet, a duck, or even a tiny chicken. Should she do so, she would believe herself to be an object of opprobrium to all humanity. Near the great houses and in the obscure streets of the English towns, is to be found a sort of executioner known in common parlance as a poulterer, who devotes himself to the horrible task of strangling and selling innocent feathered creatures. He is a detestable, an abhorred being, regarded as were the surgeons of ancient Egypt.

“All this, we geese take the liberty of assuring your lordships to be perfectly true. We implore you to pass a law forbidding the Stasbourgcois to martyrize poultry, or to torment animals. Command the Strasbourgeois, also, to limit their energy to the proper manner of plucking geese, and not to study how to derange the harmony of their internal organs. Let them take example by usurers and people of that stamp, who long ago learned how to pluck birds without making them scream.

“And if, in the criminal abuse of power, and in virtue of a falsely interpreted passage of Scripture, men still feel at liberty to take our lives, at least forbid them to deprive us of sight, as the loss of our eyes plunges us into profound melancholy. Finally, let them kill and pluck and eat us, since they are our feudal tyrants, our Salic chiefs; and since in France the poultry-yards have as yet neither charter nor Constitution, nor laws of *habeas corpus*. We live under a frightful despotism; the freest among us is at the mercy of the meanest cur, and in all Alsace there is not a single room which can be compared to the Chamber of Deputies.

“We entreat you to extend to the remotest confines of the empire the benefits for which we have the honor to implore you; and we beseech you especially to remember our unhappy cousins, the ducks of Toulouse.

“For the speedy execution of all which requests, the petitioners do humbly pray.

“(Signed.) STRASBURG GEESSE.”

OXYGEN ENEMATA AS A REMEDY IN CERTAIN DISEASES OF THE LIVER AND INTESTINAL TRACT.

Read in the Section on Practical Medicine, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

BY J. H. KELLOGG, M. D.

[As we have received so many inquiries from readers of GOOD HEALTH, concerning the use of oxygen by enemata, we publish, for their information, the following article, which we quote from *The Journal of the American Medical Association*—ED.]

The importance of the role played by oxygen in the human system has no parallel among the other substances required for the healthy maintenance of the body and its functions. A man may live a month without food, a week without water, but dies in a few minutes when deprived of oxygen. Oxygen is the vitalizing agent of animal and vegetable life. It aids both in building up and in tearing down those complex molecular compounds which characterize all living forms. The intensity of the life which an animal lives, is in exact proportion to the amount of oxygen which it breathes. The sluggish life of the frog is the natural result of its imperfect breathing apparatus, just as the astonishing activity of the humming-bird is rendered possible by the perfection of the respiratory system.

The reception into the body of an increased amount of oxygen means an increased amount of vital work. Tissue building, and tissue disintegration are only possible by the aid of oxygen. Glandular activity, either secretory or excretory, is equally dependent upon a supply of oxygen. Hence, the process of digestion, the most essential element of which is gland action, is very clearly dependent upon the supply of oxygen. That this is not merely a theoretical conclusion, or a deduction of physiological chemistry, is evidenced by the prodigious digestive powers of the woodsman and the mountaineer, and the cor-

respondingly feeble digestive ability of persons of sluggish or sedentary habits. The chronic dyspeptic who resists the therapeutic influence of pepsins and pancreatins, peptones, and all sorts of artificial peptogens, and the most carefully prepared medicinal prescriptions, sometimes runs away from the polypharmacy of his physicians, and spends a few weeks in the woods, in the mountains, at the sea-shore,—anywhere out-of-doors,—pays no attention to diet, eschews digested foods and liver stimulants; and in a month comes home with a clean tongue, and stomach intact, chiefly because he has been taking into his system daily an extra supply of oxygen. The clearing out of organic rubbish from the nooks and corners of the system, the better heart action, the quickened vital activities of the whole body, have enabled his digestive glands to make a better quality and larger quantity of digestive fluids. By this means, the septic condition of his alimentary canal has been overcome. The abnormal activity of microbic ferments has been restrained, and the toxic influence of the ptomaines and other poisons developed by their action has been prevented. The albumen and gluten and other nitrogenous elements of the food, instead of being converted by fermentations into unusable and obnoxious compounds, to be eliminated by the kidneys and other emunctories, are now made into normal peptones, good blood; and finally organized into nerve and muscle, giving strength and vigor, in place of the old feebleness and enervation. The starch, sugar, and fats, instead of being converted into alcohol, into carbonic, acetic, and butyric acids, and thus worse than wasted, are now supplied to the blood in such form that the body is provided with ample supplies of heat and force, and has a surplus to store away, thus making a gain in flesh. It would be unfair to claim that oxygen is the only factor in the production of this change, but certainly it is the most potent one.

The wonderful vitalizing and invigorating influence of oxygen is unequalled by any other agent in nature. I have seen a patient

suffering with double pneumonia, with purple lips, livid cheeks, glazed eyes, a fluttering, almost uncountable pulse, breathing shallow and at the rate of fifty a minute, suffering great distress, and apparently just at death's door,—I have seen such a patient revived in a most marvelous manner, by the inhalation of pure oxygen. The normal color returned to the cheeks and lips. The eyes brightened, the pulse became stronger and slower, the respiration fuller and less frequent, and the patient fell into a quiet slumber, awakening only when the oxygen was withdrawn. The subtle influence of oxygen, when condensed and made active by its combination with the red corpuscles, is something which we may not fully understand; but we must admit the facts of experience and of physiological science, which attest the marvelous energy of this simple substance in stimulating and supporting the vital activities of the body.

I have, for a number of years, made use of oxygen by inhalation, in various conditions, having been led to do so by what I learned of its use and apparent results while pursuing medical studies in Paris. I have seen some good results from its use in this manner, especially in pneumonia and emphysema. The great objections which I have found to its use in this manner, have been these:—

1. The difficulty of making the blood take up, through the pulmonary mucous membrane, much more oxygen when breathing pure oxygen, than when breathing ordinary air. The air contains about one-fifth its bulk of oxygen. Of this, not more than one-fourth is ordinarily removed during respiration. There being such a surplus of oxygen in the air, the addition of any amount, even to the extent of providing the lungs with pure oxygen, does not very greatly increase the amount taken up by the blood, except in cases such as pneumonia and emphysema, in which the amount of air received into the lungs is abnormally small, and the amount of carbon dioxide in the blood abnormally large.

2. The great expense involved in administering the remedy, if used in such quantities

as to be of any material value. It could hardly be expected that a few breaths of pure oxygen once or twice a day would accomplish any very great therapeutic results. This would be very much like adding to the rations of an under-fed man two or three kernels of corn, when he was already receiving a hundred times as much several times a day. I have estimated that to increase the amount of oxygen actually received into the blood in twenty-four hours, even so small an amount as one per cent, would require the respiration of about twenty-two cubic feet of oxygen gas, the actual cost to make which would be not less than two dollars; and if purchased, the cost would be fully three times as great.

3. A third objection to the use of oxygen by inhalation, for the treatment of disorders of the stomach, intestines, and liver, is the fact that so very minute a proportion of the small amount of oxygen received, ever reaches the diseased parts, they receiving only their proportionate share of the total amount taken in by the lungs; so that really very little benefit could be expected to accrue to these organs by the use of oxygen in the ordinary method. When making some experiments with sulphuretted hydrogen, by the method of Bergeon, the idea occurred to me that oxygen might be used in the same way; and I at once saw the great advantage of using oxygen in this manner for diseases of the digestive organs, and especially the liver, since oxygen taken into the intestines would be absorbed by the portal vein, thus going directly to the liver, instead of being distributed to the whole body.

I had at this time under my charge a most obstinate case of lithiasis. The patient had had for a long time a very abundant deposit of uric acid and urates. A non-nitrogenous diet, copious water-drinking, and a variety of remedies, had apparently no influence upon this symptom. The patient was losing flesh and strength, and was scarcely able to be about. Skin muddy, sclerotics dingy, tongue foul, constant headache, and a brassy taste in the mouth. I was deterred from attempt-

ing to employ the gas by enema for some weeks after the idea occurred to me, by the report of pain occasioned in the use of sulphuretted hydrogen enema by the admixture of air. I determined to make the attempt, however, and on June 20, 1887, by my request, one of my assistants administered to the patient two litres of pure oxygen gas. The treatment was repeated daily for about four weeks. After the first three days, both the uric acid and the urates wholly disappeared from the urine, and did not again appear while the patient was under treatment, except on two occasions, when treatment was omitted for a day or two, soon after the beginning of the treatment, and then in only very slight amount. The brassy taste disappeared from the mouth, the tongue became clean, the eyes and skin clear, the headaches ceased, and the patient gained several pounds in weight. All these improvements in symptoms appeared within a few days after beginning the oxygen enemata.

(TO BE CONTINUED.)

DIGESTION IN PLANTS.

THE wonderful similarity in many points which exists between animal and vegetable life is nowhere more graphically exhibited than in the phenomena of digestion. This process in the plant is essentially the same as in animals, so far as final results are concerned, although the processes of the plant seem to be much simpler. The following paragraphs on this subject, from the pen of an eminent physiologist, Dr. Jungk, are full of interest to the student of human physiology:—

“The seed contains a store of starch and albumen, for the most part in forms insoluble in water, and requiring, before they can be used to nourish the plant during the first period of its growth, to be so acted upon as to become soluble. The development of the digestive bodies called “ferments” is among the earliest incidents of germination; and if the seed be examined when it begins to show the first signs of this vital change, it is found that a part of both the starch and the albuminoids has been transformed into soluble

matter (the starch into dextrine and maltose, the albuminoids into peptones), easily diffusible, and capable of passing to every part of the growing organism. The starch and albuminoids are thus slowly changed, and used up in forming the leaf, stalk, and rootlets of the young plant.

“Even in the later history of some plants, we witness these phenomena of digestion and assimilation; as in the sago-palm, which attains many feet in height and many inches in diameter, and during a period of its growth becomes filled with starch and albuminoids, to the amount of hundreds of pounds. The natives of the tropics where it abounds, know the time to fell it and secure this ample store, which is their substitute for bread. If the palm, however, be permitted to stand until it blossoms and bears, the substances which had filled its trunk will be found to have disappeared, the latter forming now only a hollow shell. The starch and albuminoids have undergone transformation into saccharine and peptone-like bodies, and have been used up to nourish and expand the flower and fruit.

“We thus perceive how closely related in their phenomena are the digestive changes which occur in the food of plants and animals. When eaten, the starchy constituents of seeds are acted upon by salivary diastase, and thus transformed into maltose and dextrine, these being precisely the changes produced during germination. The gluten and other albuminoid constituents of grain are transformed into peptones by the digestive powers of the stomach, just as they are changed by the peptonizing ferment developed during germination. All the transformations which are effected by the action of the saliva, the gastric juice, and the pancreatic secretion, find true counterparts in the digestive processes of vegetable life. In the latter instance, as well as in the former, sugars and dextrines are formed from starch, peptones from albuminoids, fats are emulsified or split up. Indeed, the principal primary changes effected by digestive action on food eaten by man, is a repetition of the changes which are effected

in the nutritive constituents of grain during germination. The structures also which are formed out of the substances thus digested, are analogous in both animals and plants, and in arrangement and texture are scarcely less complex and delicate in the vegetable than in the animal kingdom.”

THE BLACK HOLE OF CALCUTTA.

THE Iowa State Board of Health, in its April bulletin, concludes that few who have heard of the “Black Hole of Calcutta” know the terrible facts that have rendered the place famous, and made it the synonym of all that is to be dreaded from foul air and over-crowding.

At eight o'clock on the evening of June 20, 1756, one hundred and forty-six prisoners, officers and men, black and white, and of different nationalities, were thrust into a room eighteen feet square,—with two windows on one of the four sides, heavily barred with iron, thus giving to each inmate forty cubic feet of space. In ten hours one hundred and twenty-three were found dead; only twenty-three being alive!

Another instance is where, in 1742, the High Constable of Westminster, London, committed twenty-eight persons to prison, where they were thrust by the keeper into a hole six feet square and five feet ten inches high, the windows being closely shut. In a very short time four of the inmates were suffocated!

These facts show the poisonous effects of the human breath, or respired air. Prof. Brown Sequard has recently made some experiments that are not only highly interesting, but show why the expired air of man and animals is so deadly. From the condensed vapor of the expired air he produced a liquid so poisonous that when injected beneath the skin of rabbits, it produced almost instant death. This poison he found to be, not a microbe, but an alkaloid. His conclusions are that the expired air of all animals contains a poison more fatal than carbonic acid.

It is well for the people to understand these facts. They cry aloud for better ventilation and purer air, for less crowding in home, and church, and hall, and school room.



HEALTH IN SHOES.

THE healthful shoe is a very different article from that ordinarily worn by ladies of fashion. It has a low heel, with, at most, not more than three or four "lifts," and set well back. It has a broad toe and a broad sole. Such a shoe, made to fit the foot, is no impediment in walking, but rather an assistant, in that it protects the sole of the foot from injury. But the fashionable shoe is capable of a high degree of mischief, not only to the foot, but to the whole body. An English lady, writing upon this subject, says:—

"A shoe-maker called my attention to the baggy trousers' knees observable in connection with the wearing of high-heeled boots, and said, 'Elevation of the heel thrusts the knee forward.' The human body should stand erect, from the heels upward, but the projection of the knees makes necessary a bending forward of the whole frame, to maintain an equilibrium. This is undoubtedly one cause of the ungraceful round shoulders and poked-forward head noticeable with so many women and girls.

"The shoes of men, as a rule, are not so badly constructed and worn as the shoes of women and children. A larger proportion of men wear custom-made shoes, in which some effort is made to fit the foot. Business men generally have eschewed heels, except the lowest 'lifts.'

* * * * *

"It is very hard to find any woman who

will confess that her shoes are too tight, too short, or too high-heeled. Her shoes are usually 'miles too big,' and hurt by their looseness! If women complain of lame backs or aching feet, they are always sure the shoes have no part in it; because women are really not aware how they have departed from nature in this regard. The perfect female foot is described by a physician as follows:—

"It should have great breadth and fullness of instep, a well-marked great-toe, a long second toe, a small little-toe.' Woman needs a strong and firm footing, particularly because of her function of motherhood, and yet this perfect foot is the exact opposite of the ideal lady's foot of to-day,—narrowness, shortness, and littleness are the qualities that go to make it up; and there are women, if we may believe what is said in the newspapers, who, to secure a narrow foot, are willing to have the little toe ruined.

"Strange as it is, the American women, while cramping the feet, deny it. The Chinese are more logical. They distort and cripple the feminine foot to a much greater degree, but then sing its praises. Its favorite name, the 'golden lily,' is well known.

"Many of the peculiar ailments under which women pass their days in invalidism, unhappy and miserable themselves, and making others unhappy, would vanish or be greatly mitigated, if they would but apply common sense to the selection of their shoes. It is very hard to persuade them to reform their habits on

this point; but I have never known any woman who had learned the new comfort, to go back to the old habit."

HISTORY OF COSTUME.

CURIOUS HEAD-DRESSES.

IN no one particular of costume has fashion so plainly manifested its inherent disposition to run riot, as in the development of the head-dress. The famous steeple head-dress is well shown in our illustration. It consisted of a roll of white linen rising to a height of some eighteen inches above the head, sometimes pointed directly toward the zenith, and again, as in the picture, inclined backward at an angle of forty-five degrees. From its peak floated a long strip of white lawn, which either trailed on the ground or was caught up under the arm of the wearer. Two horns curving upward from the ears, came into fashion soon afterward, and gave the wearers a fanciful resemblance to cows. An extreme case of this ludicrous fashion is shown in the portrait of the countess of Arundel, whose "horns" were each about two feet in length, and had suspended between them a heavily embroidered veil.

We must come down to the latter part of the last century, however, to find the head-dress in its most monstrous form. Says Mrs. Haweis, speaking of this grotesque and uncleanly fashion, "It was about 1780 that the heads of the ladies were at their biggest. They had been steadily growing for some years, and according to the published directions for hair-dressing by the fashionable barbers of the period, they rose rapidly from 'one foot' to 'three feet' high. Of course no human hair could cover a cushion as tall as this, and proportionately wide; the monstrous curls and rolls were, therefore, chiefly false, stuffed with tow, and were trimmed with ten yards of ribbon, vulgarly large ropes of beads, artificial flowers, immense plumes of ostrich feathers, and scarfs of gauze, as well as other ornaments; and to reach the acme of bad taste, models in glass, of ships, horses, chariots, caterpillars, and litters of pigs (very

much liked, and certainly suggestive), and many more." Another writer notes that the women of that time could not use a coach, as it was constructed, but had to have the roof raised.

"The work of building up the hair was so arduous, and the hair-dresser's art was in so



Head-Dress of 1780.

much demand, that when our fine madam was going to a rout, she was often obliged to have her head dressed a day or two before the event, sleeping upright in her high-backed chair, so as not to damage this monstrous super-constructure." An admirable representation of one of these huge "heads" is seen in the engraving.

—Don't overeat. Don't starve. "Let your moderation be known to all men."

Working-Dresses.—If women would only consent to attire themselves in healthful dresses while at work, the misery resulting from improper dressing would be much diminished, since a great share of the mischief arising from this cause is produced by the attempt to use, in work or vigorous exercise, muscles which are so trammelled by the weight of heavy skirts or the pressure of a corset, that they are either rendered helpless, or obliged to work at a great disadvantage. If women would wear healthful dresses while at work, they would soon find themselves so uncomfortable in unhealthful garments, when they "dress up," as to lead them to be glad to make the more healthful styles habitual. We are glad to see that sensible remarks like the following from a contemporary, are more and more frequently to be met in the columns of popular newspapers and magazines :—

"The uniform insisted upon for women by those who direct gymnastic exercises is the only one appropriate for house-work, so far as the under-garments are concerned. No corsets, loose bands, and the weight of the skirt suspended from the shoulders, is the only formula for a comfortable working-dress for women, that ever was or ever can be given. We hear, in fancy, the exclamation, uttered by an overwhelming chorus of feminine voices, "No corsets? Give up our supporters?" and we make no reply, save, "Try it. Experience is the best teacher." Leaving the matter of under-clothing, the outer garments should certainly be made in one piece, and should be both well-fitted and comfortable. For stout women, a wrapper made in gabrielle, or princesse, fashion is the most becoming; while for slender forms, the plain, full skirt, attached to a spencer or yoke waist, is more desirable. For material, cotton goods—gingham, seersucker or calico—are the only suitable fabrics for working-dresses. These can be worn the year round by lining with heavy, unbleached muslin for winter, and, if necessary, adding an extra under-garment. In these, one can always feel and look tidy, and the increased self-respect arising from such

a condition of things, will prove both restful and stimulating. Woolen materials have such an affinity for ashes, dust, and grease, that if worn, one must either spend much valuable time and strength brushing and cleansing, or pass for a sloven. Gingham and seersucker are preferable to calico."

An English Clergyman on Tight-Lacing.—The Reverend H. R. Haweis, of England, must have startled some of his fashionable hearers by the following denunciation of unwholesome fashions in dress :—

"When the door," he exclaimed, "closes on the light and splendor of the revel, the veil is drawn quickly across—the public are shut out; but the true physician, of souls as well as of bodies, will invite you to enter that gloomier apartment, and hear the stern verdict upon another which to-morrow may be pronounced on you,—'Death from natural causes!' Lay no such flattering unction to your soul. 'Death from rot in the liver and corn on the heart, produced by tight-lacing!' These are the very words of a leading physician of the day, to me. I plead for nothing impossible—for nothing which cannot be, and which is not accomplished every day by sensible women in the best circles. Many plead for the mitigation of a public eye-sore, against which our present fashion of following the natural lines of the body, instead of creating false ones, protests as loudly as do the doctors themselves. I want you to be reasonable, and, knowing the terrors of the violated law of nature, I pray to be persuasive; and this is the spirit in which I plead with you this morning against the evils of excessive compression in tight-lacing,—that systematic outrage upon the human skeleton, that fatal attack upon the sacred organs of circulation, respiration, and nutrition."

—If we should consider the remote effects of lacing the waist, we should find that nearly every internal malady may be either induced or greatly aggravated in virulence, by this pernicious practice.

An Abused Liver.—In the course of a lecture on dress a few weeks ago, in a Western State, the writer gave a description, illustrated by figures upon a chart, of the damaging effects of tight-lacing upon the liver. At the close of his remarks, an intelligent lady in the audience arose, and said that she wished, for the benefit of her sisters, to present herself as a living example of the damage which may be caused this important organ by the mischievous practice of tight-lacing. She stated that, when a young woman, imagining a small waist to be a desirable feature in a good figure, she determined to secure it; and being utterly ignorant of the possible evil consequences, she adopted the practice of sleeping in her corset, after lacing herself as tightly as possible just before retiring. By this means she was able gradually to reduce herself, until she acquired the wasp-like form considered so desirable. Some years later, she discovered a hard lump appearing in the lower part of the abdomen, upon the right side. This, upon examination, proved to be a portion of the liver, which had been nearly separated from the rest of the organ by the practice described. Twenty years had elapsed, during which the lady had become enlightened respecting the evils of tight-lacing and other fashionable follies; but although she had instituted a thorough-going reform, the injury done was of so grave a character that it was necessarily incurable, and she found herself condemned to be a life-long sufferer, as the result of the folly of her youth. We have met a number of similar cases.

Not long ago a German surgeon removed, by a surgical operation, a portion of a liver which had been so nearly amputated by tight-lacing that it had become an inconvenience to the owner, and the cause of so much suffering that its removal by a surgical operation was considered necessary.

—Court the fresh air day and night. "O, if you knew what was in the air!"—*Boston Advertiser.*

A Soldier in Trouble.—A military gentleman recently undertook to introduce military training into a private school for young ladies. The captain was very sanguine of the good results which might be obtained by means of the "set up" drill and other exercises, in securing grace of carriage and symmetry of figure.

He very soon, however, found himself surrounded by difficulties. He could not see the ladies' feet, so did not know whether they were on a line. Not a young woman in the school could extend her arms straight above her head. Their bustles would not allow them to do the "facings" properly, and as to bending over to touch the floor with the fingers, that was an utter impossibility, with high-heeled shoes on their feet. The captain was nearly in despair, and called a council of war with the Board and teachers; but at last accounts, terms of capitulation had not been agreed upon.

Saved at Last.—The conscience of fashion-makers seems to have awakened at last, or, if not the conscience, some other motive has led them to so modify the styles of hats, that feathers are to be worn no more. Millions and millions of song birds, humming-birds, birds of Paradise, and the most innocent denizens of the forest have been sacrificed, that fashionably decorated head-ornaments might be provided. It is certainly time that this slaughter of the innocents should be stopped. A few years more would have rendered many species of birds extinct.

Opposed to Small Waists.—Worth frowns upon the small tapering waist. In fitting a fashionable American lady recently, he ordered her corset strings loosened, and suggested some padding between the shoulder blades. It was the last dress this artist will ever cut for this lady, for her rage knew no bounds. It must be distressing to hold one's breath for years, and lap one's ribs, and then have the style change.



DEVOTED TO TEMPERANCE MENTAL AND MORAL CULTURE
 & HOME CULTURE, NATURAL HISTORY AND
 OTHER INTERESTING TOPICS
 CONDUCTED BY MRS. E. E. KELLOGG A. M.

COUNSEL.

SEEK not to walk by borrowed light,
 But keep unto thine own ;
 Do what thou doest with thy might,
 And trust thyself alone !

Work for some good, nor idly lie
 Within the human hive ;
 And though the outward man should die,
 Keep thou the heart alive !

Strive not to banish pain and doubt,
 In pleasure's noisy din ;
 The peace thou seekest for without
 Is only found within.

If fortune disregard thy claim,
 By worth her slight attest ;
 Nor blush and hang the head for shame,
 When thou hast done thy best.

What thy experience teaches true,
 Be vigilant to heed ;
 The wisdom that we suffer to,
 Is wiser than a creed.

Disdain neglect, ignore despair ;
 On loves and friendships gone
 Plant thou thy feet, as on a stair,
 And mount right up and on !

—Alice Cary.

—Sterne, in one of his brilliant essays, says : " O thou blessed health, thou art above all gold and treasure : 't is thou who enlargest the soul, and openest all its power to receive instruction, and relish virtue. He that hath thee hath little more to wish for, and he that is so wretched as to want thee, wants everything with thee."

DEEDS OF MERCY.

BY "AURORA LEIGH."

"THERE ! Get down and out of my sight this instant ! I never want to see you again !"

The words smote harshly upon the listening ears of little Beth. With rising sob she turned, and looked wonderingly up into her mother's face ; but while she paused, came these words still more bitter than before : " Leave the table this instant, I say ! " The little one, overcome with emotion, turned away, and silently left the house.

The pies which graced the board were the perfection of flakiness, the cake marvelously rich and beautifully adorned ; the nicely-browned roast, light snowy bread and golden butter, puddings, sauces, and preserves,—all such examples of skill as delight the heart of the thrifty housewife,—were spread in abundance upon the tastefully-laid table. In great contrast to this abundance was Mrs. Harper's supply of patience, which, being exhausted, permitted the stay-chains of her anger to break in unwarranted fury upon the head of the first-born, little Elizabeth, or Beth, as she was familiarly called, for upsetting her plate and spilling the soup over the snowy white linen.

By her friends, Mrs. Harper was pronounced a model cook and housekeeper ; but it must be admitted that her children were neglected ; for, being absorbed in her cooking, baking, frying, stewing, stitching, ruffling, and ironing, there was little time for instructing them,

and their queer little questions were usually answered by a command to run away, and not bother so. Still, Mrs. Harper thought she loved her children dearly.

As Beth left the house, she wondered where she should go now, for mamma did not want her any more. A cold November rain was falling, but she heeded it not, while trying to find "some place to live all by herself." Her play-house in an old up-turned box, had been removed; and hardly knowing what to do, she sat down under a dripping hedge-row that fenced the old orchard, to think about it. It being a rather difficult problem for her young mind, she did not seem to arrive at any conclusion, but continued her reverie till early twilight.

"Where's Beth, mother?" asked Mr. Harper as he came home from the store earlier than usual that evening. "You almost broke her heart, speaking so unkindly to her at dinner," he continued.

"I declare, I've been so busy I'd forgotten her. But I did not mean anything. I got so nervous over the dinner, and it was so provoking to have the linen soiled so. I'll call her; I think she must be up stairs."

But Beth was not there, and a long search was made before they found her in her retreat under the hedge-row, trembling, and shivering with cold.

"What a fright you have given me, child! How dared you do such a thing?" exclaimed Mrs. Harper.

Still perplexed, Beth answered, "I thought I had been so naughty you didn't want me any more."

"You foolish child! come right home, and get dry clothes. You're as wet as a rat."

"Mother, the child is not to blame. You should not have spoken so hastily," said Mr. Harper. Come, Beth, papa will take you in his arms, and you must be warmed, or you will be sick."

Beth was taken in and tenderly cared for, but it was too late to avert a serious illness. In her delirium she lamented sorely because she could not find a place to stay. Mrs. Harper was almost beside herself with grief, and

her repentant tears flowed bitterly; but medical skill proved unavailing. Beth found at last her little home, which was in the cold damp earth, until He who said, "Let the little ones come unto me," shall return to fulfill the promise, "I will come again and receive you unto myself."

Mrs. Harper's sorrow was too deep for words, but her bitter lament was soon smothered by the infant wails of a little new comer, sent in mercy, for the one taken in love.

CHAP. II.

Mercy was a very apt child, and proved herself a very useful member of the household, in which four jolly, rollicking boys made sad havoc with things generally; and whose demands for assistance were more forcible than polite. She replaced their lost buttons, sewed up their rents, darned their gloves or mittens, with untiring energy. Mrs. Harper, remembering her own experiences, decided to instruct her early in the culinary arts; and at the age of twelve years she was taught to roll the pie-crust, which in that household was no small task, for pie every day was the rule; and a departure from it considered little less than a crime. But, strange to say, Mercy uttered her protests against rolling pie-crust, and thought she could well depict the degrees of misery from pie to the ever present "sour stomach." And in despair she would sometimes say: "I wonder what people live for? It seems as though we live only to eat."

"Well, Sis!" her brother Theo would exclaim, "we could n't live without your mince-pies anyway! They always have the right smack, and they're just what braces a fellow up."

Such remarks annoyed Mrs. Harper, but she did not try to adjust matters, and usually ended such discussions, with, "Mercy is such a queer child anyway. She is a puzzle. I can't understand her."

When the increasing wants of the household required more help than Mercy could give, old Aunty Chloe was installed chief cook; and the table was always loaded with

the richest viands,—tea, coffee, fat meats, rich gravies, and pudding, pastry, preserves, hot biscuit and butter, honey, etc., and, by way of sharpening the appetite, pickles, sauces, spices, mustard, pepper, and similar condiments, all of which are exciting and highly stimulating.

Mrs. Harper's "sick-headache" was a household phrase, likewise "Mercy's notions;" for Mercy had taken warning, and learned to eschew pastries. She had read that author, Dr. Dio Lewis, who says: "I have no hesitation in saying that pie must be abandoned by those who would live the highest physiological life;" and she determined to make an effort to reach that high plane of life; and, as she learned of them, discard unwholesome articles of food.

This young enthusiast was deeply in earnest, and fortune favored her. The school to which her parents sent her to be educated was a model one, managed largely upon hygienic principles, the managers believing in educating and developing the physical, mental, and moral powers together.

The young girls who attended were many of them of the pale and sickly sort, but were all obliged to conform to established rules. They ate nothing but the most nourishing food, and only twice a day; went to bed at half-past eight, rose early, and took a walk each morning before breakfast; laid aside their corsets, and substituted loose gymnasium suits for facilitating the exercises, which were repeated twice a day.

Upon this regimen, Mercy made rapid progress, with such perfect results that she became very enthusiastic in her praises of the methods there pursued. She gained remarkably in strength and grace, and was able to accomplish so much mentally, that the pale sickly-looking school-girl, with an uncultured mind, returned, a healthy, graceful, and cultured young lady, ready for her life-work.

The woes of imaginary heroes were not calculated to call out Mercy's sympathies. Her tears were shed for the sufferings of those around her, and she determined to act her part toward relieving, cheering, and aiding

them. And it was not long before she discovered which duty lay nearest her. With pain she saw that Theo and Prince had gone far on the downward road of intemperance. They were bright, promising young men, and the thought of their filling drunkards' graves was a terrible one. Notwithstanding their mother's prayers and entreaties, their craving for intoxicants continually increased; nor could Mercy wonder, for with such thirst-provoking condiments, and rich, unwholesome food as they had always been accustomed to live upon, why should they not seek to allay their unnatural thirst with something still stronger?

Mercy felt that she must first acquaint her family with the principles of right-living, and, possibly something might then be done to arrest her brothers' downward course. She accordingly provided herself with a set of "Health and Temperance Charts," and proposed to give them a series of health talks. To this they gladly assented, for Mercy was a most pleasing talker. Her earnest manner and her wisely chosen words thoroughly interested them, and aroused in them a spirit of inquiry. Mrs. Harper, although occupied with her work-basket, listened intently, while little Mark rapidly developed into a regular question-box. And the older boys became intensely interested in her fine descriptions of the various organs of the body, and their work.

In her talks upon the subject of digestion, Mercy minutely described the digestive organs, and the wonderful processes by which the food is converted into blood and tissue. She then explained the processes of waste and repair, and the importance of proper food to repair the wastes. She had often heard her teachers, at school, remark that those common articles of diet,—white bread, butter, and sugar,—furnished almost nothing for bone, brain, or muscle; so she explained this to them, and told them of the superior nutritive qualities of brown bread, oatmeal, and germ grits.

Condiments and the excessive use of sugar and fats were considered at some length. Then came the subject of narcotics and stimulants, tea and coffee included. With such

fervor did she present the evils of alcohol, that a deep and lasting impression was made upon her little circle of friends and relatives. And at this opportune moment she presented a pledge, which all present signed, Theo and Prince included.

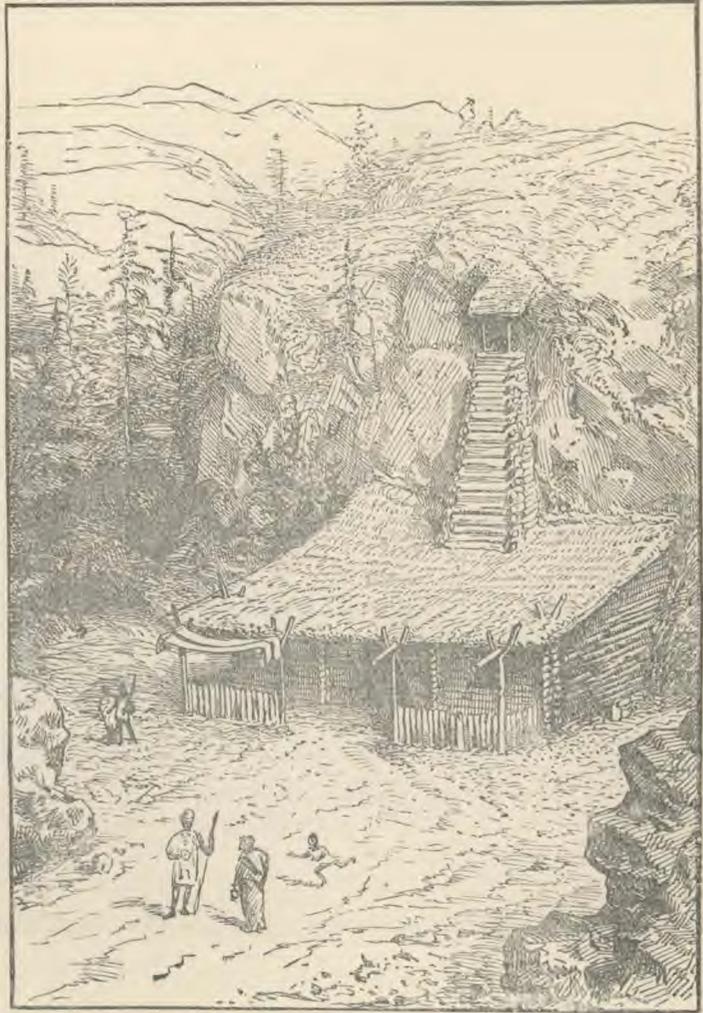
You ask if they still continue their luxurious style of living? The change was not made all at once, for there were many difficulties to overcome. Mrs. Harper realized the truth of Mercy's arguments; that it was necessary to live upon a pure, unstimulating dietary in order to overcome the habit of intemperance. Gradually, as they became convinced of their errors, the family adopted a more healthful dietary, greatly to their gain in health, time, money, and patience.

But Mercy's good deeds did not end in her own family circle. She hearkened to her next call of duty, to give her "Talks" to the public. The little leaven started in the parlor had leavened the whole, and an appreciative audience in the town-hall heard her gladly. She afterward received many such calls; and happy in the thought that she could serve the Master in the great cause of health and temperance, she gave her whole life to the work. And there are many to-day who can testify of her success in her efforts to rescue the perishing.

—"The highest exercise of charity is charity toward the uncharitable."

A PRIMITIVE ASIATIC HOUSE.

THE Aryans, the primitive inhabitants of Central Asia, seem to have been the first to



A Primitive Asiatic House.

devise something in a measure resembling the fire-place of more modern times. As will be seen in the accompanying cut, their rude house, constructed of sticks neatly fastened together, was surmounted by a chimney built after the fashion of a child's cob-house. To afford the frail structure support, it was built against the side of a huge rock.

The porch in front of the house affords

shelter from the hot afternoon sun, and is a suggestion of luxury, or something beyond the bare necessities of life. Just in front of the entrance is the low altar on which these pagans burned their morning offering to the sun-god. It is an interesting study to trace from these first rude attempts at architecture, the gradual development of those fantastic and gorgeous palaces which the traveler now finds in the land of the celestials.

BENARES.

(See *Frontispiece*.)

BENARES, the religious center of Hindooism, is one of the most ancient cities on the globe. The Rev. Sherring, in his "Sacred City of the Hindoos," says of it: "Twenty-five centuries ago, at the least, it was famous. When Babylon was struggling with Nineveh for supremacy, when Tyre was planting her colonies, when Athens was growing in strength, before Rome had become known, or Greece had contended with Persia, or Cyrus had added luster to the Persian monarchy, or Nebuchadnezzar had captured Jerusalem, and the inhabitants of Judea had been carried into captivity, she had already risen to greatness, if not to glory. Nay, she may have heard of the fame of Solomon, and have sent her ivory, her apes, and her peacocks to adorn his palace; while partly with her gold he may have overlaid the temple of the Lord."

A celebrated Chinese pilgrim visited Benares in the seventh century, A. D., and described it as containing thirty monasteries, supporting three thousand monks, and about one hundred temples of Hindoo gods. Even after the lapse of so many centuries, the city is still in its glory; and as seen from the Ganges, on the northern bank of which it is situated, it presents a most picturesque and striking appearance.

A writer in the *Encyclopedia Britannica* says that the city is "about three miles in length by one in breadth, rising from the river in the form of an amphitheater, and is thickly studded with domes and minarets. Shrines and temples line the bank. The internal streets are so winding and narrow that there is not

room for a carriage to pass, and it is even difficult to penetrate them on horseback. Their level is considerably lower than the ground-floors of the houses, which generally have arched rows in front, with little shops behind them; and above these they are richly embellished with verandas, galleries, projecting oriel-windows, and very broad over-hanging eaves, supported by carved brackets. The houses are built of stone, and are lofty, none being less than two stories high, most of them three, and several of them five or six stories. The Hindoos are fond of painting the outside of their houses a deep red, and of covering the most conspicuous parts with pictures of flowers, men, women, bulls, elephants, and gods and goddesses in all the multiform shapes known to Hindoo mythology. The number of temples is very great. They are mostly small, but are not ungraceful; and many of them are covered over with beautiful and elaborate carvings of flowers, animals, and palm branches, rivaling in richness and minuteness the finest specimens of Gothic or of Grecian architecture."

WHERE ARE YOU LIVING ?

BY FANNIE BOLTON.

THERE is a lowland where many men live
 Robed in sorrow, and shadowed with gloom;
 And there, there is little to gather or give,
 For the mountains of barrenness round it loom.
 There are wan, pinched faces, and sad, sad tones,
 And the valley is covered with dead men's bones;
 For the air with miasma of death is blent,
 And it's called the Valley of Discontent.

And O, it is ruled by a tyrant king;
 He stalks through the valley with bitter pride,
 And all at his bidding their best must bring.

And yet he is ever dissatisfied;
 And little cares he if men's eyes are dim,
 If only their griefs are of use to him;
 For 't is selfishness rules, and no love is lent
 In the sorrowful Valley of Discontent.

But there is another land, just in sight,
 A beautiful country with bowers of bloom,
 Up on a glorious, sun-kissed height,
 Where there's never a shadow of evil or gloom;
 And the faces are sweet, and the tones are gay,
 And each helps his brother upon life's way,
 And there's song in the air, and joy in the tide;
 For this is the land of the satisfied.

Only the meek and the pure dwell there,

Only the lowly, and tender, and true;

And the burden is light that the willing bear,

And blest is the servant who liveth to do;

And it seems like the place where the angels dwell,

For each loves his king and his brother, well;

And love rules the country. There's none to chide

On the beautiful heights of the satisfied.

O, where are you living? where most men dwell,

In the lowland valley of gloom, to-day?

There's a purchaser for you, if you will sell,

And a helper to help you to move away.

Bid old king Selfishness swift adieu;

There's a home in the highlands of joy, for you:

Forsake the hut of your woe and pride,

And live on the heights of the satisfied.

Down in the lowland is morbid gloom,

Feuds unceasing, and death, and sin;

Up in the highlands is light and bloom,

And the peace of heaven comes flowing in.

Down from the lowlands—a few steps down—

Is the pit of destruction, the end of strife;

Up from the highlands the victor's crown,

And the heaven of heavens, and eternal life.

Only a day! come and live with love—

Love's a panacea for self-made pain—

And then, if you still prefer to move

Back to the morbid, miasmal plain,

No one will hinder, though many will weep,

As they see you down to its level creep;

For blessed are they who forever abide

On the health-giving heights of the satisfied.

—A girl six years old was on a visit to her grandfather, who was a New England divine, celebrated for his logical powers. "Only think, grandpa, what Uncle Robert says." "What does he say, my dear?" "Why, he says the moon is made of green cheese. It is n't at all, is it?" "Well, child, suppose you find out for yourself." "How can I, grandpa?" "Get your Bible, and see what it says." "Where shall I begin?" "Begin at the beginning." The child sat down to read the Bible. Before she got more than half through the second chapter of Genesis, and had read about the creation of the stars and the animals, she came back to her grandfather, her eyes all bright with the excitement of discovery: "I've found it, grandpa! it is n't true; for God made the moon before he made any cows."

A HAPPY HOME.

MANY a child goes astray simply because home lacks sunshine. A child needs smiles, as much as flowers need sunshine. If home is the place where faces are sour and words harsh, and fault-finding is ever going on, they will spend as many hours as possible elsewhere. Let every father and mother, then, try to be happy. Let them look happy. Let them talk to their children, especially the little ones, in such a way as to make them happy.

Keep the children's sympathies, for by so doing, half the danger of their going astray is averted. No one is so sensitive over a slight as a child; and if her sorrows are made light of at home, she will be more than likely to turn to others to find sympathy, and will often find it in society she would otherwise shun. No sympathy is so dear as a mother's; and a child who has always been encouraged to tell all her troubles to her mother, knows that she will find a patient and loving hearer and counselor, and will not be apt in her youth—the time when she most needs counsel and advice—to do anything that she cannot tell her mother all about. The grown-up woman, with a family of her own, counts, as one of her sweetest blessings, the tender affection of her own mother.

Mothers are apt, as the family increases, to unintentionally omit many of the little sympathies and tokens of love which had hitherto been lavished on the older children, but are now transferred to the new arrival. Or, perhaps, as the cares of the family grow heavier, the mother has so many calls upon her time, that she cannot stop for the fondling that once was her pleasure. But surely there is time every day for some word of love or sympathy; and this one little word spoken in the morning, oftentimes cheers and helps the recipient all through the day. The idea, too, that the children, as they grow older and are more away from home, do not care for these attentions, is wholly at fault, for no true child ever grows too old for love and sympathy.—*Sel.*

Temperance Notes.

—The Annual Convention of the National Woman's Christian Temperance Union is to be held in New York City, Oct. 19-23, 1888.

—Sam Jones said in a late sermon, at Kansas City, that men are sometimes led to drink to aid digestion; and that bad biscuit-makers are the allies of the Devil.

—During 1887, the police of New York City made 81,176 arrests; and all of them except 4,708 were for drunkenness, or crimes resulting from the use of intoxicants.

—Not boys alone smoke cigarettes; many so-called ladies openly use them at fashionable watering-places, under the plea of finding it "absolutely necessary" for their nervousness, sleeplessness, dyspepsia, or some other malady.

—Hon. S. L. Cheney, a prominent Democrat of Cherokee Co., Kansas, says that under prohibition in that State, "the number of young men acquiring the habit, or vice, of drunkenness, has decreased ninety per cent."—*New York Weekly Witness*.

—The testimony of Rev. B. Myer, of England, is that nine-tenths of the twelve hundred criminals committed to the Leicester jail yearly, during the seven years of his connection with it, told the uniform story,—drink was the cause of their being led into crime and disgrace.

—Among other sound sayings of D. G. Ambler, president of the National State bank of Jacksonville, in speaking of the recent outbreak of yellow fever in Florida, is this significant remark: "People who live fairly temperate lives, do not stand in any great danger." This is worth remembering.

—Potter Co., Pennsylvania, rejoices in a long freedom from liquor-selling resorts. Says Hon. Williams, of the Supreme Court of the State: "For twenty years there has not been a licensed hotel or restaurant in this county." As results: taxes are reduced, the business of criminal courts is vastly lessened, idleness and debauchery are replaced by industry and sobriety, pauperism and crime have steadily decreased, and the population and business have been steadily increasing.

—Some of the best points of a prize article which was recently produced in response to an offer by an English journal for the best argument against smoking, are as follows: "It is unphysiological, because no

animal in a state of nature uses it; and the first time a man attempts it, he is usually upset by it. Tobacco, being a poison, nearly always causes a shock to the system, and the man is ultimately diseased by its use. It is extravagant, because there is no need for it. It is a dirty habit. What smells worse than the breath of a smoker? than his tobacco-soaked clothing and his rank pipe? Smoking blackens the teeth; and if a pipe is used, then the teeth that hold it are worn away, and so a natural adornment, the teeth, is spoiled. It is selfish, in that only the person using it gets pleasure from it, and that often at the expense of others. Smokers poison the air common to all, by the fumes they emit. Their selfishness causes quarrels and disputes, the husband preferring his pipe to his wife or children. It causes illy-developed persons, if used before growth has stopped. In adults, it first blunts the senses of taste, smell, and sight, and indirectly the hearing and touch. It always produces more or less sore throat, and often, in consequence, the worst kind of deafness,—throat deafness. It causes palpitation and irregularity of the heart, and has a depressing influence upon it."

—Bishop Taylor of the M. E. Church, a returned missionary to Africa, in his speech before a recent meeting of the National Temperance Society, in New York City, gave incidents illustrating the promptness and thoroughness of the Congo negroes in administering their prohibitory laws. On certain days the natives bring their productions to the market-places for sale. Dealers from Christian (?) nations are also there, and purchase their wares, quite generally paying for them in whisky and other intoxicants. These negroes have a custom of bringing guns, which they are apt to use when they drink, as they are certain to do on market days, to the peril of whoever is in the way. Consequently the law prohibits—guns. A certain chief who had violated the law was warned, and again he transgressed. Then they dug a hole in the ground, and put him into it, with only his head out; and stamping the soil firmly down about his neck, left him to meditate during the night, only taking care to prevent a stray jackal from devouring what was left of him. Next day, guns were permitted; and those who had them, surrounded the head, pointed at it, and fired. Mr. Chief never transgressed again. Later on, perhaps they will strike at the root of their trouble, and get a prohibition that will as effectually prohibit liquors; and then prohibition of guns at market will probably be only a fact of history. No wonder the king of Belgium appeals to the Christian nations of Europe and America to aid in stopping the liquor-traffic among his Congo subjects; but it is lamentable that these very nations are so unchristian as to introduce to them the accursed stuff.

—The faculty of the University of Pennsylvania have prohibited the smoking of cigarettes upon the College grounds.

Horace Greeley and Prohibition.—It may not be generally known that Horace Greeley was an advocate of the prohibition of the liquor traffic. The following is an extract from an editorial written by this eminent thinker many years ago:—

“No practical enforcement of the license system will ever sensibly mitigate the evils of intemperance. But let the law inflexibly forbid the sale of alcoholic beverages; and, from the cradle, every youth is thereby warned that those beverages are harmful and dangerous, and that in drinking them he encourages the violation of the law. It would command the respect of antagonists.”

Popular Science.

—An English firm recently performed the novel experiment of tuning an organ to consonants with a piano, through the medium of a telephone.

—An English scientist has called attention to a newly-discovered member of the bee communities. Heretofore, it has been supposed that all bees were included in three classes,—queens, drones, and workers. It appears, however, that there is still another variety which are called “fertile workers,” which, under some circumstances, become capable of laying eggs which produce drones.

The Nicaragua Canal.—The lock canal to be located at Nicaragua is to be begun this fall. It will be one hundred and sixty-nine miles in length. The time required in passing through it will be only twenty-eight hours.

Cloud Telegraphy.—From experiments recently made, it has been found possible for ships to communicate with one another at sea, or with the land, at a distance of fifty miles, by means of flashes from a strong electric lamp, thrown upon the clouds.

A Huge Flower.—A traveler has recently discovered in one of the Philippine Islands a huge flower. The plant is a vine, which was found growing at the height of twenty-five hundred feet above the sea. The buds are as large as huge cabbages, and the blossoms as big as a carriage wheel. It has five petals, which are oval, creamy white in color, and are arranged around the center of long violet-colored stamens. This wonderful flower exhales a poisonous gas.

A New Monster.—Prof. Crogin has recently discovered in Osborn Co., Kansas, the petrified remains of a huge extinct animal, which exceeds in proportions any discovery of this sort for many years. “The entire length of the animal is a little over sixteen feet. The jaws measure three feet eight inches; the neck is between four and five feet long; and the body about nine feet long, and three or four feet through. It has immense teeth, about three inches in length, and each pair worked independently of the rest, like pairs of hooked jaws. The animal was of such gigantic proportions that it would have been able to crush a horse in its massive jaws, and must have been king of the water. It had flippers quite similar to a seal, and its feet, two in number, were short.”

How Storms Are Made.—A scientific writer thus describes nature’s method of making tornadoes:—

“When very large areas of atmosphere have been, by excess of sun-heat, brought into an unequal state, so that there are intensely electric sub-strata of highly-heated air, and, by excess of evaporation, vapor—the conditions which produce water-spouts, sand-spouts, and tornadoes, are fully developed. The upper and colder layer of the atmosphere cannot cool the lower stratum quickly and evenly enough to prevent the formation of funnel-like vents from the lower stratum to the higher stratum, causing a rupture which takes place upward in pipe form, just as water flows with a whirling motion into the discharge-pipe of a tank or basin,—in our Northern hemisphere always in the same direction that the hands of a clock turn,—and the superheated, excessively vapor-laden, and highly electric atmosphere breaks into the cold atmosphere above, when at the ‘dew point’ level invisible vapor becomes visible, parting with its latent heat, which rarifies the air, and forces some of the condensed atmosphere in visible clouds, mounting thousands of feet above the condensed dew point into a region above the highest peaks of the highest mountains.

“To feed this pipe or pipes, as the case may be, the lower stratum flows in from all sides, rotating and ascending with the intense velocity of steam-power, producing the disastrous effects of the tornado, there being almost a vacuum at the ground or water line, as the phenomenon may be on the land or over the sea. On land, trees are twisted and uprooted, houses are unroofed, and often carried away whole, and people are blown away like leaves in autumn gales. In the deserts, entire caravans,—camels, horses, and men,—have been suddenly buried beneath mountains of wind-blown sand; and in Egypt, massive temples and monuments have been discovered under the desert sand. At sea, the tornado is still more terrible, and has overwhelmed many a good ship, and sent her to the bottom, whole, leaving her fate a mystery buried fathoms deep, and untraceable, save by the track of the storm.”



"Blessed are the Pure in Heart."

STATE REGULATION OF VICE.

THE *Philanthropist*, an excellent periodical devoted to social purity reform, has recently published, in pamphlet form, an able paper read at the International Council of Women, by Mrs. Anna Rice Powell, in which the fallacies and fearful evils of State regulations of vice are clearly pointed out, together with the efforts which have been made by Mrs. Butler and others to uproot this evil in other lands. We quote as follows from this valuable little work:—

"Since the shock of the moral earthquake, caused by Mr. Stead's exposures, which made the guilty tremble on this side of the Atlantic as well, increased attention has been given to the subject here. Statute books have been studied, to find what measure of protection for virtue the girlhood of America is given by law. The revelation is appalling, and has convinced many that it is not best longer to intrust to men alone the legislation for crimes which involve so much for womanhood.

"Those safely sheltered in ease and luxury may not feel as keenly the peril invoked by a law that fixes the age at which the little girl may consent to her own ruin at ten years. But the mother of toil and poverty, forced to send her daughter out to service when scarcely in her teens, often learns all too quickly how such a statute shields the seducer and assailant. It is the poor and the dependent that are made a prey. Since the recent agitation for raising the age of protection for young

girls began, encouraging modifications of the law have been made in several States. But in the majority, as in this very capital of the nation at the present time, the 'age of consent' is still ten years. In one State, Delaware, it is seven years. Only one State, Kansas, has raised the age to eighteen; and we should be content with nothing less."

VICE IN ART.

FEW are aware, perhaps, of the growing evils which are fostered under the guise of art. The "nude in art" is the polite term by which is known a mischief-working agency, the power of which, for evil, is little realized by those whose attention may not have been specially called to the matter. Paris is the home for all that is sensuous, voluptuous, and shameless. In this hot-bed of vice and infidelity, all that is pure and chaste and lovable is prostituted to the gross, the sensual, the fleshly. Wrong is called right. Sensuality is excused as being natural and lawful. Vice is decorated and made attractive. In the picture galleries, the most sensuous scenes look down upon the visitor, from the walls. Statues and statuettes, the most indecent, meet one at every turn in halls of statuary.

French novels the most realistic, line the shelves of book-stores and libraries; and at every news-stand, the vilest photographs are boldly exhibited for sale. Religion is scoffed at, morality is a jest, and marriage vows are disregarded. The year before the revolution,

80,000 divorces were granted in Paris, in one year. This is the city that sets the fashions in dress and art; that produces the fascinating novel so realistic in obscenity that, if it did not receive the sanction and support of the leaders of society, it would certainly be seized and burned as obscene literature.

This is the source of that morbid taste for the nude in art which is rapidly gaining ground in art circles. With little exaggeration, one might apply to these devotees of the sensual in art, the words of St. Clement's exhortation to the heathen of his day: "Casting off shame and fear, they depict in their houses the unnatural passions of the demons. Accordingly, wedded to impurity, they adorn their bed-chambers with painted tablets hung up in them, regarding licentiousness as religion." Upon the walls of the exhumed cities of Pompeii and Herculaneum the writer has seen the evidence of the exact truthfulness of these charges against the voluptuaries of the age for which St. Clement wrote seventeen centuries ago.

Less gross, but none the less certainly evil in its tendency, is the art of the present day, which delights in portraying human nudity, or in half-concealment exhibits the very refinement of sensual suggestiveness.

The common reply made to such a protest as this, is, "To the pure all things are pure;" or, "Evil be to him who evil thinks." This is all very true. But it is nevertheless true that "by beholding ye become changed." Even the pure may become contaminated by association with evil. Especially is this true of those whose characters are not yet fully formed, or whose minds, though yet uncontaminated, are receptive of evil as well as good impressions.

The public exposure of these indecent representations in oil or marble, we believe to be an agency for mischief, and in no way essential to the development of genuine art. Let all good men and women enter protest against this snare of Satan, by which the unwary are led into sin, and iniquity is encouraged to abound more and more.

YOUNG CRIMINALS.

THE following remarks on the above subject, which we quote from the *New York Tribune*, we heartily endorse, and would call attention to the fact that they are specially applicable to the subjects to which this department is devoted:—

"An unusual number of crimes have recently been committed by persons so young that they may properly be called children; and nearly all of these crimes have been of the most heinous character. A boy of fourteen caused a million-dollar fire. A boy of ten deliberately committed suicide, to escape punishment for truancy. A girl of fifteen administered poison to her father, mother, brothers, and sisters. A boy of twelve tried to wreck a train. Of course it would be improper to generalize from these and similar cases, and absurd to infer from them the existence of any prevalent tendency; but it is certainly worth while to inquire whether cases of the kind are preventable, or whether they are due to some inborn bias too stubborn to be removed by education. . . .

"Take the case of the ten-year-old boy who poisoned himself. Is it probable that a child of that age would commit suicide, if he had any ideas about the value and the purpose of life? This poor boy, evidently, did not understand what he was doing, but thought, in a confused way, that he would escape punishment at the hands of his father. It is not credible that the little girl who tried to poison all her family had any clear notion of what she was doing. Possibly she had been scolded for something, and felt angry with all about her; but it is hardly conceivable that she realized the implications of what she did when she put poison in the coffee. . . .

"In these days, when so many people think it a proof of advanced views to indulge their children from infancy, and refrain from teaching and disciplining them, for fear of injuring their spirit and crushing their independence, children of naturally strong passions are often seriously injured. By acquiring the habit of indulgence, their egoism is

dangerously developed. By being treated on terms of equality with their parents, they lose all reverence and subordination; and it very easily happens in such cases that opportunity or passion will lead them into absolute crime. We know what happens when an attempt is made to treat savages as though they were civilized. They abuse their privileges, behave childishly or lawlessly, and generally come to grief before long. Savages are but larger children, and children smaller savages. They must be taught how to conduct themselves. They do not bring that knowledge into the world with them. It does not belong in the category of innate ideas.

"An untaught child is capable of doing almost anything. Such children have been known to mimic a hanging, and actually to kill one of their number in doing it. The imitative faculty is strong in them, and therefore they can easily be trained rightly, if there is any one to do the work. When they develop dangerous and evil tendencies, the first question which ought to be asked is, 'What has their education been?' If nobody has taught them to distinguish between right and wrong, to hold guard over their passions, to be unselfish, to be considerate of others, to do as they would be done by, how can society blame them for getting into mischief? In such case, they are clearly irresponsible; but can the same be said of their natural guardians—of those whose duty it is to put and keep them in the right path, yet who have neglected that duty, no matter whether through false philosophy, or through indolence and indifference?"

A Sensible Law.—Wherever laws against prostitution have existed, there has invariably been a most unjust discrimination against women. Women have been fined, imprisoned, or otherwise punished, but men have been allowed to go free. The only exception to be found in the history of laws against this form of vice, is the Mosaic code, which, in cases of fornication, treated both sexes alike. But Iowa has set a good example for her sister States, by enacting a law which ought to be passed

by every legislature in the land. This law makes prostitution a crime; and keepers, inmates, and visitors, found in dens of infamy are liable to imprisonment for five years.

This is a vigorous method of attacking this monstrous iniquity, and ought to prove a protection for the youth of Iowa. If this is one of the fruits of the prohibition of the liquor traffic, let us have prohibition everywhere.

Abolition of State Vice.—The abolition of State regulation of vice in England was the beginning of the downfall of this most gigantic evil. The influence of Mrs. Butler's patient labors has been world-wide. Italy and Norway have just abolished this iniquitous system, and other countries are about ready for the same action. The chief medical society of Paris has declared against it; and medical men generally, both in England and elsewhere, are demanding its abolition. Those who have desired to establish this infamous system in this country may as well abandon the project as a hopeless one. America will never try an experiment which the rest of the world has proved a dismal failure, and the means of augmenting the very mischief which it proposed to abate.

The Same Standard.—Women ought not to complain of inequality in the laws,—that their rights are not recognized, etc.—until they themselves cease to discriminate against their sisters. A woman who commits a sin of impurity becomes an outcast as soon as the fact is publicly known. Her sisters refuse to recognize her. She is not infrequently thrust out from her home by her own mother and sisters. The man, who may have been the greater sinner, is promptly forgiven. Society smiles upon him. Mothers invite him to their homes, and young women court his society. This is a wrong which women must themselves correct. When women cease to be partial in their judgments, and themselves recognize but one standard for men and for women, then and only then, will such laws be formulated as will mete out to each equal punishment for sexual crimes.

Emancipation.—Women are the emancipators of the age. Abraham Lincoln issued the proclamation; but a woman had long before created a public sentiment which made the support of such a proclamation possible. The daughter of Dom Pedro, Emperor of Brazil, recently took advantage of her father's absence in Italy, to liberate the slaves of her country. Miss Josephine Butler has, through her noble efforts, secured the emancipation of the white slaves held in bondage by the operation of the "Contagious Diseases Acts" in England. By the combined efforts of noble women, civilized women may be emancipated from the thralldom of fashion, and from the numerous enslaving customs which tend in the direction of vice, and race deterioration. Will such an emancipation ever come?

A Black Heart.—A speaker at a recent meeting in the interest of social purity work, made a most vehement protest against the indifference of mothers respecting the character of the men to whom they commit their daughters in marriage, provided only that their pocket-books are well filled. To illustrate his remarks, the speaker told a story of a white man in the South who asked to marry a woman of color. Said the dusky belle: "It cannot be; you are white, and I am black." "But," responded the suitor, "my heart is just as black as yours."

Thus, said the speaker, mothers too often look only at the face. If a man is rich and prepossessing, or even if he is not particularly good-looking, if he is wealthy, the mother commits to him the keeping of her innocent daughter, without stopping to consider that his heart may be blacker than the Ethiopian's skin. Are there such mothers among our readers?

—According to the exposures of the *New York Sun*, there are in New York City not less than fifteen establishments which are devoted to the obtaining of divorces by fraudulent means. These concerns turn out hundreds of bogus divorces every year.

Compulsory Shame.—Mr. Dyer, the champion of social purity reform in India, recently communicated to the *Methodist Times*, of England, an article giving facts, and quoting official documents, from which it appears that Indian women are regularly drafted for infamous purposes. Premiums are offered by army officials for new recruits. Women are torn from their families and friends, and reduced to a slavery the most wretched imaginable. When worn out by disease and abuses, they are driven out of the camp, and no provision made for them. They are castaways, turned over to the vultures. Thousands end their wretched lives by suicide. Great indeed is the wickedness of a boasted civilization which will tolerate such a nameless iniquity as this. And yet all this is done by military officers, under government protection, and without official condemnation or protest.

—The starvation wages paid by manufacturers in many of our large cities is known to be a potent cause of vice. Poverty often leads to discouragement and loss of self-respect, after which the worst vices may follow in train. A few weeks ago the sewing-girls of Minneapolis made a strike against the prices paid by the firm of C. and L. Shotwell, which were as follows: For making shirts, 6 cents; pants, 12 cents; overalls, 5 cents; blouses, 4½ cents; blouse shirts, 3½ cents. The complaint was based not only on the fact that the wages received were insufficient to enable the sewing-girl to support life, but that they were from twenty-five to nearly fifty per cent less than prices paid for the same work in neighboring cities.

—The women of Hurley, Wisconsin, recently sent to the governor of that State, asking State aid in the removal of the infamous houses located in that place, the keepers of which are in league with the business men of the place to such an extent that they have been able, thus far, to resist successfully all efforts toward their removal.

GOOD HEALTH

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

BATTLE CREEK, MICHIGAN.

DEEP BREATHING.

CICCOLINA, writing upon this subject, said: "Up to the present time, voluntary deep breathing is not discussed or mentioned in any physiological work." This statement is essentially true. Still civilized women are unable to breathe deeply on account of their mode of dress. Students, business men, and most professional men, by their sedentary habits, lose the ability to breathe deeply. The subject is one worthy of attention. Deep breathing and the exercises that develop the ability to breathe deeply, ought to be taught in every school. The *United States Journal of Elocution and Oratory* speaks thus wisely on this subject:—

"Where inspiration is full and vigorous, life is energetic. Where it is feeble, life is torpid. Man lives in proportion as he breathes, and the activity of the child is in close relation to the strength of its lungs; so, too, is the calmness, dignity, and power of man in proportion to the depth and tranquillity of his respiration. If the lungs are strong and active, there is courage, boldness, and health; if feeble, there is cowardice and debility. To be out of spirits is to be out of breath. When eager and full of enterprise, we consume large quantities of air. However well we feed ourselves, if we do not breathe enough, we do not take on good conditions, but become irritable,

and lose all ambition in life. Deep breathing, therefore, helps us to more perfect and complete living. If learned aright, it may easily be made habitual by any person.

"As the lungs themselves do not fully perform their function, and, consequently, are not sufficiently exercised and kept at the height of their energy, they lose their elasticity, and are restrained in their plastic processes. As a result, various diseases originate in the lungs and in other parts of the body affected by the condition of the lungs. Above all, consumption results.

"Dr. Neumann, in his valuable work, says: 'The Chinese employed voluntary and ingeniously varied breath-taking as a remedy for many diseases. Likewise the people of East India, 1300 years B. C., practiced deep breathing several times a day, for the purpose of cleansing all the organs of the body, especially those of the chest.'

"Cælius and Galen, and other Greek and Roman physicians, recommended deep breathing and retention of air—*cohibitio spiritus*—as a daily exercise and as a remedy. They believed thereby to increase the heat of the inner organism, to enlarge the chest, to strengthen the respiratory organs, to remove impurities from the breast, to open the pores of the skin, to thin the skin itself, and to drive fluids through.

“Plutarch asserted that the exercise of the voice in connection with true breathing, cured diseases of the lungs and digestive organs; and Cælius Aurelius prescribed the same as a remedy for catarrh, headache, and insanity.

“Dr. Lennox Browne, surgeon of Her Majesty's Italian Opera in London, demonstrated that singers' injured voices were the fruit of wrong breathing, and that the secret of proper cultivation and preservation of the voice was lost with the old Italian school, whose masters did their utmost to develop deep breathing, which seemed to him the only respiratory method to advise.”

UNNATURAL SLEEP.

THERE is no common error more productive of mischief than the belief in the harmlessness of sleep-producing drugs. The supposition that sleep under the influence of a medicine of any sort, is a substitute for natural sleep, is a mistaken one. Remedies of this sort must sometimes be used, but their habitual employment is most mischievous. We quote with approval the following from the *London Lancet*, one of the leading medical journals of the world:—

“When we are weary, we ought to sleep; and when we wake, we should get up. There is no habit more vicious than adopting measures to keep awake, or employing artifices, or, still worse, resorting to drugs and other devices, to induce or prolong sleep. Dozing is the very demoralization of the sleep function, and from that pernicious habit arises much of the so-called sleeplessness—more accurately, wakefulness—from which multitudes suffer. Instead of trying to lay down arbitrary rules as to the length of sleep, it would be wiser to say: Work while it is day; sleep when you are weary, which will be at night, if the day has been spent in honest and energetic labor. When you awake, rise; and if the previous day's work has been sufficiently well done, the time of waking will not be earlier than sunrise.

“The difficulties about sleep are almost uniformly fruits of a perverse refusal to com-

ply with the laws of nature. Take the case of a man who cannot sleep at night, or rather, who, having fallen asleep, wakes. If he is what is called strong-minded, he thinks, or perhaps reads, and falls asleep again. The repetition of this lays the foundation of a habit of awakening in the night, and thinking or reading to induce sleep. Before long, the thinking or reading fails to induce sleep, and habitual sleeplessness occurs, for which remedies are sought, and mischief is done.

“If the wakeful man would only rouse himself on waking, and get up and do a full day's work of any sort, and not doze during the day, when next the night comes round, his sixteen or twenty hours of wakefulness would be rewarded with sleep of nine or ten hours in length; and one or two of these manful struggles against a perverted tendency to abnormal habit would rectify the error or avert the calamity.”

FAITH CURES.

EVERY physician has encountered cases in which faith has rendered most signal service in the recovery of the sick. Some time ago a patient complained to the writer that she had not been so well for a day or two. We inquired for the probable cause. She replied, “The attendant did not leave the medicine in my mouth so long this morning and yesterday as usual.”

On inquiry, it appeared that the attendant who took her temperature had not allowed the patient to hold the thermometer in her mouth quite so long as usual, as a result of which she felt worse, having previously experienced, as she stated, a very exhilarating effect from holding in her mouth what she supposed to be a powerful medicine.

Many of our readers must have heard of the man who was cured of a pleurisy by wearing upon his side his doctor's prescription for a liniment. When the paper was worn out, he called for another, and highly praised the doctor's skill in being able to prepare so efficient a remedy.

Old Dr. John Brown, a quaint Scotch phy-

sician, tells of a laboring man who once came to him, suffering with indigestion:—

“He had a sour and sore stomach, and heart-burn, and the waterbrash, and wind, and colic, and wonderful misery of body and mind. I found he was eating bad food, and too much; and then, when its digestion gave him pain, he took a glass of raw whisky. I made him promise to give up his bad food and his worse whisky, and live on pease-brose and sweet milk; and I wrote him a prescription, as we call it, for some medicine, and said, ‘Take that, and come back in a fortnight, and you will be well.’ He did come back, hearty and hale—no colic, no sinking at the heart, a clean tongue, a cool hand, a firm step, a clear eye, and a happy face. I was very proud of the wonders my prescription had done, and, having forgotten what it was, I said, ‘Let me see what I gave you.’ ‘O,’ says he, ‘I took it.’ ‘Yes,’ said I, ‘but the prescription.’ ‘I took it, as you bade me. I swallowed it.’ He had actually eaten the bit of paper.”

CAUSES OF CATARRH.

COLDS.—One thing which is very important for us to understand respecting that unpleasant experience ordinarily referred to as “catching cold,” is that the immediate or exciting cause of a cold, whether it be exposure to a draught, wetting the feet, exchanging heavy for lighter clothing, or similar accident or indiscretion, is not the real cause of the cold. The exposure to which the cold is usually attributed, is, in fact, only the provoking cause of a morbid process, favorable conditions for which have been previously prepared. In other words, it is like the throwing of a lighted match into a powder, magazine. It is not the match which explodes; it simply ignites the powder. The match will do no harm if the magazine contain no powder. So with reference to taking cold. The causes to which colds are ordinarily attributed do little or no mischief, except when brought to bear upon a system prepared for the setting-up of the diseased action which we call a cold. This is a point of

very great practical importance, and we may consider it with profit, at some length.

Let us, then, inquire: What are the conditions which may be called the real causes of a cold, or which render a person susceptible to the influence of the exciting causes of this disorder? The most important of these conditions may be enumerated as follows:—

1. *Hereditary predisposition.* Unquestionably many persons inherit a tendency to catarrhal disease. Please observe that I do not state that catarrhal disease is inherited. It is only the tendency to the disease which is transmitted by heredity. This tendency consists simply in a weakness of body and deficiency of vital activity in some part,—a general state of inability on the part of the body to defend itself against the encroachments of disease. Men who exhaust their systems by the use of tobacco or whisky, by dissipation, by gluttony, by abuses of any sort, transmit to their children that vulnerability of constitution which opens the way not only for chronic catarrh, but for all constitutional maladies.

2. *A gross state of the body.* Inattention to the laws of health as regards diet, bathing, exercise, and other conditions requisite to secure the proper elimination of waste matters from the body, results in an accumulation in the system of effete matters, which may be compared to a collection of inflammable material ready to burst into a flame upon the application of a spark, or fanned into a conflagration by a gust of wind. The use of tobacco, or intemperance of any sort, which checks the action of the excretory organs, or clogs the system, is productive of this condition.

3. *Abnormal sensitiveness.* Too much clothing is unquestionably one of the most common predisposing causes of catarrh. One who is inured to hardships is able to endure without injury exposures and privations under which one unaccustomed to a similar experience quickly succumbs. The habits of civilization,—air-tight houses, close and unventilated, super-heated rooms, even protection of the body by clothing required by man in a civ-

ilized state,—are active causes of preventing the development of hardihood, as the result of which colds are usually taken, and catarrh becomes an ever-present and almost universal malady among all civilized people.

The lumberman in driving logs, wet to his knees all day long, and taking, every now and then, an involuntary plunge, suffers no inconvenience from the sort of exposure that would give a man unaccustomed to such a life his death cold. The native of *Terre del Fuego* shelters himself from the wind and sleet of his unfriendly climate by a single bit of skin, which he throws over the shoulder most exposed. Surely such a man would not incur risk of taking cold from exposure to the draught of an open window. Historians tell us that the ancestors of the Anglo-Saxons wandered over the bleak hill-sides of their chilly island with no other protection than here and there a daub of paint. It is not to be supposed, then, that our aboriginal ancestors suffered serious inconvenience in consequence of making a change of garments. When visiting, a few months ago, the primitive Indians of Arizona and New Mexico, I was informed by the Catholic sisters in charge of the school at Fort Yuma, that the children of the Yuma tribe, who, through the efforts of the good sisters, are rapidly becoming civilized, at once become subject to colds, catarrhs, and other indispositions after exchanging the no-clothing fashion which prevails in that part of the country for pantaloons and petticoats. This fact, indeed, stands more in the way of the advancement of the work of civilizing this tribe than any other cause. The Indian boy who has lived all his life in a state of nudity, plunges into the stream for a swim, or races about for hours through the wet grass of the marshes in quest of seeds or mesquit beans for his dinner, experiences no inconvenience whatever from the wetting which he receives; but as soon as he puts on civilized clothing, he becomes sensitive to the same causes of cold which affect other people who wear clothes. His skin loses its ability to regulate its own temperature, beginning upon the non-conducting covering afforded

by the clothing for this protection. Indian men and women who have never acquired the custom of wearing hats or bonnets never take cold in consequence of going bare headed.

We do not wish to be understood as recommending that savage customs in dress should be adopted as a protection against cold, but every protection, especially the subjection of the body to too high temperature, as is so common in civilized communities during cold weather, is certainly productive of a vast deal of mischief.

The Need of Fat Foods.—The idea that fat is necessarily unwholesome, is a mischievous one. The proper nourishment of the body requires a certain proportion of fat. The only objection we urge against fats as food is the manner in which they are taken. In the form of rich cakes, pastry, fried foods, melted fats, as used with salads, butter on hot bread or potatoes, and the like, fats are difficult of digestion, and often interfere with the digestion of other foods.

Animal fats are, at least in a free state, much less digestible than vegetable fats. Cooking renders most elements of the food more digestible; or, rather, cooking is a sort of partial digestion of most food elements. Fats are, however, an exception to this rule. Cooking greatly increases the indigestibility of fats, which, at the best, are hard to digest in a free state.

The most acceptable form in which fats can be introduced into the body is in cream, in grains like corn or oatmeal, in such nuts as almonds and chestnuts, and in the legumes, as peas, beans, and lentils. When taken in this form, fats are easily digested, and when assimilated, serve to build up the brain and nerves, and encourage the nutrition of other tissues.

Butter is not an economical fat. The process of digesting butter is essentially a process of unchurning. The housewife, then, wastes her labor in churning the cream, and the butter-eater his in unchurning it. Besides, butter is rarely found in a perfectly sweet condition. As ordinarily made, butter will not keep

longer than milk, unless kept on ice. Tainted butter is a most unwholesome article. It sets up a process of decay and fermentation in the stomach, and is wholly unfit to enter a human stomach. The same must be said of cheese. The latter article, if eaten at all, should invariably be first cooked. Heat destroys the germs present in cheese, and decomposes the poisonous compounds which it contains.

Evils of Tobacco-Using.—Decaisne reported sixty-three cases of disease from the use of tobacco. The prominent symptoms noted were digestive derangements, disease of the kidneys, sleeplessness, palpitation, and vertigo. The cases were only relieved by absolute discontinuance of the use of tobacco. Tobacco-users often seek to mitigate the evils of tobacco by lessening the quantity of the weed used. This does to some degree mitigate the evils from which they suffer, but a cure is by no means possible, unless the weed be wholly discontinued.

Alcoholism in France.—We clip from an exchange the following statistics of the increase of alcoholism in France, and its result:—

“At the beginning of the present century, the French were a very temperate people, drinking but little, and that little was of a pure wine of but trifling alcoholic strength. It was in 1800 that the practice began of distilling brandy from wines, corn, and potatoes; and since then, spirit-drinking and its deplorable effects have steadily increased, insanity being one of the most marked, as well as most deplorable, of these effects. To such an extent has this been the case, that while the population of the department of Seine has increased but twofold, the number of the insane has been tenfold increased. In the years 1870 to 1887, inclusive, the lunatics of that department have increased from 6000 in the earlier year, to 10,000 in the latter. In 1804 the amount of liquor drank per head was only about a quarter of a pint. In 1830 the amount had risen to more than a quart, in

1880 to more than three quarts, and by 1887 to nearly five quarts.

“The suicides in France also have kept step with the growing alcoholism. In the four years from 1826 to 1830, there were 1739 cases of self-destruction; while from 1876 to 1880, there were 6259. In view of these facts a leading physician has said: ‘If the evil continues to grow, you may infinitely multiply charitable societies, hospitals, mutual aid societies, benevolent associations, all the charitable efforts you can make, all the miracles of private kindness, all the foresight of economists, and all the wisdom of statesmen; but all will be fatally swallowed up in the flood of alcoholism.’”

Military Testimony against Smoking.—The *Swiss Cross* is authority for the statement that the “United States Navy annually receives a large number of boys, who are trained for its service. Hundreds of candidates for this service are rejected because of bodily infirmity. Major Houston is authority for the statement that one-fifth of all the boys examined are rejected on account of heart-disease. His first question to a boy who desires to enlist is, ‘Do you smoke?’ The examining surgeons say that cigarette-smoking produces heart-disease in boys, and that in ninety-nine cases out of a hundred, where this disease has caused the rejection of those applying for positions in the navy, it has been brought on by the excessive use of tobacco. This statement is based, not upon theory, but upon the results of actual examinations going on day after day, and month after month; and, in view of these facts, there should be stringent laws against the sale of tobacco to boys under eighteen years of age. In the absence of such laws, each father should exercise his authority to prevent his sons from smoking while they are yet growing; unless the boys will cheerfully yield, as many of them will, to the voice of reason, and defer contracting the smoking-habit until they shall, at least, have passed that period during which it is scientifically proved to be certainly and seriously harmful.”

A Wise Precaution.—The following instance, for which the *Scientific American* is authority, affords evidence of progress in the diffusion of sanitary information among the people:—

“A country hotel proprietor, who had advertised for city boarders, was astonished the other day at receiving a letter from a New York gentleman, asking him to send him samples of his drinking-water for analysis. It was a wise precaution on the part of the man seeking a summer home, for a great deal of sickness arises from contaminated water; and if every one seeking country board for his family would make similar investigation respecting the sanitary condition of the places they are inclined to occupy, a twofold benefit would be the result; sickness in his own family would probably be avoided, and the boarding-house keeper would be necessitated to put his premises in a cleanly condition.”

Tea and Skin Disease.—Dr. Amelia Armsdale, who has recently returned from China, is accredited, by a correspondent of the *Phrenological Journal*, with the following remarks respecting tea, which we commend to the perusal of all drinkers of the fragrant herb:—

“The entire Chinese nation is more or less afflicted with syphilitic taint, and many of the people are so badly diseased that they have constant sores and scabs upon their persons.

“The leaves of the tea shrub are picked off by hand, and much of this work is done by the aged and infirm, who cannot perform arduous labor. While picking the leaves, they often scratch and rub their noses and eyes, stop to dress a sore, and then resume work without washing their hands.

“As the tea is picked, it is dropped into a bag, which is tied in front of the person, apron style, and scabs and the droppings from watery noses and eyes, find a ready receptacle in the bag, among the leaves of tea. There is no doubt that many diseases of skin and scalp originate from the use of tea, and their cause is not suspected.”

Tea, Coffee, Cocoa, and Digestion.—Hygienists have been claiming for a long time that these beverages impair digestion, and that their use on this account is harmful. Too many doctors, however, have encouraged their use, or at any rate have failed to discourage it. Dr. J. W. Frasier has recorded, in an article published in the *Journal of Anatomy and Physiology*, the result of a large number of anatomical experiments which go to show that both the stomach and intestinal digestion are interfered with by all three of the mildly stimulating beverages in common use,—tea, coffee, and cocoa.

Sore Throat from Milk.—A recent epidemic of sore throat in Canterbury, England, in which more than two hundred persons suffered, was traced to the use of milk from a certain dairy, the cows of which had suffered from diarrhea. A lamb connected with the dairy had had sore throat. It is more than probable that many diseases may be traced to this source.

Typhoid from Milk.—An epidemic of typhoid fever occurred some time since in Cambridge, Massachusetts, as the result of the infection of the milk supply obtained from a New Hampshire dairy. The milk cans were washed with water from a well which had been contaminated from a neighboring privy-vault. A case of typhoid fever had occurred on the premises a short time previous.

—The *Boston Journal of Health* is making things very unpleasant for the patent-medicine manufacturers and some of the manufacturers of so-called “health foods” and “foods for infants.” We think this new journal is doing good work in placing before the public the fact that the majority of manufactured foods now in the market are by no means what they are claimed to be.

—There has not been a single epidemic reported this summer that was not directly traceable to the neglect of ordinary sanitary requirements.—*The Sanitary News*.

DOMESTIC MEDICINE



A NEW RECTAL IRRIGATOR.

THE virtue of hot water as an agent in removing the thickenings and indurations which result from chronic congestions and inflammations of mucous surfaces and contiguous parts has long been recognized. In the treatment of pelvic indurations resulting from cellulitis, no agent is so potent as the hot-water vaginal douche. Dr. Emmet states that he regards this one agent as more valuable than all other local measures combined.



Rectal Irrigator.

The value of hot water in the treatment of rectal diseases seems to have been less appreciated by the profession, though recently it has been used by various specialists, and with excellent results. For some years we have used hot water by means of the continuous enema, and with most excellent results; but feeling the need of some better mode of applying hot water to this part of the body, we have experimented with various forms of instruments for the purpose. All the instruments found

in use, were too large to be used without discomfort, in most cases, and all were made of metal, which, on account of its great conductivity of heat, is wholly unfit for this purpose. The mucous mem-

brane is much more tolerant of heat than is the skin. When a metallic instrument is used, the heat transmitted to the very sensitive surface at the junction of the skin and mucous membrane becomes unbearable before the temperature is high enough to make the application of much value. We have had made an instrument, which we believe embodies the excellencies of instruments previously made, and several additional advantages, chiefly the following:—

1. It is made of hard rubber, a poor conductor of heat, which allows the use of water as hot as the mucous membrane will tolerate.

2. The instrument is of such size that it can be easily used, even in those cases in which there is unnatural contraction of the sphincter muscles from the irritation of a rectal ulcer or fissure,—the class of cases in which an instrument of this sort is of greatest service, and in which other instruments can seldom be used, never, with water of proper temperature.

3. The sleeve of the instrument is notched at its outer extremity, so as to prevent obstruction to the return flow when the inner tube is pushed in as far as allowed by the stop.

Within the last ten months, we have used this instrument in more than one hundred cases of rectal diseases of various sorts, and have found it a most satisfactory and effective aid in the management of this class of

diseases. It has proved most serviceable in the following conditions: Hemorrhoids of all forms; irritable rectum; rectal ulcer and fissure; catarrh of the rectum. We have also found it of great use in the after-treatment of cases operated upon for fissure and fistula in ano.

The temperature of the water should be 105° to 120° F., or as hot as the patient can bear without discomfort. The application should be continued from ten to thirty minutes. It is most effective when taken with the patient in a horizontal or reclining position. The bowels should always be thoroughly evacuated by enema before using the irrigator.

Astringent, anodyne, emollient, and other medicated solutions may be used with the irrigator.

Directions for use accompany each irrigator. They can be obtained from the SANITARY SUPPLY Co., Battle Creek, Mich.

Price, with douche and attachments, \$3.00.

" of Irrigator, separate, 1.25.

Look out for Typhoid Fever.—The present is the season of the year in which the fatal typhoid germ is most to be dreaded. The evaporation of water from the soil occasions a concentration of the poison, and water-supplies are consequently more liable to contain the typhoid poison in deadly quantities.

"M. Dujardin Beaumetz, in a recent communication to the Paris Academy, gives the case of a family who took a house for the season, at a fashionable resort. They were warned not to drink the well-water, as it was supposed to be impure. They drank mineral water exclusively until the last day of their stay, when, in the hurry of packing, they neglected to send for mineral water, and concluded to try the well-water. Ten drank of it, six of whom have since died; the remaining four, who had previously had typhoid fever, were made sick, but recovered. A microscopic examination of the well-water revealed the presence of the bacillus supposed to be the cause of typhoid fever."

If the family referred to above, had taken pains to boil the water from the suspected well before drinking it, they might to-day be alive and well. Heat is one of the best disinfectants. Suspicious water should always be boiled before drinking, as by this means the typhoid germs may be destroyed.

Green Stools.—The green discharges of infants suffering with some forms of bowel disorders have been shown to be due to a disease germ which produces the green substance. The usual cause is the use of milk or other food in a state of beginning decomposition, unclean nursing-bottles, or impure water.

Do n't Drown.—Very few cases of drowning need occur, if people would preserve their presence of mind, even though unable to swim. If, for instance, a party in a row-boat find their boat sinking from overloading, or owing to a leak, all may be kept afloat if they will quietly get out of the boat into the water, and use the boat simply as a buoy. A finger laid upon an oar, or some other floating object of equal size, will be sufficient to keep a person's head out of water, and enable him to see and breathe, provided he does not try to clamber on top of the boat. If persons who cannot swim will keep these suggestions in mind, the information may sometime prove of value.

Granular Lids.—It has been shown by recent investigations that granular lids are caused by germs. It is thus apparent that this common and most troublesome eye affection is contagious. The disease is most often conveyed through the use of the same towel by infected and well persons. This source of eye-disease cannot be too carefully guarded. As soon as a person—child or adult—complains of soreness of the eyes, he should at once be forbidden the use of towels used by other persons; and care should be taken that the eyes of other persons do not come in contact with the towel used by the diseased person.



THE CORN-FIELD AND TOBACCO-FIELD.

THE Indian Corn looked over the fence,
And what do you think he spied?—
A field of Tobacco already to bloom,
And stretching in lordly pride.

To his broad-leaved neighbor at once he called,
In accents loud and clear,

"I thought you belonged to a sunnier clime;
Pray what are you doing here?"

So then, with a haughty air, replied
The plant of power and pelf,

"You are pleased to ask of my business, sir;
Say, what do you do for yourself?"

"I feed the muscle, and blood, and bone,
To make our farmers strong,
And furnish food for their little ones
That round their tables throng."

"I move in a somewhat loftier sphere,"
The foreign guest replied,

"As the chosen friend and companion dear
Of men of wealth and pride.

"I'm the chief delight of the gay young spark;
O'er the wise my sway I hold;
I lurk in the earnest student's cell,
In the dowager's box of gold.

"Thousands of hands at my bidding work,
Millions of dollars I raise—"
He ceased to speak, and in angry mood
Responded the tasselled maize:

"You're in secret league with dyspeptic ills—
A merciless traitor band;
With clouds of smoke you pollute the air,
With floods of slime, the land.

"You tax the needy laborer sore;

You quicken the drunkard's thirst;
You exhaust the soil. And I wish you'd go
To the place whence you came at first!"

—*Youth's Temperance Banner.*

HOW CARELESS KATE BECAME CAREFUL
KATIE.

BY S. ISADORE MINER.

KATIE GRAY was seven years old,—quite old enough, as Mamma Gray said, to put her active little brain to some use beside just fun and frolic. That she had a bright mind, her many droll sayings and doings showed. Had it not been for that, you might have doubted it, so constant was her p.p.a. "I can't remember," or "I did n't think."

Of course Katie *could* remember, and Katie *did* think, but it was only the things she wanted to. If it was about play or fun, she remembered well enough; but anything she was not interested in, she listened to very heedlessly, if she listened to it at all.

This same carelessness characterized everything she did. She never could find her hat or mittens; she hung her cloak on the floor; and her toys were always in confusion, just where she happened to leave them. That is why she was called "Careless Kate."

She left her best hat and a lovely new picture-book out doors to be rained on and ruined, because she "did n't think;" she put chocolate drops and gum, forbidden articles, in her pocket, then sat by the fire, and so ruined a nice dress; she left a bottle of ink where baby could get it, and deluge the carpet,—all, every-day occurrences, and still she "did n't think." Mamma really thought she would, when she left by the hearth, the beautiful dollie Aunt Kate brought

her from France, and melted the wax all off its face. But it took a harder lesson than that. She learned it though.

Mamma had often warned her about running out in the dew and rain without her thick boots or rubbers, about drinking ice-water when she was very warm, about lying on the floor, her favorite position, and about getting in draughts; for mamma had two children younger than Katie to care for, and could not afford to have any of them get sick.

"What are draughts?" asked inquisitive Katie.

"They are currents of air, dear, usually understood as cold, especially in such a house as this. Grandpapa built this house years and years ago, before they knew how to build them properly. Fresh air must come in from somewhere for us to breathe, but instead of coming in near the ceiling, as cold air should, it comes in from under the badly fitting doors and poorly joined corners, and lifts the warm air up. So you must never lie on the floor, especially when you are warm and tired. Just put your hand on the floor near the door, and you will feel the draught. You cannot see it."

I really don't think Katie forgot this. How could she, when it was all explained so clearly to her? I guess she "didn't think;" for it was only the next afternoon that mamma found her fast asleep on the floor, with flushed cheeks and a decidedly wheezy way of breathing. The door stood partly open, too, and such a draught! Her toys were scattered far and wide, and the work-basket had suffered. But mamma didn't mind that. She was minding Katie's cold.

Poor mamma! Diphtheria had been raging in the town, and she had tried so hard to keep the dread disease from her darlings, by careful obedience to the laws of health. She had stood like a sentinel on duty for weeks; but now that the disease had abated without entering her home, she had trusted much to the obedience of the well-warned, but irrepressible, Katie, and had relaxed her vigilance a little. Only

that morning she captured Katie out in the wet grass and cold autumn wind, where she had slipped from her bed, in her night-gown and worsted slippers, to entice her much-abused, long-enduring kitty from its refuge under the porch. She was brought in shivering, and plunged into a warm bath and given a good rubbing; but to all reproofs she only replied, "I didn't think."

Now, to cap the climax, she had chased poor Fido round and round the room, trying to tie a tin cup to his tail, and then thrown herself, heated and tired,



down on the floor by the door, and fallen asleep, saying sleepily, "How good that cold air feels! I guess mamma won't care, if I get up pretty quick." Isn't it too bad when a girl of seven is harder to care for than a baby of two? Mamma Gray's other children minded, even the blessed baby.

I cannot tell all about the long, long illness that was the result of the heavy cold Katie took that day. She passed a restless night, and woke up next morning with a feverish, heavy head, and a burning, aching throat. Mamma did all she could, but Katie only grew worse and worse. Then the doctor came. He shook his head when he looked at the dry, sore throat her parched mouth disclosed, and said a word that made Mamma Gray turn pale—"Diphtheria!"

Well, Katie got better by and by, though the doc-

tor says she may be troubled with throat difficulty all her life, unless she is very careful to guard against exposure. She has since had to have her tonsils cut out, "because they always staid swelled," she says; but really and truly, because she "did n't think."

But the worst of all I have not yet told. The other children took the terrible disease, and oh! sad to tell, her dear little baby brother died. That is why Katie's mamma wears a black dress; and as that makes Katie think so often, they have changed her name to "Careful Katie."

Don't you think it pays for little folks to think about their health once in a while, and not leave it all to their mammas?

PUZZLE—SOMETHING TO AVOID.

THREE-FOURTHS of a cross, and
A circle complete,
An upright where two
Semicircles do meet;
A right-angled triangle,
Standing on feet,
Two semicircles, and a
Circle, complete.

Answer.—TOBACCO.

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.

Licorice Root—Magnesia—Compresses—“Indian Oil.”—Mrs. T. W. B., Connecticut, asks:—

“1. Do you consider it unhealthful to chew a little licorice root every day or night, continuing the practice for some length of time?”

“2. Is it proper to use magnesia whenever there is evidence of too much acid in the stomach, as shown by the presence of uric acid in the urine?”

“3. Is it proper to apply wet cloths to the stomach and bowels to relieve nervous weakness, or to grasp a wet handkerchief in the hands to induce sleep?”

“4. What do you think of ‘Indian Oil’?”

Ans. 1. The habit of chewing is not a good one, nevertheless we have no evidence that a little licorice root taken once or twice a day would materially injure a person.

2. Magnesia is not an antidote for uric acid. Excessive uric acid usually indicates an inactive state of the liver, indigestion, or the excessive use of flesh food. The cause of the difficulty should be ascertained and removed.

3. Compresses applied over the stomach are frequently beneficial for nervous exhaustion due to disordered digestion. The application of a wet hand-

kerchief or a moist compress of any sort to the palms of the hands or soles of the feet is sometimes useful as a remedy for sleeplessness. It is especially good in cases in which there is dryness and burning of the palms or soles.

4. We know nothing about “Indian Oil,” except that it is a quack nostrum, and likely to do more harm than good.

Danger to Wells.—M. A. N., Indiana, inquires: “How near to a well may a privy-vault be located without danger?”

Ans. Eight or ten miles would probably be a safe distance, although it is possible that communication might be established between the vault and the well even at the distance named, as through fissures in the rocky stratum, or through water courses passing through seams in rocky strata. A vault and a well both located upon an ordinary village lot, even if made as far apart as possible, are an unsafe combination. Such an arrangement is a constant menace to the health and lives of those who use the water from the well. Privy-vaults should be abolished. If the privy-vault could be banished from civilized communities, typhoid fever would almost wholly disappear. The statistics of death in large cities show that, as sewerage systems have been introduced, the number of deaths from typhoid fever has been diminished, and in proportion to the extension of the sewerage system.

Milk and Blood.—J. T. C., Canada, inquires: “Does milk make blood? If so, in what way should it be taken? Also, does it produce flesh?”

Ans. Milk is food, and consequently, when digested, will be converted into both blood and flesh. Ordinarily, milk should be introduced into the system by way of the stomach. It may be taken either cooked or raw. Cooked milk is very digestible, and less liable to produce gastric derangements, or to be an occasion of disease. Every house-wife knows that scalded milk will keep longer in the stomach than raw milk; that is, it is less liable to ferment. Milk should never be taken as a drink. It should be eaten and chewed like other food, and consequently should be taken in small sips, being eaten with a hard cracker, a bit of dry toast, or at least with something which will require thorough mastication.

Oil Baths.—L. J. A., Michigan, inquires: “Is the oil bath useful as a means of relieving inactivity of the skin; and if olive-oil is used constantly for some time, will it have a tendency to stain or discolor the skin?”

Ans. The oil bath, or oil rubbing, is one of the most useful means of encouraging activity of the skin. Pure olive-oil will not discolor the skin. Coconut-oil is preferred, however, as it seems to be absorbed more readily.

Electric Belts.—A. W. R. inquires: "Are any of the electric belts or other similar appliances so extensively advertised, possessed of the merits claimed for them as curative agents?"

Ans. Many of the so-called electrical belts produce no electrical current whatever. Others produce a slight current, but so weak that it really has no therapeutic value. We have no faith in this class of remedies, and have met many persons who had used them for a long time without benefit.

Disease of the Eyes.—D. S., Iowa, states that he has suffered for many years from chronic inflammation of the eyes, attended by considerable discharge. He recently had one eye injured by a blow from a ball. Wishes a prescription for treatment.

Ans. We would advise you by all means to consult a good specialist. Your case doubtless requires more skillful treatment than you would be able to administer yourself.

Hemorrhoids.—A subscriber wishes us to publish a reliable remedy for hemorrhoids.

Ans. There are several kinds of hemorrhoids, and several conditions which, by an unprofessional person, might be mistaken for hemorrhoids, consequently we cannot prescribe any one remedy which will effect a cure in all cases. Two kinds of hemorrhoids require a surgical operation for their relief. Astringent applications are often useful. Distilled extract of witch-hazel is frequently useful, especially in cases where there is a tendency to hemorrhage. The sitz-bath and the application of cloths wrung from cold water frequently give great relief. In certain cases hot applications are more useful. The bowels should be kept regular by the use of coarse grains and the free use of fruits. The rectal irrigator we have found very useful in treating hemorrhoids, as well as other forms of rectal disease. This instrument is described in the department of Domestic Medicine in this issue.

Acne, or Face Pimples.—H. S. inquires the cause of pimples upon the face of young ladies.

Ans. We suppose our correspondent has reference to the form of acne which consists in the inflammation of the oil glands of the skin. Gross diet, constipated bowels, and disordered digestion, and irregular habits are frequent causes of this difficulty. It can usually be cured by a simple, abstemious diet, frequent bathing, and attention to the general health. In some cases a mild astringent lotion applied to the face is found beneficial. A lotion consisting of one dram of sulphate of zinc to the pint of water, applied to the face at night, with a soft cloth or sponge, and allowed to remain over night, we have frequently found very serviceable.

Literary Notices.

We have received from the United States Department of Agriculture, BULLETIN No. 13, of the Division of Chemistry on Food and Food Adulterants. It is a pamphlet of 260 pages, devoted to spices and condiments, and the means employed for their adulteration, together with a technical discussion of the subject, and of the methods employed for their detection. Several fine illustrations of the microscopical appearance of various articles, with and without adulteration, add to the value of the work. There are also two appendixes,—one containing a list of works on spices and condiments, the other containing some of the laws relating to the adulteration of spices and condiments.

The Century, for September, presents its readers with a varied and interesting table of contents. Among the subjects treated, are, "College Fraternities," by John Addison Porter; "An Ancient School Worked on Modern Ideas;" "The Industrial Idea of Education;" "The University and the Bible;" "Women Who Go to College." These make this number one of especial value to those interested in the educational topics of the day. Besides these there are installments of the "Lincoln History;" "A Mexican Campaign;" "Hard Times in the Confederacy;" "Exile by Administrative Process," with stories and poems, and the usual Topics of the Time.

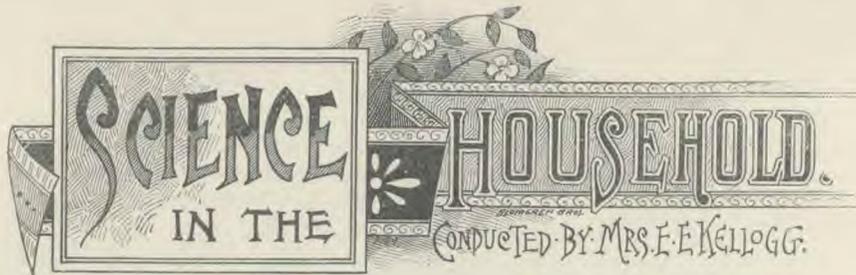
THE CENTURY CO., Union Square, New York.

Demorest's Monthly for October, closes the twenty-fourth volume of this popular magazine. "On an Ocean Steamer" is the leading article, which is finely illustrated with graphic scenes on the steam-ship "Saa'e." "Blessing and a Blight in Algeria," "Lost in the Desert," "American Indian Women of Today," "Relation of Food to Health," and "Results of Defective Drainage," are among the many other interesting articles to be found in this issue. A sketch of Mrs. Esther T. Housh, accompanied by a life-like portrait of this well-known temperance worker, is also to be found in this number.

Subscription price, \$2.00 per annum. 15 East 14th St., New York City.

Littell's Living Age, for September 15, offers its readers, among other good things, "Michael Angelo," by W. W. Story; "The Non-Chinese Races of China;" "Recent Oriental Discovery," by Prof. A. H. Sayce; "Globular Star Clusters;" and "Literary Dram-Drinking," from the *Spectator*.

Subscription price, \$8.00. Published every Saturday, by LITTELL & Co., Boston.



SEASONABLE BILLS OF FARE.

DINNER NO. 1.

Sago and Potato Soup.*

Scalloped Cauliflower,	Beets and Potatoes,†
" Sliced Tomatoes, *	
Samp,	Steamed Rice,
Whole-Wheat Bread,	Granola,
Apple Loaf,	Grapes.

DINNER NO. 2.

Brown Soup.‡

Potato Snow-Balls,	Browned Cauliflower,
Celery,	Mashed Peas,§
Parched Farinose with Peaches and Cream,	
Oatmeal Biscuit,	Graham Bread,
Sweet Apple Pudding,	Pears.

Potato Snow-Balls.—Cut large potatoes into quarters; if small, leave undivided. Boil in just enough water to cover. When tender, drain and dry in the usual way. Take up two or three pieces at a time, and in a strong, clean cloth press them compactly together in the shape of balls. Serve in a folded napkin on a hot dish.

Browned Cauliflower.—Beat together two eggs, a little salt, four tablespoonfuls of sweet cream, and a small quantity of grated bread crumbs well moistened with a little milk, until of the consistency of batter. Steam the cauliflower until it is tender, but not fallen to pieces. Separate it into small bunches, dip each top in the prepared mixture, and place in nice order in a pudding-dish. Brown in the oven, and serve hot.

Scalloped Cauliflower.—Prepare the cauliflower, and steam or boil until tender. If boiled, use equal quantities of milk and water. Separate into bunches of equal size, place in a pudding-dish, cover with a cream sauce, sprinkle with grated bread crumbs, and brown in the oven.

Samp.—Use one part of samp to four and a half parts of boiling water. It is the best plan to reserve enough of the water to moisten the samp before adding it to the boiling water, as it is much less likely to cook in lumps. Boil rapidly until the mush has well set, then cook slowly for from two to three hours. Samp is best cooked in a steamer or double boiler.

Baked Apple Loaf.—Prepare some dough with yeast, as for buns. When ready for the last molding, cut it into three portions. Put a little flour on the bread-board, mold the dough, and roll as thin as pie-crust, and in such shape as will fit a shallow baking-tin. Place on the tin, and spread with a layer of easy-cooking tart apples sliced thin. Cover this with a second layer of dough. Add another layer of apples, and cover with the third portion of dough. Pinch the edges of the dough well together, let the loaf rise till very light, then bake. Serve with sugar and cream. If the apples will not cook quickly, they may be first steamed partly tender, before putting into the loaf. If the crust appears too hard when taken from the oven, it may be covered with a wet napkin, and allowed to steam for a little while before serving.

Sweet Apple Pudding.—Pare, core, and slice fine, enough good, ripe, juicy sweet apples to fill a pint bowl. Heat, in a double boiler, a quart of new milk to scalding. Pour it, when not, over a cupful of good granulated corn meal, and beat very thoroughly to remove all lumps. Return to the double boiler, and cook until the meal is set. The batter should then be about the consistency of good corn mush. Remove from the fire, add a pint of cold milk, stir in the sliced apples, one-third of a cup of sugar or molasses,

* See March number of this journal. † See January number.
‡ See May number. § See April number.

and a teaspoonful of flour braided with a very little milk. Turn all into a deep earthen crock or pudding-dish, and, stirring frequently for the first hour, bake slowly from three to four hours. It should be moderately brown on the top when done. Serve warm or cold.

WAXING HARD WOOD FLOORS.

THE *Scientific American* offers the following as the best method for waxing hard wood floors:—

“Take a pound of the best bees-wax, cut it up into very small pieces, and let it thoroughly dissolve in three pints of turpentine, stirring occasionally, if necessary. The mixture should be only a trifle thicker than the clear turpentine. Apply it with a rag to the surface of the floor, which should be smooth and perfectly clean. This is the difficult part of the work, for if you put on either too much or too little, a good polish will be impossible. The right amount varies, less being required for hard, close grained wood, and more if the wood is soft and open grained. Even professional ‘waxers’ are sometimes obliged to experiment, and novices should always try a square foot or two first.

“Put on what you think will be enough, and leave the place untouched and unstepped on for twenty-four hours, or longer if needful. When it is thoroughly dry, rub it with a hard brush until it shines. If it polishes well, repeat the process over the entire floor. If it does not, remove the wax with fine sand-paper, and try again, using more or less than before, as may be necessary, and continue your experimenting until you secure the desired result. If the mixture is slow in drying, add a little of the common ‘driers’ sold by paint dealers,—japan, for instance,—in the proportion of one part of the drier to six parts of turpentine. When the floor is a large one, you may vary the tedious work of polishing, by strapping a brush to each foot and skating over it.”

Potted Plants.—The two great enemies to plants in pots are want of drainage and sour soil. Perhaps the one is the cause of the other. Many people do not see the necessity for drainage; they do not understand why careful gardeners put all those rocks in the bottom of a pot. In the same way the same people cannot see why farmers and gardeners go to the expense of putting in drains. One cause of sour soil is too large a pot; another is overwatering a plant, keeping the soil in an everlasting state of slop; still another is potting the plant in soil or compost which is too close and binding, and which does not allow the water to percolate through. Use as small pots as the roots will allow. Give too much drainage rather than too little. Once a year is often enough to re-pot.

—Stale crackers are much freshened by setting in a hot oven for a few minutes.

Cheap Food.—It is a false economy that induces people to use cheap butter, cheap meat, cheap flour, and other cheap articles of food. In nine cases out of ten, cheap articles of food are either damaged or adulterated, and are dear at any price. They are seldom what they purport to be, and if not really dangerous to use, generally prove unsatisfactory to the purchaser or consumer. Of all cheap things, cheap articles of food should be most carefully avoided. Bread that is heavy or sour has passed the bounds of redemption. Butter that has become rancid cannot be regenerated by the addition of coloring. Meats that are tainted can by no chemical process be restored to their original condition, and the secret of infusing freshness into stale vegetables and decayed fruits remains undiscovered. To use low-priced stuff for food is not only extravagant and foolish, but criminal. It is a flagrant violation of the laws of physiology and hygiene, and a reckless defiance of disease and death. Beware of low-priced articles of food.—*The Kitchen.*

To Wash Laces.—An exchange gives the following way as a good method for washing laces: “Fold the lace two or three times, and tuck it to a piece of clean white flannel. Wash in warm water, with soap, not rubbing, but dipping it up and down in the water, and patting it between your hands; change the water once. Then dip it into very hot water, roll it up with the flannel outside, and squeeze it as dry as possible. Then remove the tacking thread, and dip the lace into cold water, into which a little pearl starch has been dissolved.

“Take it out, and roll it up in a large cambric handkerchief, squeeze it dry, and again fold it up in a dry handkerchief. Let it remain for an hour, then fold a linen sheet four times, spread upon it a fine piece of linen or an old fine cambric handkerchief. Lay your lace upon it, carefully smooth out with your hand all folds or creases, and gently pull each pattern into proper shape; then spread over it another fine handkerchief, folded double, and iron with a hot iron. Remove the upper cloth from the lace, but do not touch the lace until it is perfectly dry. It dries in its impression on the cambric, and perfectly retains the beauty of its pattern. When quite dry, fold it in tissue paper, and it will look like new lace.”

—The family table ought to be bright and cheerful, a sort of domestic altar, where every one casts down his offering, great or small, of pleasantness and peace; where, for at least a brief space in the day, all annoyances are laid aside, all stormy tempers hushed, all quarrels healed, every one being glad and contented to sit down at the same board, and eat the same bread and salt, making it, whether it be a rich repast or a dinner of herbs, equally a joyful meal.—*Sel.*

Publisher's Page.

This number goes to press in the absence of the editors, Dr. and Mrs. Kellogg being absent in Colorado, attending a meeting of the Health and Temperance Association of that State, and getting a few days' vacation from their arduous duties at home.

By invitation, the editor had the pleasure of attending recently the Congress of American Physicians and Surgeons, at Washington, D. C. The meeting was chiefly made up of leading specialists in various lines, and was the first of its kind in this country. Numerous physicians of world-wide celebrity were present at the Congress, and took part in its proceedings. Among others were Sir Spencer Wells, the famous ovariologist of London, England; Dr. Ferrier, the renowned explorer of the brain, by means of experiments upon monkeys; and his scarcely less famous pupil, Mr. Horsley, who has astonished the world not more by the apparent rashness with which he opens the skull in search of brain tumors or abscesses, than by the brilliance of his successes in the cure of cases of epilepsy and other maladies hitherto considered hopeless. The eminent Prof. Esmarch and many other notables were also present.

The Sanitarium family were made happy a few weeks since to welcome back to their midst their old chaplain, Elder L. McCoy, of Iowa, who served with great acceptance in the same capacity for some length of time several years ago.

Elder Hutchins, of Vermont, for several years occupied the position of chaplain in the Sanitarium, a position for which his personal qualities and long experience eminently qualified him. The managers consented to his relinquishing his position only on account of his earnest plea that advancing years and increasing infirmities rendered it impossible for him to sustain, without serious injury to himself, the responsibilities and duties involved in the religious care of so large an institution.

This number of *GOOD HEALTH* is printed in the office of the Good Health Publishing Co., which now has a completely equipped printing office. The publishers will attempt to maintain, and, if possible, improve upon, the excellent quality of mechanical work which has heretofore been done on the journal.

The Sanitarium has recently made a valuable addition to its grounds by the purchase of several adjoining properties, by which its present beautiful surroundings will be greatly improved. Work will be begun at once in the removal of fences, out-buildings, etc.; and the new grounds will be graded and laid out in lawns and walks, which will greatly enhance the attractiveness of what is already the finest premises in the city.

The Sanitarium Kindergarten is one of the most flourishing features of the institution. Between thirty and forty little folks daily gather in the rooms of this department, where they are trained under the watchful care of Miss A. Foster and her assistants. The Sanitarium Kindergarten differs from all others in that in it the principles of health and temperance are made prominent features. In all particulars, the little ones are brought up in the way in which they should go; and we cannot imagine a better opportunity for children from three to five years of age to get a bias in the right direction, than in such a school as this. Six months of the sort of training given there is worth several years of later schooling of the average sort.

The advertisement of Hill's Patent Milk Aerator, which was noticed as appearing last month, was crowded over to the present issue, in which it appears. We commend the invention as a useful one.

Now is the time to join the Sanitarium Training School of Nurses. This flourishing school now numbers some scores of graduates, who are to be found in all parts of the United States, successfully engaged in the useful profession of nursing. There is no more useful or lucrative profession in which the average young man or woman can engage. Good nurses are always in great demand. Young women, especially, should be interested in the opportunity for independence afforded by this profession. There is a growing surplus of school-teachers, and the competition keeps wages at a pittance. We have known a good many young women who had made a success in teaching, exchange that profession for nursing, with real advantage, healthwise as well as pecuniarily. For circulars and other information, address Mrs. L. M. Hall, Matron of the Sanitarium, Battle Creek, Mich.

The title of the series of articles by Dr. Oswald was erroneously announced in our last issue as "The Drink Problem." The Doctor deals, as the reader will discover, with the more comprehensive topic, "The Poison Habit." It is a fashion with a certain class of scientists to make, now and then, wide digressions from the channel of true scientific reasoning, in the attempt to find some sort of scientific apology for human vices. Dr. Oswald attacks this class from their own fortress, and shows that science and nature are not friendly to vices of any sort; that there is no real antagonism between nature and religion. Those who believe man to be totally depraved in nature will perhaps take issue with the Doctor on a few points; but they will certainly admit that the view presented, places humanity upon a more dignified footing, and that the man who will follow only those instincts which are not depraved either by habit or heredity, cannot go very far astray. We feel sure that the articles from Dr. Oswald's pen will receive a careful and candid perusal.

Holiday Canvassing.—Now is the time for canvassers to be thinking of getting ready for the holiday canvass. Everybody will soon be thinking, "What shall we buy for a present?" for some friend. Thousands of dollars are annually spent for useless trinkets, usually because no sensible substitute is found which will be at once useful and unique. As such a present worthy to find a place in every household, we offer that beautiful and useful volume already familiar to many of our readers, "Sunbeams of Health and Temperance." This popular work sells rapidly, and is eminently well adapted to the holiday trade. Canvassers do well with it. It sells easily, and hence can be successfully handled by agents of little experience. The work is brimful of interest, and of unique and useful information blended in such a manner as to make a most readable volume, besides being profusely illustrated. Agents wanted to canvass for "Sunbeams" in every town in the United States and Canada. Applications will be referred to State agents, who will give them prompt attention.

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The Chicago and Grand Trunk; and Detroit, Grand Haven and Milwaukee Railways announce very low excursion rates to Chicago and return, for the Exposition. The round-trip rate from Battle Creek, including one admission to the Exposition, is only \$4.50. Tickets will be sold on Tuesdays, September 11th, 18th, and 25th; October 2nd, 9th, and 16th, good going on date of sale, and good to return up to and including Monday next following date of sale.

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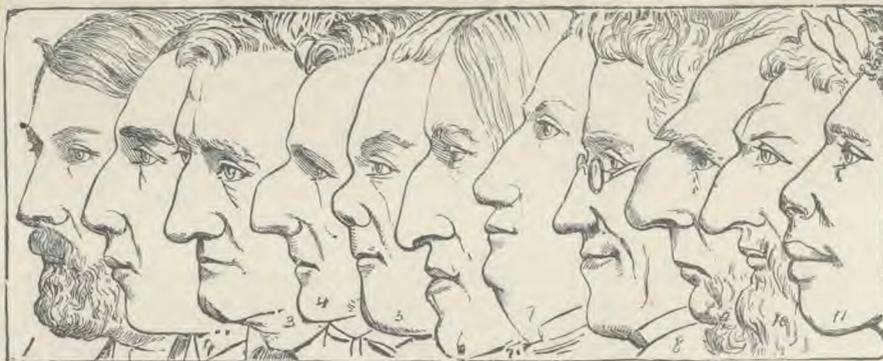
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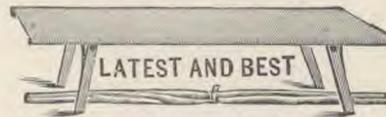
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.....	am	am	pm	pm	Dep.	Arr.	pm	am	am	am
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.....	8.05	9.10	10.15	6.20	Flint	7.35	11.27	5.40	8.40
.....	8.45	9.35	10.48	7.29	Durand	7.05	11.58	5.03	8.05
.....	10.0	11.30	11.53	8.26	Lansing	6.23	10.07	4.16	6.45
.....	10.37	11.00	12.25	9.03	Charlotte	4.2	3.34	3.25	6.15
am	11.30	11.45	1.1	10.05	BATTLE CREEK	D	3.45	5.55	2.35	5.30
6.30	am	12.05	1.20	1.05	Vicksburg	A	3.40	5.50	2.30	am
7.15	12.50	2.1	Schoolcraft	2.52	8.11	1.34
7.25	1.40	2.32	Cassopolis	2.40	1.35	VAL.
8.15	Swk.	1.50	3.19	South Bend	1.50	7.25	1.45	ACB.
8.55	Pass.	2.30	4.07	Haskell's	11.54
10.05	am	3.4	6.20	am	Valparaiso	11.40	5.30	10.30	3.40	7.00
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