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THE CHOLERA IN EUROPE.

[UNDER another title, Grace Greenwood contributes to the *Independent* the following interesting account of the spread of the cholera epidemic, which has now reached nearly every part of Continental Europe.—ED.]

Some seven weeks ago we found ourselves in a queer old town of Piedmont, called Acqui, famous for its *terme*, or baths of hot sulphur water, known as wonderfully curative of certain ailments from the times of the Romans, whose togas, it seems, did not protect them from the rheumatism, and whose sandals failed to fence off the gout. From the times of the Romans, dates a vast *natorium*, or reservoir, of sulphur water in a continual state of mild ebullition, and a sort of domesticated bog of bubbling mud, or blue clay, from which are made immense cataplasms, to encase rheumatic limbs and gouty feet. Sometimes the patient is extended on a couch, sumptuously cushioned with this soft, warm mud, and tucked in with blankets of the same; and the lively sweating which goes on under these circumstances is something beyond the wildest imagination of the hydropathist, with his wet sheet and hot bottles.

Acqui, near which are these baths, was evidently a town of some pretension, and real importance, during the times of the Romans, and even later; but it has now a discouraged and deserted look. It possesses a magnificent avenue of old trees under which nobody drives or walks, large mansions in which nobody lives, and a cathedral in which nobody worships. The only lively public institution of the place is a bounteous hot-water fountain, in the ba-

sin of which the women wash their linen. The inhabitants live mostly on the baths and the visitors thereof. Half the capital of the little city seems to be invested in cabs, and half the citizens appear to be cab drivers. These *terme* claim to be a "pleasure" as well as a "health resort;" but while, as at all other famous cures, the pleasure is of a desperate and spasmodic, or a listless and perfunctory character, health, if we may credit the doctors, absolutely runs riot here. Invalids soon take up their mud beds and walk, and crutches and canes fly right and left. The Grand Hotel of the baths is of immense proportions, and in style is exceedingly "swell." It is backed by lofty hills, and surrounded by a beautiful park.

When visitors arrive, driving through a pretty avenue, over a fine bridge, in full sight of the old Roman aqueduct,—what is left of it—four tall arches, striding across a deep ravine, like a monstrous mastodon,—and come dashing up to the grand entrance, they find an army of carefully-dressed retainers, summoned by an imperious tap of the manager's bell, marshaled to receive them. Not the least imposing is a fat little hall boy, all beaming with smiles and buttons. It sometimes happened, while we were there, that after all this expectant parade, there only descended, or was lifted from the omnibus, a poor, wretched, wincing invalid, who was put into a faded old sedan chair, also probably dating from the times of the Romans, and borne slowly to his room. After a few days, we began to remark that but few patients and visitors arrived, while many departed, and that those who remained in a place which had all the usual appliances of pleasure, were far from gay. Even pretty young girls and gallant

young officers seemed strangely moped. I looked anxiously, but vainly, for signs of fun or flirtation, so healthy and human, with such music and such moonlight as we had. During the charming evenings few cared to walk or drive, and in the beautiful ball-room very few danced; and then so silently and solemnly! Not a ripple of laughter broke on the dead calm of social intercourse anywhere, and life seemed horribly slow and poky. Proprietors and employes said always: "The season is very late this summer, on account of the cool weather; but by next week we shall be thronged; and then you will see gayety." Nobody assigned the true reason for this lack of guests and gayety—the fear of the cholera, which had suddenly broken out in Toulon and Marseilles, and was even reported to have appeared at Saluzzo, a small town near Turin.

One morning a letter came to me from Paris, with a clean cut made through it, as by a sharp instrument. As the letter was from a banker, I thought this the work of some dishonest post-office clerk, prospecting for bank notes, and made an indignant inquiry. I then learned that all letters coming from or through France were thus cut into at the Italian frontiers, for the purpose of thorough fumigation. As the panic increased, letters received another and another stab, till, when taken from the envelope, they looked like the curiously cut paper with which country people ornament and protect the gilded frames of looking-glasses.

Then came the news of the quarantine established on both the Mont Cenis and St. Gothard roads, and stories of almost murderous sulphurous fumigation of unfortunate travelers. And so the fashionable season at the famous baths, dating from the times of the Romans, was killed—very dead. The Grand Hotel and a score of minor hostleries and attendant villas remained comparatively empty. Even cabmen and venders of Italian "notions" fell away discouraged, and only perambulating musicians, minstrels, and beggars kept up their faith, and exemplified "the perseverance of the saints."

From the North, guests cared not to come through the quarantine, and from the South they dared not come, to meet the cholera; while even rheumatics near by, though languishing for mud-plasters, thought it best to stay at home, and set their houses in order, not to receive the grim guest who threatened a visit, but to keep him out, if possible.

All Italy suddenly woke up to the necessity of sanitary reform, of more cleanliness, both above and underground; to the fact that the most elaborate fumigation of hall and *salon* and "my lady's chamber," must all end in smoke, if pestilence is allowed to lurk in the drains below, biding its hour of mischief. Yet I fear that more reliance is still placed on quarantine than on cleanliness. Italy is virtually insulated; sternly guarded against all inroads from sea or land, by ministerial decrees and military authority, by regulations and Regulars. This system, despised by England, disbelieved in by many French and German scientists, and carried out at a great commercial sacrifice, has thus far seemed to work well; and yet certain ugly facts appear to indicate that these same costly quarantines of the Italian frontier and coast, in which there are now herded together more than 8,000 people, are so many propagating beds of pestilence. Several fatal cases have occurred in Italy, the victims having lately passed through quarantine, where all suffer much from physical discomfort and mental disquietude. Other cases of poor women violently attacked after washing the clothes of relatives coming from Toulon or Marseilles, through quarantine, would seem to support Professor Pasteur's idea that cold water revives and invigorates the infinitesimal animal germs which boiling water destroys. Italian peasants only wash clothes in cold water.

Yet these sad cases have not started a serious epidemic. Neither have others of a more mysterious origin, when it has seemed that the terrible enemy, so busy on his old fields, has sent a spare dart or two across the cordon at random; and we still live in trembling hope that the destroyer may pass by cities as guilty, sanitariously considered, as the Sodom and Gomorrah of Southern France, now visited by the judgment so long invited. Toulon has been for years known as one of the foulest cities of Europe, principally because of its miserable drainage. Its docks are said to be "so many cess-pools," while its peculiar, land-locked harbor is one great reservoir of filthy sewerage. Unvisited by tides or frequent winds blowing off shore, its noisome morning and evening mists are shades of death; while in hot summer days it is like a vast caldron, brewing pestilence. Marseilles is in a far better sanitary condition than it was at the period of the last cholera outbreak; but it has been, from time immemorial,

the hospitable port for all the pestilences of the world. Plague, yellow fever, small-pox, typhoid, cholera, have all joyfully disembarked here again and again, and held high carnival among its crowded and cosmopolitan population. Now they have an unlimited supply of pure water, which they did not have in the old times, when in one season the plague carried off twenty thousand Marseillais. This year the first victim was a young collegian, coming home from Toulon, where, it was said, he had imprudently feasted on fruit not fully ripe. How the epidemic started in Toulon is still a question among medical authorities. Drs. Bronardel, Proust, and Rochard, of the Paris Hygienic Committee, in their reports, gave some curious facts, as suggesting a possible origin.

Hearing that the first victims of cholera were two sailors on the "Montebello," they ascertained that this vessel was an old Government transport long out of service, and anchored at the entrance of the port, where for many years it had been used as a magazine for storing old, disused military equipments, such as shakos, knapsacks, cartridge-boxes, and uniforms out of fashion and dilapidated. It was known that some of these had belonged to French soldiers who had died of cholera before Sebastopol. Now the doctors actually discovered that the two poor sailors were struck, suddenly and mortally, a few hours after having displaced this mass of old equipments, stored deep in the hold of the "Montebello," so that it may be truly said that the cholera of Toulon comes in a direct line from the hospitals of Varna. It went to sleep, apparently gorged, on a heap of the cast-off garments of its victims, to awake nearly thirty years after to a more victorious and venomous life.

After this we could scarcely wonder if from the uncoiled cerements of some royal mummy from the pyramid of Gizeh should leap forth the mysterious midnight destroyer which once "smote all the first-born of Egypt," to renew his awful work in a new world, till it might again be said, "There was not a house where there was not one dead."

As for this pestilence, which emphatically "walketh in darkness," who shall decide when such a mighty multitude of doctors disagree? The East has produced, among its ancient and occult mysteries, nothing more dark and inscrutable than the Asiatic cholera. The old questions of epidemic, or endemic, imported or sporadic, are as hopelessly unsettled as they

were fifty years ago. Most English authorities, I believe, pronounce against the theory of the invariable importation of cholera-germs, active or dormant, and claim that the disease is no "mystery," but the natural outcome of centuries of sin against the laws of decency and health, and can—certain conditions furnished—be as well spontaneous and endemic in Toulon and Marseilles as in Calcutta and Cairo.

The *Saturday Review* mocks at the decision of the Conference of 1874, met to discuss and settle the question of the "Origin and Transmission of Asiatic Cholera," and even speaks disrespectfully of the great Pasteur's *microbes*. This amiable journal acknowledges to "a certain cynical satisfaction" in the fact that France is struck first, after all her fussiness over strict quarantine regulations, and her abuse of England for endangering the health of Europe by neglecting to establish such safeguards. The continent generally is accused of fighting the insidious foe with "sticks and staves and holy incantations," instead of depriving him of the insanitary conditions on which he thrives; instead of reforming the grossly filthy habits and habitations of the poor, looking to the purification of wells and water-courses, and the cleansing of drains. Much of this is true; but in the writer's exultation over the past and probably future exemption of England, no allowance is made for happier climatic conditions, for the fact that all the freshest winds of heaven play about that blessed isle, and that cleansing tides and cooling fogs forget it never.

Yet, for all these advantages, there are those who fear that the slums of "horrible London," unveiled to us by that brave preacher of a humane and Christian sanitary reform, George R. Sims, may, with their heaps of foul rags and unspeakable filth, form congenial nests for the Asiatic scourge; and that the Thames, like a mighty serpent, may be hiding under its sluggish, slimy length, an unimagined brood of deadly plagues. Plans are being discussed for getting rid, without endangering the public health, of that awful mass of sewerage which the reluctant tides move, but cannot remove. And may Heaven send them some Hercules of an engineer to do the mighty cleansing safely!

—There were 500,000 bbls. of cottonseed oil manufactured last year, of which a large portion was sold as olive-oil.

**PERVERTED WILL AS A CAUSE OF
INSANITY.**

[The following is a portion of an able lecture on the above subject, delivered before the students of Amherst College by Prof. Hitchcock.—ED.]

Without doubt, a prominent cause of American insanity is the peculiar and stimulating climate, the dryness of the air, the immensely developing possibilities of the material wealth, and the fast living generally. But the same causes cannot be attributed to the increase of insanity in staid Scotland and sober Germany, where the insane rate is on the increase, nor in autocratic Russia. But steam and electricity are moving and lifting the world. They are not only developing wealth, creature comfort, and luxury, but they are *disseminating ideas*, and ideas are what move the world; they are showing all grades of people that there are possibilities of bettering the material and spiritual condition; that intellectual knowledge is an immense help to better things; that to think for themselves, and to acquire the thoughts and ideas of others, give an immense advantage; and to acquire this power to lift the load of ignorance is what suffering mankind is now putting forth its intensest energies to accomplish. The degraded Russian has breathed a sniff of free air; he is bound to breathe it fully; he learns that there may be better living and more liberty to enjoy his own; he feels that some one is holding him down in slavery and ignorance. This leads him to contrive how he may get out from under this load; he is restless, unhappy, uneasy; he is ready to fight those who seem to oppose him; his bodily functions are disturbed, he does not eat and sleep like an animal; these ideas disturb him, and the mind, awakened and aroused and confused, reacts upon the healthy bodily functions, and he is unsettled, has no longer self-control, but is led about by mental disorder, disturbance, and perhaps disease.

These free thoughts, these democratic ideas, make unhappy, unsettled, and inharmonious not only the Russian, but many other individuals and people, who learn that they may be more free, and have rights and privileges bestowed on them by God, but which their rulers are depriving them of. This continual chafing, uneasiness, and unsettled condition overcoming a patient self-control, may safely be set down as one reason why we are find-

ing so much insanity among the nations. But this lack of self-control or unsettledness is manifested in other ways. Many who are not disturbed by ideas of equal rights of government are impressed by possibilities of bettering their condition. Everybody enjoys luxury and refinement—in different ways and methods, it is true; but railroads and steamships cause people to circulate more and more, and these everywhere bring people in contact with better modes, conveniences, and comforts of life, and lead them to want better things, so that they are unsettled, not satisfied with present surroundings; their labor is disturbed by cravings, and that generally unsettled condition which is not only unhealthful in the ordinary care of the body, but the nervous centers are worried, and put to an unequal strain, and they lose that ease and self-control which is so essential to serenity and security. The perplexities, the feeling of debasement, and of an unrighteous inequality of life and its surroundings, destroy the healthy equilibrium, and ere the man is aware of it, the mind is thrown from its balance.

Self-control is weakened, especially in our American public, by a disregard or disesteem of law and authority. The democratic idea, the intense individualism that permeates the body politic as does our blood the body, is a demoralizer to a sound mental condition. The disrespect for civil law, as manifested by many who only seem to see in it red tape and needless formality, is a good seed of insanity. The feeling that the letter of the law is not what it should be soon leads to a disregard of the spirit of the law; and then, with private interpretation of it, license and unbroken law readily supervene. The mind, to be sound, must be governed by laws; and anything which tends to weaken the outside workings of law, by a most powerful reflex influence reacts in a deadly manner upon the mind itself; leads to the control of the mind by something outside of self, and often what is insanity but a loss of self-control!

The disregard of law is seen not only in the broad sense of civil law, but in the child, and in the young child. A child in the arms of the nurse is almost insane often when not under the control of the mother or nurse. The crying, the struggling, and the working of a stubborn will are but the seeds of insanity commencing to germinate. And the boy not restrained properly in his food, his play, or many of

his whims, manifests a further development of the plant of insanity. And the youth who will not be controlled in the use of tobacco or alcohol has but a form of insanity, beginning, it is true, but too soon passed beyond the stage of arrest, where he will be unable to check his appetite for narcotics and stimulants—and who is more insane than he who cannot control his appetite? And when the man of business loses such control of himself that to make money he will sacrifice sleep, proper rest, recreation, or other duties essential to health as a physical and a moral being, has he not lost his reason? Would not a proper self-control prevent these habits, and thus perhaps prevent his insanity?

The possibilities of acquiring great and sudden fortunes of wealth destroy much self poise and control, and induce insanity. The neglect of simple laws of health, the excitement to the nervous and circulatory system, and the more intense disturbance of the mind at the chance of the loss or gain of a fortune in a moment, destroys that self-control which leads to the insane condition.

The speculative tendencies in science, theology, and religion, and the questions of social and political economy, tend in many instances to destroy the harmony of function between different parts of our nature, unsettle and disturb the workings of the simple laws of our being, and thus bring on nervous and mental disaster. Everywhere we find that a disregard of law, order, and harmony tend only to ruin. Nature, it is true, is elastic, often compromising; is tender, patient, and kind when the law is broken, but yet the penalty for nature's broken laws always follows sure at some time; not always in the way and with the direct punishment which we expect, but the balance is destroyed, and the compensation will be some way delivered. There are diseases which always follow specific violations of law. There are also certain violations of physical laws which incur one of many penalties,—or the disease will be fastened on to the weakest or most vulnerable part of man. Certain plants will grow best in certain soils, and certain diseases find their own gardens. Without doubt, a reason why so many diseases and excesses now tend toward nervous and mental disorder is both because modern life and science have fortified the system against many common diseases, or have shown how to subdue the power of them, and that with our re-

finements, our more intellectual and spiritual progress, our aspirations for and enjoyment of the æsthetic and spiritual life, we have not learned what is the proper limit of endurance and capacity of the mind; we are working the higher part of our natures at the expense of the lower. Whatever be our possibilities in time and eternity, while the soul is linked to, and is a part of, the body, the whole man is under limitations fixed and invariable, and who gets the largest knowledge and conception of these limitations, he it is who learns the self-control by which he may be more safely guided away from the rocky shores of mental and spiritual disorder as he goes on the voyage of life.

One of the oldest and wisest superintendents of hospitals was once asked to give a condensed statement of the causes of insanity. He replied: "I should put it all in the one word *excess*." It should not, however, be understood by this that it is always an over-amount of one or more activities or agents that brings on this condition; for oftentimes too little of some power or function makes people insane. There is an imperfect balancing of mental or bodily characteristics. A feeble ability to resist the lower appetites, or even an unwillingness to allow the higher and purer ones to be properly and moderately used, may be as sure a cause of insanity. The girl who has not strength of virtue enough to repel the advances of him who flatters for the basest purposes, possesses an excess of the weakest elements of character. And the glutton, the drunkard, the tobacco-user, shows that his power to resist appetite is over-powered by inordinate strength of the baser and weaker elements of his nature. He who suffers himself to be overworked or overdriven, who gives way to excessive emotion, who yields his judgment to his sensibilities, who will not hear to sound advice or wisdom, this excess of weakness may be his cause of insanity. This excess of weak, selfish gratification and indulgence, this disregard of any of nature's laws, most positively brings its penalty in due time—it may be to-day, it may be to-morrow.

"Though the mills of God grind slowly,
Yet they grind exceeding small;
Though with patience he stands waiting,
With exactness grinds he all."

As in Bunyan's pilgrimage, all the fingers on the guide-posts pointed toward the city of Destruction, so in the abuse of man's physical, mental, and moral nature,

everything points to insanity; and only the strong man will disregard the guide-posts, and journey in the opposite direction.

Finally, my remarks would be incomplete without a warning against alcohol and tobacco. Not with the view of frightening people by telling them what poisons these substances are, or how much money they cost, or about the widows and orphans they are responsible for, or that all smokers and drinkers die young; nor will I here urge the signing of a pledge to be a religious duty; but I do urge the truths of science and experience, that nothing deprives a person of his self-control, or plunges him into excess more readily, deceitfully, and treacherously than alcohol and tobacco.

There is not infrequently a smoker of whom it is impossible to say, he is surely injuring himself by tobacco: he is tough, he is protected by extraordinary conditions, his constitution is such that he can endure what his neighbor cannot; he is, in short, a remarkable exception. Some men live who have drunk barrels of liquor, and are yet apparently well and strong. They, too, are remarkable exceptions. We cannot ignore these facts. Should we adopt such ultra views as to deny them, we should fail to persuade reasonable people of the real truth of the case.

But where we find one man who withstands the intoxicant and the narcotic, how many who began with him have gone down? We see and know and feel the men who live, move, and act with us; but when they lie under a tombstone, we soon forget them, and their influence seldom lasts long after "dust to dust and ashes to ashes" has been said over their graves.

One need not be told that he is not strong, that he has not manhood enough to resist excessive gratification of appetites and passions; but he may have placed before him the testimony of science and experience, which shows that nervous maladies, weaknesses, abnormalities, and insanity are most seriously on the increase; and that while the number of their causes is immense, none are so certain as unrestrained indulgence of the sensual appetites and passions.

HIGH HEELS.

SINCE the high heel made its appearance, medical men have more than once borne witness to its bad effects. The late Mr.

Hilton condemned it. Others have done the same. Of late years, public opinion has done away with certain of the long established extravagances of dress, and has given rise to methods more agreeable to the symmetrical development of the body. We hope that in the process of reform, the feet, in which too often vanity pays a price which is dangerously expensive, will not escape notice. The evils of the high heeled boot or shoe are due to the fact that it is an essentially badly fitting article. It is made in defiance of the relation which it ought to bear to the anatomy of the foot, and to the direction in which the pressure of the body weight falls upon the latter. Hence the peculiarly cramped walk of ladies of the present day. Any one may observe the consequence of the "advanced position," nearly under the instep, and the increased height of heel in the substitution of a forward inclination of the body, and a trip suggestive in a measure of the stumbling gait, for the upright carriage and the free and graceful swinging movement natural to the leg in walking.

These matters, as far as they are merely relative to deportment, do not strictly concern us, but there are attendant circumstances which deserve comment. The boot or shoe, in order that it may not shift on the foot, which has lost much of its usual purchase of direct downward pressure, must hold it firmly and even tightly, and in particular it is necessarily constructed so as to hold with undue firmness just above the back of the heel. With some persons no inconvenience results; with others, who have fine skins, chafing is readily produced. This is in itself a trifle, and is presumably altogether too inconsiderate to effect the will of fashion, but it may nevertheless be the slight beginning of graver troubles.

Probably there is no practitioner fairly long acquainted with town practice who cannot recall a case or cases in which extensive inflammation of the leg with abscess formation has followed such a slight abrasion; and the exciting cause, when looked for, was discovered in the patient's shoe. There have even been instances, fortunately rare, but still occasional, where abscesses arising round some neglected trifle of this kind have ended fatally. These are facts which cannot be denied and should not be overlooked; but even if they could, is there any woman with a mind of her own who will say that the dainty step so much desired by some,

bought as it is at the cost of healthy muscular exercise, is not overvalued? We rather hope that the honest feeling and the sound judgment which have guided that sex in many better purposes, will ultimately overcome the false sentiment which now leads certain of its members to support an unbecoming and injurious custom.—*Lancet*.

CEMETERIES A CAUSE OF DISEASE.

ATTENTION has frequently been called to the danger arising from the contamination of the water-supply of towns and cities by the decomposition of dead bodies going on in cemeteries so situated as to make such contamination possible. Dr. J. Emmett Blackshear, president of the Board of Health of Macon, Georgia, recently called attention to the possibility of contamination of the excellent water-supply of that city by this means; and in support of his position he adduced the following admirable summary of facts bearing on this subject, which, through his courtesy, we are able to quote from the *Macon Telegraph and Messenger*:—

Dr. Wm. H. Ford, president of the Board of Health of Philadelphia, says: "When people are collected together in great masses, as in large cities, provision must necessarily be made for the disposition of a vast number of bodies; and if great care is not taken, the public health is apt to suffer from the effects of close proximity of crowded cemeteries to the abodes of the living." Again: "The practice of interment in cities and towns in vaults, churchyards, and in small and confined spaces surrounded by habitations, has been observed until within comparatively recent time. The pernicious effects of this custom became so evident that its further continuance has been forbidden by legislative enactment. In Europe, most of the governments have prohibited intramural interment absolutely."

Mr. Chadwick says, in his able report on the practice of INTERMENT IN TOWNS: "I have no doubt whatever that the burial grounds, as at present constituted (intramural burial grounds), are a continued source of pestilence, slow, perhaps, in its operation, and hence overlooked by ordinary observers. They are undermining the constitutional stamina of thousands of our town populations, while peo-

ple are denying they have any injurious tendency; and it is only when some epidemic comes to try it, like a touchstone, that the consequences of long antecedent neglect become so apparent as to rivet and exact alarm."

Dr. Allen mentions an instance where sickness was caused by breathing the vitiated air emitted from a graveyard. Dr. Barton is authority for the statement that the yellow fever was greatly aggravated in the epidemic of 1853 in New Orleans, by the exhalations from the overcrowded intramural tombs. Norfolk and Portsmouth suffered in the same way during the memorable epidemic of yellow fever in 1855, which nearly depopulated those towns. Dr. Rauch attributed the spread of the cholera in the vicinity of a cemetery in Burlington, Iowa, in 1850, to effluvia generated by the DECOMPOSITION OF BODIES recently buried. Mr. Walker, in "Gatherings from Churchyards," has given many cases, some of which were fatal, to show how malignant is the influence of crowded graveyards in confined places.

Dr. Stevens says: "We have no authentic instances of the contamination of water by cemeteries." Eassie states that "During the Peninsular war the English troops suffered greatly from low fevers and dysentery, caused by being obliged to drink water drawn from wells located close to grounds in which the bodies of their deceased comrades had been buried." Dr. De Pietra Santa gives an instance as having occurred at the villages of Rotonella and Bollita, in Italy, the cemeteries of which were located upon the summit of a wooded height at a considerable distance from the houses. The springs from which the water supply was obtained were at the foot of the hill; and as they were fed by water which had filtered through soil polluted by decomposing bodies, they became highly contaminated, and eventually caused a severe epidemic.

Rheinhard relates that, during the prevalence of the cattle plague in Dresden, a number of victims were buried at a depth of ten or twenty feet; and during the following year it was found that the water from a well situated one hundred feet from the pit in which they were buried had a fetid odor, and contained butyrate of lime. Recent investigations, made by Prof. Fleck, into the condition of the well-water in the cemeteries of Dresden, show that, with one or two exceptions, it contains a large amount of organic matter.

"That injurious effects have not been observed to follow the limited use of the cemetery-water by grave-diggers and their families," says Dr. Ford, "does not justify a conclusion that such waters are safe to drink. The water of wells located in graveyards, or in close proximity to graveyards, should always be looked upon with suspicion, and its use prohibited."

Erkin says: "The danger is that we have no evidence that percolation through the soil, even if it has the power of rendering harmless the organic matter which may give rise to sporadic outbreaks of fever, has any effect on specific poisons (or germs). Indeed, the famous case of the Lansen epidemic points to a directly contrary conclusion." This case is so interesting and so directly to the point at issue that I will, in conclusion, give it:—

"The public water supply was a spring rising at the foot of a mountain (the Stockhalden), which was received into a sealed reservoir, and so conveyed to Lansen that any pollution by the way or at its source was out of the question. Suspicion attached itself to the public supply, as it was found that all houses supplied from other sources were exempt from the attack. Investigation led to the discovery that cases of typhoid had occurred at a farmhouse in a valley the other side of the Stockhalden, and the drainage from that farm went into a brook called the Furler. Finally it was also discovered that part of the stream lost itself in the Stockhalden, and after traveling about a mile through the mountain, reappeared at the spring which forms the Lansen supply. Several hundred weight of salt were thrown into the stream, and salt was detected after a time in the Lansen spring, thus establishing the connection between the two. Then several hundred weight of flour were thrown in, but not a vestige appeared the other side of the mountain, showing the thoroughness of the percolation. The case, which is given at great length, and which was most elaborately investigated, proved beyond doubt that the fever poison was conveyed by water, and is interesting chiefly as showing that no amount of percolation, no matter how efficient, will keep back typhoid poison."

A gentleman now in my office, Mr. J. M. Hollis, gives a case near home. At Mount Carmel Church, near Hickory Grove, in Crawford county, was a spring which, thirty years ago, became so contaminated by the cemetery near by that the church was eventually removed.

PHYSIOLOGICAL OBSTACLES TO THE PREVENTION OF INTEMPERANCE IN THE RISING GENERATION.

BY JAMES MUIR HOWIE, M. B., LIVERPOOL.

A FEW weeks ago I was sorrowfully informed by a medical friend that a certain patient of his, in whom I was interested, had become a hopeless inebriate. About six years ago this patient had a most serious attack of diphtheria, during which his doctor thought it necessary to advise the administration of brandy. On recovering from his illness, he came to consult me as to whether I thought it advisable for him to continue an abstainer (he had been an enthusiastic Good Templar), seeing that the brandy, in his opinion, had saved his life. "I used to think," said he, "that alcohol was good for nothing in the world; but now I have quite changed my opinion, and think that I ought to take a little every day for the good of my health." I inquired whether his doctor had prescribed nothing but brandy for the cure of his diphtheria. Oh, yes; he had ordered him to stay in bed, and apply poultices continually to his throat; had prescribed a mixture of certain drugs, and fed him upon beef-tea, and other nourishing soups. "Do you, then," said I, "attach no importance to the beef-tea, and the medicines, and the rest in bed, and the poultices? Had they no hand whatever in saving your life? If they had, then, to be consistent, you ought not to touch a morsel of solid food; you ought to continue to drink your nauseous drugs, and wear your poultices, and, indeed, confine yourself to bed for the rest of your natural life." I urged him to return to his Good Templar Lodge, and never to touch a drop of alcohol until it was again ordered him by his doctor. I did not express the belief, which I really entertained, that he would probably have made as good a recovery without the brandy, because I would thereby have weakened, instead of having strengthened my argument. Besides, we are by no means bound to prove that alcohol is useless as a medicine, because we assert that it is injurious as an article of diet.

The growth of a healthy public opinion has done much, and is still working well in diminishing the amount of intemperance among all classes of the community; but it must strike all who are brought into close contact with the inner life of men, that while intemperance is decreasing as a vice, it is increasing as a disease.

To preserve our children from the evils of alcohol is one of the deepest parental anxieties of the present day. The mother knows well that if her boy gives way to drink, he may soon forget all the lessons which it has been her life-work to impart. The father remembers that many of his companions, who started in life with bright prospects, have been ruined by the bottle; and both unite in asking the momentous question, "How shall we train our boys and girls that they may escape the dangers of alcohol?" There are some who imagine that they have accomplished all that is possible for them when they succeed in persuading their children to take the pledge, and to abstain from alcohol as long as they dwell under the parental roof.

It is quite true that no man can become a drunkard who never swallows his first glass; but in the present state of society, what parent can make sure that his boy will never in a weak moment be tempted to swallow that first glass? Some bosom friend may bring it to him as a cordial to soothe an aching heart, or as a medicine to relieve a throbbing nerve. And suppose that he should be led to take this enticing drug into his system, is there any course of training which will be likely to prevent his repeating the dose, and thus to convert his first glass into his last? It is our duty not only to teach our children to do right, but to make it as difficult as possible for them to do wrong; habits are often more powerful than principles, and it is my intention to indicate from a physiological point of view the precautions which all parents ought to adopt in order to render it easier for their sons and daughters to escape the bonds of the Devil's Chain.

We must never forget that intemperance is not only a vice; it is also a disease. No one will deny that in cases of chronic dipsomania the nervous system has undergone such changes as to render abstinence almost a physical impossibility. Many sufferers from this disease have only themselves to blame for the production of such a condition of all but hopeless degradation; for they have deliberately taken to alcohol as a vicious indulgence. But on the other hand, there are very many, and the number is increasing year by year, who are ripe to fall into the slough of the drunkard, although they have never yet tasted intoxicating liquor. There are thousands, both young and middle-aged, who are only prevented by their pledge of total abstinence, or by the accident of

never having tasted alcohol, from sinking with appalling rapidity to the lowest depths of debauchery. Some of these, it is true, are the descendants of wine-bibbing and spirit-drinking ancestors, who inherit a desire for alcohol as the young tiger inherits his thirst for blood. The others are the inevitable offspring of the rush and worry of the present state of society, in which childhood and youth are stimulated with improper nourishment, and deprived for the most part of the wholesome advantages of fresh air and vigorous exercise.

Under such unnatural conditions, the muscles are poor and badly developed, and the appetite for substantial food is gradually destroyed. The nervous system is unduly excited, both by its food and surroundings; so that it grows out of all proportion to the rest of the body, and frequently changes the entire constitution of whole families. But this excessive nerve growth, instead of being beneficial, becomes highly injurious. The nerves which grow under the stimulation of disproportionate mental exercise and a life of excitement, accompanied by the injurious influences of tea, coffee, hot rooms, and foul air, are no more to be compared to sound nervous tissues than the proud flesh of an unhealthy sore is to be compared to the compact muscle of the blacksmith's biceps. Our children are becoming far too precocious. Their nerves grow too rapidly to be capable of the performance of steady, continued work. Like Jonah's gourd, and all other rapid growths, they have little stability. They promise wonderful achievements during their tender years; but in adult life they have little power of sustained action, and require constant further stimulation to prevent collapse. The result of this constant excitement and stimulation is that the nervous system becomes painfully sensitive to the slightest external influences, and some of the strongest minded men find the grasshopper to be a burden, and imagine every molehill a mountain, even during the time that, according to the calculations of our forefathers, they ought to be in the prime of life.

A trifling mistake in the morning will suffice to worry such a man all day long; any slight disturbance in the evening will drive away half his night's rest. The wheels of his life are revolving with preternatural and tormenting rapidity. He would give all he possesses to obtain some potent regulator to control their move-

ments; but no such regulator is to be found. His only hope of comfort lies in a complete or considerable alteration of his life's conditions, so as to allow the nervous system to *resume* a quiet, unhurried, natural activity. In the battle of business or the pursuit of politics, he cannot afford time for such a change in his habits, and thus the noisy wheels continue ceaselessly to revolve until they wear themselves out. The end of such a life may be immediately brought about by paralysis, heart-disease, or some other malady directly traceable to worry. It is not so much overwork as overworry that kills such men. It is very significant of the present hurried nervous life, that deaths from such diseases have increased 65 per cent in proportion to the population during the last thirty years; while at the same time the mortality from other causes has considerably diminished. Some of the hurried workers in these days die of nerve prostration in the midst of their work, without contracting any definite disease. A man's work ought to improve his health; but in the present day it is more frequently an injury. In human society, as in the bee-hive, the drones used to die sooner than the workers, but we are rapidly altering that salutary state of things.

Now, if you introduce the clumsy crowbar of alcohol into the delicate machinery of the nervous system, you bring its action more or less to a standstill. This method of producing rest is a coarse and injurious one, doubtless; but no one can deny that in most cases it produces the desired effect. Anxious men do not drink alcohol to stimulate them. They are over-stimulated already, and the effect of alcohol upon them is to put one-half of their nervous system to sleep, *while the other half enjoys merely a semi-conscious existence.* In this condition of partial intoxication, all the worries and troubles of life disappear from the consciousness, as if by the wand of a magician; and when a worried man has once made the experiment successfully, the probability is that from that moment he is on the road to ruin. The greatest blessing that can befall such a man is that his first dose should be either too small or too large. For if the dose be too small, it will act as a stimulant, and thereby increase his present discomfort; whereas if it be too large, his aching head on the following morning may teach him a valuable lesson.

From what I have said, you will gather that the three great physiological obstacles to the prevention of intemperance are as follows:—

1. The hereditary influence of alcoholic drinking.
2. The influence of improper feeding—under which head are included under-feeding and over-feeding, as well as the use of improper articles of diet.
3. Excessive mental exertion, nerve strain, or worry.

Let us first consider the hereditary influence of alcoholic drinking. The following case, recorded by the editor of the *Quarterly Journal of Inebriety* affords a striking example of this:—

"The ancestors of A. B. were Irish, and inebriates. Owing to a rise in real estate, the son became wealthy. He was talented, and a paroxysmal inebriate at twenty-six years of age. He married a pious woman, having neurotic ancestors, in spite of the protest of the family physician. Seven children followed this marriage; two died in infancy of convulsions; the third became insane at puberty, and is now in an insane asylum, hopelessly incurable; the fourth grew to manhood, and is now an inebriate pauper and criminal, having been in prison five out of the last eight years; the fifth became the wife of a wealthy man, and in a paroxysm of inebriate insanity, killed her child, poisoned her husband, and then committed suicide; the sixth is a low dealer in spirits and a petty criminal, who has repeatedly been punished for crime; the seventh, after a short life of great excesses, died in a public hospital; the father became a paralytic, lost his property, and died in an asylum; the mother died in puerperal convulsions at thirty-four."

Take another example. In April last, a boy of eight years of age, suffering from delirium-tremens, was treated at the Children's Hospital, Dublin. He had frequently been found intoxicated, and his face bears the usual signs of excessive drinking. He had stolen a quantity of whisky and wine, and had drunk every drop. His mother, it appeared, was a drunkard, and the doctors believe that the desire for strong drink forms part of his nature. Now, as this special obstacle, rightly understood, is a key to the others, and as many thoughtful people find it difficult to understand how a love for alcohol can be inherited, you will perhaps permit me to offer an explanation of the

manner in which this is effected. So closely does alcohol enter into the intimate structure of nervous tissue, that its habitual presence there for any length of time appears to render it, for the future, essential to the normal functional activity of the nervous system.

Deprive the habitual drunkard of his accustomed draught, and you seem to have kindled the fire of hell in his inmost vitals. By some this is interpreted as a proof of the danger of sudden total abstinence. They assert that alcohol must serve a useful purpose in the economy, when its sudden withdrawal is productive of such injurious consequences. Take a canary that has spent years of his life in the *unchanged* atmosphere of a smoky chamber, and carry him into the free air and sunshine. He will probably fall from his perch unconscious from the sudden change. But is that any proof that *foul air* is better than pure, that smoke is better than sunshine? Let the little songster recover from his temporary swoon, and he will gradually become accustomed to his altered surroundings. In the same manner I have seen the habitual drunkard lie for weeks in a condition of the lowest nervous prostration, and sometimes of complete unconsciousness, on being *entirely* deprived of alcohol; and many times, as life trembled in the balance, I too have trembled for the result. But in most cases, time and patience and dogged determination are ultimately successful. After days or weeks, and sometimes months, of anxious watching, your patient gradually wakes from his protracted swoon, becomes accustomed to ordinary diet, and lives a useful and healthy life so long as he continues to avoid the intoxicating cup.

But this condition of nervous prostration does not supervene immediately upon the cessation of alcoholic drinking. The first effects of abstinence are quite of an opposite character; the nerves of the drunkard cannot rest without his accustomed beverage. He wanders about for one or two days and nights in the most wretched restlessness; the most luxurious couch brings him no repose, the most comfortable pillow cannot soothe him to sleep.—*Medical Temperance Journal.*

(Concluded in next number.)

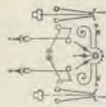
—“Never mistake perspiration for inspiration,” said an old minister in his charge to a young pastor just being ordained.

BENJAMIN FRANKLIN AND NIGHT-AIR.

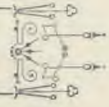
THE prejudice against night-air seems to have been as strong in the days of the great philosopher as at the present time, as is illustrated by the following anecdote of Franklin and Adams, recently unearthed by a Boston newspaper correspondent:—

“Here is a funny old story, which has never seen print, and it is true, having come down among the traditions of the old families of Massachusetts. Some time during the revolutionary period, or a little after, John Adams and Benjamin Franklin were dispatched from Philadelphia, I believe, to this State on a public errand. Adams had a mortal antipathy, shared by him along with the majority of mankind at that day, against the night-air. He believed that if he kept his bedroom window open even a crack at night, he would surely die. Franklin, on the other hand, was a disbeliever in the theory of danger in the night-air, and he had many arguments with Adams thereon. Circumstances and the crowded condition of many of the taverns they stopped at on their journey eastward, compelled them frequently to occupy the same room, and often the same bed. Adams always opposed raising the window, and poor Ben nearly suffocated, and reviled Adams, on waking, for his wretched theory of the deadly effects of nature’s universal medium of breath. One night, Ben slyly raised a window in their common chamber, but Adams, on the alert for his friend’s little games, insisted that it should be closed at once. Said crafty Ben: “Now, Mr. Adams, we’ll go to bed with the window up, and I will show you why it will not be harmful to us to permit it to stay open. If I cannot convince you of the reasonableness of my theory, I will myself get up and close the window.” Adams weakly consented, and Ben began to reason with him. Finally poor Adams was talked to sleep, and Ben tranquilly resigned himself to slumber. Next morning, great was Adams’s horror at finding the window up; but not having died during the night, and feeling no ill effects from having breathed the night-air, he became a convert to sly Benjamin’s night-air theory.”

—Had we not faults of our own, we should take less pleasure in observing those of others.



TEMPERANCE AND MISCELLANY,



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

Conducted by MRS. E. E. KELLOGG, Superintendent of Hygiene of the National W. C. T. U.

NOTHING IS LOST.

NOTHING is lost; the drop of dew,
Which trembles on the leaf or flower,
Is but exhaled to fall anew
In summer's thunder shower,
Perchance to shine within the bow
That fronts the sun at fall of day,
Perchance to sparkle in the flow
Of fountains far away.

Nothing is lost; the tiniest seed
By wild birds borne, or breezes blown,
Finds something suited to its need,
Wherein 'tis sown and grown.
The language of some household song,
The perfume of some cherished flower,
Though gone from outward sense, belong
To memory's after-hour.

So with our words; or harsh or kind,
Uttered, they are not all forgot;
They leave their influence on the mind,
Pass on, but perish not!
So with our deeds; for good or ill,
They have their power scarce understood;
Then let us use our better will
To make them rife with good.

—Selected.

SKETCHES OF TRAVEL, No. 18.

BY MRS. E. E. KELLOGG.

THE CASTELLATED RHINE.

SEVEN o'clock one June morning found our party with our various pieces of luggage, which proved to be far more numerous than the proverbial old lady's "big box, little box, band-box, and bundle," on board the steamer Hohenzoller, just moving out from the wharf at Mayence, on our way down the Rhine to Cologne.

For ages, travelers and poets have sung of the beauties of this wonderful stream, whose origin goes back to the melting snows of the high Alp glaciers, and whose identity is lost in the *Wal* ere it reaches the sea. The river, which is broad and clear, sweeps in wide and graceful curves amid steep crags and mountains which stand back just far enough to give room for the modest little villages that here and there dot the shores, or rise abruptly from the water's edge, their rocky slopes terraced with vineyards, and their almost inaccessible peaks crowned with the hoary ruins of some old castle once occupied by lawless barons who exacted toll of all passing vessels. For sixty miles, from Mayence to Coblentz, the banks are lined with these vestiges of by-gone feudal splendor, "around whose crumbling walls once rang the clash of arms,

and in whose dungeon cells the brave and beautiful have languished." The moldering castles, half hidden under a weight of ivy, the rocky steeps and pretty villages, each have their point of interest or ancient legend,—something to invest them with a charm, so that our entire journey was one continuous panorama of varied beauty and interest.

Almost at once after leaving Mayence the steamer passed the island of Petersau, where Louis the Pious, the son and successor of Charlemagne, sought refuge and died in 840. A little farther on are other islands, where Charlemagne used to resort for the purpose of fishing, and where he built a magnificent palace.

The first village of note is Bingen, "fair Bingen on the Rhine," with its old chateau Klopp, or castle of Drusus, in which tradition asserts the emperor Henry IV. was for a long time confined. Just beyond, on a huge rock in the middle of the river, is situated the famous "Mouse Tower," described by the poet Southey as the one to which Archbishop Hatto fled to escape the vengeance of the rats which, according to tradition, were sent *en masse* to devour him as an act of justice, because he shut his starving peasants into his barn and set fire to it, though his granaries were overflowing with the corn they plead for. History, which in this instance does not accord with tradition, informs us that the tower was built in the Middle Ages for a toll-house and danger-signal station, the navigation of the river at this point being very difficult and dangerous, because of a strong current beginning just below.

Passing on, the storied ruins of the Rhein-stein, Sonneck, Heimbürg, and a score of other beautiful castles, crown the heights above the stream. Here is the town of Bacharach, the *Ava Bacchi* (altar of Bacchus) of the Romans, which has long been celebrated for its wines. According to the old rhyme translated by Longfellow in the "Golden Legend,"—

"At Bacharach on the Rhine,
At Hochheim on the Main,
And at Würzburg on the Stein,
Grow the three best kinds of wine."

Tradition states that the city of Nuremberg obtained its freedom in return for an annual tribute of four casks of the wine of Bacharach. On the heights just above the village is the castle of Stahleck, the residence of the counts Palatine in the twelfth century, which was taken and retaken eight times in the Thirty Years' War.

A curve in the river now brings to view, upon a rocky island in the middle of the stream, the

picturesque castle of Pfalz, built by the Emperor Louis in the fourteenth century, for the purpose of exacting tolls from passing vessels. It was near this place that, on the night of the first of January, 1814, the Prussian army, under the command of Blucher, crossed the Rhine.

Farther on down the stream are the ruins of Schönberg castle, the cradle of the celebrated family of that name. According to an ancient legend, one of the counts who dwelt here had seven beautiful daughters who were as coquetish as they were fair. "So great were the number of the victims of their heartlessness, that *Lurlei*, the river fairy, resolved to punish them. One day when they were going to a neighboring castle, a violent storm arose, their boat was overturned, and the maidens were precipitated into the water. They were at once changed into rocks." At low tide, the Seven Sisters are still to be seen in the river.

A little farther on is the village of St. Goar, which owes its origin to a hermit of that name who in 570 A. D. came here to preach to the inhabitants. He passed his days in exhorting his rude hearers, and devoted his nights to watching the passing barques and warning them of danger, the navigation at this point being then very perilous. The king, hearing of his piety and benevolence, tendered him an Archbishopric. St. Goar declined the honor, and desired only to pursue his useful life. Tradition says he proved to the people the divine origin of his mission by "throwing his threadbare cloak across a sunbeam, where it remained suspended as on a peg." Upon his death, a chapel was built over his remains, where for centuries the monks of St. Goar received pilgrims, and extended the rites of hospitality to travelers.

Two neighboring castles are denominated the "Cat" and the "Mouse," the latter scornfully so called because the Counts of Katzenellenbogen, who built the former, said their Cat would soon eat it up. Near by are two other ancient castles, called "The Brothers," the subject of many legends.

Two of the most imposing structures upon the river are the Stolzenfels (Proud Rock) castle, and the fortress of Ehrenbreitstein (Honor's Broad Stone). Near the latter, a bridge, constructed on the top of some fifty or more large row-boats, spans the river. As our steamer approaches, a part of the bridge, as if impelled by invisible oarsmen, swings slowly round to make an opening, while a crowd of market-women and townspeople on either side impatiently wait the passing of our vessel and the closing of the bridge.

Another hour's ride, and we come to some of the most magnificent scenery upon this world-renowned river. Here a series of thirty peaks, with "the castled crag of Drachenfels, frown over the wide and winding Rhine." On the opposite shore are the picturesque ruins of the castle of Rolandseck, and in the river below is seen the beautiful island of Nonnenworth, with its old convent. In the castle which, says a legend, in "the most ancient times" crowned the summit of the Drachenfels, or Dragon's Rock, dwelt Hildegarde, a beautiful maiden,

and beloved by the celebrated Roland, nephew of Charlemagne. When he went to the wars, she waited and watched at home, as "many a brave maiden has done," till at last there came only the news of his death at the battle of Roncevaux. Then Hildegarde, leaving her father's castle, went down to bury her young life and bright hopes in the convent on the island of Nonnenworth. But the rumor of Roland's death was false, and in time he returned only to find Hildegarde the bride of the church. Then upon the rock opposite the Drachenfels the unhappy youth built the castle of Rolandseck, commanding a view of the island of Nonnenworth, where he could watch the nuns as they walked in the convent garden, and perhaps distinguish among them the face of Hildegarde.

Our next stopping-place is Bonn, famous for its university, which numbers among its professors some of the most eminent scholars of Europe. Bonn is also the birthplace of Beethoven. The house in which he was born is still standing in a quiet street near the river. Outside the city, in a little park, is a fine statue of the great musician.

Twenty miles farther, and we are at Cologne, in full view of the beautiful cathedral, of which we will give you a description next month.

THE CHILDREN'S JOKE.

(Concluded.)

BREAKFAST was half over when papa came in, and was about to take Harry's place, when his son said, vainly trying to look grave as he showed the watch,—

"What did I tell you, sir? You are late again, sir. No breakfast, sir. I'm sorry, but this habit *must* be broken up. Not a word; it's your own fault, and you must bear the penalty."

"Come, now, that's hard on a fellow! I'm awful hungry. Can't I have just a bite of something?" asked papa, quite taken back at this stern decree.

"I said not a morsel, and I shall keep my word. Go to your morning duties, and let this be a lesson to you."

Papa cast a look at Aunt Betsey that was both comic and pathetic, and departed without a word; but he felt a sudden sympathy with his son, who had often been sent fasting from the table for some small offense.

Now it was that he appreciated Aunty's kind heart, and felt quite fond of her; for in a few minutes she came to him, as he raked the gravel walk (Harry's duty every day), and slipping a nice, warm, well-buttered muffin into his hand, said in her motherly way,—

"My dear, do try and please your father. He is right about late rising, but I can't bear to see you starve."

"Betsey, you are an angel!" and turning his back to the house, papa bolted the muffin with grateful rapidity, inquiring, with a laugh, "Do you think those rogues will keep it up in this vigorous style all day?"

"I trust so; it isn't a bit overdone. Hope you like it," and Aunt Betsey walked away, looking as if *she* enjoyed it extremely.

"Now put on your hat, and draw baby up and down the avenue for half an hour. Don't go on the grass, or you will wet your feet; and don't play with baby, I want her to go to sleep; and don't talk to papa, or he will neglect his work," said Kitty, as they rose from the table.

Now it was a warm morning, and baby was heavy, and the avenue was dull, and mamma much preferred to stay in the house, and sew the trimming on a new and pretty dress.

"Must I really? Kitty, you are a hard-hearted mamma to make me do it," and Mrs. Fairbairn hoped her play-parent would relent. But she did not, and only answered with a meaning look,—

"I have to do it every day, and you do n't let me off."

Mamma said no more, but put on her hat, and trundled away with fretful baby, thinking to find her fellow-sufferer and have a laugh over the joke. She was disappointed, however, for Harry called papa away to weed the lettuce bed, and then shut him up in the study to get his lessons, while he mounted the pony, and trotted away to town, to buy a new fishing-rod, and otherwise enjoy himself.

When mamma came in, hot and tired, she was met by Kitty with a bottle in one hand and a spoon in the other.

"Here is your iron mixture, dear. Now take it like a good girl."

"I won't!" and mamma looked quite stubborn.

"Then Auntie will hold your hands, and I shall make you."

"But I don't like it; I do n't need it," cried mamma.

"Neither do I, but you give it to me all the same. I'm sure you need strengthening more than I do, you have so many 'trials,'" and Kitty looked very sly as she quoted one of the words often on her mother's lips.

"You'd better mind, Carrie; it can't hurt you, and you know you promised entire obedience. Set a good example," said Auntie.

"But I never thought these little chits would do so well. Ugh, how disagreeable it is!" And mamma took her dose with a wry face, feeling that Aunt Betsey was siding with the wrong party.

"Now sit down, and hem these towels till dinner-time. I have so much to do I do n't know which way to turn," continued Kitty, much elated with her success.

Rest of any sort was welcome, so mamma sewed busily till callers came. They happened to be some little friends of Kitty's, and she went to them in the parlor, telling mamma to go up to nurse, and have her hair brushed and her dress changed, and then come and see the guests. While she was away, Kitty told the girls the joke they were having, and begged them to help her carry it out. They agreed, being ready for fun, and not at all afraid of Mrs. Fairbairn. So when she came in, they all began to kiss and cuddle and praise and pass her round as if she were a doll, to her great discomfort, and the great amusement of the little girls.

While this was going on in the drawing-room, Harry was tutoring his father in the study, and putting that poor gentleman through a course of questions that nearly drove him distracted; for Harry got out the hardest books he could find, and selected the most puzzling subjects. A dusty old history was rummaged out also, and classical researches followed, in which papa's memory played him false more than once, calling forth rebukes from his severe young tutor. But he came to open disgrace over his mathematics, for he had no head for figures, and not being a business man, had not troubled himself about the matter; so Harry, who was in fine practice, utterly routed him in mental arithmetic by giving him regular puzzlers, and when he got stuck, offered no help, but shook his head, and called him a stupid fellow.

The dinner-bell released the exhausted student, and he gladly took his son's place, looking as if he had been hard at work. He was faint with hunger, but was helped last, being "only a boy," and then checked every five minutes for eating too fast. Mamma was very meek, and only looked wistfully at the pie, when told in her own words that pastry was bad for children.

Any attempts at conversation were promptly quenched by the worn-out old saying, "Children should be seen, not heard," while Harry and Kitty chattered all dinner-time, and enjoyed it to their heart's content, especially the frequent pecks at their great children, who, to be even with them, imitated all their tricks as well as they could.

"Don't whistle at the table, papa;" "keep your hands still, mamma;" "wait till you are helped, sir;" "tuck your napkin well in, and do n't spill your soup, Caroline."

Aunt Betsey laughed till her eyes were full, and they had a jolly time, though the little people had the best of it; for the others obeyed them in spite of their dislike to the new rules.

"Now you may play for two hours," was the gracious order issued as they rose from the table.

Mamma fell upon a sofa exhausted, and papa hurried to read his paper in the shady garden.

Usually these hours of apparent freedom were spoiled by constant calls, not to run, not to play this or that, or frequent calls to do errands. The children had mercy, however, and left them in peace, which was a wise move on the whole; for the poor souls found rest so agreeable they privately resolved to let the children alone in their play-hours.

"Can I go and see Mr. Hammond?" asked papa, wishing to use up the last half-hour of his time by a neighborly call.

"No; I do n't like Tommy Hammond, so I do n't wish you to play with his father," said Harry, with a sly twinkle of the eye, as he turned the tables on his papa.

Mr. Fairbairn gave a low whistle, and retired to the barn, where Harry followed him, and ordered the man to harness up old Bill.

"Going to drive, sir?" asked papa, respectfully.

"Do n't ask questions," was all the answer he got.

Old Bill was put into the best buggy, and driven to the hall door. Papa followed, and mamma sprang up from her nap, ready for her afternoon drive.

"Can't I go?" she asked, as Kitty came down in her new hat and gloves.

"No, there isn't room."

"Why not have the carryall, and let us go too, we like it so much," said papa, in the pleading tone Harry often used.

Kitty was about to consent, for she loved mamma, and found it hard to cross her so. But Harry was made of sterner stuff; his wrongs still burned within him, and he said impatiently,—

"We can't be troubled with you. The buggy is nicest and lightest, and we want to talk over our affairs. You, my son, can help John turn the hay on the lawn, and Caroline can amuse baby, or help Jane with the preserves. Little girls should be domestic."

"Oh, thunder!" growled papa.

"Aunt Betsey taught you that speech, you saucy boy," cried mamma, as the children drove off in high glee, leaving their parents to the distasteful tasks set them.

Mrs. Fairbairn wanted to read; but baby was fretful, and there was no Kitty to turn him over to, so she spent her afternoon amusing the small tyrant; while papa made hay in the sun, and did n't like it.

Just at tea-time the children came home, full of the charms of their drive, but did not take the trouble to tell much about it to the stay-at-home people. Bread and milk was all they allowed their victims, while they reveled in marmalade and cake, fruit and tea.

"I expect company this evening, but I do n't wish you to sit up, Caroline; you are too young, and late hours are bad for your eyes. Go to bed, and don't forget to brush your hair and teeth well, five minutes for each; cold cream your hands, fold your ribbons, hang up your clothes, put out your boots to be cleaned, and put in the mosquito bars; I will come and take away the light when I am dressed."

Kitty delivered this dread command with effect, for she had heard and cried over it too often not to have it quite by heart.

"But I can't go to bed at half-past seven o'clock of a summer night! I'm not sleepy, and this is just the pleasantest time of the whole day," said mamma, thinking her bargain a hard one.

"Go up directly, my daughter, and do n't discuss the matter; I know what is best for you," and Kitty sent social, wide-awake mamma to bed, there to lie thinking soberly till Mrs. Kit came for the lamp.

"Have you had a happy day, love?" she asked, bending over the pillow, as her mother used to do.

"No, ma'am."

"Then it was your own fault, my child. Obey your parents in all things, and you will be both good and happy."

"That depends"—began her mamma, but stopped short, remembering that to-morrow she would be on the other side, and anything she might say now would be quoted against her.

But Kitty understood, and her heart melted

as she hugged her mother, and said in her own caressing way,—

"Poor little mamma! did she have a hard time? and did n't she like being a good girl and minding her parents?"

Mamma laughed also, and held Kitty close, but all she said was,—

"Good-night, dear; don't be troubled: it will be all right to-morrow."

"I hope so," and with a hearty kiss, Kitty went thoughtfully down stairs to meet several little friends whom she had asked to spend the evening with her.

As the ladies left the room, papa leaned back and prepared to smoke a cigar, feeling that he needed the comfort of it after this trying day. But Harry was down upon him at once.

"A very bad habit,—can't allow it. Throw that dirty thing away, and go and get your Latin lesson for to-morrow. The study is quiet, and we want this room."

"But I am tired. I can't study at night. Let me off till to-morrow, please, sir!" begged papa, who had not looked at Latin since he left school.

"Not a word, sir! I shall listen to no excuses, and shall *not* let you neglect your education on any account," and Harry slapped the table *a la* papa in the most impressive manner.

Mr. Fairbairn went away into the dull study, and made believe to do his lesson, but he really smoked and meditated.

The young folks had a grand revel, and kept it up till ten o'clock, while mamma lay awake, longing to go down and see what they were about, and papa shortly fell asleep, quite exhausted by the society of a Latin Grammar.

"Idle boy, is this the way you study!" said Harry, audaciously tweaking him by the ear.

"No, it's the way you do;" and feeling that his day of bondage was over, papa cast off his allegiance, tucked a child under each arm, and marched upstairs with them, kicking and screaming. Setting them down at the nursery door, he said, shaking his finger at them in an awful manner,—

"Wait a bit, you rascals, and see what you will get to-morrow."

With this dark threat he vanished into his own room; and a minute after, a great burst of laughter set their fears at rest.

"It was a fair bargain, so I'm not afraid," said Harry stoutly.

"He kissed us good-night, though he did glower at us; so I guess it was only fun," added Kitty.

"Hasn't it been a funny day?" said Harry.

"Do n't think I quite like it, everything is so turned round," said Kitty.

"Guess *they* didn't like it very well. Hear 'em talking in there;" and Harry held up his finger, for a steady murmur of conversation had followed the laughter in papa and mamma's room.

"I wonder if our joke will do any good?" said Kitty thoughtfully.

"Wait and see," answered Aunt Betsey, popping her night-capped head out of her room with a nod and a smile that sent them to bed full of hope for the future.

CHIMNEYS.

CHIMNEYS seem so natural to us that we forget that there was a time when they were unknown. They were invented about the same time with clocks and watches. No house in ancient Rome or Athens had them. The Greeks and Romans heated their rooms with hot coals in a dish, or by flues beneath the floor, and the smoke passed out the doors and windows. You could always tell when a Roman was about to give a dinner party, by the clouds of smoke that came out of the kitchen windows. It must have been very unpleasant for the cooks, who had to do their work in the midst of it.

The tall chimneys that rise over the tops of the houses in New York and Brooklyn, pouring out their clouds of smoke, would have seemed miracles to our ancestors a few centuries ago. Even the pipe of a steamer or a chimney of a kerosene lamp they would have thought wonderful. In England, in the time of the Conqueror (1066), the fire was built on a clay floor, or in a hole or pit in the largest room of the house. The smoke passed through an opening in the roof. At night a cover was placed over the coals. Everybody was by law obliged to cover up his fire when the bell rang at a certain hour. In French, this was *couvre-feu*, and hence the "curfew" bell.

Chimneys began to be used generally in England in the beginning of the reign of Elizabeth. No one knows who invented them, or when they first came into use. We find them first in Italy. In Venice they seemed to have been not uncommon as early as 1347. In 1368 they had long been in use at Padua. They were at first built very wide and large, so that they could be easily cleaned. The wide chimney-pieces of some of our older houses are very curious.

But as time passed on, chimneys were made taller, narrow, and often crooked. When they had to be cleaned, it was customary to send boys up into them to remove the soot and ashes. It was then that the saddest stories were told of the little sweeps, who were forced to climb up the narrow flues, and come down torn, bleeding, and covered with soot. These poor creatures, who were often not more than seven or eight years old, were sometimes suffocated in the foul chimneys they attempted to clean. When they reached the top, they were expected to look out and give a loud shout. No boy would

ever become a chimney-sweep from choice, and they were often driven to climb the chimneys from fear of a whipping. The cruelty of the master-sweeps was fearful. But the little chimney-sweeper has passed away, and his place is taken by a patent broom and a colored operator.

In the days before chimneys were invented, men lived in clouds of smoke. The walls of the finest palaces in ancient Rome were soon covered with soot and filth. It was impossible to keep them clean. The mosaics and the paintings on the walls soon became discolored. In the castles of England and France it was still worse. Here the huge fire blazed in the center of the great hall. The smoke covered the roof with black drapery; and the savage knights and squires were forced either to endure the cold, or to live and breathe in an air that was dangerous to sight, health, and life itself.—*Sel.*

"GOOD MORNING."

It is astonishing how old this salutation is, and how it differs among various races. The Greeks wished a man to be of "good cheer." The Romans trusted their friends might, that day, find themselves in a state of health and safety. But when the matter is looked into, the reason explains itself. Happiness at any time was the Greek's ideal; hence, be of "good cheer,"—make the most of the moment. The Romans, however, surrounded by the cares of a vast empire, threatened now by one foe and again by another, used a more solemn greeting. "Health" was his first wish, because his idolized Rome was surrounded by fogs. "Safety" was his second wish, for at any moment the fateful end of all things might come. In China, "good morning" almost grows comic. It means there, "Have you eaten your rice, and is your stomach working well?" Fancy putting these phrases to an American. Yet, after all, the Chinaman shows a good deal of wisdom in his salutation. A good appetite for breakfast, be it a bread-and-butter meal, or be it a repast on rice, means, as a rule, a good day, and following a good day, a good night, and, with a good night, pleasant sleep and renewed strength for the morning again. A man whose stomach is working well is a man whose temper is equable, and will therefore, generally speaking, be happy and sunny-minded. Upon these considerations, it would almost seem that the Chinaman's "good morning" is the wisest of those named.—*Selected.*

Popular Science.

—A hundred-ton cannon that was being fired for the first time recently at Gibraltar, split or burst at the muzzle in consequence of the shot not having been rammed home.

—A Frenchman has invented electrical insects which, when attached to the artificial ferns and other flowers often seen, appear natural as life, fluttering about like live insects whenever the pot containing the flowers is disturbed.

—Missionary coaches on railways is a new and useful idea. The coach is to contain a room for religious services, accommodation for the pastor, and is to be furnished with tracts, books, etc., for the use of employes and passengers. The coach is to be adapted to all lines. Of course the pastor will be a *traveling* preacher.

—A native of the wooden nutmeg State has devised a means of preventing collisions of trains on single track roads. His invention consists in a track running along the top of the train with inclines at each end, so that a meeting train may run over instead of *into* it. No practical tests of the utility of the invention have yet been made.

—It is not generally known that the common bladderwort of our ponds is a carnivorous plant. It has no roots, but floats about in the water after its prey, which consists of small water insects, eggs of fish, and even newly hatched fish, which it captures in its tiny bladders, each of which is provided with a trap-door arrangement, which instantly engulfs the unfortunate creature that comes in contact with it.

—The American population of the State of Michigan hail from the following States: We have 500,000 native-born Michiganders; 230,000 claiming their nativity in New York; nearly 30,000 Pennsylvanians; above 60,000 from Ohio; 14,000 from Vermont; 12,000 from Indiana; 11,000 from Massachusetts; 8,000 from New Jersey; 7,000 from Connecticut; 6,000 each from Illinois and Wisconsin; 4,000 each from Maine and New Hampshire; and say 13,000 scattered among other States, with 90,000 Canadians, and less than 200,000 of foreign birth.

—The rare but beautiful phenomenon of a lunar rainbow was seen about 11:30 P. M., August 4, at Mendota, Ill. The colors were by no means as distinctly marked as those of a solar rainbow, but yet were sufficiently so to show an orange tinge on the outer edge, with a gradual mixture of the prismatic colors in the center, and terminating with a delicate blue within the arc. It lasted for nearly forty minutes, but was twice obscured by clouds for a few minutes.

—A traveler in Egypt describes a Mohammedan university at Cairo as being 900 years older than Oxford, and still flourishing as in the palmy days of the Arabian conquest. There were to be seen two acres of turbans assembled in a vast inclosure without floor, except the pavement, and with a roof supported by 400 columns. Some 10,000 students are said to be receiving instruction here, preparing to go out as missionaries of the Moslem faith.

—The project of cutting a ship canal across the Province of Holstein, by which the Baltic and North Seas will be connected, has been earnestly taken up in Germany. The canal will extend from a point near the mouth of the Elbe to the harbor of Kiel, one of the chief naval ports of the empire. It will be of sufficient size to permit the largest ironclads of the German Navy to steam through it. This will avoid the necessity of making the present long journey around the Peninsula of Jutland. Detailed drawings of the canal will be submitted to the Reichstag.

—Discussing the question as to what the motor power of the future is to be, an Engineer of the English Mediterranean Squadron says: "The future power motor will be a gas engine. The fuel used will be coal, finely powdered, intimately, mechanically mixed with chemicals and made into suitable form for handling. This mechanical mixture will, like gunpowder, contain within itself the same ingredients as the gas it produces.

—The Washington Monument now almost finished at the National Capital, is to reach the almost unparalleled altitude of 520 feet from the general level, or 510 feet from the terrace on which it stands. It is now the highest building in the known world, with one exception, the cathedral of Cologne, and it lacks but a few feet of being up to that. When finished, it will overtop all other earthly structures by many feet. Other American buildings reach the following altitude: The Washington monument at Baltimore, 193 feet; Bunker Hill monument, 221 feet; the Capitol in Washington, 306 feet. Old world buildings range as follows: St. Paul's cathedral, London, 360 feet; St. Peter's, in Rome, 438 feet; the cathedral of Milan, 355 feet; the Great Pyramid of Cheops, in Egypt, 450, originally 480 feet; the cathedral of Rouen, 489 feet; the cathedral at Cologne, 510 feet.

Some Interesting Facts.—A railroad train traveling at the rate of forty miles an hour would reach the sun in 2246 years.

A cannon ball fired from an eighty-pound gun would reach the sun in nine years.

A telephone message would require about half an hour to go to the sun and back.

\$25,000,000 worth of coal is annually lost in smoke in London alone.

The most intense artificial heat which can be produced is about 4000° F.



BATTLE CREEK, MICH., OCTOBER, 1884.

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

TERMS, \$1.00 A YEAR.

MILK AND BREAD IN CITIES.

IN an interesting paper entitled "Health in a Health Resort," Dr. Richardson thus discourses on the milk and bread supplies of a city:—

For all the young, milk is required, and should be of the best and most healthful. But it is a source of constant danger. In some of our present Health Resorts, cows are cooped up in the most limited space, in what are called cow-sheds, for the sole purpose of making them turn vegetable food into milk. For months together, these miserable animals never see the open day, never know what it is to stretch out at full freedom on greenward, never know what it is to breathe the pure open air, never know what it is to be fed on any variety of food save that which makes them yield the largest quantities of milk. They are, in truth, like animal machines kept in sheds, the sheds in the heart of the human population itself, the poorest, likely, of their kind. On milk manufactured under these conditions,—in partial darkness, dirt, close air, and often without any provision for the separation of healthy from unhealthy animals,—on such milk how can infants and children live, to live wholesomely? It is impossible, and, I am bound to say, wickedly impossible. To this also is added the further danger of epidemic diseases spreading through milk—a risk so great that in one town alone, which I recently inspected, I was able to estimate that at least a saving of one death per thousand per annum would have resulted from an entire and perfect reformation of the milk supply.

The staff of life, the bread of our Health Resort, that gives good health on every hand, deserves, finally, a careful treatment in production. The oldest art in the world is, perchance, the art of making bread; and yet it is of all arts the one least advanced as a pure and cleanly process, healthful alike to those who make and those who take. The more we examine the condition of bakeries in town and country, the more as sanitarians we wonder that human beings can be found at any price to undergo the penalty of being enslaved often half the night underground, exposed to the most varying temperatures and foul air, and engaged in a labor that is as laborious as it is unwholesome. The more also we wonder that sensible people should be content to eat of bread made under such conditions, and worked as dough by the naked limbs of the unhealthy workers. For all sakes the bakeries in every town call for incessant supervision, for perfect sanitary construction, and for the introduction of the pure and simple process of manufacture by machinery, Daughlish's unfermented method.

ANIMAL FOOD AND BILIOUSNESS.

DR. JENSEN, in the *Phil. Med. World*, calls attention to the fact that digested albumen and flesh respond to the same chemical test as bile, which he argues goes to prove that the formation of bile begins in the stomach in the digestion of such foods as eggs and canned meat. The inference is an easy one that one who is bilious should abstain from eating meat

and eggs, and one who does not wish to become bilious will be better for not eating this class of foods.

The tendency of animal food to produce disturbances of the liver is well shown in the readiness with which a brick-dust or uric-acid deposit will disappear from the urine when the patient confines himself to a fruit, grain, and milk diet.

BRINGING UP BABIES.

JOHN RUSKIN, in a letter to a friend, offered the following remarks about bringing up babies, which are worth thinking about:—

“I have never written a pamphlet on nurseries; first, because I never write about anything except what I know more of than most other people; secondly, because I think nothing matters much in a nursery—except the mother, the nurse, and the air. So far as I have notions, or guess in the matter myself, beyond the perfection of those three necessary elements, I should say the rougher and plainer everything was, the better,—no lace to the cradle cap, the hardest possible bed, and the simplest possible food, according to age, and the floor and walls of the cleanest. All education to beauty is, first, in the beauty of gentle human faces round a child; secondly, in the fields—fields meaning grass, water, beasts, flowers, and sky. Without these, no man can be educated humanly. He may be made a calculating machine, a walking dictionary, a painter of dead bodies, a twangler or scratcher on keys or cat-gut, a discoverer of new forms of worms in mud; but a properly so-called human being—never. Pictures are, I believe, of no use whatever by themselves. If the child has other things right round it and given to it,—its garden, its cat, and its window to the sky and stars,—in time, pictures of flowers and beasts and things in heaven and heavenly earth may be useful to it. But see first that its realities are heavenly.”

POISONOUS PLANTS AND FLOWERS.

The Drugman offers the following very important facts respecting the poisonous properties of common plants and flowers, which ought to be generally known:—

“Buttercups possess a poisonous property, which disappears when the flowers are dried in hay; no cow will feed upon them while in blossom. So caustic are the petals, that they will sometimes inflame the skin of tender fingers. Every child should be cautioned against eating them; indeed, it is desirable to caution children about tasting the petals of any flowers, or putting leaves into their mouths, except those known to be harmless.

“The oleander contains a deadly poison in its leaves and flowers, and is said to be a dangerous plant for the parlor or dining-room. The flowers and berries of the wild briony possess a powerful purgative; and the red berries, which attract children, have proved fatal. The seeds of the laburnum and catalpa tree should be kept from children; and there is a poisonous property in their bark. The seeds of the yellow and of the rough podded vetches will produce nausea and severe headache.

“Fool’s parsley has tuberous roots, which have been mistaken for turnips, and produced a fatal effect an hour after they were eaten.

“Meadow hemlock is said to be the hemlock which Socrates drank; it kills by its intense action on the nerves, producing complete insensibility and palsy of the arms and legs, and is a most dangerous drug, except in skillful hands. In August it is found in every field, by the sea-shore, and near mountain tops, in full bloom; and ladies and children gather its large clusters of tiny white flowers in quantities, without the least idea of their poisonous qualities. The water hemlock, or cow-bane, resembles parsnips, and has been eaten for them with deadly effects.

“The water dropwort resembles celery

when not in flower, and its roots are also similar to those of the parsnip; but they contain a virulent poison, producing convulsions which end in death in a short time. The fine-leaved water dropwort and the common dropwort are also dangerous weeds.

"The bulbs of the daffodils were once mistaken for leeks and boiled in soup, with very disastrous effects, making the whole household intensely nauseated, and the children did not recover from the effects for several days."

Consumption in Hens.—The increasing prevalence of this disease does not seem to be confined to human beings. Nearly all domestic animals appear to suffer from it. It has long been known that cows and sheep were liable to the disease; and now it appears from the investigation of Prof. Johne, of Dresden, that hens are also liable to it. A number of cases which he reports were traced to their eating meat which had been chewed by a consumptive. It was also probable that they had eaten the expectorated matters of the patient, as they were fed by her. It is now an interesting question whether the eggs of tuberculous hens will communicate the disease.

Don't Kiss the Children.—If you have a sore throat or a sore mouth or a bad cold or a chronic catarrh, don't kiss a healthy, innocent little one on its mouth, and thereby incur the risk of communicating to it a disease which may terminate its life. The fashion of passing a baby around to be kissed by any one who may take a fancy to do so is always foolish and sometimes fatal. Strangers should not be allowed to kiss the little ones. Most loathsome diseases are sometimes communicated in this way. Better be considered odd and notional than expose your child to an infection which may make its life miserable, or extinguish it altogether.

Origin of Trichinæ.—A German doctor has at last discovered the origin of trichinæ, the hateful parasite which has destroyed the appetites of so many people for delicious ham sandwiches and other delectable pork tidbits. He asserts that the parasite is native to rats. In China the hogs and the Chinamen both eat rats, and so become infected with the parasites. The existence of the parasite in this country is accounted for by the asserted fact that hundreds of Chinamen are employed in the stockyards of Chicago. The Chinamen are supposed to eat the rats, thus becoming infected by trichinæ; but how the hogs become infected, unless by eating the Chinamen, is a mystery. It seems probable that the hogs have devoured all the Chinamen, as there are none to be found at the stockyards, which possibly accounts for the alarming increase of trichinæ in American pork, which caused nearly all European countries to prohibit its importation.

But that the Chinaman is not the sole conveyor of trichinæ is shown by the fact that a wild boar, captured in the swamps El Huleh on the Jordan, a few years ago, was so densely populated by the parasites that of two hundred and sixty-two persons who ate of its flesh, not one escaped the disease, and a number died.

Our German Herr Doctor must look a little farther for the solution of his problem.

Cancer in Animals.—A writer in the *Jour. Comp. Med. and Surg.* has been investigating the above subject, and describes numerous cases of undoubted malignant disease in lower animals.

Of the cases observed, there were in fowls, a chicken, an old hen whose foot had been frost-bitten, and a capon.

Five cases in horses and mules, and one each in a cow and a dog, were unmistakably malignant.

The fact is also referred to by the writer, that pigs are very subject to intestinal tumors and suspicious glandular enlargements.

Persons Killed instead of Rats.—"Rough on Rats" seems to be as deadly to human beings as to rats. Not long ago a woman suicided by swallowing a dose of the poison. A few weeks ago a nurse in a Southern State adopted this as the means of getting rid of a troublesome baby, and it is also reported that an entire family in New Jersey were poisoned by the same means.

Poisoning is not the proper means of getting rid of rats. If some member of the family is not poisoned by taking accidentally a dose intended for the rats, the whole family is poisoned when the rats die, and lay their carcasses to decompose behind chests, under floors, beneath the house, and in numerous out-of-the-way places, by inhaling noxious odors and accompanying germs.

Rats should be caught in traps, or driven out by cats, ferrets, or some other means.

Trichinosis in Saxony.—About one year ago, a pig infected with trichinæ was slaughtered in a small town in Saxony, and made into mince-meat, of which numerous persons ate. Three hundred and sixty-one persons suffered with the disease, fifty-seven fatally.

Cheese Poisoning.—One hundred and sixty-four persons were poisoned recently by eating cheese made at Fruitbridge, Lenawee Co., Mich. The symptoms were pain and burning sensation in the stomach, severe vomiting and purging, feebleness of the pulse, coldness of the extremities, and tendency to collapse.

Prof. V. C. Vaughan, M. D., who investigated the matter for the State Board of Health, reported that he found no trace of poison in the cheese, but observed that it was intensely acid, while good cheese is but very feebly acid. Cheese is liable to undergo such changes as are accompanied by the development of poisonous substances not readily detected by chemical means. We consider it of doubtful value as a food substance.

A Strange Appetite.—An English girl was incommoded by a huge lump in her stomach, which was presumed to be the result of a morbid appetite for hair combings and cotton wool, which she had gratified without stint. Dr. Knowsley Thornton, the eminent ovariologist at the Samaritan Hospital, London, made an opening into the stomach, and extracted a large mass of cotton and hair molded into the form of the stomach, and measuring nine and one-half by five inches. The patient was doing well at last accounts.

An Old Remedy Revived.—At the present time no remedy is in greater favor as a means of combating that dread malady, consumption, than milk used liberally as an article of diet, either hot or cold, but in as great quantity as the patient can be induced to take it. Probably there is no medicinal agent the value of which can be compared with this dietetic remedy, and it is to be hoped that it may soon supersede entirely the nauseous doses of cod-liver oil which have so long been in vogue in the treatment of this malady.

Like most other good things which are discovered in modern times, this proves to be simply a revival of a remedy as old, at least, as the twelfth century, as it is as highly lauded in the works of Averroes as in medical works of the present day.

Reforms in Montenegro.—Montenegro is one of the smallest of European kingdoms, but just now bids fair to lead the world, in some respects at least. Prince Nicholas I., the present ruler, is a genius reformer. Some time ago he proclaimed a law prohibiting the sale of all intoxicants, shutting up all the cafés and drinking saloons. His next step was to abolish all titles. Even his ministers are plain "Mr.," without any handles. The most recent reformatory measure is a law prohibiting all luxurious wearing apparel. Verily, absolute monarchy is a very good thing, when it is so well used as in this instance.

An Encouraging Omen.—We are happy to note the growing opposition to the use of tobacco among clergymen and other public teachers. The public sentiment demands that such men shall be clean even from the vices which in other men are approved or condoned. We observed in the announcement of a public examination of teachers which recently appeared in a local paper, that notice was given that none who used either liquor or tobacco need apply, for addiction to these vices would be considered as disqualifying a person for the position of teacher in the public schools. This is certainly a step in advance, and one that indicates unmistakably an improvement in the popular opinion on this subject. Our State law requires that instruction shall be given on the baneful effects of stimulants and narcotics, and it is certainly fitting that teachers should be required to teach by example as well as precept.

The Cholera in Italy.—A recent report states that deaths from cholera in Naples alone reached upward of three hundred, and new cases nearly one thousand daily. Naples is undoubtedly the filthiest city in Europe; and if the present visitation causes the authorities to employ its distressed pauper population in cleaning up its vile lanes and pestilence breeding gutters, there will be a preponderance of good, notwithstanding the awful slaughter of human life.

Indefatigable Germs.—A French microscopist, M. Parize, has been looking after germs in out-of-the-way places, and finds that they abound in moldy brick walls. The microscope shows that they are not only present in great numbers on the outside of such walls, but penetrate into the interior of the bricks. There is also evidence that wood-work, when allowed to become damp and moldy, may soon be swarming with these mighty little fellows which, unseen and unsuspected, lie in wait for human lives.

A Doll that Had Diphtheria.—The Board of Health of Amsterdam, N. Y., have recently investigated an outbreak of diphtheria from which two children died, a third, who was attacked, recovering. The disease was traced to a pet kitten, with which a little girl played while the animal was sick with a swollen throat and discharge from the nose. The cat died. The child was taken sick, and also died. Another girl played with a doll which had belonged to the deceased child; she was also taken sick, and died. Still another contracted the disease without other means of communication than the doll. The latter was supposed to have been disinfected.

Both Food and Physic.—It is a curious fact that the very common weed known as the burdock has been simultaneously recommended in this country as a medicine, and in France as a food. It is somewhat doubtful whether an article which is both food and medicine is more to be recommended than the adulterated milk sold by a Scotch milk-vendor, which a spiteful rival said was both "food and physic."

The Dry-Earth System in Paraguay.—A writer in *Health* states that,—

"In the city of Assuncion, Paraguay, no deep sewers exist. The excreta is collected in pails, the ashes of the house being mingled therewith, and the whole removed weekly by scavengers, who either empty the contents into the river below the town, or otherwise dispose of it. The slop-water flows by open channels into a gutter in the center of the road, where no doubt it is frequently washed down. Defective as these methods are in detail, they are sound in principle, and, as far as the town in question is concerned, fevers are said to be practically unknown there."

—An English writer says: "He that will not reason is a bigot; he that cannot reason is a fool; he that dares not reason is a slave."

Florence Nightingale on Cholera.—This eminent woman, famous the world over for her genius in nursing the sick, has shocked the sanitarians by the startling assertion that cholera is not a communicable disease; in other words, that it is not "catching." She thinks it results exclusively from inattention to the sanitary condition of cities.

Torpid Liver and Dizziness.—Roaring in the ears, accompanied by dizziness, has recently been shown by Dr. Lyman, of Boston, to be sometimes due to an inactive state of the liver, resulting in a condition similar to that present in rheumatism and gout. When this is the cause of roaring in the ears and giddiness, a brick-dust sediment will be observed in the urine.

Egg Membrane for Skin Grafting.—Dr. Wilson, of Louisville, has succeeded in healing an extensive raw surface left after a burn some six years ago, by skin grafting, in which he used human skin, rabbit's skin, and the inner membrane of perfectly fresh eggs. The latter he claims to be superior to either human or rabbit's skin for this purpose.

An Allopathic Dose.—One of Barnum's elephants had inflammation of the bowels. A horse doctor was called, and he administered a dose composed of lard, 8 lbs.; linseed oil, 1 gal.; nitrous ether, 1 pint; laudanum, 1 pint; syrup, 1 quart. No wonder the great fellow turned up his nose. Notwithstanding the dose, the animal demonstrated the toughness of his race by getting well.

Tea-Drinking and Discontent.—The Dean of Bangor, according to the *Pall Mall Budget*, asserts that tea-drinking destroys calmness of the nerves, provokes discontent, and tends to make society revolutionary. He traces the growth of radicalism to the increase in the practice of tea-drinking, showing that the two keep pace with each other.

Milk and Barley-Water.—The addition of barley-water to milk, in proportion of one part of the former to two of the latter, adds greatly to its digestibility. This is a useful hint for those who think themselves unable to use milk.

Tobacco in the English Navy.—The rules of the English navy against tobacco-using are quite stringent. Neither officers nor privates are allowed to smoke before the age of eighteen, and then never when on the street in uniform. In the military schools of this country, the use of tobacco has been forbidden for some years.

Poisonous Cod-Fish.—A foreign medical journal contains an account of wholesale poisoning from the use of dried cod-fish. In one instance, one hundred and forty-seven persons were made very ill. The poisonous fish were characterized by a red color. Microscopic examinations revealed the presence of peculiar fungi.

Consumption in Cattle.—According to the *Dietetic Reformer*, consumption is becoming alarmingly frequent among cattle in some parts of the world. At Melbourne, from fifteen to twenty per cent of all the cattle slaughtered are found to be tuberculous, and yet their flesh is eaten by human beings. What wonder that consumption is on the increase! In Germany, the proportion of infected animals is said to be still larger.

Remarkable Longevity.—A French journal is authority for the statement that a woman, Marie Durand, is living in that country at the remarkable age of 123 years. A Roumanian clergyman who recently died, was 120 years of age. The only thing remarkable in the habits of these individuals is, that they have been for many years vegetarians.

—Delirium tremens is now traced to a parasite, "the worm of the still."

Boiled Milk.—The supposition that heating milk renders it indigestible is an error. Hot milk is much more easily digested than cold, and may be taken by many persons who cannot take milk in any other manner.

A Warning to Quick-Tempered People.—A woman became very angry. A few hours later, her neighbors called her attention to the fact that she was intensely jaundiced, and she was obliged to go to the hospital for treatment.

Rage is one of the most depressing and dangerous of all the passions.

Pneumonia Germs.—Dr. R. Emmerich, of the Hygienic Institution of Munich, recently discovered underneath the floor of a prison the germs which are by some believed to be the exciting cause of pneumonia. In the prison there had previously been forty-six deaths from the disease out of one hundred and sixty-one inmates.

A Smoker's Vacation.—A Pennsylvania doctor who smokes excessively at all other times, gives himself a vacation from the weed for one month every fall, so that his system may recuperate from the effects of the poison. Suppose he should take a vacation all the time, would n't his vital organs rejoice in the deliverance!

—The Opata Indians of Sonora, Cal., are remarkable for superior mental and physical traits. Their food is extremely simple. For weeks they endure the most severe hardships with no food but pinola, or roasted flour.

—When a lady living in Chelsea sent to London for a doctor, she apologized for asking him to come such a distance. "Do n't speak of it," answered the M. D. "I happen to have another patient in the neighborhood, and can thus kill two birds with one stone."

—The latest remedy for ague is spider-web, in thirty grain doses.

—M. Pasteur has had nineteen of his vaccinated dogs bitten by mad dogs, and all escaped the disease.

—A German investigator, after much study of the subject, recommends woolen under-garments as preferable to all others.

—Senator Edmunds, of Vermont, is said to be a great friend of doctors. He owns the largest tombstone factory in the State.


—According to an English periodical, a New York firm is engaged in importing eggs from Europe, being able to get them to market at less expense than from the West.

—Every public school in Paris is under the professional care of a physician, who makes regular visits of inspection for the purpose of looking after the health of the pupils.


—The years 1347 to 1351 witnessed the most terrible epidemics and scourges the human family ever suffered. More than 93,000,000 persons perished, or about one-half of the total number of inhabitants on the globe.

—Sir Walter Scott, the eminent English poet and novelist, seems to have suffered with dyspepsia at one time, for which, according to a letter written to a friend at the time, his physician put him upon a diet of vegetables and water.

—The Vegetarian Society of England has a vegetarian restaurant at the International Health Exhibition, at which dinners are furnished at 6 d. each. It is said to be a decided success. Recently a public dinner was given in honor of Mr. Weston, who was about leaving for this country after completing his 5,000-mile walk without stimulants. Numerous members of parliament and of the nobility were present.



DOMESTIC MEDICINE.



Diarrhea of Infants.—This most common of all the ailments of infants at this season of the year is often the precursor of a fatal cholera infantum or an acute meningitis; and it is one of the most prolific causes of the great mortality among infants which usually prevails at this season. The two great causes are probably improper dress and improper diet. The heat of midsummer depresses the vital powers, and renders the system susceptible to morbid influences. The cool nights and occasional cool days disturb the circulation, particularly if special attention is not given to the clothing, carefully adapting it to the changing temperature. In this way a cold may be contracted, which in winter would appear as an acute catarrh, but now appears as a catarrh of the bowels.

When this is the cause of diarrhea in an infant, a hot bath or a hot blanket pack is one of the most efficient means of restoring the circulation and checking the disease. The pack may be followed by a hot enema, which should be repeated whenever the bowels move, or once in two hours.

If there are numerous undigested curds in the stools, the food should be looked after. Perhaps the milk is sour, or just ready to sour. Perhaps the child is unable to digest pure cow's milk. Perhaps candies or other sweets or bad food have deranged the little one's digestion. In any case, the cause of the trouble must be sought out and removed. Do not run for a doctor, and go to dosing with chalk mixture and paregoric or other mixtures, but exercise a little common sense in reference to the child's food, and soon it will be thriving. Try cream and water, one part to four, in place of milk. If this disagrees, try well-boiled oatmeal gruel, strained through a cloth and mixed with cream. If the diarrhea is very obstinate, try a diet of meat pulp, made by scraping with a case-knife the pulp from a piece of lean, tender steak. The meat should be taken raw, and should replace all other food in cases which do not yield to any other treatment. With proper dietetic treatment, medication is seldom required.

How to Remove Scars.—Scars are always unsightly, and are often painful or inconvenient on account of their propensity to contract as

they become older. Dr. Wark, of New York, asserts that they may be removed by manipulation, which he directs to be employed as follows:—

Place the ends of two or three fingers on a scar if it be a small one, and on the margin if it be large, and vibrate the surface on the tissues beneath. The surface itself is not to be subjected to any friction; all the motion must be between the integument and the deeper parts. The location of the vibratile motion should be changed every ten or fifteen seconds until the whole scar has been treated, if it be of moderate size. If the scar be the result of a large scald or burn, the margins only should be treated at first; the advances toward the center should be deferred until the nutrition of the margins has been decidedly improved. Only a little treatment should be applied to any one spot at the same time, but the vibrations should be repeated as many as twenty times a day, but never with sufficient frequency or severity to cause pain. If the scar becomes irritable, suspend treatment until it subsides.

In the course of two or three weeks of faithful treatment, the surfaces of the scars of moderate size becomes more movable, and will begin to form wrinkles like true skin, when pressed from side to side.

All these changes are due to improved nutrition consequent on better blood circulation—the development of entirely new sets of blood-vessels in the cicatricial tissue.

For Heartburn.—A teaspoonful of wheat charcoal, taken immediately after a meal, is an excellent nonmedicinal remedy for this uncomfortable derangement of digestion. A teaspoonful of glycerine taken just before or just after a meal is useful for the same purpose.

Electricity for Hiccough.—Hiccough, or hiccup, is a very common, but not usually very serious affection, in which there is a spasmodic contraction of the diaphragm. The only successful remedies are those which will interrupt the periodical spasms of the muscle of the diaphragm. This may be done by means of electricity. Place the patient in bed with the waist uncovered. Prepare the battery so it will give a very strong current. Now place one sponge in contact with the ribs at the lower border. Notice the length of time between the paroxysms, and bring the other sponge in contact with the side of the chest in such a manner as

to anticipate the spasm by a few seconds. A few repetitions will interrupt the spasmodic action.

For Bleeding Piles.—Take a hot sitz bath, temperature 104° F. Take a hot enema when the bowels move, temperature 105° to 110°, and repeat the enema after movement of the bowels. The sitz bath and the enema may be repeated two or three times a day.

The local application of a cold compress is a useful measure not to be neglected. Of the various ointments recommended for use, an ointment composed of fl. ex. hamamelis one part and vaseline three parts is one of the most useful. Subsulphate of iron is also a good astringent for use in these cases. It may be applied as an ointment, twelve grains to the ounce of vaseline. Use twice a day. In bad cases the patient must remain in a horizontal position until the hemorrhage is permanently controlled, or for at least half an hour after each movement of the bowels. Such cases require a surgical operation for a radical cure.

Electricity for Strangulated Rupture.—Hernia, or rupture, is a very common infirmity, and one which is at almost any time liable to threaten life in a very serious manner. In most cases a rupture, when down, can be readily replaced or reduced by gentle manipulation with the hand, but in some instances all measures seem to be inefficient. In such cases, electricity may be tried with hope of success. The faradic current should be used. Apply the positive sponge to the portion of the hernial tumor next the body, or the neck, the negative to the base.

Extension of the Neck in Asphyxia.—When a person has been suddenly asphyxiated, one of the first means to be employed is to pull out the tongue, so as to open the entrance to the larynx by dragging the epiglottis forward. This is not always accomplished by the means referred to, however, as recently demonstrated by Dr. Howard in the hospitals of Paris. The additional measure which he recommends and shows to be successful is forcible extension of the neck, which is accomplished by seizing the head, and forcing it back in such a manner as to stretch the neck. This should be done at the same time that the tongue is drawn forward.

Cold Applications in Fevers.—Harm is sometimes done by the indiscriminate use of cold applications in fevers. Even when the temperature is high, if the surface presents a

bluish appearance, or if the patient complains much of chilliness, cold applications must be used with caution, and a temperature near that of the body must be employed. In these cases, warm applications in the form of warm packs, warm full baths, and tepid or warm spongings, are most useful, but should be followed by a short, cool application just at the close of the warm application. This may consist of a cool sponging, a cool pour, or simply cool affusion of the neck and head.

Ulceration of the Cornea.—This very painful and dangerous affection of the eye is characterized by extreme sensitiveness to light. The patient feels disposed to avoid the light as much as possible. The pain is often so severe as to prevent sleep. The best means of treatment are very simple, and such as can be efficiently employed at home. If a good oculist is accessible, his services should be sought, of course; but in the absence of professional aid, the following may be tried with confidence:—

Three or four times a day, apply to the eye hot fomentations for fifteen or twenty minutes. Water only may be employed, or a weak decoction of poppy-heads or camomile flowers. After the fomentation, a pad of cotton wool should be placed over the eye, and a bandage applied to retain it in place. The patient need not be kept in the dark if the bandage is properly applied.

Convenient Way to Reduce Fever.—An English doctor suggests the use of dry cold as a means of reducing fever. He relates a case in which a lady, who was sick with a fever, had a temperature of 106°, which is very near the fatal point. The patient was placed upon a large air bed filled with cold water. The effect was immediate. In a few hours the temperature had fallen within safe limits, and the patient ultimately made a good recovery. If an air or water bed is not at hand, smaller bags filled with ice-water may be applied about the patient, or even bricks or stones which have been cooled by contact with ice for some time.

What to Do after Hemorrhage.—Directions are often given, what to do to stop hemorrhage, but the very important treatment which should follow a severe hemorrhage is usually overlooked. When the hemorrhage has ceased, the patient may still die from fainting or collapse. To prevent such a result, apply hot fomentations to the head, so as to encourage the cerebral circulation. In extreme cases, give

the patient water to drink freely. The addition of a little salt, a teaspoonful to the pint, will expedite the absorption. From one to three or four pints of water may be taken.

To Relieve Spasmodic Asthma.—In this affection there is a spasmodic contraction of the air passages. This can sometimes be relieved by holding the breath, after filling the lungs, as long as possible, and repeating the act several times. Another excellent means is the following: The patient should fill the lungs as full as possible; then, while the lungs are inflated, let an assistant force air into the lungs by means of a rubber bag, which may be connected with the mouth by a tube, and should be compressed with much force. By this means the spasm can usually be overcome.

Salt Rheum.—For an old case of salt rheum, in which the skin has become thickened and cracked, use the following ointment:—

R Tar ointment,	1 oz.
Zinc "	aa.

Apply morning and night, after cleansing the surface with castile soap, and spraying with very hot water for fifteen minutes. The hot spray is one of the most important means of treating this obstinate malady. The water should be applied as hot as can be borne without discomfort.

Substitute for Ear Drums.—An English physician suggests the use of castor oil in the ear by persons whose ear drums have been perforated by disease. It is only necessary to drop into the ear three or four drops of the oil, taking care that it is carried to the inner extremity of the canal. This will often improve the hearing in a most remarkable manner. The application should be made each morning. Care must be taken to prevent the ear becoming clogged, especially if the patient is employed in dusty work.

Poultices to the Eyes.—Everybody ought to know that poultices should never be applied to the eye under any circumstances. Hot fomentations are often useful, but should not be applied indiscriminately, and should never be applied more than an hour or two at a time.

—Beans, peas, and other vegetable substances which may swell after getting into the ear so that they cannot be easily dislodged, may be readily removed by filling the ear with alcohol

for a few moments, so as to cause shrinking of the foreign body, and then washing the ear with a syringe, using as much force as can be well borne without detriment.

—One of the best remedies for the throat in scarlet fever, is a strong solution of lactic acid, which should be used with an atomizer. Lactic acid has the property of dissolving the membrane, and is said to accomplish this result very readily. Lime-water has been found useful for the same purpose.

Question Box.

Germ in Milk.—A correspondent who is much interested in hygiene writes requesting that something be said on the subject of milk contamination through the use of bad water by cows. He thinks he has observed a difference in the milk of cows who drank from stagnant ponds and cess-pools, from that of cows who drank pure water, and believes that he has traced at least one fatal case to this source.

Ans.—This subject has engaged the attention of eminent microscopists for several years, and at one time it was considered proven that germs in foul water may find their way into the milk of cows drinking the water. At the present time the question is unsettled. The microscopic examination of milk is attended by very great difficulties, and it is by no means easy to say, in most cases, whether a certain little speck seen under the microscope is a germ or something else. However, it cannot be doubted that the use of unwholesome water, as well as the use of improper food, must affect the health of a cow, and hence impair the quality of the milk; and the most scrupulous attention should be given to the health of cows kept for dairy purposes.

Anti-Fermentive.—Mrs. J. G. L., of N. Y., sends a sample of Anti-Fermentive, which is advertised as a safe and harmless preparation for preserving fruits, etc., and asks our opinion of it.

Ans.—We have examined the article, and find it to be nothing more or less than the well-known antiseptic, salicylate of soda. This substance is an antiseptic, but should not be used in food; for although it could not be said to be poison in the small quantities in which it is employed, if used to any great extent, it would result in serious disease. Its use is discountenanced by all scientific physicians, and has been prohibited in several European countries. It ought not to be tolerated here in this country.

Stone Filters.—A correspondent sends a sample of stone which is used for filters in Atlanta, Ga., and wishes to know our opinion as to its value as a filtering material.

Ans.—The stone is a good filter for suspended particles, but will not remove organic impurities. The suspended filth which water contains is the least dangerous. The organic filth in solution is the most dangerous constituent of impure water, and a filter which will not remove it is of very little value, except to give the water a better appearance. A filter, to be serviceable, must contain charcoal or some other substance capable of oxidizing, or burning up, the organic impurities of water.

Typhoid Fever—Mediterranean Wheat.—A correspondent asks us to explain why typhoid fever occurs more frequently in the mountainous regions of Georgia than in the low country along the coast, since there is undoubtedly more filth in the low country than in the mountainous regions. Inquiry is also made respecting the nutritive value of Mediterranean red wheat.

Ans.—1. A fever known as mountain fever is quite prevalent in mountainous regions. It is probably due to the contamination of springs or other sources of water supply, which is very apt to occur in these regions, on account of the conditions favorable for contamination, which are likely to exist through the improper location of vaults, cess-pools, etc. One of these reservoirs of filth located on a hillside may contaminate the water supply of many families below, when, if it was located in a flat country, the area of contamination would be much smaller.

2. The wheat grown in the region of the Mediterranean and Black seas contains a larger proportion of gluten than most of the wheat grown in this country. The red wheat of this country also contains a larger proportion of gluten than the white wheat, and brings a larger price in the markets, as it furnishes a large proportion of patent flour. The red varieties of wheat are all of greater value than the white varieties.

Position during Sleep.—A correspondent inquires, "Is it better to sleep on the back or side, and does it make any difference whether the head is to the north?"

Ans.—A side position seems to be the most favorable to sound sleep. In lying upon the back, certain of the muscles, particularly those of the back, are not so perfectly relaxed as in the side position. The position in which the muscles seem to be the most perfectly relaxed and at rest is a semi-flexed position, such as would naturally be assumed by a person lying on the side.

Night-mare and various other disturbances which occur during sleep, are much more likely to occur when sleeping upon the back.

We have never been able to obtain any evidence that the position of the head in relation to the points of the compass has any relation whatever to the soundness of sleep.

Position in Relation to Digestion.—The inquiry is made whether digestion goes on better when one is lying down than when sitting up,

and whether perfect quiet or gentle exercise is the most favorable to good digestion.

Ans.—The condition most favorable for digestion is that of gentle exercise. For persons who have very slow digestion and weak nerves, sitting quiet, or even lying down for an hour or two after eating, is sometimes necessary. If a person lies down, the best position to assume is on the left side.

Tomato Catsup without Condiments.—A Southern correspondent wishes to know if there is any way of putting up tomato catsup without using the usual condiments. The only proper methods of preserving tomatoes is drying and canning. Drying is not so good a process as canning, as it does not so well preserve the natural flavor of the fruit. Tomato catsup is preserved by the condiments which it contains. When these are left out, the fruit will very soon spoil.

Ammonia in Snake-bites.—We are asked for our views of aqua ammonia in snake-bites, on the principle that the alkali of the ammonia neutralizes the poison of the snake.

Ans.—We have nothing to say of ammonia of the principle named, unless it is applied to the bite instantaneously after its infliction; but the internal administration of aqua ammonia may sometimes prove serviceable as an antidote for poisoning by snake-bites, through its stimulating effect upon the heart.

Effects of Hot Water on the Teeth.—A person asks: "Is not the drinking of hot water injurious to the teeth?"


Ans.—Experiments have been made for the purpose of showing the effects of changes of temperature on the teeth; and the results are such as indicate that the popular opinion that the use of hot and cold drinks will destroy the enamel of the teeth by cracking it, is without foundation.

Noisy Breathing.—The question is asked: "In perfect health, will breathing in sleep be noiseless?"

Ans.—Yes. Tranquil breathing in sleep should be without audible sound, or at least very slight sound. Noise during sleep at any time indicates obstruction of the air passages. An obstruction in the nose is usually due to chronic nasal catarrh. Obstructions of this kind, as well as being the result of catarrh, are also the cause of its perpetuation and aggravate its worst symptoms, and should receive attention.

Chicken Cholera.—J. P. B. wishes to know the cause of chicken cholera.

Ans.—The investigations made by experts employed by our Government show very conclusively that the cause of chicken cholera is the specific germ of bacteria. We published an engraving representing these microbes in *Good Health* for May, 1883.


 THE COOKING SCHOOL.

Conducted by MRS. E. E. KELLOGG.

BREAKFAST DISHES.

A GOOD breakfast is the very best capital upon which people who have real work to do in the world can begin the day. If the food is well selected and well cooked, it furnishes both cheer and strength for their daily task. Poor food, or good food poorly prepared, taxes the digestive powers more than is their due, and consequently robs brain and nerves of their vigor. Good food is not *rich* food, in the common acceptance of the term; it is such food as furnishes the requisite nutriment with the least fatigue to the digestive powers. It is the best of material prepared in the best possible manner, and with pleasant variety. It may be very simple in character; but if it be bread, it will be of the very best quality; if potato, it will be the driest and most mealy, with as much as possible of its nutritious elements retained.

What to get for breakfast, is one of the most puzzling problems with which the majority of housewives have to deal. The usually limited time for its preparation requires that it be something easily and quickly prepared, and besides this, health demands that the bill of fare be composed of such articles of diet as require but a minimum length of time for digestion, in order that the stomach may have chance for rest, after the process of digestion is complete, before the dinner hour. The habit of using fried potatoes, fried mushes, salt fish, salted meats, and other similar foods of almost impossible digestibility for breakfast dishes, is a most pernicious one. Scarcely any other articles of food would so completely set at variance the laws of breakfast hygiene. Besides being exceedingly difficult of digestion, the thirst-provoking character of salted foods makes them an important auxiliary to the acquirement of a love of intoxicating drinks. We feel very sure that, as a prominent temperance writer says, it "very often happens that women who send out their loved ones with an agony of prayer that they may be kept from drink for the day, also send them with a breakfast that will make them almost frantic with thirst before they get to the first tavern."

The breakfast should be as simple as possible,

but the food should be as delicately cooked and neatly served as the most elaborate bill of fare would demand. Fruit, which is always an acceptable article of diet, should have a place upon the breakfast-table. Nice, mellow apples and oranges are obtainable most of the year round, and can be varied by peaches, grapes, and other fruit in their season. The fruit can be arranged and left in some cool place over night.

The grains form one of the most healthful, appropriate, and convenient of breakfast dishes. Wheat, oatmeal, or barley, because of their especial nutritive properties, are excellent for use as the principal dish for breakfast.

Grains for Breakfast.—Hasty preparation will not suffice for the cereals, as nearly all require several hours' cooking to render them wholesome. This difficulty in the way of their use on the breakfast table may be obviated by cooking them the afternoon before in a double boiler or in one dish set inside another filled with boiling water. (Recipes for cooking the various grains were given in the April number.) When the grain is done, turn it into a large earthen or china dish. In the morning, all that is necessary to do is to set the dish into a steamer over a kettle of boiling water, and heat through to make it ready for the table. If cooked in a porcelain-lined or pure granite ware double boiler, it can be re-heated in the same dish, by filling the outer cup with boiling water, and placing the inner cup containing the grain in it until well warmed through. But unless one is very certain that the boiler is made of perfectly pure material, it is far better to turn it into an earthen dish, and steam over boiling water, and is certainly no more trouble.

Some one of the grains well cooked and served with cream and sugar with nice ripe fruit, whole-wheat bread, and some simple relishes, are quite sufficient for a healthful and palatable breakfast. If, however, a more extensive bill of fare is desired, we would suggest, as suitable articles for breakfast, radishes, raw, sliced tomatoes, and celery in their season, steamed figs, dates, baked apples, and some of the various unfermented breads for which recipes were given in the March number. Of vegetables, none but the potato is especially serviceable as a breakfast food. And it is much more readily digested when baked than when prepared in any other manner. Stewing requires less time for preparation, but about one hour longer for digestion. But in whatever manner they are

cooked, they should not be prepared over night, and left in a pan full of water to dissolve out the little nutritive elements they contain. If they are to be baked, thoroughly wipe their skins with a wet cloth, then put them in a cool place over night; if they are to be pared, it is far better to do it in the morning.

As dressings for baked potatoes, we suggest the following:—

Cream Sauce.—Heat a pint of rich milk, part cream if it can be afforded, to boiling, and stir into it one tablespoonful of flour previously rubbed perfectly smooth in a little milk. Season with salt if desired, and boil up two or three minutes till the flour is well cooked, stirring continually that no lumps be formed. Gravy full of lumps is unpalatable. If, however, it happens that with all the care lumps are found in the sauce, turn it quickly through a fine, hot colander into the dish in which it is to be served.

Celery Sauce.—Cut a half dozen stalks of celery into finger lengths, and simmer in milk for ten or fifteen minutes, or until the milk is well flavored. Skim out the celery, add a little cream to the milk, salt if desired, and thicken with flour as for cream sauce.

Egg Sauce.—Heat a pint of milk to boiling, and stir in a dessert spoonful of flour rubbed smooth in a little milk. Let it boil, stirring constantly, until the sauce is well thickened, then add the well-beaten yolk of an egg, turning it in very slowly and stirring rapidly so that it shall be well mingled with the whole. Boil up once only, add a very little salt if desired, and serve. The egg thus added makes an excellent substitute for cream when the latter cannot be had for cream sauce.

The following various kinds of toast are also quite suitable for breakfast dishes:—

Strawberry Toast.—Brown nicely some slices of Graham bread. Turn a can of well-kept strawberries into a colander over an earthen dish to separate the juice and berries. Place the juice in a porcelain vessel on the stove, and heat to boiling. When boiling, thicken to consistency of cream with flour rubbed smooth in a little water. A teaspoonful of flour to the pint of juice will be about the right proportion. Add the berries, and boil up once or twice, just sufficient to cook the flour and heat the berries; then dish over the slices of hot toast. If the toast is very dry, a little of the juice may be reserved without thickening, and heated in another dish to first moisten the toast. Or, if preferred, the fruit may be poured hot over the toast without being thickened. Canned blueberries, raspberries, peaches, and cherries also, make excellent fruit toast.

Prune Toast.—Pour tepid water over some prunes, and let them stand a few minutes to soak and soften. Rub well between the hands to clean; rinse in clean water, and then remove the stones, which can easily be done by this time. For every quart of prunes when stoned, add three of water, and place in a porcelain kettle on the stove; cover tightly, and simmer

gently till done. Then turn into a colander, and rub through to remove the skins. If the toast is desired for breakfast, the prunes should be prepared the afternoon before. When needed, heat to boiling, and pour over nicely browned slices of toast, previously moistened with hot water or hot cream as preferred.

Vegetable Oyster Toast.—Cook a quart of cleaned and sliced vegetable oysters in a quart of water till very tender, then add a pint of milk, a cup of cream, salt to taste, and thicken the whole with two tablespoonfuls of flour rubbed to a smooth paste with a little milk. Let it boil for a few minutes, and turn over slices of well-browned toast previously moistened with hot milk.

Lentil Toast.—A sauce made of stewed lentils rubbed through a colander as for soup, and seasoned with salt and cream to taste, turned over slices of well-browned Graham bread, makes a very palatable toast. If needed for breakfast, the lentils should be stewed the day previous.

Celery Toast.—Cut the tender, white portion of celery into inch pieces, simmer until tender (twenty minutes or half an hour will usually be sufficient) in a very little water, add sweet cream, season to taste, and pour over slices of toasted bread. Serve hot.

Dry Toast.—Cut thinly and evenly some slices of Graham bread, and brown nicely over hot coals or on the top grate of a hot oven. The latter method is far preferable when it is desired for dyspeptics, as the entire thickness of the slice is toasted.

Milk Toast.—Prepare some bread as for dry toast, moisten with a little hot milk, and then turn over each piece a sauce made by thickening a pint of thin cream with a teaspoonful of flour in the same manner as for cream sauce.

Tomato Toast.—Pour hot, strained, stewed tomatoes, seasoned with salt and a little cream if desired, over slices of nicely browned toast. The tomato sauce is much better to be first thickened to the consistency of cream with a little flour, the same as for milk toast.

Literary Notices.

THE ACADEMY NEWS is a monthly issued by the Michigan Military Academy, several numbers of which have recently come to our table. It is a neat, clearly printed paper, filled with well-arranged articles and paragraphs on all current topics of literature, science, and art.

Published at Orchard Lake, Mich. Price, \$1.00 per annum.

THE SANITARY ENGINEER, 140 William St., N. Y.—This journal, now in its tenth volume, has long filled a place in the front ranks of the literature published in the interest of sanitary reform. It is published every Thursday, and is always full of the most helpful hints on drainage,

water supply, ventilation, heating, lighting, and every phase of public health needing to be understood by house builders, architects, plumbers, and all other persons interested in healthful homes. Subscription price, \$4.00 per year.

PACIFIC MEDICAL AND SURGICAL JOURNAL, San Francisco.—This, the leading medical journal of the Pacific coast, keeps even pace with its Eastern contemporaries. Each number contains a good store of valuable medical knowledge of interest to professional readers.

THE SANITARIAN, New York: A. N. Bell, M. D.—This, the oldest sanitary journal in the country, comes monthly to our table, filled with most valuable instruction on sanitary topics. It is a standard journal, and well deserves the high place it has reached. Published monthly. Subscription price, \$4.00 a year.

SEED-TIME AND HARVEST.—This is an illustrated monthly magazine devoted to rural affairs. It contains many excellent hints respecting fruit and flower culture, vegetable gardening, and other agricultural pursuits. Published by Isaac Tillinghast, La Plume, Pa. Subscription price, 50 cts. per year.

THE MOTHER'S MAGAZINE for September comes laden with its usual number of good things, especially interesting and useful to the mothers of our nation. It is one of the most thoroughly helpful of magazines, and ought to be in the hands of every mother in the land.

Subscription price, \$1.50 per year. *Mother's Magazine*, box 3157, N. Y. City.

THE HEALTH SIDE is the new name of a magazine which for the last twenty-nine years has been known as the *Physio-Medical Recorder*. Its prospectus comprehends a broad scope for usefulness in the field of health-study; and if its succeeding numbers equal those we have seen, it may certainly hope to succeed.

Published at Cincinnati, O., by Wm. W. Cook. Subscription price, \$1.00 per annum.

That most excellent of monthlies, the **WOMAN AT WORK**, comes to our table this month with a new name, having been rechristened the *Woman's Century*. The magazine is especially devoted to the interests of woman's work in industries, missions, charities, and reforms. Its aim is a most worthy one, and we feel no hesitancy in commending it to our readers as one of the very best magazines which can be introduced into the home circle.

Published at Brattleboro, Vt. Subscription price, \$1.00 per year.

THE HEALTH MISCELLANY.—This is the title of an illustrated octavo pamphlet published at 25 cents by Messrs. Fowler & Wells, 753 Broadway, New York. It contains a series of papers devoted to important health topics, opening with an article on the "External Senses," with illustrations of the eye, ear, nose, tongue, and skin, giving important information in regard to the functions and also the care of these important organs of the body. The next is an illustrated article on the "Cause and Cure of the Backache," especially found among so many women. A chapter on "Ethnology" is illustrated with a number of portraits showing the races of men. A very important paper is one devoted to "Bodily Positions and Dress" in relation to health and form. The "Teeth," their use and care, contains illustrations showing how the teeth are formed and grow, why and how they decay. The work also contains "Confessions and Observations of Sir Edward Bulwer-Lytton," originally published anonymously, under the title, "Confessions of a Water-cure Patient," written in his peculiarly attractive style; is most entertaining and profitable reading. "Getting Used to It" shows how the system appears to get used to unhealthful habits.

THE MAN WONDERFUL IN THE HOUSE BEAUTIFUL, teaching the Principles of Physiology and Hygiene, and the effects of Stimulants and Narcotics, for home reading. It is also adapted as a Reader for High Schools, and as a Text-book for Grammar, Intermediate, and District Schools, Chillion B. Allen, A. M., LL. B., M. D., and Mary A. Allen, A. B., M. D., members of the Broome Co. (N. Y.) Medical Society. 370 pp., 12mo, extra cloth, price \$1.50. New York, Fowler & Wells Co., Publishers, 753 Broadway.

The book is an allegory in which the body is the "House Beautiful," and its inhabitant is the "Man Wonderful." The building of the house is shown from foundation to roof, and then we are taken through the different rooms, and their wonders and beauties displayed to us, and all this time we are being taught—almost without knowing it—Anatomy, Physiology, and Hygiene, with practical applications and suggestions.

We are then introduced to the inhabitant of the house, "THE MAN WONDERFUL," and learn of his growth, development, and habits. We also become acquainted with the guests whom he entertains, and find that some of them are doubtful acquaintances, some bad, and some decidedly wicked, while others are very good company. Under this form we learn of food, drink, and the effects of narcotics and stimulants.

The happy manner in which the subject treated is presented to the reader, must certainly add much to the interest in the study of physiology and hygiene.

Publisher's Page.

☞ THE patients at the Sanitarium were treated to a somewhat unusual form of entertainment a few evenings ago. A musical concert had been announced for the evening, but the elaborate preparations being made in the afternoon preceding, led to the surmise that something much out of the usual order might be expected, so that at the hour of beginning the large parlor and adjoining rooms and the hall for some distance from the parlor door, were crowded full, and the porches surrounding the parlor were also filled, a group of interested spectators crowding about each window.

The interior of the room was handsomely decorated with cedar and other evergreens and a profusion of flowers. The piano was placed in one corner of the spacious room and in the opposite corner was erected a fine arch of evergreens, from the center of which was suspended a beautiful horseshoe of white flowers. From the arch a passage inclosed by a hedge of evergreens led to a side entrance to the parlor.

Soon after the hour appointed, the program was opened; and for fully half an hour the audience was entertained by vocal and instrumental music kindly furnished by patients and others. Just as the players were striking the concluding strains of the last piece upon the program, a company of young people marched in through the rustic lane, and passing through the evergreen arch, took seats with the audience, all except the last pair, who remained standing just under the arch, and almost before any one had time to determine what was to happen next, Dr. W. H. Maxson, of the Sanitarium, and Miss Hattie P. Sanderson, also a member of the medical corps of the institution, were by a brief ceremony accompanied by appropriate remarks by Eld. Hill, of Minnesota, pronounced husband and wife.

After receiving the hearty congratulations of their friends, which included the whole Sanitarium family of patients and helpers, the happy couple took an early train for the West, with the expectation of enjoying a two weeks' trip among the picturesque scenery of the Lake Region, after which they will return to their posts of duty in the Sanitarium.

Both Dr. and Mrs. Maxson have the good fortune to enjoy the confidence and esteem of an unusually large circle of friends who are deeply interested in their welfare; and the reputation which they have both earned by earnest work to prepare themselves for usefulness, and fidelity to duty, guarantees for them, with the blessing of Providence, a happy and most useful future.

☞ The new Sanitarium building is now almost completed. The first story is being plastered, and

the heating and ventilating apparatus is being put in. Patients are picking out their rooms, and a considerable number of these new and pleasant rooms have already been engaged. It is expected that the entire building will be occupied by Nov. 1, when a dedication will be held, to which all old patients and friends of the institution are cordially invited.

☞ The season of the year is approaching when the majority of people have more leisure for the reading and investigation of new subjects, and the publishers of this journal wish to secure several hundred agents to introduce it in new and old fields between now and Jan. 1, 1885. A liberal commission is given, and outfits are furnished free. It is not claimed that great fortunes can be made in this work, but it is certainly known that great good may be done, and an earnest canvasser can earn fair wages on the terms offered. To be really successful, however, the canvasser must really believe what he advocates in presenting the journal, and must be a living example of its teachings. No one is desired as an agent who wishes to engage in the work solely for the money which he may be able to make. Such a person will become easily discouraged, and will probably not meet his expectations, even if they are very moderate; but the really live, earnest believer in hygienic principles who engages in the canvass rarely fails of real success, not only in obtaining subscriptions, but in winning converts to better modes of eating, thinking, working, and living generally. We want 500 such agents right away.

☞ We learn with pleasure that the new building which has been in course of erection during the past summer for the South Lancaster Academy, is nearly completed, and will be dedicated about Oct. 7. This new school promises to be a most efficient means of inculcating correct principles in the minds of New England youth, and fitting young men and women for the real success in life which depends to such a great degree upon the preparatory training in early life.

☞ The Eighteenth Annual Meeting of the stockholders of the Health Reform Institute will be held at Battle Creek, Mich., about the first of November, 1884, for the election of a Board of Directors, and the transaction of such other business as may come before the meeting. As a majority of the stock must be represented to make the meeting legal, stockholders who cannot attend will please see at once that their stock is represented by proxy, if they have not already made such provision.

ELD. S. N. HASSELL,	} Board of Directors.
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A. R. HENRY,	
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