The Laws of Life and Health are the Laws of God. Disease is the Penalty of Transgression. Health is the Reward of Obedience.

1877

HEALTH A LMANAC.

## The Code of Health.

BREATHE PURE AIR. EAT PURE FOOD. DRINK PURE WATER. WEAR PROPER CLOTHING. KE AMPLE EXERCISE.

1877

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ASC DODIAN

All Drugs are Poisons.

THE

OBTAIN ADEQUATE REST. SECURE SUITABLE RECREATION. KEEP CLEAN. CONTROL THE PASSIONS. PRESERVE CORRECT ATTITUDES.

Nature the Best Physician.

FAMILY

seth THOUSAND.

PUBLISHED AT

The Office of the Health Reformer.

BATTLE CREEK, MICH.

ADVENT SOURCE COLLECTION 1877.

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WASHINGTON TOTE 10 CENTS.

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# BATTLE EREEK COLLEGE.

This Institution is located in Battle Creek, Michigan, a flourishing city

and the Chicago & Lake Huron Railroads. The College building is both AMPLE and ELEGANT, and the Grounds are LARGE and BEAUTIFUL, The corps of Professors comprises In-structors in all the English branches, the Natural Sciences, and both An-cient and Modern Languages. One of the chief attractions of this Institu-tion is the fact that it is tion is the fact that it is

#### Conducted on Hygienic Principles.

The Professors are all hygienists, and inculcate hygienic truths in their daily instructions. The College has a FULL CHARTER from the State, and is empowered to confer Diplomas. TERMS of TUITION are very reasonable. Good hygienic board can be

Terms open as follows : Fall Term. August, 80, continuing 16 weeks. Winter Term, January, 3, continuing 12 weeks. Spring Term. April, 3, continuing 12 weeks. All who wish further information should send for the Annual Catalogue just issued.

Address, BATTLE CREEK COLLEGE, Battle Creek, Mich.

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## THE FAMILY

ASC 000149

HEALTH ALMANAC. 1877.

HE advent of a new year brings the necessity for another edition of the FAMILY HEALTH ALMANAC. Of the two former editions, more than one hundred thousand were sold, copies finding their way into nearly every State and Territory of the Union, as well as several foreign countries. Much good fruit from the seed thus widely scat-

tered has already been seen. Through this medium, thousands have received their first knowledge of the true principles of reform; hundreds of suffering invalids have found, in obedience to the truths inculcated in it, the panacea for which they had long sought in vain; and ten thousand families have accepted it as a wholesome substitute for the worthless trash with which nostrum mongers annually flood the country.

The calendar is an indispensable article in every well-regulated household. Taking advantage of this fact, the venders of bitters and patent nostrums have seized upon it as an advertising medium. Every manufacturer of these vile compounds has an almanac through which to laud his meretricious wares, and by means or forged certificates and lying testimonials impose upon the confidence of the credulous. This shameful abuse has brought the almanac into disgrace, so that the name itself has almost come to be one or reproach. A better use will soon restore it to its old position, that of an instructor of the people. Such was the character of the first almanacs published; such is still the use made of the almanac in European countries, and to a small extent in this country.

A work whose pages are scanned so frequently as are those of the family almanac ought to contain nothing in any degree objectionable. Every line ought to be of the most unexceptional character. Every page should contain something useful. Such almanacs are needed to supplant those which are unworthy of the name. To help supply this want is the object of the FAMILY HEALTH AL-MANAC; and the present edition is issued with the hope that it will receive as favorable a reception as have its predecessors.

MOON'S PHASES.         BOSTON.         NEW YORK.         WASHTON.         CHICAGO.           Third Quarter	1st MONTH. JANUARY, 1877. 31 DAYS.									
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the sun and two of the moon. They occur as follows :-I. A total eclipse of the moon, Feb. 27, invisible in America, the moon being below the horizon through the whole continuance of the eclipse.
II. A partial eclipse of the sun, March 14, invisible in America.
III. A partial eclipse of the sun, Aug. 8, also invisible in America.
IV. A total eclipse of the moon, Aug. 23, partly visible in the United States. The eclipse occurs in the early evening, and will last three hours and forty-one minutes. It begins in the following cities at the times specified: Boston, 4:35 (r. M.); New York, 4:23; Philadelphia, 4:19; Washington, 4:11; Buffalo, 4:4; Charleston, 3:59; Chicago, 3:29; St Louis, 3:18.
V. A partial eclipse of the sun, Sept. 6, invisible in North America.

#### Hasty Meals.

AMERICANS are proverbial for hasty eating. The student swallows his food unmasticated, and hastens back to his books. The merchant bolts his meals to save time for business. The glutton eats as fast as ever he can to keep pace with his neighbors and get his full share.

It is not enough to fill the stomach with food. Digestion begins in the mouth; and unless the mouth does its share of the work, the stomach is required to do a double portion. When the food is sent down into the stomach in lumps, the abused organ does its best to digest it, but fails because it has no means for grinding food. The mill is in the mouth, and mastication, if done at all, must be done there. The gastric juice cannot act upon solid food, and allows it to go undigested. Fermentation ensues, and dyspepsia, dysentery, cholera morbus, and a dozen other diseases result.

Eight ounces of food, well masticated, will afford more nourishment to the body than a pound hastily bolted. One of the best ways to avoid eating too fast is to eat hard, dry food, which requires much mastication before it can be swallowed. Drinking freely of water or other beverages at meals encourages hasty eating, besides being a serious evil of itself. If the beverage is either hot or cold, the evil is still worse; hence, tea and coffee, and iced water are justly condemned as accompaniments of meals.

Sanitarium for January.—In the unventilated tenement-houses of large cities, small-pox, varioloid, measles, and scarlatina find numerous victims during this and the preceding month. A mistaken fear of cold air confines the invalid in a stiffing apartment where the poisonous emanations resulting from the disease mingle with the odors from the kitchen and the drain-pipe, thus adding intensity to the disease already racking the frame of the sufferer, and lessening his chances for life. Colds, sore throat, whooping-cough, and other affections of the throat and lungs, together with quinsy and mumps, are prevalent during this month.

To escape those deadly fevers which make such havor with those addicted to gross and gluttonous habits, live in accordance with the laws of health; dress warmly; breathe plenty of pure air, day and night; eat simple food, at regular hours; and avoid dissipation. The way to insure immunity from colds is to be out-of-doors daily, no matter how cold the weather—warmly clothed, of course—and keep sleeping-rooms well ventilated. In case of "taking cold," getting a sere throat, catching the mumps or the quinsy, do not resort to sirups, or balsams, or teas, or expectorants, but rather trust to nature and good nursing. Warm fomentations applied to the throat, in mumps and quinsy, ice in case of very sore throat, and a warm bath for a hard cold, will do more toward helping a person to get well than a cart-load of nostrums.

2d	24 MONTH. FEBRUARY, 1877. 28 DAYS.												
Th Ne Fir	MOON'S PHASES.         BOSTON.         NEW YORK.         WASH'TON.         CHICAGO.           Third Quarter         D.         H. M.         H. M.												
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Morning and Evening Stars.—A planet is called a morning star when it is visible before the rising of the sun, and an evening star when it remains above the horizon after the setting of the sun. It is also called an evening star when it rises before midnight.

#### MORNING STARS.

VENUS, until May 6. MARS, until June 6; visible before sunrise until Sept. 15. JUPITER, until April 13; visible before sunrise until June 22. SATUER, from March 1 to June 16.

#### EVENING STARS.

VENUS, after May 6. MARS, after June 6. JUPITER, after April 13. SATUEN, until March 1, and also after June 16.

#### Connecticut Laws against Tobacco-Using.

THE "Blue Laws" of Connecticut made the use of tobacco rather inconvenient to the devotees of the weed, as will be seen by the following section relating to that filthy habit, which might be incorporated into the present code of laws of the same State with great profit to all of her citizens :--

"Forasmuch as it is observed that many abuses are crept in, and committed by frequent taking of tobacko. It is ordered by the authority of this court, that no person under the age of twenty-one years, nor any other that hath not already accustomed himself to the use thereof, shall take any tobacko until he hath brought a certificate under the hands of some who are approved for knowledge and skill in phisick, that it is useful for him, and also that he hath received a lycense from the courte for the same. And for the regulating of those who either by theire former taking it, have, to theire owne apprehensions, made it necessary to them, or uppon due advice, are pursuaded to the use thereof-It is ordered that no man within this colonye, after the publication hereof, shall take any tobacko publiquely, in the street, highways, or any barne vardes, or uppon training days, in any open places, under penalty of sixpence for each offence against this order, in any of the perticulars thereof, to bee paid without gainsaying uppon conviction, by the testimony of one witness, that is without just exception, before any one magis-trate. And the constables in the several towns are required to make presentment to each perticular courte, of such as they do understand and can evict to be transgressors of this order."

Alexandra III

Sanitarium for February.—"February thaws" produce a damp, chilly atmosphere, and disturb the circulation, making the system especially liable to colds. Croup, diphtheria, and pneumonia are prevalent. Those whose systems are weakened by improper living, fall easy victims, irrespective of age; while those whose habits are more nearly correct, are pretty sure to escape. Of the three diseases mentioned, eroup is the most to be feared, unless it is of the spasmodic variety. True croup is very insidious in its advances, the presence of the disease often being unsuspected until the patient is almost beyond recovery. The inhalation of steam, and the application of alternate hot and cold applications to the throat, externally, are among the most effective measures of treatment. The fever which attends each of these diseases is best relieved by the tepid sponge bath, which may be administered as often as the feelings of the patient demand it. Keep the head cool and the feet warm. In diphtheria, apply iced water, ice, or snow, to the outside of the throat, and give the patient bits of ice to swallow. If there are large white patches on the back part of the throat, touch them every hour or two with pure lemon juice. Keep the patient on a simple and abstemious diet until the fever subsides. Oatmeal or barley gruel, with fruit, is a very proper diet for fever patients.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	34 MONTH. MARCH, 1877. 31 DAYS.								
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	MOON'S PHA	ISES. BOSTON.	NEW YORK. WASH'TON	CHICAGO.					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	New Moon First Quarter	6         5         17 eve.           14         10         10 eve.           22         8         25 morn.	5 5 eve. 4 58 eve. 9 58 eve. 9 46 eve. 8 13 morn. 8 1 morr	4 11 eve. 9 4 eve. 7 19 morn.					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	of Month. y of Week. Sun at	Boston; New England, New York State, Mich- igan, Wisconsin, Iowa	New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl-	Washington; Maryland, Vir- ginia, Kentucky					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Day N(								
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 6&345&50&8&29&ev.51\\ 6&345&51&9&44&1&30\\ 6&325&5210&57&2&13\\ 6&305&54&morn&3&8\\ 6&285&55&0&9&3&44\\ 6&285&55&0&9&3&44\\ 6&285&55&6&1&17&4&42\\ 6&285&55&8&1&16&6&4\\ 6&285&55&8&1&16&6&4\\ 6&285&55&8&1&16&6&4\\ 6&285&58&8&1&0&6&4\\ 6&285&58&8&1&0&6&4\\ 6&285&58&8&1&0&6&4\\ 6&285&58&8&1&0&6&4\\ 6&285&58&5&1&0&6&4\\ 6&285&58&5&1&0&6&6\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&8&8&2&0&1&0\\ 6&16&6&1&0&2&3&1&1&0\\ 6&3&6&1&2&morn&2&4\\ 6&1&6&1&0&1&0&2&3&1&0\\ 6&3&6&1&2&morn&2&4&5&5&0\\ 7&5&5&6&16&1&2&45&5&5&5\\ 7&5&5&6&16&1&2&45&5&5&5\\ 7&5&5&6&16&1&8&4&5&8&1&0\\ 7&5&5&5&6&16&1&8&4&5&8&1\\ 7&5&5&6&16&2&4&5&5&2&1&1\\ 5&5&6&6&24&8&3&2&ev.2\\ \end{array}$		$\begin{array}{c} 6 & 325 & 58 & 8 & 27 \\ 6 & 315 & 54 & 9 & 34 \\ 6 & 395 & 5510 & 49 \\ 6 & 295 & 5611 & 57 \\ 6 & 285 & 57 \\ morn \\ 6 & 285 & 581 & 4 \\ 6 & 245 & 59 & 2 & 4 \\ 6 & 245 & 59 & 2 & 4 \\ 6 & 245 & 59 & 2 & 4 \\ 6 & 246 & 5 & 9 & 2 & 4 \\ 6 & 246 & 5 & 9 & 2 & 4 \\ 6 & 246 & 5 & 9 & 2 & 4 \\ 6 & 246 & 5 & 9 & 2 & 4 \\ 6 & 196 & 2 & 4 & 166 \\ 6 & 196 & 2 & 4 & 166 \\ 6 & 166 & 4 & 5 & 13 \\ 6 & 156 & 5 & 5 & 56 \\ 6 & 106 & 8 & 7 & 59 \\ 6 & 76 & 100 & 13 \\ 6 & 56 & 1111 & 22 \\ 6 & 36 & 12 \\ 6 & 76 & 100 & 13 \\ 6 & 6 & 16 & 14 \\ 1 & 136 \\ 6 & 06 & 15 & 2 & 32 \\ 6 & 16 & 14 & 1 & 366 \\ 5 & 556 & 18 & 4 & 28 \\ 5 & 556 & 18 & 4 & 28 \\ 5 & 556 & 19 & 4 & 56 \\ 5 & 556 & 19 & 4 & 56 \\ 5 & 556 & 19 & 4 & 26 \\ 5 & 556 & 19 & 4 & 56 \\ 5 & 556 & 19 & 4 & 28 \\ \end{array}$					

WINTER	begins,	December	21,	1876,	and lasts	89	days.
SPRING		March	20,	1877,	66	93	days.
SUMMER	**	June	21,	1877.	"	93	days.
AUTUMN	"	September	22,	1877,	44	90	days.
WINTER	"	December					

Length of the Tropical year, 365 days, 5 hours, and 36 minutes. The days are longest about June 25, and shortest about December 20.

#### How to Cure a Cold.

SUPPOSE the baby or some other member of the family has caught a cold; what shall be done? Shall we give him ginger tea, red pepper, brandy sling, onion sirup, honey and lard, fat pork, castor-oil, licorice, hoarhound, molasses candy, boneset, catnip, mullen tea, or pennyroyal? or shall we apply a mustard plaster to his chest, a blister to the bottom of each foot, and fat pork with salt and pepper to his throat?

Do no such thing. Such trash put into his stomach, with such irritating applications outside, would make a well person sick. Now do this:---

1. Eat little or nothing for a day or two. The popular adage, "Stuff a cold and starve a fever," is without foundation.

2. Rest. Sleep all that is possible. No time is lost in such a course. Timely rest may save serious illness.

3. Take some kind of hot bath, which will start the perspiration freely. Long sweating is debilitating; only start the action of the skin. The foot bath combined with the sitz bath, the wet-sheet pack, the vapor bath, and the hot-air bath are alike suitable. These are severally described in works for sale at this Office. After the bath, go to bed. Drink freely of pure water.

A day or two of such treatment will usually "break" the hardest cold, saving the patient several weeks of pain and annoyance, if not from chronic disease. Try it.

Sanitarium for March .- The chilling winds and sudden changes of temperature, so characteristic of this month, are the exciting causes of throat ailments, rheumatic affections, and influenzas, together with gout, neuralgia, and nervous affections of various sorts in the dissipated and those who are overworked. Those who habitually disregard the laws of health may expect to suffer. Even those whose habits are approximately correct will need to take unusual precautions to avoid disease. Those whose sytems have been rendered impure by the use of pork, condiments, or stimulating drinks, are pretty sure to receive a retribution for their digressions from the laws of health. There is nothing more effective than a rigid hygienic dietary to prevent these diseases, or to mitigate their severity when an individual is already suffering as the penalty of transgression. Sponge baths, packs, and other general baths are useful in al-laying febrile disturbances of any kind, and are applicable to cases of the character described. They aid depuration, and so assist nature in getting rid of the causes of disease. To relieve the pain of gout, neuralgia, and acute rheumatism, apply hot fomentations, or other hot applications, as hot bricks or stones, jugs or bottles filled with hot water, bags filled with heated sand, salt, or corn meal, or similar appliances. Care should be exercised that the hot applications are not continued too long without intermission. After an hour's continuous use, substitute a tepid compress for a few minutes. Sometimes cold applications give more relief than hot. They should be tried whenever the hot are unsuccessful.

4th MONTH.	4th MONTH. APRIL, 1877. 30 DAYS.								
MOON'S PHASES.	BOSTON.	NEW YORK.	WASH'TON.	CHICAGO.					
Third Quarter.D.55New Moon.13First Quarter.20Full Moon.27		<ul> <li>H. M.</li> <li>11 34 morn.</li> <li>0 54 eve.</li> <li>2 41 eve.</li> <li>11 40 morn.</li> </ul>	н. м. 11 22 morn 0 42 eve. 2 29 eve. 11 28 morn	0 0 noon. 1 47 eve.					
of Moni of Week of Week of Week of Week of Week of Week	A CONTRACTOR OF THE OWNER	New Jersey va'a, Ohio,	ity; Phila- nnecticut, , Pennsyl- Ind., & Ill.	CALENDAR FOR Washington; Maryland, Vir- cinia, Kentucky Missouri, & Ca.					
	un Moon H. w. ts. rises. Bost'n	SUN SUN M	ises. N. Y.	Sun Sun Moon rises sets. rises.					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		$\begin{array}{c} 5\ 36\ 6\ 29\\ 5\ 35\ 6\ 30\\ 5\ 33\ 6\ 31\\ 5\ 31\ 6\ 32\\ 5\ 30\ 6\ 31\\ 5\ 31\ 6\ 32\\ 5\ 30\ 6\ 33\\ 5\ 28\ 6\ 34\\ 5\ 27\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 22\ 6\ 35\\ 5\ 20\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 9\ 6\ 44\\ 5\ 12\ 6\ 45\\ 5\ 10\ 6\ 45\ 45\\ 5\ 10\ 6\ 45\ 45\ 5\ 10\ 6\ 45\ 10\ 6\ 45\ 10\ 5\ 10\ 6\ 45\ 10\ 6\ 45\ 10\ 5\ 10\ 6\ 45\ 10\ 6\ 10\ 10\ 10\ 10\ 10\ 10\ 10\ 10\ 10\ 10$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c} 5 & 39 & 6 & 27 & 0 & 46 \\ 5 & 38 & 6 & 28 & 1 & 36 \\ 5 & 38 & 6 & 29 & 215 \\ 5 & 35 & 6 & 30 & 2 & 49 \\ 5 & 38 & 6 & 31 & 3 & 17 \\ 5 & 38 & 6 & 31 & 3 & 17 \\ 5 & 38 & 6 & 31 & 3 & 17 \\ 5 & 38 & 6 & 33 & 4 & 21 \\ 5 & 29 & 6 & 33 & 4 & 21 \\ 5 & 29 & 6 & 33 & 4 & 21 \\ 5 & 29 & 6 & 33 & 4 & 41 \\ 5 & 26 & 6 & 35 & \text{sets.} \\ 5 & 24 & 6 & 36 & 8 & 1 \\ 5 & 24 & 6 & 36 & 8 & 1 \\ 5 & 21 & 6 & 391 & 12 \\ 5 & 21 & 6 & 391 & 12 \\ 5 & 21 & 6 & 391 & 12 \\ 5 & 21 & 6 & 391 & 12 \\ 5 & 21 & 6 & 391 & 12 \\ 5 & 21 & 6 & 391 & 12 \\ 5 & 21 & 6 & 431 & 0 & 28 \\ 5 & 13 & 6 & 41 & 0 & 28 \\ 5 & 13 & 6 & 44 & 2 & 30 \\ 5 & 13 & 6 & 44 & 2 & 30 \\ 5 & 11 & 6 & 46 & 3 & 23 \\ 5 & 10 & 6 & 47 & 3 & 48 \\ 5 & 7 & 6 & 49 & \text{rises.} \\ 5 & 5 & 6 & 50 & 8 & 23 \\ 5 & 10 & 6 & 51 & 9 & 33 \\ \end{array}$					
CHURCH DA Ash Wednesday, Palm Sunday, Good Friday, Easter Sunday, Ascension Day, Whit Sunday, Corpus Christi, Advent Sunday,	Feb. 14. Mar. 25. Mar. 30. April 1. May 10. May 20. May 31.	Domincial Roman In Dionysian Jewish Lu Epact, Golden Nu Solar Cyc	YCLES OF 1 Letter, duction, Period, mar Cycle,. imber, le, iod,	C. 5. 206. 13. 15. 16.					
<b>Dominical Lo</b> notes Sunday for a gi	ven year.	Dominical 1	etter is the	one which de-					

## Medicine to the Dogs.

MANY years ago, when cholera was rife in Ireland, it seemed to defy the skill of the faculty to such a degree that the panicstricken people believed the doctors poisoned the patients; and in some instances they threatened to pull down the hospitals. During the while, a physician was applied to very urgently by the brother of a cholera patient to make a visit at the dead hour of the night, and at considerable distance from his residence. Being unable to attend, he carefully prepared and gave the messenger medicines suited to the emergency, and dispatched him, with the injunction to inform him if his brother was not relieved by morning, and he would call.

A few days afterward, he met the brother-messenger in the street, and the following conversation occurred :--

"Well, John, how is Pat?"

"Long life to your honor, he's finely !"

"Pm very glad to hear it, John; it's an ugly complaint, that cholera."

"Throth, and your honor, it is ; and poor Pat had a hard time of it, but praised be the Lord, he's well again ; and plase your honor, the dog's dead."

"What dog ?"

"Oh ! your honor, it's for sartin the dog's dead."

"What dog are you talking about, my good fellow ?"

"Plase your honor, I gave the medicines the doctor sent, to the dog, and he's dead; but Pat's finely, your honor."

Sanitarium for April .- The month of April is noted for extreme fickleness of the weather. Sudden showers of rain and unexpected increases in the temperature, with the consequent atmospheric changes, keep the vital forces in a state of constant effort at adjustment to the varying conditions. These slight disturbances occasion no serious results in those whose systems have been kept pure by careful living ; but those who have clogged their systems with such unwholesome articles as fats, fried food, rich pastry, and sweetmeats, complain of "bilious-ness," "spring sickness," lassitude, and general debility. Improper diet is much more responsible for these effects than the weather. The customary spring dosing with "tonics," "bitters," decoctions of roots and herbs, and other so-called "blood-purifiers," is a practice as absurd as it is common. If the blood is impure, it will not become pure by adding to it such filthy mixtures as "temperance bitters" or "boneset tea." The old-fashioned practice of annual blood-letting was more rational, though possibly more harmful, than the modern custom of re-sorting to "purgatives" and "tonics." The best remedies for "biliousness" at any time are, a daily bath; plenty of exercise in the open air ; total abstinence from stimulating drinks, fat pork, fried food, and tobacco; a very moderate use of sugar, salt, animal food, and all condiments ; a liberal use of ripe fruits and grains ; with plenty of sleep.

5th MONTH. MAY, 1877. 31 DAYS.									
MOON'S PHA	SES.	BOSTON.		NEW YOR	K. WA	SH'TO	N.	CHIC	AGO.
Third Quarter New Moon First Quarter Full Moon	5 13 19	н. м. 6 35 mon 0 45 mon 8 12 eve 11 21 eve	rn. rn.	H. M. 6 23 mon 0 33 mon 8 0 eve 11 9 eve	n. 6 n. 0 7	<b>м</b> . 11 moi 21 moi 48 eve 57 eve	rn. rn.	11 39	morn. 12th. eve. eve.
Day of Month. Day of Week. Sun at Noon Mark.	Boston; New Yor	NDAR FOR New Engls & State, M sconsin, Io n.	ind,	CALE! New Yorl delphia, New Jer va'a, Ohi	Connec sey, Pe	Phila- cticut, nnsyl-	W Mar gin	ashin yland	R FOR gton; , Vir- itucky & Cal.
Day Day No	Sun Sun rises set	s. rises. Bo	. w. ost'n	SUN SUN rises sets	Moon rises.	н. w. N. Y.	Sus		Moon rises.
$\begin{array}{c} \text{H. M. 8. s.} \\ 1 \text{Tu } 11 56 \text{ $57$} \\ 1156 47$ \\ 8 \text{Th } 11 56 47$ \\ 8 \text{Th } 11 56 47$ \\ 156 35$ \\ 58a 11 56 35$ \\ 58a 11 56 35$ \\ 156 31$ \\ 8 \text{Tu } 11 56 18$ \\ 8 \text{Tu } 11 56 18$ \\ 10 \text{Th } 11 56 12$ \\ 11 \text{ Fr } 11 56 10$ \\ 12 \text{ Sa } 11 56 12$ \\ 11 \text{ Fr } 11 56 12$ \\ 11 \text{ Fr } 11 56 12$ \\ 11 \text{ Fr } 11 56 13$ \\ 156 14 \text{ Fr } 11 56 13$ \\ 156 14 \text{ Fr } 11 56 13$ \\ 158 \text{ M} 11 56 13$ \\ 19 \text{ Sa } 11 56 13$ \\ 19 \text{ Sa } 11 56 13$ \\ 20 \text{ Sa } 11 56 35$ \\ 28 \text{ Mo } 11 57 0$ \\ 28 \text{ Mo } 11 57 0$ \\ 29 \text{ Tu } 11 57 7$ \\ 31 \text{ Th } 11 57 23$ \\ \end{array}$	$\begin{array}{c} 4 \ 58.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\ 4 \ 59.7 \\$	$\begin{array}{c} 0 11 \ 41 \ 2\\ 1 \ morr \ 8\\ 2 \ 0 \ 24 \ 8\\ 3 \ 0 \ 58 \ 4\\ 4 \ 1 \ 25 \ 5\\ 5 \ 1 \ 47 \ 0\\ 6 \ 2 \ 7\\ 7 \ 2 \ 26 \ 8\\ 9 \ 3 \ 4 \ 9\\ 0 \ 3 \ 25 \ 10\\ 1 \ 28 \ 245 \ 8\\ 9 \ 3 \ 4 \ 9\\ 0 \ 3 \ 25 \ 10\\ 1 \ 28 \ 10 \ 3\\ 1 \ 28 \ 10 \ 10\\ 1 \ 28 \ 10 \ 10 \ 10 \ 10 \ 10 \ 10 \ 10 \ 1$	$\begin{array}{c} 12\\ 0\\ 39\\ 292\\ 292\\ 213\\ 34\\ 233\\ 13\\ 347\\ 233\\ 213\\ 311\\ 292\\ 311\\ 347\\ 292\\ 311\\ 312\\ 292\\ 311\\ 312\\ 312\\ 312\\ 312\\ 312\\ 312\\ 31$	$\begin{array}{r} 4 52 \\ 4 51 \\ 7 \\ 4 50 \\ 7 \\ 4 49 \\ 4 49 \\ 4 48 \\ 7 \\ 4 47 \\ 4 45 \\ 7 \\ 4 44 \\ 7 \end{array}$	$\begin{array}{c} 5 & 11 & 35 \\ 7 & morn \\ 7 & morn \\ 9 & 0 & 53 \\ 9 & 0 & 53 \\ 1 & 144 \\ 2 & 2 & 66 \\ 3 & 2 & 266 \\ 5 & 3 & 286 \\ 1 & 144 \\ 2 & 2 & 66 \\ 5 & 3 & 286 \\ 1 & 11 & 200 \\ 2 & morn \\ 1 & 100 \\$	$\begin{array}{c} 11 \ 17 \\ morn \\ 0 \ 13 \\ 1 \ 9 \\ 2 \ 6 \\ 3 \ 7 \\ 4 \ 5 \\ 5 \ 0 \\ 5 \ 52 \\ 6 \ 45 \\ 7 \ 38 \\ 8 \ 27 \\ 9 \ 9 \\ 9 \ 53 \\ 10 \ 37 \end{array}$	555555555555555555555555555555555555555	$\begin{array}{c} 22652\\ 22653\\ 38655\\ 58655\\ 58655\\ 58655\\ 4659\\ 277\\ 12\\ 20\\ 77\\ 12\\ 20\\ 77\\ 12\\ 12\\ 77\\ 77\\ 12\\ 12\\ 77\\ 12\\ 12\\ 77\\ 12\\ 12\\ 12\\ 12\\ 12\\ 12\\ 12\\ 12\\ 12\\ 12$	$\begin{array}{c} 0 \ 11\\ 0 \ 466\\ 1 \ 16\\ 1 \ 41\\ 2 \ 45\\ 2 \ 46\\ 3 \ 62\\ 8 \ 8\\ 8 \ 8\\ 9 \ 18\\ 10 \ 20\\ 11 \ 14\\ 11 \ 56\\ 9 \ 18\\ 10 \ 20\\ 11 \ 14\\ 11 \ 56\\ 1 \ 52\\ 2 \ 16\\ 3 \ 32\\ 1 \ 62\\ 1 \ 52\\ 2 \ 43\\ 3 \ 12.\\ 8 \ 21\\ 9 \ 18\\ 10 \ 44\\ \end{array}$

**Roman Indiction.**—A cycle of fifteen years, which was instituted by Constantine the Great in connection with the payment of tribute. It is reckoned from the year 313 A. D. as its origin. To ascertain the equivalent of any year according to Roman Indiction, subtract 312 from the given year; divide the remainder by fifteen. The quotient will be the current period of the indiction, and the remainder will be the current year of the period.

**Dionysian Period.**—This is a cycle of 532 years, obtained by multiplying together the numbers 28 and 19, which represent the solar and lunar cycles. At the conclusion of this period, the new and full moons re-

## Biliousness.

EVERY spring the regular doctors, and the quack doctors, and all the drug fraternity reap a rich harvest from the numerous multitudes who seek to be cured of biliousness by purgatives, alteratives, "blood-purifiers," and "anti-bilious pills." This is one of the great popular delusions upon which charlatans and druggists fatten. The ill feelings which are interpreted to mean too much bile, really mean, too much fat pork, too much sugar, too much grease, too much mince-pie, too much cake and preserves, too much fried sausage; in fact, too much of all kinds of food, whether good or bad. April and May bring the penalty of the transgressions of the winter months. Flagrant outrages against nature in the matter of food and drink are often seemingly borne with impunity during the cold months; but if the same line of conduct is extended into the warmer months, all the symptoms of "biliousness" appear.

The proper cure for "biliousness" is, first, Abstinence for a day or two, until nature can get rid of a little of the grossness which clogs her machinery; secondly, Avoidance of the cause; thirdly, A few packs, fomentations over the liver, and the daily dry-hand rub, with a wholesome diet.

Bitters are filthy compounds of various nauseous drugs and poisons, and bad whisky. *All* of them contain alcohol. "Temperance Bitters" and "Vinegar Bitters" are no exceptions. Some contain more alcohol and fusel-oil than brandy, gin, or rum. The various "blood tonics," "purifiers," "invigorators," etc., are of the same character. Roots and herbs belong in the same category with the rest. They are not so harmful, however, though equally useless.

Sanitarium for May.—During the winter, the putrefactive germs which arise from decomposing heaps of garbage, from cess-pools, and back yards where slops from the kitchen and laundry are deposited, are frozen up, and so rendered incapable of doing harm ; but with the approach of spring and warm weather, the antiseptic influence of cold is removed, and soon these various collections of organic filth begin to send out volumes of mephitic vapors, and countless myriads of poisonous germs. These vapors and germs, when taken into the system through the lungs, are the well-known causes of those dreaded diseases, typhoid fever, typhus fever, cerebro-spinal meningitis, with others known to the physician as "filth diseases." It is very evident that the removal of such accumulations as have been mentioned, at the very earliest opportunity after the vernal sun has loosened the icy shackles, is one of the most important matters requiring attention at this season of the year. Now is the time to thoroughly cleanse the premises of every taint of filth or decay. Examine every nook and corner, and see that no trace of decomposing matter is lurking near. Clear the cellar, and clean out the cistern. Leave no spot uncleansed,

6th MONTH. JUNE, 1877. 30 DAYS.								
MOON'S PH	ISES.	BOSTO	N.	NEW YORK.	WASH'TON	N. CHICAGO.		
Third Quarter New Moon First Quarter Full Moon	11.	1 40 n	norn. norn. norn. ve.	н. м. 0 15 morn. 9 36 morn. 1 28 morn. 11 57 morn.	1 16 mor	n. 8 42 morn. n. 0 34 morn.		
Day of Month. Day of Week. Sun at Noon Mark.	Boston: New Yo	NDAR F New En rk State, isconsin	gland, Mich-	delphia, Co	ity; Phila- onnecticut, , Pennsyl-	CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal.		
Day Day Noo	SUN SU rises set		н. w. Bost'n		MOON H. W. ises. N. Y.	SUN SUN MOON rises sets. rises.		
$\begin{array}{c} \text{H. M. s.} \\ 1 \ \text{Fr} & 11.57\ 32 \\ 2 \ \text{Sa} & 11.57\ 11 \\ 3 \ \text{Si} & 11.57\ 51 \\ 4 \ \text{Mo} & 11.58\ 11 \\ 5 \ \text{Tu} & 11.58\ 11 \\ 5 \ \text{Tu} & 11.58\ 11 \\ 6 \ \text{W} & 11.58\ 22 \\ 7 \ \text{Th} & 11.58\ 13 \\ 9 \ \text{Sa} & 11.58\ 14 \\ 9 \ \text{Sa} & 11.59\ 17 \\ 11.59\ 17 \\ 12 \ \text{Tu} & 11.59\ 19 \\ 12 \ \text{Tu} & 11.59\ 10 \\ 15 \ \text{Fr} & 12\ 0\ 15 \\ 16 \ \text{Sa} & 12\ 0\ 05 \\ 13 \ \text{Fr} & 12\ 0\ 15 \\ 16 \ \text{Sa} & 12\ 0\ 05 \\ 13 \ \text{Tu} & 12\ 0\ 15 \\ 16 \ \text{Sa} & 12\ 0\ 05 \\ 13 \ \text{Tu} & 12\ 12 \\ 20 \ \text{Fr} & 12\ 12 \\ 20 \ \text{Fr} & 12\ 12 \\ 22 \ \text{Fr} & 12\ 12 \\ 23 \ \text{Sa} & 12\ 15 \\ 23 \ \text{Sa} & 12\ 15 \\ 23 \ \text{Sa} & 12\ 0\ 23 \ \text{Sa} \\ 23 \ \text{Sa} & 12\ 3 \ 0 \\ 23 \ \text{Sa} & 12\ 3 \ 0 \\ 23 \ \text{Sa} & 12\ 3 \ 0 \\ 23 \ \text{Sa} & 12\ 3 \ 0 \\ 23 \ \text{Sa} & 12\ 3 \ 0 \\ 20 \ \text{Fr} & 12\ 3 \ 13 \\ 30 \ \text{Sa} & 12\ 3 \ 24 \\ \end{array}$	$\begin{array}{c} 7777777777777777777$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 3 & 17\\ 3 & 54\\ 4 & 43\\ 5 & 50\\ 8 & 51\\ 9 & 55\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 50\\ 11 & 20\\ 11$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		

cur in the same order upon the same day of the week and month in the Julian calendar. To obtain the year of the Dionysian period, divide the number of the current year of the Julian period by 532, and the remainder will be the number sought.

Jewish Lunar Cycle .- A period employed in Jewish reckoning.

Epact.—This is the number which expresses in days the moon's age upon the first day of the year, from which it can be calculated for any day during the year. To obtain it for a given year, multiply the golden number for the same year by 11; subtract 10 from the product, divide the remainder by 30, and subtract 1 from the quotient. The result will be the number sought.

12.

#### Temperance Bitters.

THOUSANDS of people are annually imposed upon by villainous compounds which are advertised under the alluring title, "Temperance Bitters." One of the most extensively sold of these was well exposed in the *Pacific Medical and Surgical Journal*, two or three years ago, as follows :--

"This 'Bitters' is one of the nastiest nostrums, introduced and largely sold by the most extensive and brazen advertising under the false pretense of being free from alcohol. It originated with the cook of a party which traveled overland as a mining company to California in 1849; he settled in Calaveras County, and, having no success as a miner, he turned his attention to the bitter qualities of the herbs growing around him, and came to San Francisco with the idea of making and vending a nostrum to be called 'Indian Vegetable Bitters.' He fell in with an enterprising druggist who saw money in the project, and joined him. At the suggestion of the latter, the 'Indian' was struck out; and, as the concoction got sour by fermentation, it was concluded to call it 'Vinegar Bitters,' and to identify it with the temperance movement. The native herbs, which became rather troublesome to collect, were discarded; and aloes, being a cheap bitter, was substituted. 'Nine sick people out of ten,' said the druggist, 'will be cured by purging.' Wherefore aloes and Glauber's-salt. So the cook turned doctor, the decoction became sour, and of Californian instead of Indian paternity, and 'Doctor Walker's Vinegar Bitters' began their career in the newspapers and on the shelves of the drug stores."

According to the analyses of Nichols, Hoffman, and others, "Vinegar Bitters" consist of a mixture of aloes, gum guaiac, anise-seed, sassafras bark, acetic acid, sulphate of soda, Glauber's salt, gum arabic, and alcohol.

Sauitarium for June.—As summer advances, the combined influences of heat and moisture serve to develop an increase of the production of disease germs wherever foul matter accumulates. Hence the necessity for increased watchfulness in guarding against these enemies of life and health. Chronic invalids, especially those suffering with chronic diseases of the liver, and asthmatic affections, find their maladies increased by the loss of the dense, invigorating air of winter. Those who continue to indulge in the usual articles of winter's fare, such as ham and eggs, sausages, griddle cakes, and fried food of all kinds, will suffer most from "billousness," and will be the easy victims of gastric and intestinal disorders of every description. The use of unripe fruit by many people at this season of the year is a frequent cause of cholera morbus, and is, no doubt, an exciting cause of true cholera. Injury sometimes arises, also, from the use of vegetables which have become too old, as potatoes which have begun to sprout, and from partially decayed fruit.

7th MONTH. JULY, 1877. 31 DAYS.								
MOON'S PHA	SES. BOST	ON.	NEW YORK	WASH'TON	CHICAGO.			
Third Quarter New Moon First Quarter Full Moon	10 5 22 17 8 28	eve. eve. morn. morn.	н. м. 4 6 eve. 5 10 eve. 8 16 morn. 2 23 morn.					
ay of Month. ay of Week. Sun at Noon Mark.	CALENDAR Boston; New En New York State igan, Wisconsin & Oregon.	ngland, Mich-	New York ( delphia, C New Jerse	AR FOR Dity; Phila- onnecticut, y, Pennsyl- , Ind., & III.	CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal.			
Day Day No	Sun Sun Moor			Moon H. W. rises. N. Y.	Sun Sun Moon rises sets. rises.			
$\begin{array}{c} \text{H}, \text{ H}, \text{H}, \text{S}, \\ 12 & 3 & 36 \\ \text{M} & 12 & 3 & 47 \\ 3\text{Tu} & 12 & 3 & 47 \\ 3\text{Tu} & 12 & 3 & 58 \\ 4 & W & 12 & 4 & 9 \\ 5\text{Th} & 12 & 4 & 29 \\ 5\text{Th} & 12 & 4 & 29 \\ 6\text{Fr} & 12 & 4 & 29 \\ 8 & \text{S} & 12 & 4 & 39 \\ 8 & \text{S} & 12 & 4 & 49 \\ 9 & \text{Mo} & 12 & 4 & 58 \\ 10 & \text{Tu} & 12 & 5 & 56 \\ 10 & \text{Tu} & 12 & 5 & 56 \\ 10 & 12 & 5 & 54 \\ 10 & \text{Tu} & 12 & 5 & 56 \\ 11 & W & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 48 \\ 16 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 5 & 58 \\ 15 & \text{Mo} & 12 & 6 & 14 \\ 20 & \text{Fr} & 12 & 6 & 14 \\ 26 & \text{Fr} & 12 & 6 & 12 \\ 29 & \text{Mo} & 12 & 6 & 12 \\ 29 & \text{Mo} & 12 & 6 & 12 \\ 29 & \text{Mo} & 12 & 6 & 12 \\ 29 & \text{Mo} & 12 & 6 & 12 \\ 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 12 & 6 & 12 \\ 12 & 12 & 12 & 12 & 12 \\ 12 & 12 &$	$\begin{array}{c} 4 \\ 327 \\ 38 \\ 3737 \\ 837 \\ 3737 \\ 3837 \\ 3737 \\ 3837 \\ 3737 \\ 3837 \\ 3857 \\ 3657 \\ 365 \\ 95 \\ 4367 \\ 3510 \\ 24 \\ 377 \\ 3410 \\ 4387 \\ 3411 \\ 4397 \\ 3311 \\ 3407 \\ 32 \\ 01 \\ 4427 \\ 310 \\ 52 \\ 4437 \\ 301 \\ 4427 \\ 310 \\ 52 \\ 4437 \\ 301 \\ 4427 \\ 310 \\ 52 \\ 4437 \\ 301 \\ 4427 \\ 310 \\ 52 \\ 52 \\ 52 \\ 52 \\ 52 \\ 52 \\ 52 \\ 5$	$\begin{array}{c} 2 & 3 & 188 \\ 2 & 3 & 577 \\ 7 & 4 & 388 \\ 0 & 5 & 266 \\ 0 & 7 & 258 \\ 0 & 5 & 266 \\ 1 & 10 & 40 \\ 0 & 330 \\ 1 & 11 & 400 \\ 7 & 100 & 0 & 300 \\ 1 & 11 & 400 \\ 7 & 100 & 0 & 300 \\ 1 & 11 & 400 \\ 7 & 100 & 0 & 300 \\ 1 & 11 & 400 \\ 7 & 100 & 0 & 300 \\ 1 & 11 & 400 \\ 1 & 11 & 100 \\ 1 & 10 & 100 \\ 1 & 10 & 10$	$\begin{array}{r} 4 327 55 \\ 4 337 35 \\ 4 347 357 34 \\ 4 347 357 34 \\ 4 357 34 \\ 4 357 34 \\ 4 357 34 \\ 4 367 33 \\ 4 377 33 \\ 4 377 33 \\ 4 377 33 \\ 4 377 33 \\ 4 377 33 \\ 4 397 32 \\ 4 407 31 \\ 4 417 30 \\ 4 417 30 \\ 4 417 30 \\ 4 417 30 \\ 4 417 30 \\ 4 417 30 \\ 4 417 30 \\ 4 417 30 \\ 4 417 28 \\ 4 457 27 \\ 4 467 27 \\ 4 467 27 \\ 1 \\ 4 487 25 \\ 4 487 25 \\ 4 487 25 \\ 4 487 25 \\ 4 497 23 \\ 4 507 722 \\ 4 557 71 \\ 9 \\ 4 557 71 \\ 9 \\ 4 557 71 \\ 9 \\ 4 557 71 \\ 8 \\ 5 \\ 5 \\ 7 \\ 1 \\ 8 \\ 5 \\ 7 \\ 1 \\ 8 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 1 \\ 5 \\ 7 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$			

**Golden Number.**—The number of a given year in the lunar cycle. The lunar cycle is a period of 19 years, after which the new moon falls again on the same day of the month. The period always begins with a year in which the first new moon falls upon the first day of January. The golden number is obtained by dividing the number of the year, plus 1, by 19 One is added to the number of the year because the golden number of the first year of the Christian era was 2.

Solar Cycle.—At the end of each period of 28 years, the days of the week recur upon the same days of the year This period of time is called the solar cycle. The first year of the Christian era was the tenth of the solar cycle. Hence, to find the year of the solar cycle, add nine to the current year, and divide by 28. The remainder will be the number desired.

#### To Destroy Foul Odors.

ABUNDANCE of fresh air is the best deodorizer. There is no substitute for ventilation. Pure air washes away foul smells, as water washes away dirt. One removes solid filth, the other gaseous filth. If the offensive body is movable, be sure to remove it. If not, apply something to destroy it. Several agents will effect this.

If it can be safely done, set fire to the foul mass; or, if this is undesirable, heat it almost to the burning point.

Apply very dry, finely pulverized earth. Clay is the best material. Finely powdered charcoal which has been freshly burned, is quite as good as earth. Dry coal or wood ashes are excellent.

Make a solution of permanganate of potash, dissolving one ounce in a quart of water. Add this to the offensive solid or fluid until it is colored like the solution. An excellent deodorizer. It is needed in every household. A supply of the solution should be kept constantly on hand, ready for use.

Copperas dissolved in water in proportion of one pound to the gallon of water is cheaper, and may be used when large quantities are needed. Apply it freely.

Bromo-chloralum is a very good deodorizing agent, but is rather expensive.

Chlorine gas, chloride of lime, ozone, and numerous other agents, are effective when rightly used.

Sanitarium for July .- During the hot weeks of this and the succeeding month, intestinal diseases make sad havoc in the large cities. Hundreds of children die every week of cholera infantum, while older ones are swept off by diarrhea, dysentery, cholera morbus, and Asiatic chol-era. Drug treatment often takes away the only chance for life which remains, and in hundreds of cases consigns the patient to the grave when careful nursing, and the application of a few simple remedies, would have saved a valuable life. One of the best remedies for most bowel disorders is the use of a diet of ripe fruit. Ripe grapes and blackberries are especially excellent. Avoid purgatives. They frequently excite a condition of irritation which eventually becomes uncontrollable inflammation, and ends in death. The enema, the abdominal compress and bandage, and hot fomentations in case of spasmodic pains, are very useful remedies. When there is continuous heat and pain in the bowels, apply a cool compress constantly, changing the applications at short intervals. Farmers are liable to great injury from overwork in the harvest field, during the sultry days of this month. A careful avoidance of stimulating foods and drinks will greatly lessen the danger ; but the most temperate must exercise a reasonable amount of caution. It is far better to allow a few sheaves to remain in the fields to feed the birds and the squirrels than to continue laboring after the body evidently requires rest.

Sth MONTH. AUGUST, 1877. 31 DAYS.												
MOON'S PHA	SES.	BOSTO	N.	NH	w y	ORK	. WAS	SH'TC	N.	CI	IICA	.GO,
Third Quarter New Moon First Quarter Full Moon	9	н. м. 5 37 m 0 33 m 5 44 e 6 26 e	orn. ve.	H. 5056	21 1 32 (		0 5 2	t. 13 mo 9 mo 20 eve 2 eve	rn. 2.	11 4		ve.
Day of Month. Day of Week. Sun at Noon Mark.	Boston New Y	ENDAR H ; New En ork State Wisconsir gon.	gland, Mich	-	New 1 delp New	York hia, Jers	OAR F City; I Connec ey, Per o, Ind.,	Phila	Mgi	Wash aryli nia,	ingt ind, Ken	
Day Day Noc	SUN S rises se		н. w Bost'ı		SUN	Sun sets.	Moon rises.	H. W N. Y		UN I ises s	SUN ets.	Moon rices.
$\begin{array}{c} \text{H. M. s.} \\ 1 \text{ W} & 12 \ 6 \ 2 \\ 2 \ \text{Th} & 12 \ 5 \ 5 \\ 8 \\ \text{Fr} & 12 \ 5 \ 5 \\ 12 \ 5 \ 5 \\ 8 \\ \text{Sa} & 12 \ 5 \ 4 \\ 12 \ 5 \ 4 \\ 8 \\ 8 \\ \text{W} & 12 \ 5 \ 2 \\ 12 \ 5 \\ 12 \ 5 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 19 \\ 12 \\ 3 \\ 11 \\ 12 \\ 2 \\ 12 \\ 3 \\ 11 \\ 12 \\ 2 \\ 12 \\ 2 \\ 12 \\ 1$	$\begin{array}{c} 4 \ 5 \ 5 \ 7 \ 7 \ 7 \ 6 \ 5 \ 5 \ 7 \ 7 \ 7 \ 6 \ 5 \ 5 \ 5 \ 5 \ 5 \ 5 \ 5 \ 5 \ 5$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9 19 10 22 morr 0 1- 2 11 22 0 0 5- 1 3 5 5 4 4 4 5 4 $4$ 5 5 5 5 5 5 10 3 2 11 5 2 10 3 2 11 5 $4$ 6 5 5 5 5 5 10 3 2 11 2 2 10 5 2 10 2 2 2 10 2 2 2 10 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	677589881445982578971906769449	$\begin{array}{c} 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 $	$\begin{array}{c} 7 & 143 \\ 7 & 7 & 132 \\ 7 & 7 & 122 \\ 1 & 9 & 7 \\ 7 & 7 & 7 & 7 \\ 7 & 7 & 7 & 7 \\ 7 & 7 &$	$\begin{array}{c} 7 \ 58 \\ 8 \ 23 \\ 8 \ 49 \\ 9 \ 14 \\ 9 \ 43 \\ 10 \ 18 \\ 10 \ 58 \\ 11 \ 46 \\ morn \\ 0 \ 41 \\ 1 \ 41 \\ 2 \ 47 \\ rises \\ 6 \ 43 \\ 7 \ 32 \\ 7 \ 41 \\ 8 \ 3 \\ 8 \ 24 \\ 8 \ 53 \end{array}$	$\begin{array}{c} 7 \ 1.\\ 8 \ 1.\\ 9 \ 4\\ 10 \ 2.\\ 11 \ 4\\ 10 \ 2.\\ 3 \ 3 \ 4\\ 4 \ 4\\ 5 \ 3\\ 8 \ 4\\ 4 \ 4\\ 5 \ 3\\ 8 \ 4\\ 9 \ 1\\ 9 \ 1\\ 10 \ 5\\ 11 \ 3\\ ev.1 \end{array}$	4333245420001559n8132535555555555555555555555555555555555	$\begin{array}{c}1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\112\\13\\14\\15\\6\\17\\18\\19\\20\\21\\22\\23\\24\\25\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\22\\$	10 9 8 7 6 5 3 2 1 0 59 57 6 5 55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	$\begin{array}{c} 10 \ 57 \\ 11 \ 37 \\ morn \\ 0 \ 28 \\ 1 \ 32 \\ 2 \ 47 \\ sets. \\ 7 \ 29 \\ 7 \ 57 \\ 8 \ 24 \\ 8 \ 50 \\ 9 \ 17 \\ 9 \ 49 \\ 10 \ 25 \end{array}$

Julian Period.—This period consists of 7980 Julian years, which is the product of the numbers 28, 19, and 15, or the solar, lunar, and indiction cycles. The year of the birth of Christ was 4714 of the Julian period. Con-sequently, the Julian period is supposed to have begun 4713 B. C. To find the year of this period, add to 4713 the current year. The Solar System consists of 1. The Sun; 2. The larger planets, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune; 3. The minor planets or asteroids, which now number more than one hundred and twenty; 4. Satellites, or moons, of which there are eighteen; 5. Meteors; 6. Comets. It is supposed by scientists that our solar system is in most respects similar to millions of other systems which occupy the boundless territory of the universe. territory of the universe.

## The Scrofulous Scavenger.

Sus scrofa was the significant name which the ancient Romans applied to the gluttonous beast which moderns call the hog. From scrofa comes scrofula, the name of a disease which the ancients observed to be common both in the hog and in those who ate of his diseased carcass.

The hog is well known to zoölogists as a scavenger, a member of a family of scavengers. His near relatives, the peccary and the tapir, are scavengers like himself.

The Jews were forbidden by Jehovah, through their lawgiver, Moses, to use the flesh of the hog as food, and for years, down to the present time, in fact, they have as a nation rigidly abstained from the use of pork. It is a significant fact, as stated by a recent author on longevity, that the average length of life among the Jews is greater than among any other nation. When we consider the prejudicial influence of swine's flesh upon the health, the loathsome diseases which it engenders and predisposes to, it is but fair to suppose that a considerable share of this notable superiority in point of longevity is due to the non-use of pork.

In sections where pork is largely used as an article of food, that large class of diseases commonly known as scrofulous—enlarged glands, skin diseases, sore eyes, and even worse conditions —are very abundant.

But what shall we do with the hog if we don't eat him? Let him alone. Suffer him to pursue, unmolested, his natural vocation, that of a scavenger. Or, if he must be employed otherwise, turn him over to the oil-maker and the soap-boiler. Make brushes of his bristles, gloves of his elastic hide, glue of his feet, manure of his bones, anything or everything of his carcass, but don't eat him.

Sanitarium for August.—Cholera infantum continues its ravages among the children. Impure air, improper food, diseased milk, and bad nursing are the principal causes. All kinds of bowel disorders continue unabated. Thousands die victims to a superstitious faith in poisonous drugs which have no curative power, while thousands of others, who get well in spite of both disease and medicines, are doomed to linger out a miserable existence with ruined health and broken constitutions. During the hot months, animal food should be excluded from the dietary, or at least used very sparingly. It makes an inferior quality of blood at any time; and in the summer time there is additional danger from the increased liability of eating diseased flesh. The abundant use of cold water as a beverage when the body is perspiring with heat is often productive of very great and lasting injury to the digestive organs. The same remark applies with even greater force to the use of iced cream at such times. The best beverage for use in hot weather is pure soft spring or well water, or some of the simple drinks described under the head of summer beverages.

9th MONTH. SEPTEMBER, 1877. 30 DAYS.							
MOON'S P	HASES.	BOSTON.	NEW YORK	WASH'TO	N. CHICAGO.		
New Moon First Quarter Full Moon Third Quarter	····· 7 ···· 14 ···· 22	н. м. 8 16 morn. 6 24 morn. 10 50 morn. 1 36 morn.	н. м. 8 4 morn 6 12 morn 10 38 morn 1 24 morn	. 6 0 mon	rn. 5 18 morn. rn. 9 44 morn		
Day of Month. Day of Week. Sun at Noon Mark.	Boston ; New You	NDAR FOR New England, rk State, Mich- isconsin, Iowa on.	New York delphia, New Jerse	OAR FOR City; Phila- Connecticut, ey, Pennsyl- o, Ind.,& Ill.	CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal.		
Day Day No		N MOON H. W. s. rises. Bost'r			Sun Sun Moon rises sets. rises.		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 3&5&26&6&2\\ 3&4&5&5&28&6&5\\ 4&5&5&28&6&5\\ 5&5&5&5&5&5&5\\ 5&5&5&5&5&5&5\\ 5&5&5&5&$	$\begin{array}{c} 44 \\ 11 \\ 0 \\ 52 \\ 1007 \\ 64 \\ 10 \\ 10 \\ 87 \\ 57 \\ 29 \\ 126 \\ 91 \\ 24 \\ 810 \\ 10 \\ 22 \\ 64 \\ 101 \\ 11 \\ 52 \\ 24 \\ 84 \\ 810 \\ 11 \\ 52 \\ 44 \\ 810 \\ 11 \\ 27 \\ 42 \\ 810 \\ 11 \\ 27 \\ 42 \\ 10 \\ 11 \\ 27 \\ 42 \\ 10 \\ 11 \\ 27 \\ 42 \\ 10 \\ 11 \\ 27 \\ 42 \\ 10 \\ 11 \\ 27 \\ 42 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 1$	$\begin{array}{c} 5 & 27 & 6 & 32 \\ 5 & 28 & 6 & 31 \\ 5 & 29 & 6 & 31 \\ 5 & 29 & 6 & 31 \\ 5 & 29 & 6 & 28 \\ 2 & 5 & 32 & 6 & 28 \\ 5 & 33 & 6 & 28 \\ 5 & 33 & 6 & 28 \\ 5 & 33 & 6 & 28 \\ 5 & 33 & 6 & 28 \\ 5 & 33 & 6 & 18 \\ 5 & 5 & 35 & 6 & 18 \\ 5 & 5 & 35 & 6 & 18 \\ 5 & 5 & 38 & 6 & 18 \\ 5 & 5 & 48 & 5 & 7 \\ 7 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 5 & 45 \\ 7 & 5 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 \\ 7 & 5 & 5 & 5 & 5 \\ 7 & 5 &$	$\begin{array}{c} morn & 3 & 28 \\ 0 & 17 & 4 & 48 \\ 1 & 32 & 5 & 49 \\ 2 & 53 & 6 & 53 \\ 4 & 13 & 7 & 48 \\ sets. & 8 & 36 \\ 6 & 48 & 9 & 15 \\ 7 & 14 & 9 & 54 \\ 7 & 14 & 9 & 54 \\ 7 & 14 & 9 & 54 \\ 7 & 14 & 9 & 54 \\ 7 & 14 & 9 & 54 \\ 8 & 54 & morn \\ 9 & 41 & 0 & 15 \\ 10 & 35 & 1 & 10 \\ 11 & 33 & 2 & 12 \\ morn & 3 & 17 \\ 0 & 36 & 4 & 19 \\ 1 & 40 & 5 & 13 \\ 2 & 42 & 6 & 3 \\ 3 & 43 & 6 & 47 \\ 4 & 43 & 7 & 28 \\ rises. & 8 & 61 \\ 6 & 7 & 9 & 13 \\ 6 & 56 & 9 & 46 \\ 6 & 7 & 8 & 41 \\ 6 & 29 & 9 & 13 \\ 6 & 56 & 9 & 46 \\ 7 & 28 & 10 & 25 \\ 7 & 28 & 10 & 25 \\ 8 & 8 & 11 & 9 \\ 9 & 1 & 11 & 58 \\ 10 & 3 & ev. 57 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		

**The Sun.**—The diameter of the sun is 850,000 miles. Its mass<sup>4</sup> is more than 600 times as great as all the rest of the solar system together. Its light is more than equal to that of 5,000 wax candles at a distance of one foot from the eye. It is the principal source of heat, as well as light to our system How its enormous heat is produced has not been satisfactorily determined as yet, though many plausible theories have been advanced.

The Planets.—Jupiter, the largest of all the planets, is one of the most interesting to amateur astronomers, since its four moons can be so easily observed. Saturn is an interesting object on account of its rings and eight moons. The smallest planet—excepting the asteroids—is Mercury, which is also nearest the sun, unless the supposed existence of a still smaller planet, Vulcan, be admitted. The most distant of all the planets

## Night Air.

ONE of the popular fallacies is the dread of night air. The casual admission of air during the day is no longer permitted, all known apertures are carefully closed, and if intention could be realized, not an inch of fresh air would be admitted during the hours of sleep. Yet, what air can we breathe at night but night air? The choice is between pure air from without and foul air from within. Most people prefer the latter. What will they say if it is proved to be true that fully one-half of the colds and other diseases that we suffer from are occasioned by people sleeping with their windows shut? A window more or less open most nights in the year can never hurt any one. In large cities, night air is at most times the purest and best to be had, and in them I could better understand shutting the windows during the day than during the night.—*Florence Nightingale*.

#### Eating Between Meals.

THE stomach requires rest as well as the brain or the muscles. If food is eaten at other times than at meals, it is kept constantly at work. From three to five hours are required to digest most articles of food; hence, if food is taken again within five or six hours after eating, the stomach is kept incessantly employed, and becomes exhausted. When the next meal is taken, it is unprepared to receive it; and indigestion, with its myriad train of ills, results. Late suppers are suicidal. Never eat within three or four hours of retiring.

Sanitarium for September.—In malarious sections, the approach of autumn is the signal for the commencement of the usual autumnal fevers, ague, remittent and intermittent fevers, and bilious fevers. In southern districts, yellow fever also appears, sometimes nearly depopulating whole cities. Quinine and calomel are constantly brought into requisition by the patrons of drug medication, to the great, and often permanent, damage of the poor patient. Drugs may paralyze the vital forces, and so defeat remedial action, thus "curing" disease; but they never remove the cause of disease. A half-dozen packs, siz baths, and dripping-sheet baths will do more toward removing the causes which produce ague and other malarial diseases than all the quinine or Peruvian bark in South America. In the cool stage of the disease, warm the patient with blankets, hot bottles, bricks, stones, and similar applications. During the fever, cool him with tepid sponge baths and wet-sheet packs. Under drug treatment, the mortality of yellow-fever patients is fearful; but the disease loses much of its formidable character when the patient is treated hygienically, as was abundantly demonstrated during the epidemic of this disease in 1873.

10th MONTH. OCTOBER, 1877. 31 DAYS.								
MOON'S PHASES.	BOSTON.	NEW YORK.	WASH'TON.	CHICAGO.				
New MoonDFirst Quarter13Full Moon23Third Quarter24	10 58 eve. 2 47 morn.	H. M. 5 2 eve. 10 46 eve. 2 35 morn. 9 25 morn.	н. м. 4 50 eve. 10 34 eve. 2 23 morn. 9 13 morn.	H. M. 4 8 eve. 9 52 eve. 1 41 morn. 8 31 morn.				
ay of Mont ay of Weee Noon Mark Noon Mark	SUN MOON H. W	delphia, Co New Jersey va'a, Ohio, Sun Sun 1	ity; Phila- onnecticut, , Pennsyl- Ind., & Ill. Moon H. W.	CALENDAR FOR Washington; Maryland, Vir- tinia, Kentucky Missouri, & Cal. Sux   Sux   Moox				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ises.         N.         i.         r.           i.         m.         m.         m.         m.           i.         m.         m.         m.         m.         m.           norn         3         16         5         23         5         6         23         5         6         23         5         6         6         5         39         8         1         6         6         11         9         31         6         6         4710         15         6         7         32         11         4         6         6         4710         15         6         7         32         11         46         6         0         23         31         15         6         0         0         25         0         49         6         0         32         339         6         10         0         2         34         5         17         6         3         35         6         1         3         35         6         1         3         35         6         1         3         3         3         3         6         1         3         3         35         6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
	4 59 10 11 4 4 57 11 29 5 4 56 morn 6 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		23 5 4 10 22 24 5 3 11 37 26 5 2 morn				

is Neptune, whose mean distance from the sun is about 2,750,000,000 miles. **The Earth.**—The earth ranks third in size, its diameter (equatorial) being about 7,925 miles. Its weight is about 6,000 billion tons. The earth makes a yearly journey round the sun of about 600,000,000 miles at the rate of eighteen miles per minute.

Meteors.—Besides the planets, great and small, there are numerous small masses of matter scattered through space, which, like their larger companions, the planets, are circling round some central orb. Sometimes these bodies pass through our atmosphere in their course, being made visible by the heat caused by their rapid flight, and passing on their journey if not wholly consumed. If the earth's attraction is sufficient to arrest their onward motion, they fall to the ground.

## A Cold.

THE real cause of a cold is disturbance of the circulation. Changes of temperature are the most active agents in producing such disturbances, and so colds are most often attributed to exposure to cold in some way. This general dread of cold and cold air has very little real foundation. Colds may be induced either by sudden transition from warm air to cool air, or from cool air to warm air. Going from a heated lecture room in a state of perspiration into the cold air out-of-doors, without sufficiently increasing the clothing, will almost always induce a severe cold. Going into a very warm room from the frosty air of a winter's morning, will also produce a cold. Unequal exposure of the body to cold, is the most common cause of colds. This is the reason why draughts are so productive of colds. If the whole body were equally exposed to a draught, no cold would be taken. People who are clothed equably do not take cold when riding in the wind, in an open vehicle, even in winter. A very severe cold may result from riding in a railway carriage with the cold air striking the back of the neck from a small opening in the window. Colds are almost sure to result from remaining long in an impure atmosphere and then suddenly passing to a pure but cold one. A violent cold may result from getting the feet wet and then allowing them to become cold, when no cold would have been taken if the whole body had been wetted.

In all of these cases the cold results from a contraction of the blood-vessels upon the surface of the body, or a part of it, occasioned by cold, and the congestion of the blood-vessels of internal organs, especially of the mucous membrane of the lungs and air passages. This congestion of the mucous membrane of the nose induces sneezing, which is thus an indication that a cold has been taken.

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

> Center for Adventist Research Andrews University Berrien Springs Michigan

11th NONTH. NOVEMBER, 1877. 30 DAYS.										
MOON'S PHASES.		BOSTON.		NEW YORK	WASHTO	N. CHICAGO.				
New Moon First Quarter Full Moon Third Quarter	H. M. 3 55 morn. 7 0 eve. 5 35 eve. 5 22 eve.		H. M. 3 43 morn. 6 48 eve. 5 23 eve. 5 10 eve.	н. м. 3 31 mon 6 36 eve. 5 11 eve. 4 58 eve.	5 54 eve. 4 29 eve.					
Day of Month. Day of Week. Sun at Noon Mark.	W ungo & Oreg			New York ( delphia, C New Jerse va'a, Ohio, Sun Sux		CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal. Sun Sun Moon rises sets, rises.				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} \texttt{III} \texttt{IIII} \texttt{IIII} \texttt{IIII} \texttt{IIII} \texttt{IIII} \texttt{IIII} \texttt{IIII} \texttt{IIII} \texttt{IIIII} \texttt{IIIIII} \texttt{IIIIII} \texttt{IIIIII} \texttt{IIIIII} \texttt{IIIIIII} \texttt{IIIIIII} \texttt{IIIIIII} \texttt{IIIIIIII} \texttt{IIIIIIII} IIIIIIIIII$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} \text{H. } \mathbf{M} \\ 8 \\ 8 \\ 10 \\ 9 \\ 5 \\ 11 \\ 42 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 11 \\ 12 \\ 11 \\ 11 \\ 12 \\ 11 \\ 12 \\ 11 \\ 11 \\ 12 \\ 11 \\ 11 \\ 12 \\ 11 \\ 11 \\ 12 \\ 11$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				

Stars.—The fixed stars are generally believed to be suns of other systems. Many of them are known to be far superior to our own sun in size They are called "fixed stars," because it has been supposed, until quite recently, that their relative positions remained unchanged. In this respect they differ very noticeably from those heavenly bodies known as planets, which belong to the solar system, and which undergo a constant and very apparent change of position. Recent investigations with the spectroscope have shown that the so-called "fixed stars" are really in very rapid motion in various directions, so that their positions are constantly changing; but their distance is so great that the apparent change of place is inappreciable.

#### Bathing.

FROM the millions of little pores on the surface of the body there flows a ceaseless stream of impurities. As the moisture evaporates, these are left upon the skin. The requirements of health and cleanliness demand that these should be removed. Once a week, at least, the year round, the whole person should be thoroughly washed with soap and water.

A barrel of water is not required for an efficient bath. A pailful is an abundance. Even a pint will go a good way toward making a person clean, if judiciously applied. A simple air bath is better than none.

Cold bathing is not recommended. Robust persons may stand it very well, but it is injurious to invalids, and to any one if long continued. The best temperature for most persons is about blood-heat.

In the summer time, when perspiration is more free than in winter, the accumulation of dirt upon the skin is much more rapid, and a daily bath is required.

Are not baths weakening? The weakening effect of a simple application of a little water to the surface of the body is not one-tenth as great as that from carrying about constantly a load of dirt upon the skin, which not only prevents the elimination of impurities from the blood, but is actually absorbed into the system again. A bath is refreshing, soothing, and strengthening if properly taken.

Sanitarium for November.—Upon the approach of cold weather suitable precautions must be taken to protect the body from the influence of the cold, which is at first felt more keenly on account of its contrast with the genial temperature of the warmer months. Ladies and children are especially liable to be negligent in this respect. The feet and limbs should be warmly clad as well as other parts of the body. Woolen or cotton-flannel under-garments, made in such a way as to completely envelop the body from neck to wrists and ankles, will be found to be a most efficient means of protecting the system from the congestions, colds, and various other disturbances which arise from exposure of the feet and limbs to cold.

The fevers of late fall are more generally of the continued type, typhoid and typhus succeeding to the less dangerous bilions and intermittent. It is now quite generally acknowledged that typhoid fever is caused by the presence in the system of certain matters which originate in decomposing animal matter. Animal excreta is the most common source of these poisons. It is also generally believed that these poisonous germs usually enter the system in the water employed for cooking and drinking purposes. Many cases of typhoid fever have found their cause in a well which was contaminated by the filtration into it of excrementitious matter from privies, hog-pens, and barn-yards, and of decomposing animal substances from cemeteries and cess-pools. Look out for these sources of disease.

12th MONTH. DECEMBER, 1877. 31 DAYS.										
MOON'S PHASES.		BOSTON. N		EW YORK	WASH'TO	N. CHICAGO.				
New Moon         D. 4           First Quarter         12           Full Moon         20           Third Quarter		5 20 eve. 4 50 eve. 7 7 morn.		H. M. 5 8 eve. 4 38 eve. 6 55 morn 1 24 morn		n. 6 1 morn.				
Day of Month. Day of Week. Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa & Oregon.			CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind.,& III.		Maryland, Vir- ginia, Kentucky				
Day Day Noc	Sun Su rises set		н. w. Bost'n	Sun Sun rises sets.	Moon H. W. rises. N. Y.	SUN SUN MOON rises sets. rises.				
$\begin{array}{c} \text{H. M. s.}\\ 1 & \text{Sa} & 11 \; 49 \; 24\\ 3 & 11 \; 49 \; 47\\ 3 & \text{Mo} \; 11 \; 50 \; 136\\ 4 & \text{Tu} \; 11 \; 50 \; 36\\ 5 & \text{W} \; 11 \; 51 \; 11\\ 5 & \text{Th} \; 11 \; 51 \; 26\\ 7 \; \text{Fr} \; 11 \; 51 \; 23\\ 8 \; \text{Sa} \; 11 \; 52 \; 19\\ 9 \; \text{S} \; 11 \; 52 \; 19\\ 9 \; \text{S} \; 11 \; 52 \; 19\\ 9 \; \text{S} \; 11 \; 52 \; 19\\ 9 \; \text{S} \; 11 \; 52 \; 46\\ 10 \; \text{Mo} \; 11 \; 53 \; 14\\ 12 \; \text{W} \; 11 \; 54 \; 12\\ 12 \; \text{W} \; 11 \; 53 \; 14\\ 12 \; \text{W} \; 11 \; 54 \; 13\\ 12 \; \text{W} \; 11 \; 55 \; 71\\ 15 \; \text{Sa} \; 11 \; 55 \; 36\\ 16 \; \text{S} \; 11 \; 56 \; 36\\ 16 \; \text{S} \; 11 \; 56 \; 85\\ 18 \; \text{Tu} \; 11 \; 57 \; 58\\ 11 \; 56 \; 66\\ \text{S} \; 11 \; 56 \; 48\\ 20 \; \text{Th} \; 11 \; 58 \; 44\\ 20 \; \text{Th} \; 11 \; 58 \; 44\\ 21 \; \text{Fr} \; 11 \; 58 \; 34\\ 22 \; \text{Sa} \; 11 \; 59 \; 34\\ 24 \; \text{Mo} \; 12 \; 0 \; 4\\ 25 \; \text{Tu} \; 12 \; 0 \; 38\\ 24 \; \text{Mo} \; 12 \; 1 \; 33\\ 27 \; \text{Th} \; 12 \; 1 \; 33\\ 28 \; \text{Fr} \; 12 \; 2 \; 32\\ 30 \; \text{S} \; 12 \; 3 \; 1\\ 31 \; \text{Mo} \; 12 \; 3 \; 30\\ \end{array}$	$\begin{array}{c} 7 & 114 \\ 7 & 124 \\ 7 & 124 \\ 7 & 134 \\ 2 \\ 7 & 134 \\ 4 \\ 2 \\ 7 & 134 \\ 4 \\ 2 \\ 7 \\ 134 \\ 4 \\ 2 \\ 7 \\ 134 \\ 4 \\ 2 \\ 7 \\ 194 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 224 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 4 \\ 2 \\ 7 \\ 204 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ $	$\begin{array}{c} 8 & 3 & 31 \\ 8 & 4 & 47 \\ 8 & 6 & 3 \\ 8 & 8 & 6 \\ 8 & 8 & 8 \\ 8 & 8 & 5 \\ 4 & 47 \\ 8 & 8 & 8 \\ 8 & 8 & 5 \\ 4 & 8 \\ 8 & 8 & 6 \\ 5 & 8 \\ 8 & 8 \\ 8 & 8 \\ 1 & 9 \\ 8 & 8 \\ 1 & 9 \\ 8 & 1 \\ 7 \\ 4 \\ 8 \\ 1 \\ 7 \\ 4 \\ 2 \\ 8 \\ 1 \\ 1 \\ 7 \\ 4 \\ 2 \\ 8 \\ 1 \\ 1 \\ 7 \\ 4 \\ 2 \\ 8 \\ 1 \\ 1 \\ 7 \\ 4 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	$\begin{array}{c}1&38\\2&21\\3&2\\3&43\\4&24\\5&7\\5&566\\6&438\\8&31\\9&300\\10&30\\11&5\\2&266\\3&29\\4&18\\5&9\\6&11\\7&10\\8&11\end{array}$	$\begin{array}{c} {\rm H. 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M.} \\ \textbf{H.M.} & \textbf{H.M.} & \textbf{H.M.} \\ \textbf{7} & 0 & 4 & 39 & 3 & 277 \\ \textbf{7} & 14 & 38 & 4 & 388 \\ \textbf{7} & 24 & 38 & 551 \\ \textbf{7} & 34 & 38 & \text{sets.} \\ \textbf{7} & 74 & 438 & 52 \\ \textbf{7} & 54 & 38 & 63 \\ \textbf{7} & 64 & 38 & 75 \\ \textbf{7} & 74 & 38 & 811 \\ \textbf{7} & 84 & 38 & 912 \\ \textbf{7} & 84 & 38 & 1012 \\ \textbf{7} & 84 & 38 & 1011 \\ \textbf{7} & 104 & 38 & \text{morn} \\ \textbf{7} & 114 & 39 & 0 & 9 \\ \textbf{7} & 114 & 39 & 1 & 5 \\ \textbf{7} & 124 & 39 & 2 & 9 \\ \textbf{7} & 118 & 439 & 31 & 133 \\ \textbf{7} & 1134 & 40 & 420 \\ \textbf{7} & 1144 & 40 & 5 & 277 \\ \textbf{7} & 154 & 411 & 6 & 56. \\ \textbf{7} & 174 & 44 & 10 & 5.77 \\ \textbf{7} & 154 & 411 & 6 & 56. \\ \textbf{7} & 174 & 44 & 10 & 5.77 \\ \textbf{7} & 184 & 446 & 1 & 177 \\ \textbf{7} & 184 & 447 & 0 & 77 \\ \textbf{184} & 447 & 0 & 77 \\ \textbf{7} & 194 & 477 & 3 & 397 \\ \textbf{7} & 194 & 447 & 3 & 494 \\ \textbf{6} & \textbf{7} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} & 177 \\ \textbf{7} & 194 & 447 & 3 & 391 \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{7} \\ \textbf{7} & 194 & 447 & 449 \\ \textbf{6} & \textbf{8} \\ \textbf{7} & \textbf{194} & \textbf{449} \\ \textbf{6} & \textbf{1} & \textbf{177} \\ \textbf{7} & \textbf{194} & \textbf{449} \\ \textbf{6} & \textbf{1} & \textbf{177} \\ \textbf{7} & \textbf{194} & \textbf{447} & \textbf{2} \\ \textbf{8} & \textbf{10} \\ \textbf{8} \\ \textbf{8} & \textbf{10} \\ \textbf{8} & \textbf{11} \\ \textbf{8} & \textbf{11} \\ \textbf{8} & \textbf{11} \\ \textbf{8} & \textbf{8} \\ \textbf{8} \\ \textbf{8} & \textbf{11} \\ \textbf{8} & \textbf{8} \\ \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} & \textbf{8} \\ \textbf{8} \\ \textbf{8} & 8$				

**Noon Mark.**—Draw, upon a perfectly level surface, a circle 10 in thes in diameter. At its center, place a rod exactly perpendicular to the plane of the circle. The rod should be of such length that its shadow will fall wholly within the circle after about  $10\frac{1}{5}$  A. M. Watch the shadow carefully, and mark upon the circle the points at which its end just touches in the forenoon and afternoon. Connect these two points by a straight line. Place a mark at the exact center of this line. Draw a straight line from the center of the circle through this point, extending it on to the circumference of the circle. When the shadow of the rod coincides with this line, the sun is at noon-mark, and the clock may be regulated by the table given in the calendar.

#### Vegetable vs. Animal Food.

It is a mistaken opinion that flesh food is necessary to maintain human life. This is abundantly proven by numerous facts which are drawn from the anatomy of man and the lower animals, human and comparative physiology, and the experience of the human race from Adam's time to our own.

Flesh food is not necessary to sustain either mental and physical vigor, or animal heat. It contains no nutrient element not found in vegetables. In fact, eating flesh is only taking vegetables at second hand; for all animals subsist upon vegetables.

On the other hand, the use of meat is unfavorable to longevity. Flesh food is stimulating. It contains venous blood, which is filled with such poisons as urea, uric acid, and cholesterine, with many others, which would have been removed by the kidneys and liver of the animal, had it lived. It is also liable to contain the products and germs of disease; for few animals are perfectly healthy when killed, and many are in a condition of gross disease, being only hindered from dying a natural death by the intervention of the butcher's knife.

Animal food will sustain life; it will nourish the body; but it is not the best food. Science shows that it is not the natural food of man, and history testifies that the bravest and noblest nations of antiquity subsisted for ages without it.

Thousands of people have investigated this subject during the last twenty years, have become convinced that animal food was inferior to vegetable food, and have renounced the use of the former with the most excellent results. Reader, investigate, and then try it for yourself.

Sanitarium for December .- As soon as the first snow-flakes make their appearance, heralding the coming of winter, it is a custom with many to nail up their windows, stop every crevice in the walls, line the door and window casings with strips of felt, and employ every other means of securing the complete exclusion of fresh air. Such persons are unwittingly preparing for themselves and their families the most favorable conditions possible for securing an unintermitting succession of colds so long as such conditions are maintained. Pure air is just as necessary in cold weather as in warm weather. Even greater precautions to secure efficient ventilation are needed in the winter than in the summer. The best way to avoid colds is to ventilate thoroughly, and to be in the open air as much as possible. Sleeping rooms, espe-cially, should be amply supplied with fresh air. It is also a mistake to bundle up the throat with thick furs or many folds of a large scarf, as a preventive of colds and sore throat. It is far better to fortify the throat by bathing it frequently in cold water, so that nothing more than a thin covering will usually be necessary. Chilblains are often a very troublesome complaint, originating in exposure of the feet to se-vere cold in early winter. They may be readily cured by using the alternate hot and cold foot bath.

## Effects of Tight-Lacing.

Fig. 1 is a correct representation of the proportions of the female chest and waist as nature and the Creator design it. Fig.

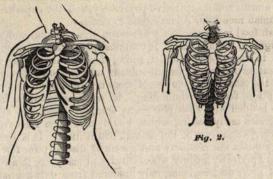


Fig. 1.

2 represents the same after it has been compressed and distorted by the ruthless hand of fashion by means of the corset, tight belts, and waistbands. Let every woman consider carefully the injury which results from this artificial and totally unnatural constriction of the waist.

It will be observed in Fig. 1 that the lower part of the chest is larger than the upper part on account of the expansion of the lower ribs. The object of this arrangement is to give ample room for the action of the delicate vital organs which are carefully lodged within this bony cage for protection. Chief among these are the *lungs*, the *heart*, the *liver*, the *diaphragm*, and the *stomach*. In the healthy performance of their functions, these or gans require a limited degree of motion. With every act of respiration, the lungs alternately expand and contract; the diaphragm moves up and down; the stomach and liver have the the same motion. Every beat of the pulse is produced by a change in the position of the heart. The size of the stomach necessarily varies greatly, being full after a meal, and nearly empty at other times.

How does compression affect these various organs and their functions? The corset, with its inflexible stays and hour-glass shape, grasps the expanding lungs at their lower part like an iron vise, and prevents their proper filling with air. The lungs are thus crowded up into the upper part of the chest and are pressed against the projecting edges of the first ribs, upon which they move to and fro with the act of breathing. The friction thus produced occasions a constant irritation of the upper portion of

the lung, which induces a deposit of tuberculous matter, and the individual becomes a prey to that dread disease, consumption, a sacrifice to a practice as absurd as pernicious.

The lower part of the chest being narrowed, thus preventing proper expansion of the lungs, the amount of air inhaled is insufficient to properly purify the blood by removing from it the poisonous carbonic acid which gives to impure blood its dark color, and is so fatal to the life of all animals. In consequence of this defective purification of the blood, the whole body suffers. None of the tissues are properly kept in repair. They are all poisoned. Particles of gross, carbonaceous matter are deposited in the skin, causing it to lose its healthy color and acquire a dead, leathery appearance and a dusky hue. The delicate nerve tissues are poisoned, and the individual is tormented with "nerves," sleeplessness, and fits of melancholy.

All this results from curtailing the action of the lungs so that only their upper portion can act. Their action ought to be wholly unrestrained allowing the pure air with its life-giving oxygen to penetrate to the smallest extremity of every air-tube, and fill to its utmost capacity every delicate cell. A woman ought to be able to breathe deep and full, as does a man. Such an act is an utter impossibility when the waist is pinioned by a corset.

We once found in Bellvue Hospital a woman who had cut her liver nearly in two by tight-lacing, and had crowded it entirely out of its natural position. The function of the organ had thus been so greatly interfered with that the dark elements which should have been removed from the blood by the liver had been deposited in the skin, giving it a leathery hue. Thousands of young ladies treat their livers in the same cruel way. No wonder that they require rouge and French chalk to hide their tawny skins.

## The Hygienic System.

THE "hygienic system," or "health reform," as it is sometimes called, is very little understood outside of the ranks of its adherents. The majority of people believe it to be a "horrid" doctrine which teaches all manner of absurdities, such as "starvation diet," "bran-bread diet," "cold-water cure," and similar notions.

Some people entertain a still more discreditable opinion of it. When President White, of Cornell University, was performing his duties as a member of a committee to examine the health commissioners of New York with reference to their fitness for their office, he asked one of them to define hygienic. "Hi-jinnicks," said the commissioner, "is a bad smell arising from dirty water!" All this popular prejudice and misunderstanding is found, by a little examination, to be founded in sheer ignorance of the real teachings of this system. Hygienic doctrines have the support of both science and common sense. Nearly every new discovery in physiology confirms the teachings of this system.

"Water-cure," "hydropathy," and "vegetarianism" are epithets which are in no way applicable to the hygienic system. Those terms are justly applied to certain specialists, who are not proper representatives of health reformers, or hygienists in general. Like every other great reform, it numbers among its professed adherents, extremists, fanatics, enthusiasts, quacks, tyros, and pretenders. These, also, must not be taken as representative hygienists. The public are often unable to discriminate between genuine reformers and pretenders; and the whole system is thus brought into disrepute.

Health reform requires a man to sacrifice nothing but those things which are of positive injury to him. It takes from him no real pleasure, and deprives him of no real good. It only corrects his bad habits and educates him in good ones. It shows him the depravity of his nature, and restores him to right relations with life. It enables him to appreciate pleasures of which he was formerly unconscious. It cleanses his body, frees his mind, unfetters his soul, and sharpens his senses.

To those to whom this subject is new, we would say, Investigate it candidly and thoroughly; then you will be prepared to judge of its merits.

## Does the Bible Uphold Intemperance?

IF it can be proven that the Bible favors the use of intoxicating drinks in any degree, then the infidel has placed in his hands a most powerful weapon with which to attack the authenticity and sacredness of the Scriptures. If, on the other hand, it can be shown that there is no such conflict between science and common sense, and inspiration, then the difficulty vanishes. A careful examination of the subject will convince any candid man that the support which the advocates of the use of liquor claim to derive from the Bible is wholly imaginary; and that the use which is made of the Scriptures in defense of intemperance is a most flagrant perversion of the language and import of inspiration.

Inspiration, true science, and sound common sense always agree. Any apparent conflict arises either from a misunderstanding of the meaning of the language employed, or from an imperfect knowledge of the scientific facts supposed to necessitate a disagreement. Science says, distinctly and unequivocally, All fermented drinks contain alcohol; alcohol is a poison *under* 

all circumstances and in all doses. The decision of science is sustained by that of reason; for common sense teaches that a substance with properties like those possessed by alcohol can be nothing less than poisonous. If it is true that the Bible teaches that alcohol-in the form of wine, or otherwise-is good and harmless, then it will be made to appear that inspiration is less wise than reason and science ; that man, the creature, has outstripped the Creator in knowledge.

All of the much-vaunted arguments which have been adduced to prove that the Bible favors the use of alcoholic drinks are founded upon a misapprehension or a perversion of Scripture. The Bible distinctly recognizes two kinds of wine, the characters of which are contrasted below. When this fact is recognized, all the difficulty in the question disappears.

#### BAD WINE.

Fermented. Contains alcohol. . Poisonous. Intoxicating. Produced by decay. A symbol of wrath. "Wine is a mocker."

"Look not thou upon the wine when it is red."

"Strong drink is raging."

"Poison of dragons

"Cruel venom of asps."

"Biteth like a serpent and stingeth like an adder."

"Woe unto him that giveth his neighbor drink, that puttest thy bot- thanks, and gave it to them, saying, tle to him."

#### GOOD WINE.

Unfermented. Contains no alcohol. Wholesome. Unintoxicating. Produced by natural growth. A symbol of blessing. "Cheereth God and man."

"Use a little wine for thy stomach's sake.'

"Maketh the heart glad."

"And he took the cup, and gave Drink ye all of it."

#### Cleanliness.

THE skin is one of the most important depurating organs of the whole body. From each of its millions of pores constantly flows a stream laden with the poisonous products of disintegration. As the water evaporates, it leaves behind these non-volatile poisons, which are deposited as a thin film over the whole surface of the skin. As each day passes, the process continues, and the film thickens. If the skin is moderately active, three or four days suffice to form a layer which may be compared to a thin coating of varnish or sizing. The accumulation continues to increase, unless removed, and soon undergoes further processes of decomposition. It putrefies, rots, in fact, and develops an odor characteristic and quite too familiar, though anything but

pleasant, being at once foul, fetid, putrid, pungent, uncleanly, and unpardonable.

But the offense to the nose is not the extent of the evil. The unclean accumulation chokes the mouths of the million little sewers which should be engaged in eliminating these poisons, and thus obstructs their work. Being retained in contact with the skin, some portions are reabsorbed, together with the results of advancing decay, thus repoisoning the system, and necessitating their elimination the second time.

Here water serves a most useful end, if properly applied. It is unexcelled as a detergent, and by frequent application to the skin will keep it wholly free from the foul matters described. The necessity for frequent ablutions is well shown by the fact that nearly two pounds of a poison-laden solution, the perspiration, is daily spread upon the surface of the body. It is not an uncommon occurrence to meet with people who have never taken a general bath in their lives. Imagine, if possible, the condition of a man's skin at the age of seventy or eighty years, which has never once felt the cleansing effects of a thorough bath !

One of the most serious effects of this accumulation of filth is the clogging of the perspiratory ducts. Their valve-like orifices become obstructed very easily, and depuration is then impossible. It is not wonderful that so many people have torpid skins. The remedy is obvious, and always available.

## Dialogue with a Smoker.

Young man, you're poisoned! You are completely saturated with *nicotine* and *narcotia*, two most deadly drugs. Your eyes show it, your skin shows it, your breath is full of it, and your present occupation is the proof of it. That cigar in your mouth contains poison enough to kill two men. Every whiff you draw from it is laden with gaseous poison with which it fills your lungs and impregnates your blood, which carries it to every part of your body.

"Do you mean to say that tobacco is poisonous ?"

Indeed it is. At this very moment your whole body is full of the poison of this filthy drug. See how your hand trembles. That indicates that your nerves are being slowly but surely destroyed. Some day paralysis will supervene. Then perhaps you will be willing to deny yourself the ineffable luxury of inhaling poison, offending every well-bred lady or gentleman, and making a general nuisance of yourself.

"How do you know that tobacco is such a dreadful poison ?"

Do you recollect how you felt after smoking your first cigar? and do you suppose that an article the mere vapor of which will make a boy feel as though he is going to turn inside out, will blanch his cheeks, double and twist him out of all recognizable shape, and roll him about on the grass like a big pumpkin, can be of a very wholesome nature? If your landlady should give you for supper an article which would serve you thus, you would send at once for a doctor and a policeman. Besides the effects of tobacco upon yourself, you may see its effects upon animals. A little tobacco tea will kill the most venomous snake. One drop of the oil will kill a cat in two minutes.

"But tobacco don't hurt me now, if it was rather unpleasant at first. I've got used to it."

So says the toper, the opium-eater, the hashish taker, the absinthe devotee, and the consumer of arsenic. "Used to it"! What does that mean i It means, simply, that your nerves have become so dead, obtuse, and insensible that they no longer do their duty. They are sleepy sentinels, and let the enemy in without warning, so that you are poisoned without knowing it; and though your nerves are being destroyed, your vitality exhausted, your senses depraved, and your whole system devastated, you are in total ignorance of it. Young man, reform at once, or you are fated to premature death as surely as there is a God of nature. Escape for your life,—H. R.

## Don't Smother the Innocents.

EVERY winter we see several accounts of the smothering of infants by over-cautious mothers. Babies need air to breathe, as well as adults. They need pure air, also, and almost an equal supply of it. Never bury a child beneath the bedclothes at night, unless you wish to get up in the morning and find the little one cold and stiff.

Rooms occupied by children ought to be most thoroughly ventilated, so that their active lungs and young blood may be well supplied with fresh air and its life-giving oxygen. It is a blot upon American civilization that not more than one public school building in a hundred is even tolerably ventilated. It is even still more rare to find a well-ventilated dwelling-house. This matter demands serious attention. Why should God's oxygen, which is free and unlimited, be doled out to us in such limited measure ?

Strange Indeed !—" You have lost your baby, I hear," said one gentleman to another. "Yes; poor little thing ! it was only five months old. We did all we could for it. We had four doctors, blistered its head and feet, put mustard poultices all over it, gave it nine calomel powders, leeched its temples, had it bled, gave it all kinds of medicines, and yet, after a week's illness, it died !"

## Origin of Water-Cure.

It is popularly believed that the use of water in the treatment of disease is a modern discovery. This is an error; for a very cursory glance at the history of ancient nations furnishes ample evidence that water has been thus employed from the most remote ages. In the writings of the most ancient medical authors are found numerous references to the bath, recommendations of its use in cases of disease, and testimonials of its good effects when properly employed.

That the bath was used by the Egyptians at a very early period, is shown by history, as well as by pictures which have been discovered in ancient Egyptian tombs. Frequent bathing was required by the religious revelations of the ancient Jews, as it now is by the more modern Mohammedans. The Persians, Greeks, and Romans erected magnificent structures which they devoted to the bath. All these nations, together with the Arabians and other ancient nations, employed the bath as a remedy for disease as well as to preserve health. The first cold-water doctor mentioned in history is an empirical practitioner named Fra Bernardo, a Sicilian by birth, who acquired the title from his exclusive use of cold water in treating the sick. He flourished more than a century and a half ago.

Floyer, Hancock, Jackson, and Currie have left upon record evidences of their devotion to water as a remedial agent. But the attention of the world was not called to water as a therapeutic agent in such a way as to leave a lasting impression until the first quarter of the present century. At that time, Priessnitz, a native of Prussia, made his appearance. Having met with an accident by which three of his ribs were broken, he treated himself with applications of cold water. He made a good recovery and then tried the same remedy upon others in similar cases. His success encouraged him to make thorough experiments; and though an ignorant peasant, his natural acuteness enabled him to devise varicus means for applying water to the body. His increasing success attracted numerous patients, and the fame of Græfenberg, his native village, became, in a few years, world-wide. Many of his methods were very rude, and his ignorance of medical science often led him into errors. But he succeeded in restoring to health hundreds of patients who had been pronounced incurable.

The interest in the new method became so great that numerous other individuals, equally ignorant, and possessing less shrewdness, undertook to imitate the German innovator. Some of them were successful, many of them were not; all were alike in committing numerous blunders through ignorance of scientific medicine. These evils, together with many other gross er-

rors connected with the practice, has deterred scientific physicians from employing it sufficiently to test its merits, only in a few exceptional instances. Nevertheless, there is no good reason why an efficient remedial agent should be suffered to receive the stigma which properly attaches only to those who are responsible for its abuse.

## A Mineral Spring in the Well.

THE late professor of chemistry at the University of Michigan used to relate to the students, with a great deal of dry humor, a story about the old university well which was situated in a part of the campus near the president's residence. The story contains so good a hint respecting the character of mineral springs that it ought not to be lost. It ran substantially as follows :---

A few years ago, the president incumbent, though a very able and worthy man, had the misfortune to gain the ill-will of quite a large number of the students, who resorted to all sorts of wicked tricks for the purpose of satisfying their spite. One day the president came to the board with a petition for a new well. He declared that a mineral spring had broken into the old well and rendered the water totally unfit for use. The supposition did not seem so very improbable, since there were two or three mineral springs in the vicinity, and the learned professor observed a striking resemblance in the taste of the water of the well to that of the springs.

The curiosity of some of the more scientific members of the faculty was so aroused that a quantity of the water was secured and taken to the laboratory for examination. A careful analysis proved that the water really contained so considerable a proportion of sulphureted hydrogen as to give it great respectability as a "sulphur spring," and to fully justify the president's protest against being obliged to use it.

This development led to an exploration of the well itself, the results of which were most unexpected, and were of such a nature as to hopelessly blast all the schemes for the attainment of notoriety and wealth which any speculating dreamer may have indulged. The first object which greeted the eyes of the investigators was the putrescent carcass of a dead cat. Next appeared an ancient pair of boots. Two more decomposing cats and sundry pairs of old boots, accompanied by old hats, old coats, ragged breeches, cast-off hosiery, nether garments, and other articles too numerous to mention, were brought to light in the course of the investigation.

The mineral-spring hypothesis was no longer tenable, of course; and on every suitable occasion since, the story has been rehearsed at the expense of the unfortunate president, and mineral springs.

It is not intimated that every mineral spring contains old boots and dead cats; but since the ingredients of some mineral waters are such as may be derived from such sources, the question of origin is of little moment. The most pertinent question is, Are mineral waters wholesome?

## Properties of Drugs.

ONE would think from the language of the books, giving it a strictly literal interpretation, that drugs are endowed with certain peculiar and characteristic properties which enable them to act upon the body in a peculiar manner. For example, a drug which, when taken into the stomach, is thrown out again, is called an *emetic*, and is spoken of as though it acted upon the stomach. Of course, no one now believes such an absurdity; though the idea may have been held some time in the Dark Ages, and the incorrect expressions then formulated have been handed down to us. But we use them as figures of speech, or tropes; just as we say the sun rises, though we know perfectly well that it does not stir, or that the eye sees, or the hand feels, while well aware that the real seat of sensibility is deep within the skull. The emetic does nothing to the stomach; it does not act, it is only acted upon.

A drug which, when taken into the system, is expelled by the kidneys, is called a *diuretic*. Medical writers understand this fact, but for convenience they speak of the drug as acting upon the kidneys. Possibly there are some unthinking persons who really suppose that sweet spirits of nitre or juniper *acts* upon the kidneys; but scientific physicians entertain no such erroneous idea.

A cathartic is a drug or poison which is expelled by the intestines. A *diaphoretic* is a drug which occasions an increased activity of the skin, or perspiration, which process is excited for the purpose of expelling the drug.

If we should consider each one of the *properties* of different medicines, we should find that in each case the property (so-called) of a drug is the *manner in which the system acts toward it or upon it.* The words *nervine*, *stimulant*, etc., as applied to alcohol, are merely terms to indicate how the system behaves toward this drug when it is taken into the body.

A drug which occasions only one kind of action has but one property. A drug which occasions numerous actions or disturbances in the body possesses many properties. Alcohol, when taken into the body, is expelled in a variety of ways, and produces a general disturbance; hence its varied properties. The more general the disturbance which a drug occasions, the more numerous and varied its properties.

In brief, then, the medicinal properties of a drug are so many terms for indicating a corresponding number of disturbances or disorders which the drug occasions in the body.

#### What Was Down His Throat.

A POOR dilapidated specimen of humanity, with blood-shot eyes, a ruddy nose, tottering gait, and tattered garments, approached a temperance lecturer in Delaware with the exclamation, "Stranger, look down my throat !" Thereupon, he opened his mouth, and the accommodating stranger glanced down into the yawning cavity presented for inspection.

the yawning cavity presented for inspection. "Well, what do you see?" said the first-mentioned individual. "Nothing but what one would expect to see in a man's throat," said the inspector.

"That is strange, indeed," said the man. "Look again." And he opened still wider his oral cavity. Another glance revealed no object of peculiar interest in the man's throat, though the reeking fumes of alcohol arising therefrom betrayed his intemperate habits.

"What! nothing !" said the man, apparently with much astonishment, when informed of the negative result of the second inspection. "It is powerful queer you can't see nothin down there. Why, stranger, there's a good yoke of oxen down my throat, and I don't see why you can't see 'em. And there's as good a team of horses as ever you saw, down there; and a fine harness, a good wagon, and an elegant carriage went down with them. It's the strangest thing in the world if you can't even get a sight at 'em."

The stranger was silent with astonishment at hearing such a disclosure; but he began to understand the case as the man proceeded,—

"Once I had the best farm in the county, with a fine orchard and good improvements. That, too, went down my throat, along with a big barn and a splendid house. Must be your sight is a little dull, stranger, or you could see some of 'em down there."

It was no longer possible to misunderstand the man. He was a drunkard. He had been in affluent circumstances. Through drink, he had fallen. For rum, he had sacrificed his home, his property, his manhood; and now, with shattered frame, and trembling nerves, he sadly enumerated the various valuable things that his voracious vice had engulfed, and hopelessly waited until his rum-destroyed body should itself be swallowed up by the grave.

Many a man's fortune has gone down his throat. Thousands of people who wonder what has become of the wealth, the comforts, the luxuries they once enjoyed, will find them all down their throats. Reader, do you indulge in alcoholic drinks, or any other stimulus, never so slightly? pause, before you take another sip at the poisoned cup, and take an inventory of the things already down your throat, or of what may be in danger of getting there.

#### Condiments.

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EVERY day a hundred thousand dyspeptics sigh and groan in consequence of condiments. Pepper, spice, salt, vinegar, mustard, and all kinds of fats belong to the list of dyspepsia-producing articles known as condiments. All the works on diet define a condiment as an article which adds nothing to the real nutritive value of food. It is simply something which is added to make food taste better. Whether the food does taste better or not does not depend upon the condiment, but upon the taste of the eater. If his taste is unperverted, he likes food best without condiments; if perverted, he may like almost any kind of unnatural combination. A Frenchman is as fond of assafcetida in his food as an American is of salt, or an East Indian of curry powder.

Condiments are innutritious and irritating. They induce a heated condition of the system which is very unfavorable to health. They clog the liver, imposing upon it a great addition to its rightful task. Worst of all, they irritate the digestive organs, impairing their tone and deranging their function. A little practice soon accustoms a person to the disuse of condiments, and he learns to relish his food better without than with them.

#### Quick Relief for Acute Pain.

WHEN a person has a bruise or other injury, or a sudden pain resulting from any other cause, camphor, arnica, "pain-killer," or some liniment is the usual application. Sometimes partial relief is given, but often the pain is diminished very little if at all. Hot applications are much more effective in such cases. Here are directions for applying heat in various ways:—

Wring out of water as hot as can well be borne, a folded flannel cloth, and apply it quickly to the part to be treated. Cover with a dry cloth, and change once in five minutes.

Bottles filled with hot water, hot bricks or stones wrapped in papers or cloths, hot cloths, bags filled with hot sand, salt, or corn meal, and rubber bags filled with hot water, are convenient methods of applying dry heat.

Moisture and heat may be applied in a variety of ways also

Instead of wringing cloths out of hot water, put them into a steamer for a few minutes. This saves the trouble of wringing them. When there is no water hot, and a fomentation is wanted quickly, wring a cloth out of cold water, spread it between the folds of a newspaper, and lay the paper upon the top of the stove, or press it against the side. In a minute it will be hot. Wrap hot stones or bricks in a moist cloth. Poultices of various sorts answer the same purpose.

#### Bread for Dyspeptics.

THE most wholesome bread which can be made requires nothing but flour and water for its composition; but the flour must be something other than the superfine white starch usually sold by the millers. The flour must be the best and the water must be the softest and purest. The *best* flour made is wheat meal or Graham flour. It should be made from the plumpest and cleanest of white wheat. If the bran and middlings are taken out, more than half the sweetness and nutrient value of the grain is removed. The whole grain is required.

Having secured the right kind of flour and a sufficient quantity of pure water, make a stiff batter by stirring the flour into the water, work in as much flour as will knead well, and then knead hard for twenty minutes or half an hour. Make into rolls one-half inch or two inches in thickness, and bake in a hot oven on a grate. This kind of bread is very sweet and toothsome when eaten warm. If the crust is a little too hard for the teeth, it may be rendered very tender by covering the rolls with a moist cloth as soon as they are removed from the oven.

Mineral Springs.—The water of a much-esteemed mineral spring in England was, on chemical analysis, found to contain in very large proportion every known form of impurity; viz., oxidizable organic matter, ammonia, chlorides, nitrates, nitrites, living organisms, and decaying vegetable matter.

A correspondent sends us an account of a mineral spring which was recently discovered in Washington. The water sold rapidly at a cent a glass until it was discovered that its origin was a mass of filth which had been accumulating for a number of years, into the midst of which the the iron pipe had been driven from which the water was drawn. A local paper aptly characterized it as "animal water."

How to Take a Wet-Sheet Pack.—Spread two or three comfortables upon a bed or mattress. Spread over the whole a woolen sheet. Wring out of water of the desired temperature a linen or cotton sheet. Spread it quickly upon the bed, and let the patient immediately lie down in the middle. Then quickly envelop him in the wet sheet, wrapping him snugly from head to foot. Then cover him with the comfortables, and let him remain quiet as long as required. Elevate the head a little, and use care to have the feet warm. Half-packs may be taken in a similar manner, confining the application to the trunk of the body.

Care should be used that the feet are kept warm and the head cool during the pack. When the feet are cold, a warm foot bath should be administered for fifteen minutes before placing the patient in the pack. The head may be kept cool by sponging in tepid water, or by placing upon it a cool compress. The compress should be changed as often as it becomes warm.

#### Drowning and Suffocation.

THE chief remedy to be used in all cases is *artificial respiration*. There are several methods which are very serviceable. The following, which is the most approved method for restoring drowned persons, we copy from a publication issued by the Michigan State Board of Health, the Secretary of which, Dr. H. B. Baker, has kindly furnished us with cuts for illustration:—

Treatment of the Drowned.---- "Two things to be done : 1. Restore breathing ; 2. Restore animal heat.

"RULE 1.—Remove all obstructions to breathing. Instantly loosen or cut apart all neck and waist bands; turn the patient on his face, with the head down hill; stand astride the hips, with your face toward his head, and, locking your fingers together under his belly, raise the body as high as you can without lifting the forehead off the ground (Fig. 1), and give the body a smart jerk to remove mucus from the



throat and water from the windpipe; hold the body suspended long enough to slowly count one, two, three, four, five, repeating the jerk more gently two or three times.

"RULE 2.—Place the patient on the ground, face downward, and maintaining all the while your position astride the body, grasp the points of the shoulders by the clothing, or, if the body is naked, thrust your fingers into the armpits, clasping your thumbs over the points of the shoulders, and raise the chest as high as you can (Fig. 2) without lift-



ing the head quite off the ground, and hold it long enough to slowly count one, two, three. Replace him on the ground, with his forehead on his flexed arm, the neck straightened out, and the mouth and nose free. Place your elbows against your knees, and your hands upon the sides of his chest (Fig. 3) over the lower ribs, and press downward and in-



ward with increasing force long enough to slowly count one, two. Then suddenly let go, grasp the shoulders as before and raise the chest (Fig. 2); then press upon the ribs, etc. (Fig. 3). These alternate movements should be repeated ten to fifteen times a minute for an hour at least, unless breathing is restored sooner. Use the same regularity as in natural breathing.

"Rule 3,-After breathing has commenced, RESTORE THE ANIMAL

HEAT. Wrap him in warm blankets, apply bottles of hot water, not bricks, or anything to restore heat. Warm the head nearly as fast as the body, lest convulsions come on. Rubbing the body with warm cloths or the hand, and slapping the fleshy parts may assist to restore warmth, and the breathing also. If the patient can SURELY swallow, give hot coffee, tea, milk, or a little hot sling. Give spirits sparingly, lest they produce depression. Place the patient in a warm bed, and give him plenty of fresh air; keep him quiet. "Avoid delay. A MOMENT may turn the scale for life or death. Dry

"Avoid delay. A MOMENT may turn the scale for life or death. Dry ground, shelter, warmth, stimulants, etc., at this moment are nothing— ARTIFICIAL BREATHING IS EVERYTHING—is the ONE REMEDY—all others are secondary.

"Do not stop to remove wet clothing before efforts are made to restore breathing. Precious time is wasted, and the patient may be fatally chilled by exposure of the naked body, even in summer. Give all your attention and effort to restore breathing by forcing air into, and out of, the lungs. If the breathing has just ceased, a smart slap on the face, or a vigorous twist of the hair will sometimes start it again, and may be tried incidentally, as may, also, pressing the finger on the root of the tongue.

"Before natural breathing is fully restored, do not let the patient lie on his back unless some person holds the tongue forward. The tongue by falling back may close the windpipe, and cause fatal choking.

"If several persons are present, one may hold the head steady, keeping the neck nearly straight; others may remove wet clothing, replacing at once clothing which is dry and warm; they may also chafe the limbs, and thus promote the circulation.

"Prevent friends from crowding around the patient and excluding fresh air; also from trying to give stimulants before the patient can swallow. The first causes suffocation; the second, fatal choking.

"Do not give up too soon. You are working for life. Any time within two hours you may be on the very threshold of success without there being any sign of it."

Marshall Hall's Ready Method.—This famous method consists, briefly, in laying the patient with his face downward, his arms folded beneath his forehead, and then slowly rolling him upon his side, restoring him again to his former position. By this means, the chest is alternately compressed and expanded, thus imitating the movements of respiration. This method has been variously modified.

Sylvester's Method.—This method, which has been proposed more recently, is highly recommended by many physicians. Raise the arms from the sides until they meet above the head; then bring them slowly back to the sides again, pressing them against the sides of the chest. Repeat this sixteen or eighteen times a minute. It is a very efficient means when skillfully applied.

**Dirt in the Eye.**—Particles of dirt or other foreign bodies in the eye should be removed at once. If the object is upon the visible portion of the eyeball, remove it with the corner of a handkerchief. If concealed beneath the lid, roll the lid over upon a pencil or turn it outward with the finger, and remove the speck in the same way. Dirt beneath the upper eyelid can often be removed by drawing it outward

and downward over the under lid. Then press it upon the under lid, and open the eye. Blowing the nose, while the eye is closed, will assist in the removal of small particles of dirt. Particles of iron which have become embedded in the tissue of the eye may be loosened and removed by a needle mounted in the end of a pencil.

#### What to Do in Poisoning.

Give an emetic at once, which may consist simply of tepid water in large quantities, or the same with the addition of mustard or common salt. After drinking several cupfuls, tickle the throat with the finger or a feather. Continue taking a cupful every two or three minutes until vomiting occurs. Individual poisons require special remedies. The following lists comprise the most common poisons and their antidotes :—

Vegetable Poisons.—Opium, Morphia, Camphor, Aconite, Laudanum, Paregoric, Strychnia, Tobacco, Lobelia, Arnica, and other vegetable poisons require the emetic and the application of a stomach-pump if possible. Milk and mucilaginous drinks should be given freely after thorough vomiting. Artifical respiration should be employed in poisoning by strychnia and opium. The cold douche is also excellent in poisoning by the latter drug. Keep the patient awake, if possible, by making him walk about.

Acids.—Sulphuric (oil of vitriol), Nitric (aqua fortis), Hydrochloric (muriatic), and Oxalic Acids are the more common. Drink largely of water at once. Acids are neutralized by alkalies. Calcined magnesia is the best antidote. Chalk (powdered), whiting, lime, weak lye, and strong soap-suds are the best substitutes. Something must be done quickly in case of poisoning by acids.

Alkalies.—The most common which are sources of poisoning are Ammonia, Potash, Soda, Pearlash, Lye (from wood ashes), and Salts of Tartar. Drink copiously of weak vinegar or lemon juice. Afterward take some mucilaginous drink, or oil.

Mineral Poisons.—For Corrosive Sublimate, White Precipitate, Red Precipitate, and Vermilion, take the whites of several eggs in a quart of tepid water. Soap-suds thickened a little with wheat flour is the best substitute for eggs. No other emetic is necessary.

Arsenic, Cobalt (fly powder), Ratsbane, Paris Green, and other compounds containing Arsenic, should be expelled by vomiting as soon as possible. Then administer quite large doses of calcined magnesia.

Acetate of Lead, White Lead, Litharge, and Saltpeter require an emetic followed by oil or mucilage.

For Lunar Caustic (nitrate of silver), administer half a tablespoonful of salt in a pint of water.

The antidote for matches or Phosphorus is calcined magnesia, followed by soothing fluids.

Antidotes for Verdigris and Blue Vitriol (sulphate of copper), are eggs, milk, and soda.

Alcoholic Poisoning, -- A man found "dead drunk," should be treated like any other case of narcotic poisoning, as from opium. **Chronic Poisoning** by Lead, Opium, Tobacco, or any other drug which has been received into the system for a long time, requires, first, that the cause be wholly removed at once; secondly, attention to the general health. In the case of Opium and Tobacco, the disuse of the drugs is attended with a good deal of unpleasant feeling on the part of the patient. He feels as though he will certainly die. His fears are groundless. He is in much less danger of dying than before.

Poisonous Candies and Food.—The paints used in the manufacture of candies are poisonous, and often sicken those who eat the candies, sometimes fatally in the case of children.

Fish and meat, either fresh or canned, are frequently sources of poisoning. Decayed fruit or other food, shell-fish, and mushrooms are often productive of injury in the same way. Such cases should be treated on the general principles relating to poisoning.

Soda Water.—The water often contains lead. The sirups are most wretched imitations of natural flavors, and are made from unwholesome materials.

**Poisonous Gases.**—Carbonic acid (more properly carbon di-oxide) is the most common cause of suffocation. Chlorine gas, illuminating gas, the vapor of burning sulphur, ether, and nitrous oxide or laughing gas, with other poisonous gases, produce death in the same way, though some of them are active irritants in addition.

Carbonic acid is heavier than air, and, in consequence, it accumulates in old wells, caves, deep valleys, and other low places. It is formed in mines in large quantities at times, and is known to miners as "choke damp." It is also formed in the vats of breweries by fermentation. In the burning of limestone it is also produced in enormous quantities. When the kilns are opened, it sometimes pours out so rapidly as to suffocate the workmen before they can escape. Miners are frequently destroyed by a sudden gust of "choke damp."

Old wells should never be entered without first testing the air at the bottom. Do this by lowering a burning candle. If it is extinguished, or burns feebly, carbonic acid is present, and descent would be extremely perilous. If it burns brightly, no fears need be entertained. If gas is found to be present, it can be dislodged by throwing into the well burning fagots or paper. Old cellars and cisterns are sometimes dangerous on the same account; they may be tested in the same way. —*Household Manual.* 

**Poisonous Wall-Paper**.—So many people have been made seriously ill by poisoning from arsenical wall-paper that it is really unsafe to purchase new paper without making sure that it is free from this poisonous agent. Green colors are the most suspicious, but other colors are often equally poisonous, and some green papers do not contain arsenic; so it is evident that the color alone is not a sufficient test. The following is a simple and reliable test for arsenic in wall-paper, and it should always be applied to new paper before it is placed upon the walls; better, before it is purchased :—

Take a small piece of the suspected paper, place it in a saucer, and pour over it two or three spoonfuls of ammonia water. Move the saucer about a little, so as to wash the paper thoroughly for a few mo-

ments, then drop into it a small piece of lunar caustic. Watch it carefully. If yellow particles collect about it, be sure that the paper contains arsenic, and reject it. You had better let the walls go bare, or paper them with newspapers, than to cover them with such paper.

Adulterated Sirup.—Much of the sirup which is sold, is adulterated with a cheap article made by a chemical process from refuse starch with sulphuric acid. These spurious sirups often look as nice as the genuine; and it is sometimes very difficult, or impossible, to detect them by the flavor, so ingeniously are they disguised. They are very pernicious, however, and should not be used on any account. Great care should be taken to avoid purchasing them. Sirup is not a very good article of food at the best; but if it is to be eaten, only that which is first-class should be bought. Before purchasing, take a small sample home and test it thus: Make a little pretty strong tea. Pour a few spoonfuls into a tumbler, and add a teaspoonful of sirup. If the color of the tea becomes much darker, the sirup may justly be suspected. To make a certain test, buy a test tube and a few cents' worth of nitrate or chloride of baryta at the drug store. Dissolve a few crystals of the nitrate in warm water, in the test tube. After the crystals are entirely dissolved, add half a teaspoonful of the sirup, and shake the tube well to dissolve it. Set the tube away in a perpendicular position. After an hour, examine it. If there is a deposit of white particles at the bottom, the siru p is spurious; if not, it is genuine.

To Test Drinking Water.—Nothing is more important, after securing pure air to breathe, than to obtain pure water. Hard water is the cause of many serious and fatal maladies. Water containing organic impurities, as sewage, drainings from cess-pools, barn-yards, or cemeteries, is a fruitful source of disease.

The degree of hardness of water, which generally indicates the amount of mineral impurities, is readily tested by determining whether it readily forms a good lather with soap. The lather should be compared with that made from the same soap with rain-water.

The organic impurities are the most to be dreaded. They may be detected in either of the following ways; it is well to try both :---

To a small bottle of the suspected water, add a pinch of sugar. Cork tightly, and set in a warm place. If the least turbidity appears after standing ten days or two weeks, the water is unfit for use.

To a small quantity of the water in a small bottle, add two or three drops of a solution of permanganate of potash, just sufficient to impart a slight tinge. If the color of the solution has diminished after standing a week, the water is foul.

Both of these tests are so easy that any one can try them; and no one should rest contented without assuring himself that the water he drinks is pure.

Food and Drink.—A man is made of what he eats. Good food and drink make good blood; and good blood is manufactured into healthy brains, and strong bones and muscles. Poor food and improper drinks make poor and foul blood, which, in turn, is made into equally poor brains, bones, and muscles.

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Those who pay no attention to the character of their food, but hurry into their stomachs, indiscriminately, food which is good, bad, and indifferent, are sooner or later admonished by disease and suffering that the way of the transgressor is hard, and that nature's laws are inexorable. America is known abroad as a nation of dyspeptics. This unfortunate condition is the result of the universal disregard of dietetic rules for which our countrymen are notorious. Attention to a few plain principles would save many thousands of lives annually. A large number of the most fatal acute diseases have their chief cause in errors of diet.

. Time for Meals.—But two meals per day are far preferable to more than that number. The stomach needs rest as well as the other organs of the body. Meals should never be eaten with less than five hours' intermission, by adults. With small children, this rule may be varied somewhat, according to the age of the child. Probably the best hours for meals, considered from a physiological standpoint, are 8 A. M. and  $2\frac{1}{2}$  P. M. Those who find these hours inconvenient may take breakfast at 7 A. M. and dinner at  $1\frac{1}{2}$  P. M. Some cannot make these hours convenient, and such may breakfast at  $6\frac{1}{2}$  A. M. and dine at 12 M. without suffering particular inconvenience from not taking the third meal, after having become accustomed to the change. For almost all persons, two meals are vastly better than three; but if the third meal is taken, it should be very light, and should not be eaten later than 5 P. M.

How to Avoid Contagion.—The ordinary kinds are such as are communicated by contact, by coming near enough a sick person to breathe into the lungs, and swallow with the saliva into the stomach, certain solid particles which have become detached from the invalid, and which speedily find their way into the blood and poison it. Among these are the following :—

> SCARLET FEVER, MEASLES,

DIPHTHERIA, SMALL-POX.

Persons who breathe through the nose only, and avoid swallowing in the sick chamber, may come out of it unharmed; for the solid particles are arrested in their long, circuitous passage through the dampened channel which leads from the nostrils to the windpipe. An additional safeguard is to sit so that the draught of air may be from you toward the patient; hence, not between him and the fireplace, toward which there is always a current passing, whether there is any fire there or not.

**Farm Accounts.**—The pleasure and profits of farming may be greatly increased by a careful system of keeping accounts. A number or name should be given to each field, and then it should be charged with everything which goes to it, as labor, seed, manure, or other expense. The field should be credited for what it produces. If a portion of the crop is fed to stock, the stock should be charged for the same at reasonable rates, and the field should be credited to the same amount. In this way the farmer will have the means of determining with certainty the relative profit to be derived from various crops.

#### Population of States and Territories.

	1870.	1790.	Le Aller and Aller	1870.	1790.
Alabama,	996,992	1000	Missouri,	1,721,295	1.1210
Arkansas.	484,471	4.598	Nebraska,	122,993	ESPOR DZ
California.	560,247	C. Carlos M.	Nevada,	42,491	the serves
Colorado.	110,000	ALC: TO BE	New Hampshire,	\$18,800	141,885
Connecticut,	587,454	227,946	New Jersey,	906,096	184,189
Delaware,	125,015	59,096	New York,	4,882,759	840,120
Florida,	187,748	00,000	North Carolina,	1,071,361	898,751
Georgia,	1,184,109	82,548	Ohio,	2,665,260	000,101
Illinois,	2,539,891	02,010	Oregon,	90,923	NO SALE
Indiana,	1,680,687	State 1		8,521,791	434,378
Iowa,	1,191,792	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pennsylvania,	217,858	
Kansas,	864,899	13 C 19 5 7 14	Rhode Island,		
			South Carolina,	765,606	249,078
Kentucky,	-1,321,011	78,677	Tennessee,	1,258,520	85,691
Louisiana,	726,915		Texas,	818,579	
Maine,	626,915	96,540	Vermont,	330,551	85,425
Maryland,	780,894	319,728	Virginia,	1,225,163	747,610
Massachusetts,	1,457,851	378,787	West Virginia,	442,014	
Michigan,	1,184,059	Ser and	Wisconsin,	1,054,670	NAMES TO
Minnesota,	439,706	The state of the	Dist. of Columbia,	131,700	
Mississippi,	827,922	TV OK PETE	Total, incl. Territories,	38, 555, 981	3, 929, 214

Business Law.—The following brief compilation of business law is worth a careful preservation, as it contains the essence of a large amount of legal verbiage :—

It is not legally necessary to say, on a note, "For value received." A note made on Sunday is void.

Contracts made on Sunday cannot be enforced.

A contract made with a minor is void.

A contract made with a lunatic is void.

A note obtained by fraud, or from a person in a state of intoxication, cannot be collected.

If a note is lost or stolen, it does not release the maker; he must pay it, if the consideration for which it was given and the amount can be proven.

Notes bear interest only when so stated.

Principals are responsible for the acts of their agents.

Each individual in a partnership is responsible for the whole amount of the debts of the firm.

Ignorance of the law excuses no one.

It is a fraud to conceal a fraud.

The law compels no one to do impossibilities.

An agreement without consideration is void.

Signatures made with a lead pencil are good in law.

The acts of one partner bind all the rest.

To Remove Grease from Silk.—Grease may be removed from silk and other delicate fabrics, thus : Upon a smooth surface spread a woolen cloth. Lay upon this the silk with the right side down. Over the grease spot lay a piece of coarse brown paper. Place upon this a flatiron sufficiently hot to just scorch the paper. A very few seconds will suffice. Remove the flat-iron and paper, and rub the spot briskly with a piece of paper.

**Dangerous Kerosene Oil.**—A large share of the fires which occur, result from the use of an inferior quality of kerosene oil. Oil which is not properly refined, becomes, under favorable circumstances, a more dangerous explosive than gunpowder. It is a good plan to test oil before using it, and here is a good way in which to do it: Place a basin of water upon the stove, or in any other convenient position, where it will be gradually heated. Float in the basin, a saucer, or other vessel containing a little of the oil to be tested. Place beside the saucer, in the water, a good thermometer, and note the temperature. When the thermometer indicates a temperature of about 90°, light a match or taper and hold it near the oil. If there is a slight flash when the flame approaches the oil, reject it. It is extremely dangerous. If there is none, wait until the temperature rises to 100°, and try again. Continue to test it in this way, as the heat increases. If it flashes at a lower temperature than 140°, it is unsafe for use.

#### Postal Laws.

MAILABLE MATTER.—There are three classes of mailable matter. First-class consists of letters and all written matter except book man-

uscript, corrected proof-sheets, postal cards, and local or drop letters.

Second-class consists of publications regularly mailed.

Third-class embraces tracts, pamphlets, books, book manuscript, and proofs, occasional or transient publications, and all miscellaneous matter.

Packages containing liquids, poisons, explosive chemicals, or glass, cannot be sent by mail. Anything of an obscene, vulgar, or disloyal character is also unmailable.

No package to be sent by mail can exceed four pounds in weight.

RATES OF POSTAGE.—First-class matter, including ordinary letters, for each one-half ounce, or fraction thereof, to any part of the United States or Territories, and Canada, 3 cents; to England, Ireland, Scotland, Switzerland, Sweden, Norway, Denmark, Belgium, Holland, Germany, Austria, Russia, Poland, Turkey, Portugal, Egypt, Australia (direct), Shanghai (direct), Greenland, leeland, Greece, Italy, and West Indies, 5 cents; to Newfoundland and Sandwich Islands, 6 cents; to France, 9 cents; to China (direct) and Mexico, 10 cents; to Spain, New Zealand, and New South Wales, 12 cents; to Africa, Morocco, Japan (direct), Brazil (direct), 15 cents; to India, 17 cents.

Second-class matter must be prepaid by the publishers.

Third-class matter, with the exception of printed matter, is sent at the rate of 1 cent for every ounce or traction thereof to any part of the United States or Territories. Special rates to other countries. This class of matter must be unsealed, and must contain no writing.

The new postal law allows *printed matter* of the third class to be sent at the rate of 1 cent for every two ounces or fraction thereof.

Postal cards and printed matter may be sent to Canada at domestic rates, and to England by the addition of a 1-cent stamp. Postal cards require letter postage if more than the address is written on the face.

Drop or local letters require 1 cent postage ; if delivered by carrier,

2 cents.

Letters are not forwarded if postage is unpaid.

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