

GOOD HEALTH.



MENS SANA IN CORPORE SANO.

VOL. 14.

BATTLE CREEK, MICH., DECEMBER, 1879.

NO. 12.

THE PHYSIOLOGY OF DIGESTION.*

BY THE EDITOR.

INTESTINAL DIGESTION.—While stomach digestion has been going on, the gastric juice acting upon the albuminous elements of the food, and the digestion of the starch slowly progressing, the fatty elements of the food have undergone no change except such as have resulted from the elevated temperature. Being to some extent freed from its association with the other elements, the fat floats upon the surface of the contents of the stomach, when fluid, but undergoes no further change until it comes in contact with the bile and pancreatic juice in the duodenum, when those fluids act upon it in the manner already described. The pancreatic juice also acts vigorously upon the portions of starch remaining undigested, and such portions of cane sugar as may have escaped digestion or absorption in the stomach.

We now have all the elements of food acted upon by the saliva, gastric juice, bile, and pancreatic juice, but, lest any portion should escape undigested, nature provides the intestinal juice, which continues its action upon all the elements of food alike during the whole of its passage through the small intestine, and perhaps to some extent in the large intestine also.

During the process of intestinal digestion the food is slowly moved along through the twenty-five feet of small and large intestines, gradually becoming more and more solid by the absorption of the portions rendered fluid

by the digestive juices, and also gradually being more and more completely deprived of its nutrient elements, until at last there is left in the lower part of the large intestine nothing but the innutritious residue of the food, mixed with the excrementitious products of the intestinal mucous membrane, constituting alvine matter, or feces, which are destined in due time to be discharged from the body, such a discharge occurring normally as often as once in twenty-four hours, in most persons, and usually in the morning before or just after taking breakfast.

ABSORPTION.—The process of absorption begins almost as soon as food is taken into the mouth, and continues so long as any soluble nutriment can be extracted from the alimentary mass. The work of absorption is performed by two sets of absorbent vessels, minute veins, and lymphatics, here called lacteals. The venous absorbents take up whatever is held in solution, in the fluid taken into the stomach, and the principal portion of the digested farinaceous, saccharine, and albuminous elements of food. The lacteals absorb the emulsified fats, and some portion of the other elements. The products absorbed by the venous absorbents find their way into the general circulation through the hepatic vein, after passing through the liver, which is apparently a wise arrangement of nature to provide for a sort of filtration before the more delicate tissues of the body are exposed to the action of whatever deleterious elements the food may happen to contain. Those products which are absorbed by the lacteals, reach the

*"Digestion and Dyspepsia:" Good Health Pub. Co.

general circulation through the thoracic duct, a long, slender duct which empties into the large vein from the arm on the left side. Both classes of products meet in the right side of the heart.

OXYGENATION.—From the right heart the mixed products of digestion are sent to the lungs, where, by coming in contact with the oxygen of the air, the final change is effected whereby heterogeneous, organized matter is converted into human blood, with properties and qualities to nourish and repair each of the great variety of delicate tissues found in the body. Just what is the nature of these changes is not fully known; but that such changes do occur is pretty certain. After the blood has passed through the lungs, neither sugar nor fat, which may abound in the blood before its oxygenation, can usually be found.

We have now traced through its various subdivisions the entire process of digestion, and found, until we came to the process of absorption, that, as at first remarked, the process chiefly depends on two vital actions; viz., muscular action and secretion. Muscular action masticates the food—by the aid of the passive accessory organs, the teeth—and mingles with it the saliva. Muscular contraction draws the alimentary bolus from the mouth down into the stomach. Here, by the action of muscles, it is churned up with the gastric juice, and finally squeezed through the pylorus into the small intestine, where, by the aid of muscles, it is mixed with the bile and the pancreatic and intestinal juices, and is moved along, constantly coming in contact with fresh secreting and absorbing surfaces until its digestion is complete. Even absorption is greatly aided by this muscular action, as the circulation in the absorbing parts is thereby quickened, so that larger quantities of fluid are taken up.

NERVOUS RELATIONS.—Before leaving the physiology of digestion it should be noted that both the secretion of the digestive fluids and the muscular action of the stomach and intestines are under the control of nerves. The digestive organs are all intimately connected with the general nervous system, so that any change in one is readily noted in the other. A demand for nutriment in the general system is referred to the stomach as hun-

ger, just as the demand for liquid is referred to the throat as thirst. Undigested food, or any other obnoxious substances in the stomach, may excite a nausea which will relax and prostrate the whole system. In certain states of the system, and especially in young children, disorder of digestion may even produce convulsions. On the other hand, we see that agents which affect the general nervous system often influence the digestive organs indirectly with almost the promptness of agents addressed directly to them. The sight or smell of savory viands will "make the mouth water" by exciting the salivary secretion. Seeing or smelling disgusting objects will not infrequently cause prompt emesis, when there is nothing whatever in the stomach to occasion vomiting. In a case which came under our observation several years ago, a gentleman was deprived of several meals by having had the misfortune to meet a very loathsome object. Whenever he attempted to eat, an image of the repulsive object came before his mind, and the immediate nauseating effects were so great as to make it impossible for him to keep anything in his stomach. On more than one occasion a patient has been made to vomit by being told that he had taken an emetic, when the dose he had swallowed was inert.

Vomiting is evidently a result of reflex nervous action in most cases. The exact mechanism of the act we do not need to explain, except to say that the expulsive effort is made chiefly by the abdominal muscles and the diaphragm, the stomach taking little active part in the process; being powerfully compressed against the rigid diaphragm, by the vigorous contraction of the abdominal muscles, its contents are forcibly expelled upward through the esophagus, contraction of the pylorus preventing exit from the stomach in a downward direction.

Retching is an effort of the same character as vomiting, only less in degree. Gulping is a peculiar action by which air is drawn down into the stomach. It frequently precedes vomiting, having the effect to relax the sphincter muscle at the lower end of the esophagus. Other abnormal actions connected with the stomach and bowels will be explained in connection with the diseases of these organs.

TABLE

Showing the Length of Time Required for the Digestion of Various Articles of Food in the Stomach, according to the Observations of Dr. Beaumont on the Stomach of Alexis St. Martin.

	H. MIN.		H. MIN.
Rice, boiled,	1 00	Duck, wild, roasted,	4 30
Milk, boiled,	2 00	Beef suet, boiled,	5 30
" unboiled,	2 15	Cheese, old,	3 30
Venison steak,		Soup from beef,	
broiled,	1 35	with vegetables	
Lamb, broiled,	2 30	and bread,	4 00
Eggs, hard-boiled,	3 30	Soup, from barley,	1 30
" soft-boiled,	3 00	" " mutton,	3 30
" fried,	3 30	" " oysters,	3 30
" raw,	2 00	Hash (meat and veg-	
Salmon trout, fresh		etables),	2 30
boiled,	1 30	Sausage, broiled,	3 20
Salmon, salted,		Bread, wheaten and	
boiled,	4 00	fresh,	2 30
Oysters, stewed,	3 30	Apple dumpling,	3 00
Beef, fresh and lean,		Apples, sour, mel-	
roasted,	3 00	low,	2 00
Beefsteak, broiled,	3 00	Apples, sweet, mel-	
Beef, hard, salted,		low,	1 30
boiled,	4 15	Parsnips, boiled,	2 30
Pork, fat and lean,		Carrots, boiled,	3 15
roasted,	5 15	Turnips, boiled,	3 50
Mutton, boiled,	3 00	Potatoes, boiled,	3 30
Veal, broiled,	4 00	" baked,	2 30
Fowl, boiled,	4 00	Cabbage, boiled,	4 30

AN INDICTMENT AGAINST ALCOHOL.

COL. ROBERT INGERSOLL, whose views upon the subject of temperance are as much to be approved and admired as his religious notions are to be condemned, in a recent speech before a jury in a distillery case, made the following eloquent indictment of the demon, alcohol:—

"I am aware there is a prejudice against any man engaged in the manufacture of alcohol. I believe from the time it issues from the coiled and poisonous worm in the distillery until it empties into the hell of death, dishonor, and crime, that it is demoralizing to everybody that touches it, from the source to where it ends. I do not believe that anybody can contemplate the subject without being prejudiced against the crime. All we have to do is to think of the wrecks on either side of the stream of death, of the suicides, of the insanity, of the poverty, of the destruction, of the little children tugging at the breast, of weeping, despairing wives asking for bread, of the men of genius it has wrecked, of the struggling with imaginary serpents produced by this devilish thing; and

when you think of the jails, of the almshouses, of the asylums, of the prisons and scaffolds on either bank, I do not wonder that every thoughtful man is prejudiced against this vile stuff called alcohol. Intemperance cuts down youth in its vigor, and age in its weakness. It breaks the father's heart, bereaves the doting mother, extinguishes natural affection, erases conjugal love, blots out filial attachment, and blights parental hope, and brings premature age in sorrow to the grave. It produces weakness, not strength; sickness, not health; death, not life. It makes wives widows, children orphans, fathers fiends, and all paupers. It feeds rheumatism, nurses gout, welcomes epidemics, invites cholera, imports pestilence, and embraces consumption. It covers the land with misery, idleness, and crime. It engenders controversies, fosters quarrels, and cherishes riots. It crowds your penitentiaries, and furnishes victims for the scaffold. It is the blood of the gambler, the element of the burglar, the prop of the highwayman, and the support of the midnight incendiary. It countenances the liar, respects the thief, esteems the blasphemer. It violates obligations, reverences fraud, honors infamy. It defames benevolence, hates love, scorns virtue and innocence. It incites the father to butcher his offspring, and the child to grind the parental ax. It burns up men, consumes women, detests life, curses God, and despises Heaven. It suborns witnesses, nurses perfidy, defiles the jury box, and stains the judicial ermine. It bribes voters, disqualifies votes, corrupts elections, pollutes our institutions, and endangers the government. It degrades the citizen, debases the legislator, dishonors the statesman, and disarms the patriot. It brings crime, not honor; terror, not safety; despair, not hope; misery, not happiness; and with the malevolence of a fiend, calmly surveys its frightful desolation, and unsated with havoc, it poisons felicity, kills peace, ruins morals, whips out national honor, curses the world, and then laughs at its ruin. It does that and more—it murders the soul. It is the sum of all villainies, the father of crimes, the mother of all abominations, the devil's best friend, and God's worst enemy."

A CHAPTER FOR BOYS.

* *The Race Ruined by Boys.* The human race is growing steadily weaker year by year. The boys of to-day would be no match in physical strength for the sturdy youths of a century ago who are now their grandparents. An immense amount of skillful training enables now and then one to accomplish some wonderful feat of walking, rowing, or swimming, but we hear very little of remarkable feats of labor accomplished by our modern boys. Even the country boys of to-day cannot endure the hard work which their fathers accomplished at the same age; and we doubt not that this growing physical weakness is one of the reasons why so large a share of the boys whose fathers are farmers, and who have been reared on farms, are unwilling to follow the occupation of their fathers for a livelihood. They are too weakly to do the work required by an agricultural life, even by the aid of the numerous labor-saving inventions of the age.

What is it that is undermining the health of the race and sapping the constitutions of our American men? No doubt much may be attributed to the unnatural refinements of civilization in several directions; but there can be no doubt that vice is the most active cause of all. Vice yearly ruins more constitutions than hard work, severe study, hunger, cold, privation, and disease combined.

Boys, the destiny of the race is in your hands. You can do more than all the doctors, all the scientists and most eminent political men in the world, to secure the prosperity and future greatness of the nation, by taking care of yourselves, by being pure, noble, true to yourselves and to the demands of high moral principle.

Bad Company. The influence of evil companionship is one of the most powerful agents for evil against which those who love purity and are seeking to elevate and benefit their fellow-men have to contend. A bad boy can do more harm in a community than can be counteracted by all the clergymen, Sabbath-school teachers, tract-distributors, and other Christian workers combined. An evil boy is a pest, compared with which the cholera, small-pox, and even the plague, are nothing. The damage which would be done by a terrific

hurricane sweeping with destructive force through a thickly settled district is insignificant compared with the evil work which may be accomplished by one vicious lad.

No community is free from these vipers, these agents of the arch-fiend. Every school, no matter how select it may be, contains a greater or less number of these young moral lepers. Often they pursue their work unsuspected by the good and pure, who do not dream of the vileness pent up in the young brains which have not yet learned the multiplication table and scarcely learned to read. We have known instances in which a boy of seven or eight years of age has implanted the venom of vice in the hearts and minds of half a score of pure-minded lads within a few days of his first association with them. This vice spreads like wild-fire. It is more "catching" than the most contagious disease, and more tenacious, when once implanted, than the leprosy.

Boys are easily influenced either for right or for wrong, but especially for the wrong; hence it is the duty of parents to select good companions for their children, and it is the duty of children to avoid bad company as they would avoid carrion or the most loathsome object. A boy with a match-box in a powder magazine would be in no greater danger than in the company of most of the lads who attend our public schools and play upon the streets. It is astonishing how early children, especially boys, will sometimes learn the hideous, shameless tricks of vice which yearly lead thousands down to everlasting death. Often children begin their course of sin while yet cradled in their mother's arms, thus early taught by some vile nurse. Boys that fight and swear, that play upon the streets and disobey their parents, may be wisely shunned as unfit for associates. In many instances, too, boys whose conduct is in other respects wholly faultless sometimes indulge in vice, ignorant of its real nature and consequences. At the first intimation of evil on the part of a companion, a boy who is yet pure should flee away as from a deadly serpent or a voracious beast. Do not let the desire to gratify a craving curiosity deter you from fleeing at once from the source of contamination. Under such circumstances do

not hesitate a moment to escape from danger. If an evil word is spoken or an indecent act of any sort indulged in by a companion, cut the acquaintance of such a boy at once. Never allow yourself to be alone with him a moment. On no account be induced to associate with him. He will as surely soil and besmear with sin your moral garments as would contact with the most filthy object imaginable your outer garments.

It were better for a boy never to see or associate with a lad of his own age than to run any risk of being corrupted before he is old enough to appreciate the terrible enormity of sin and the awful consequences of transgression. It should be recollected also that not only young boys but vicious youths and young men are frequently the instructors in vice. It is unsafe to trust any but those who are known to be pure.

Bad Language. We have often been astonished at the facility with which children acquire the language of vice. Often we have been astounded to hear little boys scarcely out of their cradles, lisping the most horrible oaths and the vilest epithets. The streets and alleys in our large cities, and in smaller ones too in a less degree, are nurseries of vice, in which are reared the criminals that fill our jails, prisons, work-houses, school-ships, and houses of correction. Many a lad begins his criminal education by learning the language of vice and sin. At first he simply imitates the evil utterances of others; but soon he learns the full significance of the obscene and filthy language which he hears and repeats, and then he rapidly progresses in the downward road.

A boy that indulges in the use of foul language will not long be chaste in acts. It is a safe rule to be followed by those who wish to grow up pure and unsullied by sin, untainted by vice, that those who use bad language are persons to avoid, to keep away from. Even those who are well fortified against vice, who have been faithfully warned of its consequences and fully appreciate its dangers, cannot be safely trusted to associate with vile talkers. The use of bad language by old and young is an evil which is of the very greatest moment. It is too often ignored; too little is said about it; far too often it is disregarded as of little consequence,

and persons who are really not bad at heart thoughtlessly encourage the evil by listening to and laughing at obscene and ribald jokes, and impure language which ought to make a virtuous man blush with shame to hear.

Boys, if you want to be pure, if you wish to be loved by a pure mother, an innocent sister, and when you are grown to manhood to be worthy of the confidence of a pure, virtuous wife, keep your lips pure; never let a vile word or an indecent allusion pass them. Never, under any circumstances, give utterance to language that you would blush to have your mother overhear. If you find yourself in the company of persons whose language will not bear this test, escape as soon as possible, for you are in danger; your sense of what is right and proper in speech is being vitiated; you are being damaged in a variety of ways.

Bad Books. A bad book is as bad as an evil companion. In some respects it is even worse than a living teacher of vice, since it may cling to an individual at all times. It may follow him to the secrecy of his bed-chamber, and there poison his mind with the venom of evil. The influence of bad books in making bad boys and men is little appreciated. Few are aware how much evil seed is being sown among the young everywhere through the medium of vile books. It is not only the wretched volumes of obscenity of which so many thousands have been seized and destroyed by Mr. Comstock which are included under the head of bad books, and which corrupt the morals of the young and lead them to enter the road to infamy, but the evil literature which is sold in "dime and nickel novels," and which constitutes the principal part of the contents of such papers as the *Police Gazette*, the *Police News*, and a large proportion of the sensational story books which flood the land, and too many of which find their way into town and circulating libraries and even Sunday-school libraries, which are rarely selected with the care that ought to be exercised in the selection of reading matter for the young.

Bad books often find their way even where evil companions would not intrude; and undoubtedly effect a work of evil almost as great as is wrought by bad associations.

Look out, boys, for the tempter in this guise. If a companion offers you a book the character of which is suspicious, take it home to your father, your mother, or some reliable older friend, for examination. If it is handed you with an air of secrecy, or if a promise to keep it hidden from others is required, have nothing to do with it. You might better place a coal of fire or a live viper in your bosom than to allow yourself to read such a book. The thoughts that are implanted in the mind in youth will stick there through life, in spite of all efforts to dislodge them. Hundreds of men who have been thus injured when young, but have by some providence escaped a life of vice and shame, look back with most intense regret to the early days of childhood, and earnestly wish that the pictures then made in the mind by bad books might be effaced. Evil impressions thus formed often torture minds during a whole lifetime. In the most inopportune moments they will intrude themselves. When the individual desires to place his mind undividedly upon sacred and elevated themes, even at the most solemn moments of life, these lewd pictures will sometimes intrude themselves in spite of his efforts to avoid them. It is an awful thing to allow the mind to be thus contaminated; and many a man would give the world, if he possessed it, to be free from the horrible incubus of a defiled imagination.

Vile Pictures. Obscene and lascivious pictures are influences which lead boys astray too important to be unnoticed. Evil men, agents of the arch-fiend, have adopted all sorts of devices for putting into the hands of the boys and youths of the rising generation pictures calculated to excite the passions, to lead to vice. Thousands of these vile pictures are in circulation throughout the country in spite of the worthy efforts of such philanthropists as Mr. Anthony Comstock and his co-laborers. In almost every large school there are boys who have a supply of these infamous designs and act as agents in scattering the evil contagion among all who come under their influence.

Under the guise of art, the genius of some of our finest artists is turned to pandering to this base desire for sensuous gratification. The pictures which hang in many of our art

galleries that are visited by old and young of both sexes often number in the list views which to those whose thoughts are not well trained to rigid chastity can be only means of evil. A plea may be made for these paintings in the name of art; but we see no necessity for the development of art in this particular direction, when nature presents so many and such varied scenes of loveliness in landscapes, flowers, beautiful birds, and graceful animals, to say nothing of the human form protected by sufficient covering to satisfy the demands of modesty.

Many of the papers and magazines sold at our news-stands and eagerly sought after by young men and boys are better suited for the parlors of a house of ill-repute than for the eyes of pure-minded youth. A news-dealer who will distribute such vile sheets ought to be dealt with as an educator in vice and crime, an agent of evil, and a recruiting officer for hell and perdition.

Evil Thoughts. No one can succeed long in keeping himself from vicious acts whose thoughts dwell upon unchaste subjects. Only those who are pure in heart will be pure and chaste in action. The mind must be educated to love and dwell upon pure subjects in early life, as by this means only can the foundation be laid for that purity of character which alone will insure purity of life. When the mind once becomes contaminated with evil thoughts, it requires the work of years of earnest effort to purge it from uncleanness. Vile thoughts leave scars which even time will not always efface. They soil and deprave the soul, as vile acts do the body. God knows them, if no human being does, and if harbored and cherished they will tell against the character in the day of Judgment as surely as will evil words and deeds.

Influence of Other Bad Habits. Evil practices of any sort which lower the moral tone of an individual, which lessen his appreciation of and love for right and purity and true nobility of soul, encourage the development of vice. A boy who loves purity, who has a keen sense of what is true and right, can never become a vicious man. Profanity, falsehood, and deception of every sort, have a tendency in the direction of vice.

The use of highly seasoned food, of rich

saucers, spices and condiments, sweetmeats, and in fact all kinds of stimulating foods, has an undoubted influence in occasioning temptations to sin which otherwise would not occur. The use of mustard, pepper, pepper-sauce, spices, rich gravies, and all similar kinds of food, should be carefully avoided by young persons. They are not wholesome for either old or young; but for the young they are absolutely dangerous.

The use of beer, wine, hard cider, and tobacco, is especially damaging to boys on this account. Tobacco is an especially detrimental agent. The early age at which boys now begin the use of tobacco may be one of the reasons why vice is becoming so terribly common among boys and young men. We never think a boy or young man who uses tobacco safe from the commission of some vile act.

The use of tea and coffee by boys is also a practice which should be interdicted. All wise physicians forbid the use of these narcotic drinks, together with that of tobacco, and always with benefit to those who abstain.

Closing Advice to Boys and Young Men.

One word more and we must close this chapter, which we hope has been read with care by those for whom it is especially written. Let every boy who peruses these pages remember that the facts here stated are true. Every word we have verified, and we have not written one-half that might be said upon this subject. Let the boy who is still pure, who has never defiled himself with vice, firmly resolve that with the help of God he will maintain a pure and virtuous character. It is much easier to preserve purity than to get free from the taint of sin after having been once defiled. Let the boy who has already fallen into evil ways, who is already in the downward road,—let him resolve now to break the chain of sin, to reform at once. The least hesitancy, the slightest dalliance with the demon vice, and the poor victim will be lost. Now, this moment, is the time to reform. Seek purity of mind and heart. Banish evil thoughts and shun evil companions; then with earnest prayer to God, wage a determined battle for purity and chastity until the victory is wholly won.

One of the greatest safeguards for a boy is implicit trust and confidence in his parents.

Let him go to them with all his queries instead of to some older boyish friend. If all boys would do this, an immense amount of evil would be prevented. When tempted to sin, boys, think first of the vileness and wickedness of the act; think that God and pure angels behold every act, and even know every thought. Nothing is hid from their eyes. Think then of the awful results of this terrible sin, and fly from temptation as from a burning house. Send up a prayer to God to deliver you from temptation, and you will not fall. Every battle manfully and successfully fought will add new strength to your resolution and force to your character. Gaining such victories from day to day, you will grow up to be a pure, noble, useful man, the grandest work of God, and will live a happy, virtuous life yourself, and add to the happiness of those around you.—*Plain Facts for Old and Young.*

CURIOSITIES OF FOOD.

THE articles of human diet in the various countries of the world include a category of substances of the most divers characteristics.

In Norway and Sweden the sawdust of resinous woods is boiled and then baked, mixed with flour, to form a bread. The inhabitants of British Guiana eat rotten wood, and the bark of roots and trees is common food in Siberia.

Insects of various species are considered palatable dishes in some countries as instanced by flies in Mexico, grubs in Jamaica, and lice in Southern Africa. Locusts have been used as food from the remotest antiquity, and at the present day they are devoured in enormous quantities by many different races. Among the ancient Greeks the cicadae and butterflies were highly relished. The American Indians are fond of butterflies, as are also the natives of New South Wales.

The Hottentots eat ants both raw and cooked; the East Indians mix them with flour and convert them into a popular pastry. Ants are also used to flavor brandy by the inhabitants of India. In Ceylon, bees are used for food. In New Caledonia, the people eat a large spider esteeming it a luxury.

The Chinese cook and eat the chrysalis of

the silk-worm, the larva of the hawk-moth, and various earth-worms. And yet, says the *Scientific Farmer*, "there is more reason for eating the caterpillar which has been nurtured on the clean palm-bud than for eating the lobster which fattens on carrion. The world has not as yet come to exercise pure reason, and lobster will with us always oversell the caterpillar."

Sea-slugs, entrails, maws, raw flesh, putrid flesh, rats and mice, and the saliva of birds, are not uncommon food in some countries.

A vast number of substances of a mineral character are used as food by various tribes. According to Medhurst, the Chinese use great quantities of gypsum, mixed with pulse, to form a jelly, of which they are very fond. The practice of clay-eating is prevalent in some parts of Florida, and instances of like habit are noted throughout the world. The *Scientific Farmer* gives some interesting facts concerning this habit, which we quote. "The name of Panama is derived from panamante, a substance which the Indians of Central America prepared from a mealy gypsum-powder found in the Sierra. The earth which the Otomacs in Northern Brazil eat is an unctuous, almost tasteless clay of a yellowish-gray color. This clay is collected by the natives with great care, as they discriminate between the flavor of different kinds. The clay is kneaded into balls of from four to six inches in diameter, which are then baked before a slow fire until they attain a reddish color. When eaten, these balls are moistened. An Indian will eat from three-quarters to a pound and a quarter of this clay a day, and consume it as a food in the rainy season, when other food is difficult to be procured, and as a luxury at other times.

"The Indian women who are engaged on the river Magdalena in turning earthenware pots, continually fill their mouths with large lumps of clay.

"In many parts of Peru, calcareous earth is sold in the streets as an article of food for the Indians.

"The natives of New Caledonia, to appease their hunger, eat lumps as large as the fist, of a friable steatite.

"In Java, Labillardiere saw small reddish

cakes of clay sold publicly in the villages for eating.

"In Guinea, the negroes eat a yellowish earth, which they call caouac, and when carried to the West Indies as slaves they endeavor to procure a similar earth as food. In Guinea it is said not to cause inconvenience, but the eating of the earth was forbidden in the West Indies on account of the injury to health, and slaves found transgressing were barbarously punished. Notwithstanding the penalty, a species of red or yellowish stuff was secretly sold in the public market of Martinique in the year 1751.

"Berzelius and Retzius state that in the more remote parts of Sweden hundreds of cart loads of earth containing infusoria are annually consumed by the country people as bread-meal, more from fancy than necessity. In some parts of Finland, a similar kind of earth is mixed with bread.

"This earth-eating habit seems more prevalent in the warmer regions of the earth; and Humboldt observes that in the tropics it is often found necessary to shut children up, in order to prevent their running into the open air to devour earth after recent rain. The practice is generally recognized as injurious to the health or appearance of those who habituate themselves to it."

CAUSE AND CURE OF BLUSHING.

THIS often troublesome affection is seldom brought to the attention of a physician for treatment, as it seems to be pretty well understood to be intimately connected with the mind. It is a very curious phenomenon, and in some cases may be incurable; but the following paragraphs from the London *Lancet* contain suggestions which, if followed, will in most cases result in a cure:—

"Blushing is occasioned by sudden dilatation of the small blood-vessels, which form a fine net-work beneath the skin, and when they admit an increased volume of red blood, cause the surface to appear suffused with color. Blanching is the opposite state, in which the vessels contract and squeeze out their blood, so that the skin is seen of its bloodless hue. The change effected in the size of the vessels is brought about by an instantaneous action of the nervous system. This action may be

induced by a thought, or, unconsciously, by the operation of impressions producing the phenomenon habitually. In a word, blushing may become a *habit*, and it is then beyond the control of the will, except in so far as the will can generally, if not always, conquer any habit. It is almost always useless, and certainly seldom worth while, to strive to cure a habit of this class *directly*.

“The most promising course is to try to establish a new habit, which shall destroy the one it is desired to remedy. For example, if blushing is, as generally happens, associated with *self-consciousness*, we must establish the sway of the will over that part of the nervous system which controls the size of the vessels, by calling up a feeling opposed to *self-consciousness*. It is through the mind that these nerves are influenced. Then influence them in a contrary direction by antagonizing the emotion associated with blanching. Thus, if the feeling which causes the blushing be expressible by the thought, ‘Here am I in a false and humiliating position,’ oppose, or still better, anticipate and prevent, that thought by thinking, ‘There are *you* daring to pity or feel contempt for another.’ Avoid going on to think who that ‘other’ is, because the aim must be to eliminate self. Constitute yourself the champion of some one, any one, and everybody, who may be pitied, and the ever-zealous and indignant foe of those who presume to pity.

“Most persons who blush with self-consciousness blanch with anger, and this artificial state of mock anger will soon blanch the face enough to prevent the blush. It only requires practice in the control of the emotions and the production of particular states at will—the sort of expertness acquired by actors and actresses—to secure control of these surface phenomena. Blushing and blanching are antagonistic states, and may be employed to counteract each other, control of the physical state of the blood-vessels being obtained through the emotions with which they are associated.”

Oatmeal.—Oatmeal, says a writer in the *Montreal Witness*, is a food of great strength and nutrition, having claims to be better known and more widely used than it is at present. Of much service as a brain food, it

contains phosphorus enough to keep a man doing an ordinary amount of brain work in good health and vigor. All medical authorities unite in the opinion that, eaten with milk, it is a perfect food, and, having all the requisites for the proper development of the system, it is a pre-eminently useful food for growing children and the young generally. Oatmeal requires much cooking to effectually burst its starch cells; but when it is well cooked it will thicken liquid much more than equal its weight in wheaten flour. The oats of this country are superior to those grown on the Continent and the southern parts of England, but certainly inferior to the Scotch, where considerable pains is taken to cultivate them; and it is needless to point out that the Scotch are an example of a strong and thoroughly robust nation, which result is justly set down as being derived from the plentiful use of oatmeal. Dr. Guthrie has asserted that his countrymen have the largest heads of any nation in the world—not even the English have such large heads—which he attributes to the universal use of oatmeal; as universal it is, being found alike on the tables of the rich and on the tables of the poor—in the morning the porridge, and in the evening the traditional cake.—*American Miller*.

The Secret of Beauty.—The secret of beauty is health. Those who desire to be beautiful should do all they can to restore their health if they have lost it, or to keep it if they have it yet. No one can lay down specific rules for other people in these matters. The work which one may do, the rest he must take, his baths, his diet, his exercise are matters of individual consideration, but they must be carefully thought of and never neglected. As a rule, when a person feels well he looks well, and when he looks bad he feels bad, as a general thing. There are times when one could guess, without looking in the glass, that his eyes were dull and skin was mottled. This is not a case for something in a pretty bottle from the perfumers, or for the lotion that the circulars praise so highly. To have a fresh complexion and bright eyes, even to have white hands and a graceful figure, you must be well. Health and the happiness that usually comes with it are the true secrets of beauty.—*Quarterly Review*.

HISTORY OF THE TOBACCO HABIT.

FOUR centuries ago, the use of tobacco was wholly confined to the few thousand savages who inhabited the American continent. Europeans, then the only civilized portion of the human family, had never seen the weed, or, at least, had never used it in any way. Among the American Indian tribes where it originated, its use was universal. Every tribe discovered by Columbus and his contemporary explorers, was acquainted with its use. Among the savages, the devotion to the weed was so great that it was used as a means of reckoning time, as a watch is now used by their civilized imitators. An Indian who wished to tell how long he was occupied with anything, would say, I was one pipe, two pipes, or other number of pipes, as it might happen to be, about it.

Though discovered in 1492, by the two sailors sent out by Columbus to explore the island of Cuba, it was not until 1560 that the plant itself was introduced into Europe, being carried to Spain by a Spanish physician who had visited Mexico on an exploring expedition. It was introduced into Portugal about the same time by a merchant who had obtained some of the seed from Florida. From Portugal it was speedily carried to France and Italy. From Jean Nicot, the French ambassador who carried some of the plants from Lisbon to France as a present to the French queen, Catherine de Medicis, the active principle of the drug received its name, being called *Nicotiana*, or nicotine. The Spanish physician who introduced it into Spain gave to it the name of "tobaco," or tobacco, from the name of the peculiarly shaped pipe with which the native Indians inhaled the smoke of the leaves.

Shortly after it became known in Spain and Portugal, tobacco was introduced into Great Britain by Sir Walter Raleigh, by whom its use was soon made popular in spite of the opposition received from the more cautious and sensible portion of the people. Germany, Russia, Turkey, and other European countries, also soon received the drug.

First Used as a Medicine.—Undoubtedly physicians were in a great measure responsible for the rapid introduction of the vile

weed into general use. At first it was not employed as a luxury, but upon the recommendation of the physicians of that time, who seem to have sought diligently after every variety of poisonous, noxious weed, hoping to find the grand panacea for all human ills for which the physicians and alchemists of olden time hunted in every nook and corner of the then known world. Such they claimed tobacco to be, and so recommended it to the people, who were only too ready to be deceived, and to make themselves slaves to the vile custom which has since become more universal than the use of any other narcotic or intoxicant.

Catharine de Medicis, the notorious queen who instigated the massacre of the Protestants on St. Bartholomew's day, was the first European who acquired the art of snuff-taking. It is a question open to discussion, by which means she accomplished the most evil to the race, by her cruel slaughter of the innocent Protestants, or by the pernicious influence of her example as a patron of a vile and harmful practice.

Drinking Tobacco.—In England, tobacco was first used by smoking, which was then called drinking tobacco. Great pains was taken to cultivate the art of smoking in the most artistic manner. There were regular instructors in the art, who opened smoking schools. Many curious stories are told of the amazement with which those who were unacquainted with the barbarous custom beheld the first exhibition of it. An old writer gives an account of a Welshman, who, visiting London about the year 1600, and seeing for the first time a person smoking tobacco, was much astonished and cried out, "'O Jhesu, man, hold, ty snowt's on fire;' and having a bowl of beer in his hand, threw it in the other's face to quench his smoking nose."

A similar story is told of Sir Walter Raleigh, whose servant, discovering his master smoking in his chamber, was greatly amazed, and seeing the smoke issuing in volumes from his mouth supposed that his master was undergoing internal combustion; whereupon he rushed out after the proper means for extinguishing a fire, and quickly returning, deluged his lord with several pailfuls of water, a remedy which we doubt not

might be administered to most smokers with profit.

Opposition to the Practice.—It must not be supposed that the world was conquered by this most pernicious and tyrannical of vices without a struggle. The good, the wise, and the prudent, everywhere opposed. In most instances, kings and others in authority placed every obstacle in the way of its introduction and propagation, and even imposed severe penalties upon those who used the weed.

In Russia, the use of tobacco was prohibited under the penalty of the *bastinado* (a severe whipping) for the first offense, cutting off the nose for the second, and loss of life for the third. History gives account of several persons who were subjected to punishment for a second offense, their noses being amputated in public.

Pope Innocent XII. issued a bull of excommunication against all who used tobacco in any form in church. Many years afterward, however, the bull was revoked by Pope Benedict, who was himself an immoderate user of tobacco.

In Persia, the laws against tobacco-using were so stringent that the devotees of the weed were obliged to flee to the mountains, where they preferred to wander in exile among the rocks and caves with liberty to use their fascinating drug, rather than dwell in the peace and purity of home without it.

In Switzerland, all users of the weed were punished as criminals. Punishment was inflicted upon a man in that country for smoking, so late as in the last century.

The opposition to the use of tobacco was not confined to the Old World. The governors of the American colonies followed the example of King James I. of England, in many instances, issuing edicts against its use, and placing every obstacle in the way of its introduction. The old "blue laws" of Connecticut and of several other States contained restrictions of its use of a most strenuous character. In the city of Boston a law against smoking still exists; and less than a dozen years ago a workman was arrested on the public streets for the offense, and was fined in accordance with the law.

By degrees the rulers who opposed the in-



troduction and use of tobacco themselves became devotees of the weed, so that their opposition was withdrawn. Being thus without restraint, the evil habit rapidly spread throughout all civilized lands, enslaving alike all classes of people, from the ignorant peasant to the king upon the throne.

The history of tobacco-using furnishes a most striking illustration of the readiness of human nature to seize upon anything which promises gratification to the senses, no matter how disgusting, how pernicious, or how fatal in its ultimate consequences. The history of the world affords no other example of a vice which spread so rapidly and fastened itself so securely upon its victims.

EDITOR.

A German Physician's Opinion of Tea and Coffee.—Tea and coffee drinkers are likely to find themselves in bad company ere long if they do not reform. The chemists have long shown that there is a powerful and poisonous narcotic principle in both tea and coffee, which the physicians have classed with alcohol and tobacco in its effects. Now some of the most eminent physicians of the world are denouncing the popular use of these fascinating drugs, and it is quite possible that it may become as much a blemish upon one's character to be a slave to tea or coffee as to be a devotee to tobacco, a drunkard, or an opium eater. Dr. Bock, of Leipsic, claims that "the nervousness and peevishness of our times are chiefly attributable to tea and coffee; the digestive organs of confirmed coffee drinkers are in a state of chronic derangement, which reacts on the brain, producing fretful and lachrymose moods. Ladies addicted to strong coffee have a characteristic temper, which might be described as a mania for acting the persecuted saint."

An Astonished Doctor.—The *Presse Medicale*, of Vienna, gives a good illustration of the reckless practice to which some physicians are addicted, in the case of a German physician who administered to twenty-four invalids in a hospital, half a grain each of *curare*, a powerful poison, and "was much astonished that the poison had not produced a fatal result."


 LITERARY MISCELLANY.
 

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

THE BUILDERS.

ALL are architects of Fate,
Working in these walls of Time;
Some with massive deeds and great,
Some with ornaments of rhyme.

Nothing useless is, or low;
Each thing in its place is best;
And what seems but idle show
Strengthens and supports the rest.

For the structure that we raise,
Time is with materials filled;
Our to-days and yesterdays
Are the blocks with which we build.

Truly shape and fashion these;
Leave no yawning gaps between;
Think not, because no man sees,
Such things will remain unseen.

In the elder days of Art,
Builders wrought with greatest care
Each minute and unseen part;
For the Gods see everywhere.

Let us do our work as well,
Both the unseen and the seen;
Make the house where Gods may dwell,
Beautiful, entire, and clean.

Else our lives are incomplete,
Standing in these walls of Time,
Broken stairways, where the feet
Stumble as they seek to climb.

Build to-day, then, strong and sure,
With a firm and ample base;
And ascending and secure
Shall to-morrow find its place.

Thus alone can we attain
To those turrets where the eye
Sees the world as one vast plain,
And one boundless reach of sky.

—H. W. Longfellow.

FROM PRINCIPLE.

"You have left Clark & Upham, Henry, after all the pains your father took to get you the situation?"

"Yes, mother, I obeyed father during my minority. I am twenty-one now, and it is right that I should act for myself."

"Why do you object to retaining your present situation, my son? Mr. Clark told

your father only yesterday that he was thinking of making you confidential clerk, in place of Grant, who has left on account of ill-health; that implies an increase of salary, of course."

"The subject was broached to me last night, mother, but I refused the situation. I don't wish to make any outside talk about it, but I leave Clark & Upham from principle. They are, I am sorry to say, neither Christian men nor temperance men. In the elegant little apartment, half office, half reception-room, off the great sales-room, where they entertain their country customers, there are kept a variety of nice fruits and liquors. Many an unwary, but well-meaning young merchant has lost his head there, and gone out to be dragged into the yawning pitfalls of this great city because he had not the moral courage to refuse the hospitalities of the prosperous merchants with whom he had been dealing.

"If I accept the position of confidential clerk, I shall be obliged to entertain the customers in that way, and sometimes to take them out to see the city *sights*, which, with some people, means all that is fast and 'loud' and bad. I have occasionally been required to take Grant's place when he has had one of his 'bad spells,' so I know all about it. Poor Grant's 'bad spells,' by the way, are caused by too much wine, instead of 'heart disease.' He was a church member and a temperance man when he became an employee of the house ten years ago. He took the situation of confidential clerk, when it was offered to him, under a conscientious self-protest, because he felt that he had grown up with the business, understood it perfectly, and had earned the right to the increased salary.

"I also began at the foot of the ladder, so I have the same grounds for feeling that I have earned the situation, and the same scruples about accepting it. He was socially inclined, and after a while came to breaking

over the barrier so hard to define, and taking a glass or two too much. Having his sad downfall as an example, I have made up my mind that I will black boots or clean side-walks, if necessary, but I will never use my influence toward leading a brother man to destruction.

"Father will be greatly disappointed, of course, but when he understands the situation he may feel differently.

"Who am I that I dare to pray daily, 'Lead us not into temptation,' and then go into that room and handle those dainty crystal wine-cups and those exquisite, cut-glass decanters?"

Mrs. Benedict said no more upon the subject. She had been very proud of her son's situation in one of the largest wholesale houses in the city, and had thought it all over, how she should say when Henry was inquired for, "Oh, Henry is Clark & Upham's confidential clerk." But she felt that her child was right, and knew in her heart that she had now more cause for pride in him than she had ever had before.

Henry was not out of a situation for a single day. While working his required "notice," he found a place as subordinate clerk in a great shipping warehouse at wages barely sufficient to pay his board. He took the situation with the understanding that he was to leave on a week's notice whenever he could better himself. One cold winter morning Henry was much surprised at being sent for to come to the private office of the senior member of the firm. This gentleman was so seldom at the warehouse that Henry was by no means the only clerk who did not even know him by sight.

Going forward, and being announced by one of the junior partners, the young man was surprised to see, sitting in an arm-chair behind the mahogany desk, an old gentleman in a rough-cloth morning-coat, whom he had seen frequently at prayer and temperance meetings, not taking part in the exercises, to be sure, but sitting quietly, watching the proceedings from under his shaggy eyebrows, while on the opposite side of the glowing grate sat Mr. Clark, his former employer.

"Good morning, Benedict, good morning," said the old gentleman, rubbing his hands in

a satisfied way, "I have known you for some time before you were employed here. Perhaps you may remember of having seen me?"

"Your face is quite familiar. I have so often seen you at our church," replied Henry, truthfully, "but I never thought to ask your name."

"Ha, ha," laughed the jolly old man, "of course you did n't think such an old foggy as I am was of much consequence, but you seated me in a warm, cozy place, near the register, one cold night, I remember. I have always been a little particular about the clerks I take into my warehouse, and I never hire a man until I know where he spends his evenings. I have had an eye on you for some time. I snapped at you quick enough when the opportunity offered, and I do n't intend to let you go unless you disappoint me in some way. Now, my young friend, how would you like, in conjunction with your present duties, to attend my private bar, where I 'bart my customers,' I mean? Your salary would be doubled of course."

A look of blank surprise overspread Henry's honest face. Were the two men making game of him? But he replied quietly and friendly, "I thought you were a temperance man, sir. I understood that there was no such objectionable apartment in *your* establishment."

"Ha, ha, ha," laughed the old man again. "You were informed rightly, my boy. My son-in-law, Clark, here—perhaps you did n't know Clark was my son-in-law."

"No, sir;" admitted Henry, more and more surprised.

"Well, Clark & Upham have failed up, just as I supposed they would if I gave them time enough, when I set them up twelve years ago. Now, I am going to take the business off their hands if I can find some one who understands all the ins and outs, and hooks and crooks of the trade, to manage it for me. Clark, here, spoke of you. What do you think about it?"

The young man looked very grave for a few moments, then he said, honestly:—

"I think, sir, with the present corps of clerks, and with the wine-closet and its contents removed from the private office, that George Grant and I could carry on the business of the firm without any trouble."

"Would you dare trust George Grant?" asked the old gentleman in surprise.

"Yes, sir. He has signed the pledge and he will endeavor to keep out of temptation. He is older than I, has rare business capacity, and has been longer in the business than I have. The best way to set him upon his feet again is to show that you have confidence in him."

The transfer was made immediately, with as little noise as possible. That was some time ago. Henry Benedict and George Grant are both partners now. The business has prospered without the wine, but there is always good cheer in the charming little room where a great many heavy bargains are closed weekly.

There is always conspicuously posted in the counting-room a list of religious services, temperance meetings, lectures, and all the moral entertainments in the city, and there is always some gentlemanly young fellow among the clerks, detailed to keep the stranger company if he desires, and show him the *good* side of city life. This has been the established custom for years, and you cannot find a firm where a better feeling exists between merchant and customer than that of Grant & Benedict.—*Mrs. Annie. A. Preston.*

CHEERFUL HOMES.

A CHEERFUL, happy home is the greatest safeguard against temptations for the young. Parents should spare no pains and begrudge no money to make home an attractive spot. There should be pictures to adorn the walls; flowers to cultivate the finer sensibilities; the choicest and most entertaining of books, and high-toned and instructive newspapers and periodicals. These things, no doubt, cost money, but not a tithe the amount that one of the lesser vices even will cost—vices which are sure to be acquired away from home, but so seldom there.

Then there should be social pleasures—a gathering of young and old around the hearthstone; a warm welcome of the neighbor who drops in to pass a pleasant hour. There should be music and games and reading. The tastes of all should be consulted, until each member of the family looks forward to the hour of reunion around the

hearth as the brightest one in the whole twenty-four.

Wherever there is found a pleasant, cheerful, neat, attractive, inexpensive home, there you may be sure to find the abode of the domestic virtues; there will be no dissipated husbands, no discontented or discouraged wives, no "fast" sons nor frivolous daughters.

The following weighty remarks on this subject are worthy of the most thoughtful consideration, and certainly point to the true remedy of an evil that is becoming distressingly characteristic of the age.

"Recreation is a necessity of hardworking, overstrained life. Men and women need it, and will have it. But should they go from home to find it? Is home nothing but a place to sleep, eat, and drudge in? Plainly false and injurious as is such a view, it seems to be that which widely prevails among us. The members of the household seek their recreations abroad. Yielding to different tastes, or controlled by different circumstances, they seek it in different places. Husbands and wives, parents and children, thus separate from one another in their associations; the family unity disappears; and the seeds of discord are planted in the home circle.

"Under this false and fatal idea, that it is necessary to go abroad to seek after enjoyment, society has become a traveling association of pleasure-hunters, as if pleasure could be found by thus hunting for it. The old, happy home-life is disappearing—and with it is vanishing, not only the truest enjoyment, but also the greatest safeguard of our social state.

"Miserable or guilty is the man who quits home to find enjoyment. Lost is that woman who does it. Unhappy is the son or daughter who does not find home the happiest spot on earth. The family circle is a misnomer, as applied to the members of households thus separate in their associations and pleasures. With them there can be no golden chain of holy affection, strengthened and kept bright by loving association and the communion of the innocent joys and sacred sorrows of the family. Home should be the dearest, happiest spot on earth to every individual.

There the weary man of business should find his needed rest. There the wife and mother should find her purest, deepest pleasure. And there children should find attractions stronger than all the world can present."

It is, we fear, too true that we tinker away at the evils of society, and go on making new "societies" to amuse, instruct, or restrain the people, when the great want is homes.—*Heart and Hand.*

GOOD MANNERS.

THE essence of good manners is kind thoughtfulness of others. The man who goes to his room in a hotel stamping and talking through the corridor, slamming his door, and flinging his boots heavily down upon the floor, is merely brutally selfish. He is not aware that he owes duties to other people, who will be affected by his conduct. He does not think that he rudely awakens some one to whom sleep is indispensable, and whom he has no right to disturb. Haydon's picture of the man in the chop-house waiting for the *Times*, which his neighbor has held for an hour, and is evidently bent upon holding until he has read all the advertisements, is an illustration of this common selfishness. The talk and conduct in the cars are generally signs of vanity or a morbid self-consciousness. A well-bred man keeps his toothaches and headaches to himself, and does not assume that strangers are interested in his digestion. A well-bred woman keeps her children quiet, and does not assume that all her fellow-travelers must share her fondness for them. If Mrs. P——, with her vivid sense of Mr. P——'s peculiarities and of her fine house and equipage, could only once know how supremely unimportant any individual is, how well the world fared before Mr. P—— arrived, and how unshocked the universe will be by his departure, she would be a modest and well-mannered woman. That knowledge, indeed, would be a general corrective of manners. A certain kind of personal conceit often accompanies undeniable superiority. There are men, like Lord Chatham, who like to have their going and coming regarded as events, to move with a ponderous bustle, and to be constantly recognized as great men. But if they could only know it, that very

taste is constantly accounted to them for weakness, and their influence is just so far lessened.—*Harper's Magazine.*

WEARY WOMEN.

NOTHING is more reprehensible and thoroughly wrong than the idea that a woman fulfills her duty by doing an amount of work that is far beyond her strength. She not only does not fulfill her duty, but she most signally fails in it; and the failure is truly deplorable. There can be no sadder sight than that of a broken-down, overworked wife and mother,—a woman who is tired all her life through. If the work of the household cannot be accomplished by order, system, and moderate work, without the necessity of wearing, heart-breaking toil that is never ended and never begun, without making life a tread-mill of labor, then, for the sake of humanity, let the work go. Better to live in the midst of disorder than that order should be purchased at so high a price,—the cost of health, strength, happiness, and all that makes existence endurable.

The woman who spends her life in unnecessary labor is by this very labor unfitted for the highest duties of home. She should be the haven of rest to which both husband and children turn for peace and refreshment. She should be the careful, intelligent adviser and guide of the one, the tender confidant and helpmate of the other. How is it possible for a woman exhausted in body, and as a natural consequence in mind also, to perform either of these offices? No, it is not possible. The constant strain is too great. Nature gives way beneath it. She loses health and spirits and hopefulness, and more than all, her youth, the last thing that a woman should allow to slip from her; for, no matter how old she is in years, she should be young in heart and feeling, for the youth of age is sometimes more attractive than youth itself.

To the overworked woman this green old age is out of the question; old age comes on her sere and yellow before its time. Her disposition is ruined, her temper is soured, her very nature is changed, by the burden which, too heavy to carry, is dragged along as long as wearied feet and tired hands can

do their part. Even her affections are blunted, and she becomes merely a machine,—a woman without the time to be womanly, a mother without the time to train and guide her children as only a mother can, a wife without the time to sympathize and cheer her husband, a woman so overworked during the day that when night comes her sole thought and most intense longing is for rest and sleep that very probably will not come; and, even if it should, that she is too tired to enjoy. Better by far let everything go unfinished, to live as best she can, than to entail on herself and family the curse of overwork.—*Sanitary Magazine*.

THE ALPHABET OF SHORT RULES.

Attend to your business.
 Be punctual in your payments.
 Consider well before you promise.
 Dare to do right.
 Envy no man.
 Faithfully perform your duty.
 Go not in the path of vice.
 Have respect for your character.
 In everything be just.
 Judge mercifully of others' faults.
 Know thyself.
 Lie not, for any consideration.
 Make few acquaintances.
 Never profess what you do not practice.
 Occupy your time in usefulness.
 Postpone nothing you can do now.
 Quarrel not with your neighbors.
 Run no risk.
 Save something against a day of trouble.
 Treat everybody with kindness.
 Use yourself to moderation.
 Vilify nobody's reputation.
 Watchfully guard against idleness.
 Xamine your conduct carefully.
 Yield to superior judgment.
 Zealously pursue the right path.

ANCIENT GLASS.

The oldest specimen of pure glass known is supposed to be a small molded lion's head, belonging to the British Museum. It bears the name of an Egyptian king of the eleventh dynasty, and was probably fashioned more than 2,000 years B. C. The skill displayed

in this specimen is sufficient evidence that the art of glass-making was not then in its infancy. Says the *Scientific American*: "It cannot be doubted that the story prepared by Pliny, which assigns the credit of the invention to the Phenicians, is so far true that these adventurous merchants brought specimens to other countries from Egypt. Dr. Schliemann found disks of glass in the excavations at Mycæne, though Homer does not mention it as a substance known to him. That the modern art of the glass-blower was known long before, is certain from representations among the pictures on the walls of a tomb at Beni Hassan, of the twelfth Egyptian dynasty; but a much older picture, which probably represented the same manufacture, is among the half obliterated scenes in a chamber of a tomb of Thy at Sakkara, and dates from the time of the fifth dynasty, a time so remote that it is not possible, in spite of the assiduous researches of many Egyptologists, to give it a date in years. Glazed pottery and beads as old as the first Egyptian dynasty have been found."

LAMENTABLE IGNORANCE.

PERHAPS the day is not far distant when girls will receive a practical training to fit them for becoming wives and mothers; it is to be hoped so; for under the present order of things a great many mothers are possessed with the idea that ignorance on the part of their daughters with regard to many laws and facts universally considered as of most vital importance to them is promotive of innocence. In consequence of this mistaken notion hundreds and thousands of girls fall into snares and pitfalls designed for the unwary, and thousands more assume responsibilities which they lack both knowledge and capacity to discharge. They know absolutely nothing about the wonderful mechanism of the human body, or how to best preserve their own health. From the brilliancy of social success the belle passes in a year or two to the hush of the nursery; here, too, comes the young lady student in rapid transition from academy or college life; here, too, is the giddy girl transformed into the helpless, unknowing mother—each willing and glad to barter her very life for the knowledge that would en-

able her to give life and health to her child. But this kind of knowledge does not come by intuition, nor in answer to whatever prayers mingled with however bitter tears. In the revulsion of feeling experienced by the ignorant young mother, and her profound consciousness of the impotence of the knowledge she has acquired to aid her in the discharge of her maternal duties, she often renounces books and intellectual culture almost entirely, and sinks into the nursery-maid and the household drudge.—*Sch.*

Facts about Money.—The coinage of money is ascribed to the Lydians. In sacred history money is mentioned as a medium of commerce as early as 1860 B. C.; in the twenty-third chapter of Genesis we are told of Abraham's purchasing a field for a sepulcher. Homer speaks of "pass money" as existing in 1184 B. C.

The Romans gave the name *moneta* to their silver 269 B. C. on account of its having been coined in the temple of Juno-Moneta.

Julius Cæsar was the first who obtained permission of the Roman Senate to place his portrait on coin. In the earlier days of Rome the heads were those of deities, or of those who had received, so-called, divine honors.

Money was made of different ores, and even of leather and other articles. Gold was coined 206 B. C. Iron money was used in Sparta, and iron and tin in Britain. Money was made of pasteboard by the Hollanders as late as 1574. From the reign of Henry I. down to the period of the establishment of the Bank of England, a portion of the money of England was fabricated out of wood. It consisted of one-half of a four-sided rod called an exchange tally, on which the sum it purported to represent was carved in transverse notches, varying in width for pounds, shillings, and pence. These signs were for the unlearned. For the advantage of those who could read, the sum was written in ink on two opposite sides of the rod, which was then split in two longitudinally; one-half, called the tally, being given to the person for whose service it was intended, the other half, called the counter tally, was laid

away until its corresponding tally should be brought in by the one last giving value for it.

The exchequer bill, first introduced by Mr. Montague in 1696, was derived from this primitive tally. The word "bill" was also, no doubt, obtained from the Norman-French word, *bille*, meaning staff or rod. It is said that our bank post bills and bills of exchange came from the same wooden basis.

Dangers to Young Men.—Dr. John Hall in a recent lecture mentions some of the dangers that threaten young men as young men in this age. "First, the danger of shallowness, which arises from the hurry and bustle and state of activity in which we live. Individual capacities are not trained to their highest perfection. The second danger arises from a mistaken conception of what success really is. Money has come to be considered the ideal of success. And allied to this mistake is a false notion of gentility. It is said to be the fact that throughout New England it is extremely difficult to persuade young men to become mechanics, farmers, or laborers. The young are filled with the idea that they must go to the large cities. This is an unhealthy condition of things. All honest work is honorable if done in a right spirit. Another peril is caused by a certain unsettledness in life. It is extremely easy in this country to pass from one line of life to another. The very thought in the minds of young men that they can easily pass to another line of work, if they become dissatisfied with their present employment, disinclines them to direct their whole energies upon the work in hand. Dr. Hall's advice is: Choose slowly, deliberately, with the best advice, and perhaps later than young men are ordinarily accustomed to do, and then, when the occupation has been decided upon, stick to it."

For Low Spirits.—Take one ounce of the seeds of resolution, mixed well with the oil of conscience, infuse it into a large spoonful of the salts of patience; distill very carefully a composing plant called "others' woes," which you will find in every part of the garden of life, growing under the broad leaves of disguise; add a small quantity, and it will greatly assist the salts of patience in their op-

eration. Gather a handful of the blossoms of hope, then sweeten them properly with the balm of prudence, and if you can get any of the seeds of true friendship, you will have the most valuable medicine that can be administered. Be careful to get the seeds of true friendship, as there is a seed very much like it called self-interest, which will spoil the whole composition. Make the ingredients into pills and take one night and morning, and the cure will be effected.—*Rural New Yorker.*

How to Take Life.—Take life like a man, says Spurgeon. Take it just as though it was—as it is—an earnest, vital, essential affair. Take it just as though you were born to the task of performing a merry part in it—as though the world had waited your coming. Take it as though it were a grand opportunity to achieve, to carry forward great and good schemes, to hold and to cheer a suffering, weary, it may be a heart-broken, brother. The fact is, life is undervalued by a great majority of mankind. It is not made half as much of as should be the case. Where is the man or woman who accomplishes one tithe of what might be done. Who cannot look back on opportunities lost, plans unachieved, thoughts crushed, and all caused from lack of necessary and possible effort! If we knew better how to take and make the most of life, it would be greater than it is. Now and then a man stands aside from the crowd, labors earnestly, steadfastly, confidently, and straightway becomes famous for wisdom, intellect, skill, greatness of some sort. The world wonders, admires, idolizes; and yet it only illustrates what each may do if he takes hold of life with a purpose. If a man but say he will, and follow it up, there is nothing in reason he may not expect to accomplish.

—**Triplet Maxims.**—Three things to love—courage, gentleness, and affection.

Three things to admire—intellect, dignity, and gracefulness.

Three things to hate—cruelty, arrogance, and ingratitude.

Three things to delight in—beauty, frankness, and freedom.

Three things to wish for—health, friends, and a contented spirit.

Three things to like—cordiality, good humor, and cheerfulness.

Three things to avoid—idleness, loquacity, and flippant jesting.

Three things to cultivate—good books, good friends, and good humor.

Three things to contend for—honor, country, and friends.

Three things to teach—truth, industry, and contentment.

Three things to govern—temper, tongue, and conduct.

Three things to cherish—virtue, goodness, and wisdom.

Three things to do—think, live, act.

—*Public Opinion.*

Curious Derivations.—“Pamphlet” is derived from the name of a Greek authoress, Pamphylia, who compiled the history of the world into three little volumes. “Punch and Judy” is a contraction from Pontius and Judas. It is a relic of the old “miracle play,” in which the actors were Pontius Pilate and Judas Iscariot. “Bigot” is from Visigotha, in which the fierce and intolerant Arianism of the Visigoth conqueror of Spain has been handed down to infamy. “Humburg” is from Hamburg; “a piece of Hamburg news” was in Germany a proverbial expression for the false political rumors. “Gauze” derives its name from Gaza, where it was first made. “Tabby cat” is all unconscious that her name is derived from Atab, a famous street in Bagdad, inhabited by the manufacturers of the silken stuffs called atabi, or taffety, the wavy markings of the watered silks resembling pussy’s coat. “Old Scratch” is the demon Skratti, who still survives in the superstitions of northern Europe. “Old Nick” is none other than Nikr, the dangerous water-demon of Scandinavian legend. The lemon takes its name from the city of Lima.

—The great blessings of mankind are within us and within our reach; but we shut our eyes, and, like people in the dark, we fall foul upon the very thing we reach for without finding it.

POPULAR SCIENCE.

Design of the Pyramids.—It is quite generally conceded by scientists that the pyramids of Egypt were built for astronomical purposes; and now Prof. Proctor offers a suggestion which harmonizes the opinion of Mr. Glidden—that the pyramids were the sepulchers of kings—with the astronomical theory of their purpose. He thinks “they were intended for astronomical research, as well as for astronomical observations. They were carried up to a certain height, favorable for such purposes, and the solid floor was used by a monarch during his lifetime. When he died, his body was inclosed, and the pyramid completed to its summit. His successor began, at once, to build a new one for similar purposes, which was completed in like manner at his death.

A Vegetable Curiosity.—A Springfield (Mass.) paper states that a remarkable freak of nature was recently observed by a gentleman residing in Worcester. It consisted of a potato vine bearing tomatoes, said to have been occasioned by planting tomato seed in the same hill with potatoes. The journal referred to thinks it would be a great saving of labor if the two plants could be united, producing good potatoes at the roots and good tomatoes on the tops.

The Nearest Comet.—From a careful consideration of all the facts bearing on the case, a celebrated astronomer has concluded that the nearest approach ever made to the earth by a comet was in 1770, when a comet apparently five times as large as the moon came within 1,390,000 miles of the earth. Comets have approached much nearer the earth's orbit than this, but, fortunately, at times when the earth was at some other part of it.

A New Material for Clothing.—A Prussian inventor has patented, as a new article of manufacture, a material for clothing, consisting, for the greater part, of sponge. This material, it is claimed, rapidly absorbs the perspiration, is a poor conductor of heat, can be readily cleansed, and is very flexible, and so prevents chafing.

An Ingenious Bird.—*Nature* publishes a letter from a correspondent in Burmah who mentions a bird known as the “weaver” bird, which has the habit of fixing fire-flies to the inside of its nest with a lump of mud, for the purpose of illuminating its nest at night.

—A new disinfectant has been discovered by Dr. Kingsett, to which he has given the name of “*sanitas*.” The substance, as sold in tin cans, is a light brown powder, of a pleasant taste and odor, is not poisonous, will not injure clothing or furniture, and is said to be capable in a very remarkable degree of preventing or arresting putrefactive changes. It is prepared by placing Russian turpentine and water in large earthen jars, surrounded by hot water. Air is continually driven through the mixture for three hundred hours, the result being the decomposition of the turpentine, and the formation of a watery solution of the substance which is afterward submitted to a process of evaporation.

—It is reported that a Mr. Blossom of Mackinaw, Mich., has captured a very remarkable fish. It is about ten feet long, and its weight is estimated at about four hundred pounds. It is perfectly transparent, and the action of the heart and other organs can be plainly observed.

—A new variety of sweet potato is being cultivated in the extreme southeastern part of California which recent tests suggest will make better and cheaper sugar than beets; and a sugar company is being organized to utilize the crop.

—A telephone has been introduced into the Second Presbyterian Church of Richmond, Va., connecting with the pastor's home, by means of which his daughter, for ten years an invalid, can hear the sermon in her room.

—Angelina (scientific): “Do you smell the iodine from the sea, Edwin? Is n't it refreshing?” Old salt (overhearing): “What you smell ain't the sea, miss; it's the town drains as flow out just 'ere.”

—Among the recently found relics of the lake-dwellers of Switzerland, is a pair of forks, apparently invented for table use and fashioned from the metatarsal bone of a stag.

GOOD HEALTH.

BATTLE CREEK, MICH., DECEMBER, 1879.

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

TERMS, \$1.00 A YEAR.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THIS beneficent organization convened for its seventh annual session in the State Capitol at Nashville, Tenn., Nov. 18, 1879. This organization is composed of the members of State Boards of Health, health officers, and other eminent sanitarians from all parts of the United States. A large share of the members were present at this meeting, and many very valuable papers were presented, being followed by interesting discussions on the points involved. The subject of yellow fever was very thoroughly canvassed, and many highly interesting facts were brought out in the several papers and discussions; but we were very sorry that the subject was finally dismissed without the definite determination of any more precise knowledge than was previously possessed with reference to the real nature of the disease, its manner of origin in this country, and its mode of communication.

Even among those who have had much experience with the disease there was great diversity of opinion respecting it. Some believed that the disease is of distinctly foreign origin; others, that it may originate in this country wherever the conditions are such as are required, the chief elements being filth and a high temperature. Some claimed that filth had nothing to do with either the origin of the disease or its spread, and that disinfection is useless as a means of controlling it; while others believed most implicitly in the filth origin of the malady, and placed the utmost confidence in disinfection as a means of prevention. One speaker claimed that the disease is caused by the peculiar kind of filth that originates in the bilge water of ships at sea. Still another new theory referred to was that it is caused by *eating the flesh of the opos-*

sum! The latter suggestion we took to be a joke, not supposing that this animal, so nearly akin to the rat and other unclean animals, was ever used, to any extent, as human food. The reader can scarcely imagine our surprise when, upon glancing over the bill of fare for dinner at the best hotel in the city, the same day, we found conspicuously displayed among other delicacies of the season, "baked opossum." We can now readily believe that persons whose gustatory sense is so perverted that they can relish such unnatural food, are capable of having yellow fever or almost any other disease, without the intervention of any occult foreign cause.

We were somewhat disappointed that so much time was devoted to useless and aimless discussion of questions pertaining to the yellow-fever epidemics in the South, which chiefly concern but a comparatively small portion of our country, while other questions, which concern the welfare of the whole country, evils which threaten the health and lives of the whole American nation, North, South, East, and West, were almost totally ignored. The subjects of air and water contamination were scarcely alluded to, and the matter of food adulteration, which is certainly worthy of prompt and serious consideration, was not mentioned. The contamination of air, water, and food, either by natural or nefarious means, is undoubtedly the cause of many more deaths annually than yellow fever or any other epidemic disease. We doubt not that future meetings of the Association will be devoted to the more general interests of public health rather than those of a sectional character.

One of the pleasant features of the meeting was an excursion to the famous stock farm of Gen. Hardin. A special train of four cars conveyed the members to the farm, where we

were made welcome by Gen. Jackson, the son-in-law of the aged General. After waiting a few minutes to warm ourselves before the huge old-fashioned fire-places in the spacious parlors, we were led to the stables to see the fine horses for which the Hardin farm has acquired a world-wide reputation. After showing us a dozen or two of the finest weanling colts we ever saw, the colored groom led out for inspection the famous horses, Great Tom, Enquirer, and Bonnie Scotland, whose colts are among the fleetest race horses in the country. Great Tom showed two immense bare spots on his sides, which the groom said were the remains of two blisters which had been put on to cure an attack of pleurisy. It occurred to us that if the horse's owner had only been acquainted with the science of fomentation, the noble horse might have been saved the pain of the blister and the partial loss of his coat of hair.

We were glad to find that the General had no sympathy with horse-racing, never indulging in it as a pastime, and regarding it as a very poor kind of recreation. His whole ambition was to develop the equine race as highly as possible. When asked how he succeeded in producing such fine animals, he replied that his success was wholly attributable to two things: First, a careful study of the laws of heredity, so combining parents as to balance up deficiencies and secure special natural advantages; and, second, careful attention to hygiene as related to horses. He called particular attention to the manner in which his stables were constructed, so that there was an unrestricted supply of air and light. He remarked that the things which he regarded as essential to the maintenance of the highest degree of health in a horse, were good food and plenty of air, light, and exercise.

As a final treat we were invited to visit the park of more than four hundred acres of natural woodland, where were kept a large number of deer. Four mounted negroes were sent ahead to bring them into view. We counted more than two hundred as they bounded past us. They seemed little afraid of human forms or voices, as they are never hunted in the park.

Having had a very pleasant time, we made our way back to the train, which was in wait-

ing, and the engineer whistling impatiently. Our enjoyment was seriously interfered with, however, by the dense fumes of tobacco-smoke which filled the cars and accompanied the party wherever we went. We were painfully surprised, also, to see the readiness, even amounting in many cases to eagerness, with which many of the party "sampled" the wine which was placed in numerous decanters in every convenient corner. This we could but consider a very unfortunate example to be set by professed sanitarians, and we could but think that little good can come from the most painfully laborious investigations and deliberations respecting yellow fever, its causes and best modes of prevention, while the demon of intemperance is allowed to ravage our noble country unopposed, with our sanitarians and professors of hygiene even joining in the worship of this modern moloch, and by their example leading others to destruction.

We were glad to meet in attendance at the meeting many persons of eminence as scientists and sanitarians, quite a number of whom we also had the pleasure of meeting at Richmond, last year, and whom we hope to meet again.

The meeting for next year was appointed at New Orleans.

PRACTICAL KNOWLEDGE.

THE most experienced and advanced educators of the present day do not hesitate to deprecate the great amount of time expended by the great majority of classical students in the acquirement of the dead languages, to the neglect of more practical knowledge. A learned college professor once attempted to convince Horace Greeley of the importance of the study of the classic languages, remarking that "these languages are the conduits of the literary treasures of antiquity." Mr. Greeley replied, "I like croton water very well; but it does not follow that I should eat a yard or two of lead pipe."

A more appropriate and convincing answer could not have been made. The small good of the classics is usually obtained by a process just about as unreasonably laborious and painful as would be the mastication of a few yards of water pipe to obtain the water flow-

ing through. The main good may be obtained by tapping the pipe.

The dead languages are useful, but there are subjects of far greater importance for the student as such, and as a member of society. In general, the classical student is so completely buried in the perplexing mazes of endless rules and numberless exceptions of Greek and Latin declensions and conjugations that instruction on other subjects receives little or no attention, or makes but a very slight impression and is quickly forgotten.

There is a growing feeling that this course is very detrimental to the interests of society as well as individuals, and our educators are beginning to feel that instruction in the natural sciences, in subjects which pertain to everyday life, especially in the subjects of human physiology and hygiene, must receive a larger degree of attention. This change in popular feeling is largely due to the work of State Boards of Health; and it is much to be hoped that the present tendency will increase until no person will be allowed to receive a certificate of qualification for teaching unless he is thoroughly conversant with what is known respecting the laws which relate to human health, being able to pass a critical examination on the relations of pure air to health, modes of ventilation, care of the eyes, and kindred subjects which have a special bearing on school hygiene. No student ought to be allowed to graduate from a grammar or high school, academy, seminary, college, or university, without possessing at least a good knowledge of the elements of physiology and hygiene. When the people become educated on these subjects, then we can entertain hopes that our sanitary laws will be carried out and the anticipations of sanitarians realized.

Disease among Wild Animals.—It is generally supposed that disease in animals is almost wholly confined to domestic animals. The testimony of hunters of experience is contrary to this opinion. It is stated on good authority that disease is very common among wild animals, especially those of a carnivorous character. Lions, wolves, and other beasts of prey, suffer much from consumption. They are also subject to many other maladies, some of which are common to both man and lower animals.

DANGER FROM ROTTEN WOOD.

WHILE it is now pretty generally understood that decaying substances emit dangerous gases and other causes of disease to which human beings cannot be exposed without danger, it is not so generally known that the same danger accompanies the decay of wood as of other forms of vegetable decomposition.

At the late meeting of the American Public Health Association Dr. Brewer, President of the Connecticut State Board of Health and professor of Agriculture in Harvard University, read a highly interesting paper describing a series of experiments on the subject, by which he had found that this is a matter of much greater importance than has been heretofore supposed. He found that green wood placed in pure water, even when the water is many times greater in bulk than the wood, very soon gives rise to the most active evidences of decomposition. Within two or three days the liquid in which such wood has been placed becomes very foul smelling, and upon examination with the microscope is found to contain myriads of microscopic organisms, just such as are always found present where decomposition is going on. In a very short time the liquid becomes dark colored and very foul, continuing thus for years. The Doctor found that this occurs with all varieties of wood, the hardest woods as well as the soft varieties readily inducing decay when placed in water.

In view of these facts it is very evident that there is great need of reform on the part of many who consider themselves models of obedience to sanitary law. It appears that wood-piles, heaps of chips about the doorway, rotten plank walks, decaying sawdust and shavings in the vicinity of saw-mills and other wood-working establishments, are about as much to be feared as heaps of garbage or manure, cess-pools, neglected privy vaults, and similar nuisances. These facts also afford a strong argument against the use of wood for piles, well-curbings, or for any other purpose that will bring it in contact with moisture.

The practice which exists in many lumbering districts of discharging great quantities of sawdust into streams, the water of which is in many cases afterward used for drinking purposes, is a very pernicious one indeed. If the

water contains a large amount of clay in suspension, the earthy matter may combine with the substances dissolved out of the wood and thus prevent the decomposition which would otherwise occur. As an evidence that this is not a mere theoretical difficulty, we may mention the fact that a complaint was entered to the Michigan State Board of Health not long since, by persons living in or near the lumbering regions, against the very practice last referred to, on the ground that it was injurious to health.

Holiday Dinners.—Friends, those of you who expect to treat your children and relatives or neighbors to a holiday feast, let us give you a hint. Before making preparations for the occasion, pause a moment to consider whether it would not be best to deviate a little from the almost universal custom of making our national holidays the occasion for animal gormandizing. Instead of loading the table with articles of food of a character certain to injure the digestive organs, and to work mischief in every part of the vital organism, would it not be better to spread upon the table a variety of good, wholesome foods which might be partaken of with impunity, and which will not stimulate the palate to gluttony?

Overeating at Thanksgiving, Christmas, and New Year's dinners annually causes many cases of sickness and not a few deaths. Doctors are always busy the next day after these holidays, and may generally expect an unusual increase in business.

Nothing could be more unreasonable than for people who understand the laws of health as relating to diet, to depart on special occasions from the course which their reason leads them to generally pursue, and by their actions, at least, declare to be good and desirable at those special times what at all other times and on all other occasions they pronounce bad and unwholesome.

—The booksellers of Freeport, Ill., have entered into a mutual agreement not to keep for sale upon their counters the vicious "nickel" and "dime novels" which of late years have so aided in corrupting the minds of the youth of the country.

Cemetery Wells.—A few years ago we visited a cemetery in company with a large number of persons who were paying their last respects to the remains of a well-known fellow-citizen. After the services at the grave were finished, and the company were preparing to disperse, we noticed at a little distance a knot of persons whom a second glance showed to be drinking from a pump in a well situated in the midst of hundreds of graves. The cemetery had been in use for thirty years or more; and the porous soil, resting on a bed of sandstone rock must have been saturated with the products of decomposition. Water from the well referred to must have been contaminated in the highest degree with the rotten filth which filled the surrounding earth. The extreme probability of such contamination is shown by the fact that some years ago the walls of the cellars of houses in the vicinity of a closely packed grave-yard in New York were covered with a horrible slime which oozed from the earth in which the dead bodies of paupers were packed.

It is bad enough to drink of wells in barn-yards, and adjoining cess-pools and vaults, where they are made the recipients of liquid pollution from those depositories of filth; but a well in a grave-yard is too horrible to think of.

Uneasy.—The wife of a gentleman who was a subscriber to a sanitary paper desired him not to take the paper any longer because it made her "uneasy" to read it, an evidence that she was just the individual who should profit by sanitary instruction. It is one of our highest aims to make people so uneasy about eating bad food, drinking impure water and worse liquids, breathing foul air, and otherwise disobeying the laws of health, that they will be constrained to "cease to do evil and learn to do well" in those particulars. If there are any of our readers who are thinking of stopping their subscriptions at the end of the year on account of being made uneasy by the startling disclosures of danger to life and health frequently made in these columns, we hope they will for a moment consider whether this kind of uneasiness is not salutary; whether it is not better to be made uneasy by timely warning, than to be allowed to go on in ignorance to physical destruction.

Look out for Colds.—Now is the time to be specially cautious against taking cold. A cold contracted now will be quite sure to last all winter. Do not seek to do this by shutting up closely doors and windows and keeping up a hot fire, avoiding all exposure to cool air, but seek to fortify the system by clothing the body well, especially the extremities, and then going out into the open air frequently and freely, and so getting the system hardened. Thorough and free ventilation is one of the most useful and efficient preventives of colds. It is a great mistake to suppose that a cold is a trivial matter. It is a fact that a bad cold is rarely ever fully recovered from. A cold is a very serious matter, and should receive prompt and thorough treatment.

Diseased Milk.—An eminent English chemist recently read a paper before the London Chemical Society, in which he stated that the examination of a large number of specimens of milk had disclosed the fact that cows might be suffering from acute disease of many forms without any change appearing in the milk which could be detected by the most careful chemical analysis. Notwithstanding this fact, the milk is in some way so changed by the existing disease as to occasion in many cases serious illness in those who make use of it as food. This fact shows the great care which should be exercised by those who make use of milk that the cows by which it is produced be in a healthy state.

Causes of Diseases of the Eyes.—The following excellent summary of causes of injury to the sight is made by Prof. Raoux, an eminent physician of Lausanne:—

1. Bad light, or defective illumination.
2. Air vitiated by animal emanations, vegetable or mineral dust, the smoke of various combustibles, especially that of tobacco, in which nicotine exists.
3. Temperature too high or too low, and sudden changes and draughts.
4. Clothing too tight, particularly at the neck or waist.
5. Position with the head and body too much bent forward during labor with the eyes.

6. Premature study, excess of reading, etc.
7. Alcoholic excesses.
8. Use of the eyes and brain immediately after eating.
9. Habitual constipation, cold feet, and everything which tends to produce congestion of the head.
10. Immorality, especially during childhood and youth.

Arsenical Poisoning.—Notwithstanding the wide agitation of the subject, wholesale poisoning from the use of common articles containing arsenic in some form still continues. The French government has led out in the needed reform by making a law which renders manufacturers of paper and book-covers containing arsenic liable to a fine and an action for a criminal offense. We hope our American legislators will wake up to this subject soon. If nothing is done sooner, undoubtedly the National Board of Health will ultimately give this matter the attention it deserves.

Not an Angel.—Nothing can be more out of keeping with the sacred office of a gospel minister than the vile habit of tobacco-using; and the sharp rebuke given by the lady referred to in the following anecdote was none too severe; it had certainly better come then than when too late to banish the quid and cleanse the mouth from the juice of the vile weed:—

“Old Parson Happy was one of the old-time circuit riders, whose rough exterior and uncouth ways often obscured his true goodness of heart. One day he was caught in a shower in Illinois, and going to a rude cabin near by he knocked at the door. A sharp-looking old dame answered his summons. He asked for shelter. ‘I don’t know you,’ she replied suspiciously. ‘Remember the scripture,’ said the preacher. ‘Be not forgetful to entertain strangers, for thereby some have entertained angels unawares.’ ‘You need n’t say that,’ quickly returned the other; ‘no angel would come down here with a big quid of tobacco in his mouth!’ She shut the door in his face, leaving the good man to the mercy of the rain and his own reflections.”

The Sphygmaphone.—Dr. Richardson, the eminent English champion of the temperance cause, is also very eminent for his scientific attainments and discoveries. He has recently invented an instrument called the sphygmaphone, by means of which the pulse can be made audible, and can be heard by a large audience. It is even said that by means of this instrument a physician can sit at home and listen to his patient's pulse several miles away.

Consumption in Cows.—While on a visit a few days ago to the famous stock farm of Gen. Hardin, near Nashville, Tenn., we were informed by a gentleman who is thoroughly conversant with the matter of which he was speaking, that the cattle of New England are suffering greatly with pulmonary disease, many of them, especially cows of high breeding, dying with consumption, unless deprived of the opportunity by being slaughtered and used for food. This the gentleman attributed to the excessive care which is taken of these animals. They are kept up in stalls, with little exercise, and no sunshine, and become diseased in consequence.

It is a well-known fact that consumption is much more common in New England than elsewhere among human beings. It is also well known that this terrible disease may be contracted by eating the flesh or using the milk of consumptive cows. It is a question worth considering whether there may not be an intimate relation between these two facts.

An Epidemic from Impure Water.—An alarming epidemic of diarrhea recently broke out in the Kentucky State penitentiary. Within forty-eight hours more than five hundred convicts were attacked, scarcely enough well ones being left to care for those who were sick. A careful examination showed that the cause was the use of impure water.

Poisonous Paper Collars.—An English physician extracted ten and a half grains of arsenic from a single paper collar. All paper collars are not poisonous, but many manufacturers employ arsenious acid in producing the gloss, and such collars are of course dangerous.

—An English writer argues strongly for the disuse of animal food on the ground that the evidence for the existence of animals after death is as good as that for human beings. The writer very well says that nothing can be more monstrously ridiculous than the inconsistency of those who maintain the theory of animal posthumous existence and yet continue to destroy them either for food or for sport.

—Dr. E. Lavey, a Viennese physician, has proved that the human skin is absolutely impenetrable to the chemical constituents of mineral waters. It is evident, then, that the wonderful effects supposed to be derived from bathing at mineral springs, etc., are due rather to the water than to the various saline, alkaline, and ferruginous minerals and foul gases contained in it.

—A physician recommended a lady to abandon the use of tea and coffee. "Oh! but I shall miss it so," said she. "Very likely," replied her medical adviser, "but you are missing health now, and will soon lose it altogether if you do not." So it is with the use of beer, tobacco, and many other injurious things.

—Condurango, the South American drug which has at various times acquired such a remarkable reputation for the cure of various and widely different diseases, among which have figured prominently all kinds of malignant disease, has proved, upon chemical analysis, to contain no active principle. Its chief virtue evidently is that it is inert.

—We heartily agree with the sentiment of a Hamburg paper which said, "Tobacco burns out the blood of the German people (Americans as well), destroys their teeth, their eyes, their lungs, their brains; turns their flesh into mummies, and their minds into metaphysics."

—The human skeleton consists of more than two hundred bones. So, when a man says every bone in his body aches, you may know he is a landed proprietor of two hundred achers.

FARM AND HOUSEHOLD.

Devoted to Brief Hints for the Management of the Farm and Household.

BEDS AND BED CHAMBERS.

CONSIDERING the fact that at least one-third of our lives is spent in bed, it is very essential that our sleeping arrangements should be such as will be the most conducive to the health of the occupant. Bedrooms should be large and well ventilated. Very many persons sleep in "eight by ten rooms," or rooms whose cubic contents would not be over six or eight hundred cubic feet, while each individual requires every hour at least three thousand cubic feet of air,—more than four times the capacity of the room; and when we reflect that two persons habitually sleep, oftentimes with closed doors and windows, in rooms containing less than a thousand feet of air, which must last at least eight hours, except such scanty additional supply of fresh air as may insinuate itself through cracks and crevices by doors or windows, we can but assert, with a recent number of an English sanitary journal, that "there is reason to believe that more cases of dangerous and fatal disease are gradually engendered annually by the habit of sleeping in small, unventilated rooms, than have occurred from a cholera atmosphere during any year since it made its appearance in this country."

During the night there is an average loss of a pound of matter, given off from the body, partly from the lungs and partly through the pores of the skin. The escaped material is carbon dioxide and decayed animal matter or poisonous exhalations, which is in part diffused through the air, and in part absorbed by the bedclothes. It is said that "if a single ounce of wool and cotton be burned in a room it will so completely saturate the air with smoke that one can hardly breathe, though there can only be an ounce of foreign matter in the air. If an ounce of cotton be burned every half-hour during the night, the air will be constantly saturated with the smoke unless there be an open window or door for it to escape. Now the sixteen ounces of smoke thus formed is far less

poisonous than the sixteen ounces of exhalations from the lungs and bodies of two persons who have lost a pound of weight during the eight hours of their sleeping; for while the dry smoke is mainly taken into the lungs, the damp odors of the body are absorbed into the lungs and into the pores of the whole body."

Nothing more is needed to show the importance of having bedrooms well ventilated, and of thoroughly airing the sheets, coverlets, and mattresses in the morning before packing them together in a neatly-made bed. E. E. K.

SEASONABLE HINTS.

THE following hints are from the *American Agriculturist* for November:—

"COLTS.—Young colts and yearlings require good nutritious food. Oats are the best food for a growing colt; if corn is used, wheat bran is a proper accompaniment. Abundance of phosphates is needed to form a solid and strong bony framework, and bran is rich in these. Keep the skin clean with the curry-comb and brush, especially the latter."

"MIXED FEED.—Sameness palls upon the appetite; a variety of food encourages it. A good farmer loves to see his animals eat, and the more they eat, and healthfully digest, the greater are the owner's profits. Cut or pulped roots will be found the best basis for winter feeding, and with these, corn-fodder and oat straw may be given liberally, saving the hay until the early spring."

A Hint for Nurses.—We quote the following excellent hints for changing bed linen from *Scribner's Monthly* for September:—

"Nothing is more easy to an experienced nurse or more difficult to an inexperienced one than to change the bed linen with a person in bed. Everything that will be required must be at hand, properly aired, before beginning. Move the patient as far as possible to one side of the bed, and remove all but one

pillow. Untuck the lower sheet and cross sheet and push them toward the middle of the bed. Have a sheet ready folded or rolled the long way, and lay it on the mattress, unfolding it enough to tuck it in at the side. Have the cross sheet prepared as described before, and roll it also, laying it over the under one and tucking it in, keeping the unused portion of both still rolled. Move the patient over to the side thus prepared for him; the soiled sheets can then be drawn away, the clean ones completely unrolled and tucked in on the other side. The coverings need not be removed while this is being done; they can be pulled out from the foot of the bedstead and kept wrapped around the patient. To change the upper sheet, take off the spread and lay the clean sheet *over* the blankets, securing the upper edge to the bed with a couple of pins; standing at the foot, draw out the blankets and soiled sheet, replace the former, and put on the spread. Lastly, change the pillow-cases."

For Measuring Land.—An exchange offers the following useful hints for measuring land:—

"Almost every farmer has some way of measuring land, and the most common is to step off five paces for a rod, and call sixty by sixty-five paces an acre. For ordinary purposes this mode will answer, but when the exact measurement of a piece of land is desired it cannot be depended on as being accurate.

"A light pole, just sixteen and a half feet long, is a cheap and convenient measure, but a four-rod tape line is much better.

"An exact acre can be found by the following table of distances:—

"A plot of ground 5 yards wide by 968 yards long contains 1 acre.

"A plot of ground 10 yards wide by 484 yards long contains 1 acre.

"A plot of ground 20 yards wide by 242 yards long contains 1 acre.

"A plot of ground 40 yards wide by 121 yards long contains 1 acre.

"A plot of ground 80 yards wide by 60½ yards long contains 1 acre.

"A plot of ground 70 yards wide by 69 1-7 yards long contains 1 acre."

Winter Care of Strawberry Plants.—Do not mulch strawberry plants, says the *Fruit Recorder*, until after the ground freezes the first time for winter. Then drive right on to the bed and throw on straw or hay sufficient to just cover them from sight, and leave it there till spring. To keep from blowing off, lay brush or stones or boards on it here and there, but not so as to press right down on the crown of the plants. Leaves are splendid for mulching.

Spots on Furniture.—Spots on furniture may usually be cleaned by rubbing them vigorously with a flannel dipped in the same thing that took out the color. A warming-pan full of hot coals held over varnished furniture will take out white spots. Care should be taken, however, not to hold the coals near enough to scorch; and the spots should be rubbed with a flannel while warm. Rotten stone pulverized and mixed with linseed oil is the best restorative for defaced varnished furniture.

Cheap Walks for Farmers.—A very good walk from the house to the stable and other out-houses may be made by laying sapling trees, a few inches in diameter, parallel with each other, and two or three feet apart. Bind them firmly in place by pinning occasional ties across, and fill the middle with sand or gravel.

Soot.—Often, in putting up or taking down stove-pipes, soot will fall on the carpet. If such places be covered thickly with common salt, the soot can be brushed up without damage to the carpet.

—The quickest way to expel foul air from a well is to heat a bar of iron red hot, and lower it down into the water; the sudden formation of steam is effectual.

—Shirt bosoms, cuffs, etc., dipped into clear water, after starching (not to wash the starch out, but simply to rinse from the outside), will be much more easily ironed and will look more glossy.

—It is stated that if the wicks for candles be steeped in lime-water and saltpeter, and dried without rinsing, the flame will be much clearer and the tallow will not run.

NEWS AND MISCELLANY.

- Bismarck is in ill health.
- The Zulu war cost \$22,500,000.
- Venezuela has joined the postal union.
- John B. Gough is only sixty-two years old.
- Philadelphia is to have an elevated railway.
- Pocahontas lies buried at Gravesend, near London.
- The walls of ancient Rome were thirteen miles around.
- Mexico is said to be preparing for another revolution.
- There are 636 natives of India who are authors and poets.
- Sealing-wax was first made in Europe by the Portuguese.
- Over two thousand lives were lost by the recent floods in Spain.
- There is no church in Bodie, a city in Nevada of 8,000 inhabitants.
- The pyramids of Egypt were begun 1500 B. C., and completed 1082 B. C.
- Prince Jerome is about to become a competitor for the Presidency of France.
- Over 6,000,000 acres of land in Ireland are owned by less than 300 individuals.
- James Gordon Bennett's income from the *Herald* is said to be \$1,500 per day.
- Fifty thousand gross of watch glasses are sold annually in the United States.
- Nearly 5,000 women and girls are employed about the coal-mines of Great Britain.
- Over five thousand more Germans have immigrated to the United States this year than last.
- An explosion of fire-damp occurred in a coal-mine near Scranton, Pa., Nov. 2, killing five men.
- The sparrow was first introduced into America in the autumn of 1858 by a gentleman named Desblois.
- Italy has formed a league with Germany and Austria against the preponderance of England and France.
- Alaska is about one-tenth the size of the States and other Territories, yet it has a greater extent of sea-coast.
- The flour mill being built by Mr. Washburn, of Minneapolis, will, when completed, be the largest one in the United States.
- President Grevy, of France, is opposed to capital punishment, and recently commuted the death sentences of several criminals.
- It is announced that the largest cargo of cotton ever sent out from New Orleans has safely passed outward through the jetties.
- In most respects Norway is the smallest nation of Europe; but its commerce is such that its fleet is the third largest in the world.

—Officers of the Canadian Geological Survey report the discovery of extensive beds of coal in the neighborhood of the Nelson River.

—The Egyptian obelisk known as "Cleopatra's Needle" is to be removed to the United States. The work of removal has already begun.

—Next year will complete a semi-millennium of the English Bible, Wyckliffe's translation of the New Testament having been issued in 1380.

—The re-appearance of the plague, in Russia, is reported. Though not wide-spread, it is sufficiently serious to demand preventive measures.

—There are thirty thousand deaf mutes in the United States, and fifty places of worship where services are conducted in the sign language.

—The discovery of enormous deposits of iron ore, of the best quality, among the farms on the Ohio River, about eight miles from Pittsburgh, is reported.

—The English language derives its name from the Angles and the Saxons (Anglo Saxons), who took possession of the British Isles early in the sixth century.

—The greatest length of Lake Michigan is 300 miles; its greatest breadth, 108 miles; mean depth, 690 feet; elevation, 506 feet; area, 26,000 square miles.

—The essay of Prince Ptah-hotep, son of a king of the fifth dynasty of the Egyptian kings, known as Pisse Papyrus, is probably the oldest manuscript in the world.

—Hungary is afflicted with a distressing famine, the result of the bad harvest. The Government has suspended the collection of taxes until the next harvest shall have been gathered.

—Mr. W. H. Vanderbilt, of New York, and Mr. J. C. Flood, of San Francisco, are said to be the two largest single holders of U. S. registered bonds. They each have \$5,000,000.

—The condition of Turkish finances is so bad that the usual provision cannot be made for the pilgrimage to Mecca; an occurrence never before known in the history of the Ottoman empire.

—The Chinese wear only five buttons on their coats; these serve them as a reminder of the five moral virtues recommended by Confucius,—humanity, justice, order, prudence, and rectitude.

—In 1860 there were 1,311,246 employees engaged in the manufacturing industries of the United States; in 1870 the number was 2,053,996, and in 1880 the number will not be less than 3,500,000.

—A colored man named Cato Oakley, living in Suffield, Conn., is one hundred and fourteen years old. He has been a slave, and was one hundred and eight years old when he cast his first ballot.

—Boston annually manufactures about 4,000 tons, and New York about 7,000 tons, of candy. It is stated that more candy is made and eaten in this country than in all the rest of the world combined.

—During the fiscal year ended June 30, 1879, there were 19,300 applications filed, and 12,471 patents issued by the United States Patent Office. The receipts were \$703,146, being \$154,495 in excess of expenditures.

—Measures are being taken for the complete abolition of slavery in Cuba by the year 1890. The bill to be presented to the Cortes provides that all slaves over fifty-five years of age shall be freed in Sept., 1880.

—The head of the Goddess of Liberty which adorns the silver dollar is the likeness of Miss Anna Williams, a modest teacher in the House of Refuge, Philadelphia, she having sat for the artist who designed the head.

—The first Sunday-school was founded by Robert Raikes, in 1780. Next year the centennial anniversary of Sunday-schools will be celebrated in all the leading cities of Great Britain, and by a world's convention to be held in London.

—The celebrated temple of Diana of Ephesus was 425 feet long, 225 feet broad, and was supported by 127 columns of Parian marble sixty feet high, each weighing 150 tons. It was built 552 B. C., and was one hundred years in building.

—An inspection of houses, under the auspices of the National Board of Health, has been begun in Memphis, with a view to ascertain what sanitary improvements are necessary for each dwelling within the corporate limits of the city.

—In Hong Kong, China, there is a foundling hospital, established by Herr Knak, a German preacher who recently died in Berlin, where eighty girls, thrown away in their infancy by their Chinese mothers, are being educated under Christian influences.

—Italy is about to extend suffrage to every citizen above twenty-one who can read and write. Signor Morelli, proposes to include women who can fulfill these requirements, and measures are already on foot to obtain the signatures of such as desire the privilege.

—Dr. Le Moyne, so widely known through his advocacy of cremation, died Oct. 14, at his home in Washington, Pa. His remains were converted into ashes in the furnace built upon his own land for crematory purposes. He was a large man, weighing 200 pounds; after cremation his ashes weighed seven pounds.

—It is supposed that the dowel-pins found in connection with the stone-work of the ancient temples of Egypt, is the oldest timber in the world that has been used by man. These pins appear to be of shittim wood,—of which the ark is said to have been constructed,—a sacred tree of ancient Egypt, but now rarely found in the valley of the Nile.

—Miss Rye, a philanthropic English lady, has just made her thirty-second voyage across the Atlantic with a cargo of "street waifs" collected from the highways of London. These girls are taken to Canada and placed in respectable families, where, in almost every instance, they lead virtuous lives. It is about ten years since Miss Rye began her noble work.

—The Duke of Westminster is greatly reducing the number of public houses on his estate as the leases expire. The lease of a large public house recently expired, the renewal of which would have amounted to several hundred a year, and the Duke has let it, rent free, to the incumbent of the parish as a mission house, and, at his own expense, has put a public drinking fountain against its wall.

LITERARY NOTICES.

LECTURE NOTES ON CHEMICAL PHYSIOLOGY AND PATHOLOGY. By V. C. Vaughan, M. D., Ph. D., 315 pp. Ann Arbor, Mich.

The author of this able work is the lecturer on Medical Chemistry in the University of Michigan, and the author of several other important works. The work is the latest on the subject, and while not pretending to be exhaustive, contains all that will be of practical utility to the average student of this branch of study. The position of the author and his brilliant success as a teacher of the subjects treated in this work is a sufficient guarantee of the reliability and practical value of the instruction contained in it, as is also evidenced by the fact that although the first edition so recently appeared, a second has already been demanded. The mechanical execution of the work is excellent.

WOMAN AT WORK. Mrs. E. T. Housh, editor. Louisville, Ky.

The *Woman at Work* is a literary and practical monthly magazine which is now in its third volume. It has departments especially devoted to the women, the youth, and the children. Its articles are original and pure-toned. It is an excellent paper, and ought to be found in every household. The subscription price is \$1.50 per annum.

HOUSTON'S EASY LESSONS IN NATURAL PHILOSOPHY. Philadelphia: 17 North Seventh Street. Eldridge & Brother.

In this work of one hundred and seventy-six pages the author has aimed to present the elementary principles of Natural Philosophy in such a manner as to bring them within the comprehension of young children, by explaining in simple language matters common to the experience of every-day life. The book is beautifully illustrated, and the language so well adapted to those for whom the book is designed, and the subjects so thoroughly treated, we can heartily recommend it as a most useful treatise for children. The price is 50 cents.

AMERICAN HEALTH PRIMERS, No. 4. EYESIGHT, AND HOW TO CARE FOR IT. Philadelphia: Lindsay & Blakiston.

This is an excellent little monograph, by George C. Harlan, M. D., surgeon to the Willis' Eye Hospital. Though not intended as an exhaustive treatise upon the subject, "its object is to place before the reader such elementary knowledge as is necessary to enable him to understand the conditions under which the eyes must do their work;" and to place this knowledge within the reach of all, the explanations are as simple as possible, and the use of technical language is avoided, rendering it entirely practical to the general reader. Its practical suggestions have reference to prevention rather than cure, which, together with the general knowledge upon the subject it contains, makes it worthy of a place in every family circle.

Publishers' Page.

GOOD HEALTH FOR 1880.

THE present number closes the volume for 1879, and with the next will begin the fifteenth annual volume of this journal. In looking over the several numbers which have appeared during the last year, noting the great variety of topics which have been treated in its monthly columns, the many new and interesting facts presented to the readers of the journal, the publishers feel that their work has not been in vain, and take some satisfaction in believing that the last volume has been much the best of any which has yet appeared. Nevertheless, they feel the need of still greater improvements, and are not blind to the fact that in many particulars there is room for such changes as will increase the usefulness of the journal. They feel determined to make the next volume still more interesting, more instructive, and more indispensable for every family in the land.

Among the special attractions which will be possessed by the next volume we may mention the following:—

1. We shall be able to devote more time to the journal, and shall spare no pains or expense to make it all that can be desired.

2. A special effort will be made to make each number excel every previous one in value for those who wish to gain practical knowledge concerning the hygiene of the important subjects of how best to preserve health and prolong life.

3. Every number will contain an illustrated article on some practical subject.

4. Last, but not least, we would mention as a specially promising feature the fact that a number of excellent contributors have been engaged to write for the journal during 1880.

The interest in our periodical was never so great as now. Never was it so well received among intelligent men and women, not only in America but wherever the English language is spoken, as now. The prospect for increasing and continued prosperity was never better than at present.

A Trial Trip.—With the January number *GOOD HEALTH* will begin a trial trip for four months, at twenty cents. This will afford our friends an opportunity to send the journal to their friends for a small sum for a sufficient length of time to enable them to test its merits. Many persons can be induced to pay 20 cents for a dollar journal for four months; and who cannot afford to pay a dollar for five copies of the journal to be sent to friends for four months? We want at least fifteen thousand names. Let them come in at once. If every one will help a little, we shall meet with a grand success.

This number goes to press a little later than usual owing to delay occasioned by the absence of the editor, in attendance at the meeting of the American Public Health Association at Nashville, Tenn., and a great press of extra business in connection with the annual meetings of the American Health and Temperance Association and the stockholders of the Sanitarium.

A PREMIUM TO OLD SUBSCRIBERS.

THE calendar presented to our old patrons last year was so well appreciated that we propose to make the same offer again as follows:—

Every subscriber who will renew his subscription to *GOOD HEALTH* by the first of January, 1880, will receive, in addition to the year's numbers of the journal, a beautiful calendar for 1880. Every one who received the calendar last year was more than pleased with it. Its size is 14x12 inches. It is beautifully printed in various colors, in ornamental style, and is well worth the retail price, 15 cts. post-paid.

To each of the many thousand patrons whose subscriptions expire with this number we would be delighted to give a *GOOD HEALTH CALENDAR*, and we shall have several thousand ready in expectation that there will be a great demand for them. Those who remit first will be the first to receive the calendar.

Good Health Calendar.—Last year we issued in addition to the *Health Annual* an ornamental Calendar, which had a large sale, and was exceedingly popular wherever introduced. To-day hundreds of copies may be found still in use in banks, offices, post-offices, hotels, and other business places in many different States. This year we have prepared a calendar somewhat similar in form and general style, but in every way far superior to that of last year. It is by all odds the neatest and most convenient thing of the kind ever offered to the public. Every family ought to have it. It is a splendid thing for a present to a friend. Price, 15 cts. post-paid, or 10 cts. each by the quantity.

The annual report of the Sanitarium at the recent meeting of its stockholders shows a larger number of patients treated during 1879 than ever before in a single year. The institution is rapidly growing in the confidence of the public, and of the intelligent portion of the medical profession. It starts out upon the new year with more friends and better prospects than ever before. The board of directors elected at the last meeting consist of the following-named persons: James White, S. N. Haskell, L. McCoy, W. C. White, H. W. Kellogg, W. J. Fairfield, J. H. Kellogg.

We take special pleasure in informing our readers that we are authorized to say that Eld. and Mrs. White, whose excellent practical articles have before formed an important feature of the journal, will during the coming year contribute regularly to the columns of *GOOD HEALTH*. These articles will treat of live practical subjects with which they are accustomed and well fitted to deal, and will undoubtedly be considered invaluable by all who appreciate wise instruction and practical common sense.

The January number of *GOOD HEALTH* will be ready by the tenth of December, so that it may be used for specimen copies by canvassers. A large extra edition will be issued with the expectation that many hundred copies will be used in this way.

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