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Good Health

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The publishers of GOOD HEALTH have been able to make such arrangements with the publishers of the best periodicals, that they can supply many of them with this journal at the price of one, and thus make a great saving to the subscriber. Those who wish to subscribe for one or two good journals besides GOOD HEALTH, will find this a very advantageous offer to do so. The following list comprises some of the principal journals, which we are able to furnish thus:—

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Art Age. Atlantic Monthly. Boston Traveler (weekly) Blackwood's Magazine.	2 50 4 00) 4 20) 1 75	Mother's Magazine (new sub's only).	5 (11 1 ($\begin{array}{cccccccccccccccccccccccccccccccccccc$
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Cincinnati Inquirer. City and Country. Denver Republican morest's Magazine	2 0	0 1 60	Popular Science News Gardening (new sub's only)	1 1 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
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Golden Days (for boys and girls)	221	10 28 15 80 10 82	Teacher's Institute. Toledo Blade. Tronsure Trove	111	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Housekeeper arper's Magazine "Weekly "Bazaar "Young People	4(4)	0 40 0 42	0 V ick's Floral Guide		10 1 80 00 3 00 5 1 60

We can furnish any other periodicals with GOOD HEALTH at about the same rates as above. When the clubbing journal furnishes a premium, we will supply the same at publisher's rates.

> HEALTH PUBLISHING CO., BATTLE CREEK, MICH.



Nearly a Year Ago the Managers of the Health Publishing Co. Announced in Preparation a New Book,

... ENTITLED ...

Sunbeams of Health

THIS is a unique work in which the author has undertaken to present a vast amount of Interesting Information in such a manner as to be not only Instructive, but Entertaining. The following are the titles of the principal sections of the work:

......

The House We Live In. A popular description of the human body nating presentation of a most interesting subject. : : : : : : : :

. . . .

. . . .

The Habitations of Men. A description of the numerous and often places of abode in use by various tribes and nations, with observations respecting their relations to health and a description of A HEALTHY HOME: How it should be built, heated, ventilated, etc. : : : : : : : :

Some Strange People And Their Strange Manners.—A most entertaining account of some of the most remarkable tribes and classes of the human race, describing their manners, customs, and habits, with special reference to their influence upon health. : : : :

. . . .

The Bills of Fare of All Nations. A study of the dietaries of the leading nations of ancient and modern times, with special relation to health. "Curiosities of Diet" affords a fund of most curious and interesting information, while "Rational Dietetics" presents the leading practical facts respecting a healthful dietary.

Dame Fashion and Her Slaves. This section considers the relation of dress to health as indicated by a study of the costumes of all nations. "The History of Cos-

. . . .

tume" is an interesting account of the origin of many absurdities in fashion, while pointing out the better way in dress. : : : : : : : : :

. . . . Health and Temperance Miscellany. In this department is contained a choice selection of articles, stories, sketches and poems relating to the various practical and interesting phases of sanitary and temperance reforms. : : 1 . . . Other Departments Add to the interest of the book entertaining and practically useful information on numerous health topics, making this volume almost an encyclopedia of health and tem-. perance subjects. Profusely Illustrated. The volume is illustrated by hundreds of en-gravings, many of which were made expressly for this book, together with EIGHTEEN FULL PAGE PLATES, five of which are beautifully colored. : : : : : : : : : One of the Most Unique and Interesting Volumes Ever Published. It contains the results of many years' research on the part of the authors. Its popularity is well shown by the fact that the publishers received orders for 10,000 copies of the work in advance of publication. Just the Thing for a Christmas Present. This attractive work is now in press and will be ready for delivery before the holidays. : : Over 220 Quarto Pages. PRICE, CLOTH, \$1.90; CLOTH, GILT-EDGE, \$2.25. Sold by Subscription. AGENTS WANTED IN ALL PARTS OF THE UNITED STATES AND CANADA.

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Hygienic Corset Waist.

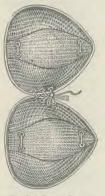




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Skirt Sup, with Bustle Attach.

EVERY GARMENT NEEDED FOR A COMPLETE OUTFIT IN HEALTHFUL DRESS. WE HAVE ALSO RECENTLY ADDED A FULL LINE OF THE EXCELLENT AND POPULAR

JENNESS-MILLER PATTERNS,

Which will enable any seamstress to construct the most elegant and healthful articles of dress for women and girls, and at a minimum cost.

For price list of goods and patterns, address,

SANITARY SUPPLY CO., Battle Creek, Mich.



THE ALCOHOL DETECTOR. SOMETHING NEW AND USEFUL.

The accompanying cut shows a new and very simple apparatus, by means of which Alcohol may be detected in beer, wine, and cider, as well as in the stronger liquors.

The apparatus is so simple that a child can use it. The alcohol is made visible by a blue flame burning

PRICE, Securely Packed,

at the mouth of the flask.

paratus ever invented for illustrating a temperance lecture, and is offered at so cheap a price that it can be possessed by every one interested in temperance teaching. It should be in every school room,

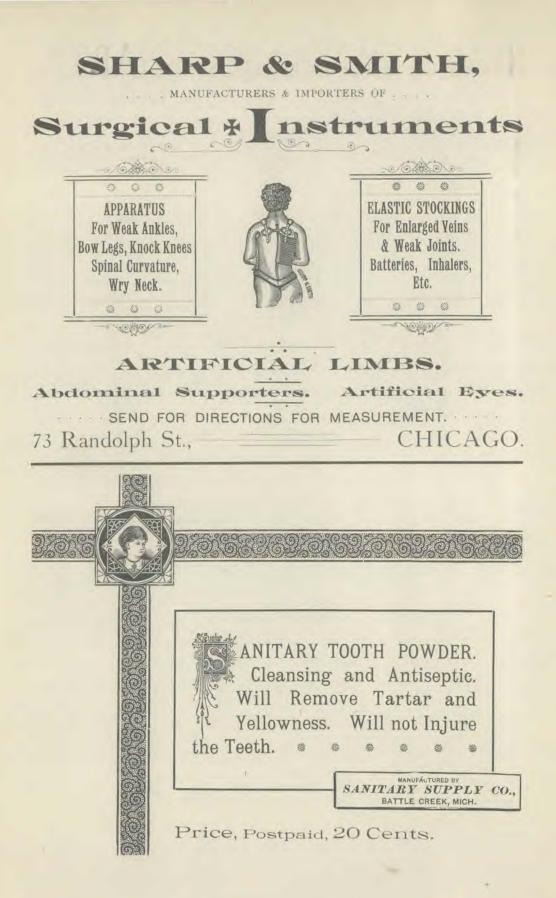
\$1.25.

This is the most useful piece of ap-

Address,

HEALTH PUB. CO., BATTLE CREEK, MICH.





NEW TEMPERANCE CHARTS.

By J. H. KELLOGG, M. D.

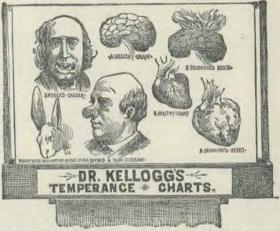
FTER a careful study for several years of the PEYSICAL EFFECTS OF ALCOHOL AND TOBACCO upon the human body, with unusually favorable opportunities for observation through post-mortem examinations, chemical analyses, and microscopical investigations, the author has prepared, by the aid of the best artists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

TEN COLORED PLATES,

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

PLATE 1. The Alcohol Family.

- 2. A Healthy Stomach. 14
- .. 3. Stomach of a Moderate Drinker.
- 11 4. Stomach of a Hard Drinker.
- 5. Stomach in Delirium Tremens.
- 6. Cancer of the Stomach. 11
- 7. A. Healthy Nerve Cells. 44 Fatty Degeneration of Nerve Cells. C. Healthy Blood. D. Blood of an Habitual Smoker. E. Blood of a Drunkard. F. Blood Destroyed by Alcohol. G. The Drunkard's Ring. H. Healthy Nerve Fibres. I. Faty Degeneration of Nerve Fibres, J. Healthy Muscle Fibres. K. Fatty De-generation of Muscle Fibre.
- 8. Smoker's Cancer. A Rum Blossom. A Healthy Brain. A Drunkard's Brain. A Healthy Heart. A Drunkard's Heart.



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

- 10. ALCOHOLIC DRINKS, showing the percentage of Alcohol contained in the common Alcoholic Beverages. ADULTERANTS OF ALCOHOLIC DRINKS, showing a list of the various poisons used in adulterating the various liquors. SPHYGMOGRAPHIC TRACINGS OF THE PULSE, showing the effects of alcohol and tobacco upon the pulse. A. Pulse of a Healthy Person. B. Pulse of a Moderate Drinker. C. Pulse of a Drunkard. D. Pulse of an Old Tobacco User. E. Pulse of a Young Smoker.
- STATISTICS OF STIMULANTS AND NARCOTICS. A diagram exhibiting in a graphic way the fact that the annual cost of alcoholic drinks, tobacco, rum, tea, and coffee, exceeds the cost of bread, meat, clothing, education, and missions.

NOTHING SO COMPLETE in this line has ever been attempted before. These ten charts constitute a most powerful temperance lecture, the impressions of which will not be easily forgotten.

TESTIMONIALS.

The following are a few of the many good words which have been spoken for the charts :---

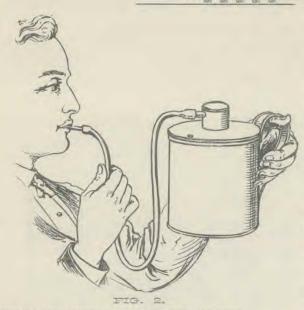
"They are the best yet published, and no temperance educator can afford to be without them. The illustrations of the effects of tobacco are alone worth the money, and when explained, ought to be sufficient to cure any one of the tobacco habit, and I know of some who have thus been cured." GEORGE WOODFORD. "The Charts you sent I like the best of any issued, and shall commend them everywhere, and your lecture was inimitable."-Miss FRANCES E. WILLARD, Pres. N. W. C. T. U. "I have carefully examined the Temperance Charts so ably prepared by Dr. J. H. Kellogg, of Battle Creek, Mich., and I am very much pleased with them.-JULIA COLMAN, Chairman of the Literature Committee of the National W. C. T. U.

The accompanying cut illustrates a novel arrangement for exhibiting charts, which is now furnished with this series of charts when desired. It works to a charm, and is just the thing for lecturers. It is only nec-essary to set it on a stand or table, and in two minutes it can be made ready for operation. It can be oper ated in either direction equally well. Each set of charts is accompanied by a Key and a stenographic report of a lecture from the charts delivered by Dr. Kellogg at the Lake Bluff Temperance Convocation.

Price of Charts on commo	n ro	llers,		-		-	\$12.00
Case axtra,		-	-	-	-	-	1,25
Charts with Exhibitor,		-	-	 		-	10.00

HEALTH PUBLISHING CO., Battle Creek, Mich-

The : Sanitarium : Steam : Inhaler.



chronic, throat coughs, bleeding from the lungs, chronic catarrh of the bronchial tubes, and allied affections. Every family should possess one of these inexpensive and most effective appliances. In the treatment of croup and diphtheria its use is indispensable.

Price, including directions for use, 50 cents. When ordered by mail 15 cents extra should be added for postage.

The Sanitarium Battery.

THE utility of electricity in the treatment of paralysis, general debility, and a great variety of common chronic ailments has become so well recognized that an electrical battery is considered in many households almost as indispensible as any ordinary article of furniture. One reason for this is probably to be found in the fact that while often effective for great good, the gentle electrical current furnished by an ordinary electrical battery is hardly capable of doing any serious injury.



SANITARIUM BATTERY.

'HE above cut represents one of the simplest, cheapest, and most efficient steam inhalers ever advertised. It consists of an outer cup for holding hot water, and an inner cup in which is placed a small quantity of hot water, to which the medicament is added. The construction of the inhaler is shown in Fig. 1. As will be seen, the air passes down through the cover and over the top of the inner cup through the liquid, and is drawn up through the innermost cup into the tube, thence into the mouth, as shown in Fig. 2. All kinds of volatile remedies for throat ailments, such as the essential oils, balsams, etc., may be used with this inhaler. There is no simple remedy so effective in relieving sore throats, either acute or

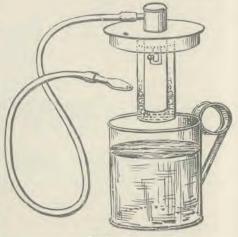


FIG. 1

The popular faith in electricity as a curative agent is to be seen in the enormous sale of electrical belts, brushes, and so-called magnetic and electrical garments of various descriptions which are being constantly effected through liberal and deceptive newspaper advertising. It is well enough known to scientific physicians that the majority of these appliances supply either no current at all, or a current so feeble as to be absolutely worthless as regards results.

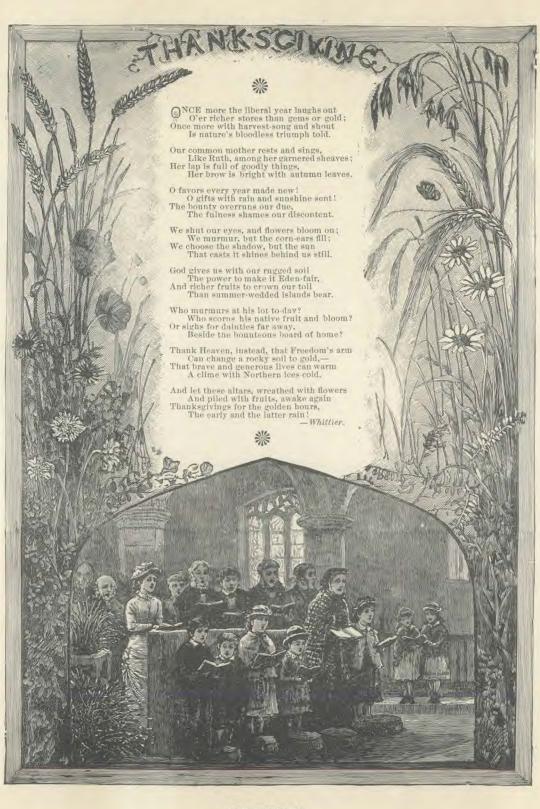
The battery shown in the engraving is manufactured expressly for us, and is one of the most efficient, durable, and easily managed family batteries ever offered for sale. Many hundreds of these batteries have been sold, and the great satisfaction which those who have used them have expressed, warrants the belief that future purchasers will be equally well pleased with this very efficient and convenient electrical apparatus.

Full Directions for the use and care of this Battery accompany each instrument.

SANITARY SUPPLY CO. Battle Creek.

T spini-

Mie: Sam



AUTUMN.



-* A * JOURNAL * OF * HYGIENE. *-

MENS SANA IN CORPORE SANO.

Volume XXII.

BATTLE CREEK, MICH., NOVEMBER, 1887.

Number 11.

CHURCH SANITATION.

Some of the greatest breaches of sanitary law and sanitary administration are to be met in our churches. The mere sweeping and dusting of a church requires all that care and attention which is bestowed by the good housekeeper upon her home. Generally this work is committed to men not trained in any such service. The carpets and cushions of many a church receive but a very rare shaking, and no such rubbing and dusting as are necessary to sustain cleanliness.

But it is especially in matters of ventilation, heating, and lighting that we suffer from the mismanagement of churches.

When a congregation is dismissed, the first business of the sexton should be a thorough ventilation of the building. This does not mean merely the pushing up of a window or two. With the tendency that air has to cling to surfaces, and of floating particles to do the same, any crowded church needs such thorough flushing with air as can only be secured by a very extensive opening of it to the outer air. This may not be necessary nor possible between a morning and evening service, but is especially desirable after the latter. From inquiry we believe it to be the more common practice for the airing to be left until the day before the Sabbath, and then for it to be done in a very imperfect way.

The church is thus left filled with the contaminated air for nearly a week. It lacks the advantage of a house that is used every day, which gets some ventilation by the opening of

doors and windows and the passing in and out of occupants and guests. The stifled air settles about its corners and crevices, or sinks along the pews, and is not easily removed by the work of the following week. Indeed, there is often painstaking not to remove much of it, but to keep it for the hasty warming. It is too little realized that the numbers of people and the multitudes of lights at evening very rapidly exhaust the oxygen from the At the close of the day's service there air. is a reservoir of impure air, which should be peremptorily turned out of-doors. The day following the Sabbath is the best cleaning and regulating day for church assembly-rooms. The design of the previous afternoon or early Sabbath-morning opening should not be the removal of foul air, but of any dampness, by letting in fresh air and sunshine. It is the proper union of these two methods that secures the best condition of air for churches.

As all large assembly-rooms are difficult of regulation as to draughts, churches should not depend much on window ventilation. If they do, the persons in adjacent pews, or those receiving the air on the back of the head or neck, not infrequently take cold. Where window ventilation is at all relied upon, pieces, or strips, of board should be so placed under the lower sash as to make an inlet between the upper and lower sashes when the latter is raised and the strip of board placed under it. Where windows are opened from the top, those on the opposite side of the room should be shut, that direct draughts may be prevented. The Tobin system of ventilation, or some other by which air is admitted through the walls and at a height above the heads of persons standing, is much better than the usual window ventilation. Openings above lamps and chandeliers aid in the removal of foul air, but in large rooms not so much as is generally supposed, unless there is additional aid to exhaust the room or attic above.

Churches suffer much from imperfect modes Often there is an attempt to of heating. make one or two furnaces do the work which should be distributed among several. It is hard to distribute heat from one center over a large assembly-room. When the attempt is made, the furnace is driven at such a heat as to introduce it at entirely too high a temperature for comfortable diffusion. In the attempt, carbonous oxide and various gases of forced combustion are blown in with the heated air, There is also that burnt feeling of the heated air so often complained of, and an absence of moisture, which makes sudden demands upon individuals as well as upon surroundings. If most of our churches are to continue to depend upon furnaces, we are not sure but that fire-places will have to take their places in various corners, as a means of ventilation. Every sexton needs to make the particular building he superintends a study as to its administration. In this he must keep clear of notions and of mere sensations. The thermometer here and there should tell him the actual He should know how to test warmth. draughts, and then should not be governed by the feelings of others .- Independent.

About to Change His Profession.—" Trampin's played out," said a sad-looking specimen of his tribe, as he hugged the red-hot stove in the station ; "trampin's no good any more, an" I'm goin' to change my perfeshum."

"What are you going into?" he was asked. "I'm goin' to be a mind-cure doctor."— Chicago Herald.

-Mrs. De Buffington says her husband suffered from suffusion into the plural, but the doctors drew off the water with an exasperater, and now he is incandescent.

HOMES OF THE FIRST INHABITANTS.

OF the earliest inhabitants of this continent, little or nothing is known; and so by the first inhabitants we mean the Indian and the pioneer. America was undoubtedly occupied at some remote period of time by a race far superior in intelligence and much farther advanced in civilization than the "red man," whom the discoverers of the continent found in possession on their arrival. In the far West there are many traces of substantial structures of very considerable extent, that were occupied by the aboriginal race, which is now nearly or quite extinct. Whence came the rel-skinned invaders who displaced a race superior to themselves, and destroyed so completely the traces of their existence, the wisest of our scientists are not prepared to answer with full assurance ; but the new comers seem to have brought with them a style of dwelling sometimes called the "wigwam," a collection of which the artist shows us in the picture of an Indian village on next page.

Previous to the discovery of this continent by Europeans, the Indian was compelled to make his hut of skins or bark; and even now, in some parts of the West, among the wildest tribes, wigwams are constructed of the same material. Some of the Indians of the Pacific Coast live in hollow trees and holes in the hill-sides, while a few of the wild tribes have begun to imitate, in a rude way, the architecture of the white race, making rude huts from boards of cedar, roughly hewn out, and fastened together with thongs. These they carry with them as they move from place to place.

The fire on the floor of the wigwam fills it with dense smoke, which a white man finds quite unendurable.

These rudely constructed huts are by no means an adequate protection from the cold storms to which their occupants are often subjected. As a result, although the older ones are usually able to survive the exposure, the infants are sacrificed in such numbers that the Indian race is being rapidly exterminated. Doubtless rum and tobacco have

GOOD HEALTH

had much to do with the rapid decay and extinction of many tribes. Naturally a race much superior to the negro, the Indian has copied the vices of the white man so faithfully that nature threatens him with extinction. There are few old men among them. Consumption carries off hundreds yearly, the disease being brought on by exposures, and States, at least where timber is plenty; and there are thousands of men to-day occupying positions of the greatest honor and influence, —merchant princes, railroad kings, judges, clergymen, and eminent statesmen,—who began life in these humble abodes.

The log-house, with its many cracks and chinks between the logs, and its great open



AN INDIAN VILLAGE.

probably aggravated by the smoky atmosphere which fills their wretched dwellings.

THE PIONEER'S CABIN.

The first settlers in the vast wilderness of the West, like the savages whom they displaced, contented themselves with very humble and inexpensive dwellings, a fair model of which appears in the cut on next page; but the modest log-cabin was a palace compared with the shanty or wigwam of the Indian.

There are plenty of these log-houses still to be seen in the newer portions of the United fire-place, almost large enough for a small bedroom, was just the right place in which to lay the foundation for that soundness of constitution which is the most reliable basis for the highest use fulness. The men born and reared in the well-built frame or brick house, which succeeded the log-cabin in due course of time, as wealth increased, and substituted for the breathing walls of the log-house, the modern air-proof barriers against the life-giving element, and replaced the yawning fireplace, the best of ventilators, by the air-tight stove,—these are the men who fill the growing ranks of the consumptives, the dyspeptics, the rheumatics, the neurasthenics, and the hypochondriacs.

In the palaces of the rich as well as in the cottages of the poor, women and children annually die of air-starvation by thousands. Civilized human beings are trying to live under conditions in which a North American savage or a South American monkey would die in a few months. Air that is soiled by



THE PIONEER'S CABIN.

human breaths and rendered foul by the emanations from human bodies, is carefully bottled up in air-tight living and sleeping rooms, preserved as carefully as though it were the golden wedge of Ophir.

Those who subject themselves to this contaminated atmosphere, lead inane lives, made wretched by headaches, nervousness, colds, catarrhs, debilities, and general good-for-noth-Enervated and poisoned by the ingness. noxious atmosphere in which they live, they are an easy prey to a host of maladies, distressing and often incurable. Thus it may well be questioned whether the old-fashioned log-houses of the last generation were not a blessing, in the loss of which we of the present generation have suffered an injury which has seriously weakened the vital stamina of the race, and has laid the foundation for an increase of constitutional maladies in the generations to come .- Sunbeams of Health and Temperance.

SMOKING AMONG WOMEN.

"A recent incidental statement made by an authority whose opportunity of observation leaves no doubt as to its truthfulness, discloses the fact that the practice of smoking is becoming more and more general among American ladies. The observer, who is a lady of the highest standing in New York, says :---

" More American women smoke cigarettes, and often cigars, than the world is aware of. Only a few mornings ago I sat in the boudoir of one of the best-known women in New York society, a lady whose name is a synonym to the outside world for everything that is womanly and refined, while she smoked cigarette after cigarette with the utmost placidity. During the morning, three other ladies dropped in, and two of them also produced dainty eigarette cases, and smoked with entire composure, ejecting the curls of smoke into rings above their heads as gracefully and perfectly as the most expert smoker among men could do. I know myself of scores of our best New York, Boston, and Philadelphia ladies, all my personal friends, who indulge in smoking, and whose names, if given to the public, would cause astonishment.'

"It is not pleasant to contemplate such a condition of affairs as the above gives us excellent reason to believe exists to-day among our American women. . Men smoke, and why should not women ? ' many have asked. Simply because there are a thousand and one things which, though proper in men, are entirely unbecoming to women. The association of tobacco with a refined lady is disagreeable; it is not so with the most polished gentleman. It is argued by some that in Spain, France, and Turkey, and other European countries, the women all smoke, and in public; yet these same people making this assertion have never for themselves seen the class of women who are addicted to the use of tobacco. In like manner might we conduct a foreigner to places in our great cities where women can be found continually smoking, but

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could such a visitor return to his native land, and declare in truthfulness that the American lady smokes ?

"We are aware that in France especially, the habit of smoking among women is more general than in America, but likewise are many other habits which American mothers would not care to associate with the lives of their daughters or their lady friends. If the custom of smoking among American ladies is becoming prevalent, it is one that cannot be otherwise than deeply deplored. No woman-and we weigh each word in this statement-can be a lady while addicted to smoking. The argument that 'men smoke,' is no plausible reason for women to do so; and no one possessed of any degree of common sense will advance such a comparison. There are scores and hundreds of things that can be properly associated with the more common-place nature of man ; but when connected with the delicate and refined nature of woman, they become widely dissimilar. Tobacco was intended for the use of men; and while it would be infinitely better were it not used at all, or used in much lesser quantities than it is at present, the cigar or cigarette is not unbecoming to the most perfect gentleman. But when employed by ladies, it is put to a use for which it was never intended."

We could indorse the last sentence, but certainly could not agree with the writer of the above in his apology for the use of tobacco by men. There is no more reason for excusing the use of tobacco by men, simply because it is more customary, than for excusing, on the same ground, profanity, obscenity, rudeness of manners, and general wickedness, which are commonly recognized as more prevalent among men than among women. Such excuses for tobacco-using are so transparently flimsy and baseless that they do not require serious refutation.

---- What makes that girl walk so funny?' inquired De Smythe of Browne. "Is she intoxicated?" "Oh, no; she's not intoxicated," responded Browne; "it's only her shoes that are tight."

HYGIENE.

The blessed word "health" once literally meant "holiness," and that means wholeness; for disease and sin alike are fractional conditions—one of the body, the other, largely through the body, of the soul. Equipoise, as of the compass in the binnacle, is the only normal relation of our being toward God and his laws; adjustedness, harmony,—these are the high, pure, happiness-giving rewards of conformity to the will of him who in nature and grace formulates that will in laws as changeless as his own being.

"My will, not thine, be done," whether uttered by violating a law of health or spiritual holiness, helps to turn Eden into a desert; but, "Thy will, not mine, be done," in matters of diet, as well as discipline, helps to turn the desert into Eden, and makes Gethsemane the gate of heaven.

"Who sweeps a room, as for God's laws, makes that and the action fine," sang George Herbert. Oh, may these "deeds of week-day holiness,"—this reverent study of those habits in life which relate to the diet, dress, cleanliness, ventilation, and exercise, that will make the physical estate of humanity more normal, attract our thought, as the sun draws the tides of the sen.—*Frances E. Willard*.

A VOICE FROM THE FLESH POT, BY SUSIE A, HOXIE,

THE glories of the winter day Were fading in the west,
As Tim, the grimmy charcoal man, Came driving home for rest,
And the broad tread of his iron wheels The snowy carpet pressed.
Beneath the limbs of the poplar tree That grew by the broad road-side,
He catches a gleam from his own dear nest, And it fills his heart with pride;
For there he had placed, twelve months ago, The light of his home, his bride.
And then, "Tim's wife is a splendid cook," So all of the neighbors said,

"She has the knack of stirring her dough Into such lovely bread,"

And it made them hungry whenever they thought Of the crispy doughnuts she made.

GOOD HEALTH.

To-night, 'neath the beams of the hanging lamp, They sit them down to tea; The snowy white of the table-cloth Was a joy for Tim to see, And every dish of their evening meal Suited him perfectly. The steak was tender, and juicy, and sweet, And touched with the daintiest brown ; And the butter, near by on the butter-plate, Looked much like a golden crown : While the castor, filled up with its precious freight, With a smile stood looking down ; There was bread, of course, of the finest grade, And cake so rich and sweet, And the tea that came to his bountiful board One does not always meet ; While the fruit that had grown on their apple-trees Was fit for a king to eat. After his hunger is well appeased, He reads in his easy-chair ; And the smoke of his scented cigarette Curls up to poison the air, Like an evil weed that springs from the earth In the midst of flowers rare. A hand seems, at length, to be shifting the scenes; And in sight of his wondering eyes The walls of the room are stretching away, And it fills his heart with surprise ; For out of a huge iron kettle he hears This lively discussion arise : "How cruel and heartless that we should be placed In the midst of this big iron pot, And then just to think what is waiting for us,-To be fished up and swallowed down hot ! I feel at a loss to know just what to do, For I never had dreamed of this lot. "Mr. Tim, I am sure, do n't quite understand Just what he devoured at his tea; That slice of cold ham was a part of my friend Who was sick with the cholera. He will learn, if he lives, that it won't do to trust Every line piece of meat he may see. "Sickness and death often lurk in the pot, Concealed from the eyes of mankind : Beware lest you make of your stomach a grave, And clog the machine of the mind ; For its intricate wheels are kept brightened and oiled

By the right kind of food, you will find.

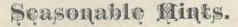
- "Lay up in your muscles unwavering strength, They're the bands that support the machine ;
- Should your food be poor, in the end you will find Your loss is far more than your gain ;
- For the bands will relax, and at length will become Too weak to give force to the brain."

- It ceased for a moment, and he saw near at hand, On the top of the tea-pot lid,
- A strange little imp that he thought was a leaf : But it mournfully shook its head,
- And pointing beneath to the steaming hot tea, "Beware of this poison," it said.
- "God's plans are the best, pure water for man As it flows in its life-giving stream;
 - No poison corrupts this sweet nectar of bliss, And no monster ere visits your dreams:
 - Tarry not by the cup if you value your health, Let this be henceforth your theme.
- "Inch by inch, joint by joint, you are losing your life,

And still you keep smoking away,

- You look even now like a slice of smoked ham, I am quite sure tobacco do n't pay ;
- This life is too short to be squandered like this, Its swift fleeting moments won't stay.
- "Your body was formed in the image of God, And every wrong thing that you do
 - Leaves a scar that no hand can ever remove; Look well to my warning, adieu."
 - It vanished, and Tim started up from his sleep, And found himself sitting alone,
 - Very thankful, indeed, it was all a bad dream, And time was still his to atone
 - For the very wrong use he had made of the house That he learned "was not his own."

Use of Fruit in Diet .- Were fruits used daily by all, there would be less gout, rheumatism, calcareous degeneracy, and other kindred diseases, than there is now. In connection with the curative power of fruit, we must mention the "grape cure." This is practiced in France and Germany in the autumn, and is a cure for many diseases due to high feeding. The patient is given a pound of grapes to eat the first day. The amount is increased, until the person can eat five or six pounds a day. The other food is gradually lessened, and the diet at last consists entirely of grapes. It cures obesity and many other complaints, and starts the person off on a new lease of In this country we may carry out this life. cure in part, using strawberries, gooseberries, cherries, and plums in the place of grapes. Fruit is thus seen to be a necessity in a rational diet, and of immense value as a dietetic medicine. __ The Table.



BY THE EDITOR.

Colds, with their subsequent sneezing, coughing, hemming, nose-blowing, and throat-clearing, begin to be the order of the day, with the ushering in of cold and damp November days. Persons who are subject to chronic catarrh of the nose or throat are the first victims. From the beginning of cold weather until the full re-establishment of warm weather in late spring or early summer, large numbers of persons are rarely free from colds of some sort. Such persons should understand that an ounce of prevention is worth a pound of cure, and should cure their colds in advance by taking such percautions as will prevent their catching cold, or rather, their being caught by a cold.

Overclothing the Body.—While there are many who neglect to supply themselves with a sufficient amount of clothing during the cold months, there are those who overdo the matter, and on the first approach of cold weather surround themselves with woolens and furs and extra wraps to such an extent that they are kept in a state bordering upon perspiration the whole winter through. Such imprudence as regards clothing occasions a relaxed condition of the skin and of the body in general, and renders the individual exceedingly susceptible to colds; and hence should be avoided.

Hardening for Cold Weather.—Did it ever occur to the reader how nature takes care of the trees and shrubs, which are obliged to stand unprotected from the wintry blasts that howl about their trunks and leafless branches, wholly without the advantage of the extra wraps and thicker garments upon which human beings rely for protection from the winter's cold? For a month or two, kind Mother Nature, who never neglects even the simplest of her children, has been preparing the trees and plants for the inclement weather to which they are to be subjected, by thickening and hardening their coats of bark, and putting them in a condition to endure the cold.

Just so it is with human beings, if they allow nature to do her work. As the cold weather approaches, many people, like bears, raccoons, opossums, and other allied species of animals, retreat into warm, comfortable quarters, where they hibernate during the cold winter months. If now and then these hibernat ing individuals are obliged to face the piercing blasts of winter, they quickly succumb to the influence of the cold, for which they are not prepared; and colds, catarrhs, pneumonias, pleurisies, consumptions, etc., result. If, on the other hand, an individual pursues the plan of nature, and allows his body to become inured to the cold by daily contact with out-of-door weather, without so great an amount of clothing as to render himself wholly oblivious to the prevailing temperature, he will become accustomed to contact with cold air, and through the increased vital activities of his body, will become enabled to defend himself against the dangers of a lowered temperature. This is the best of all precautions against cold weather. So we say to those who do not wish to suffer from the inconveniences incident to this season of the year: Do not shut yourselves up too much in your overheated houses, but go out every day, rain or shine, sleet, hail, or snow, wind or no wind. Keep yourselves on friendly terms with Old Boreas by daily acquaintance, and you will be astonished to see how little impression his most fierce attempts will make upon you.

Only a Cold is a common expression when one having a slight indisposition from having taken cold. is interrogated respecting the state of his health. This popular notion, that a cold is a matter of trivial importance, is often productive of most serious consequences. A cold is a disease, really a fever rather than a cold, and is a dangerous disease. From colds occur numerous chronic diseases, some of which are not easy to eradicate. Many a consumptive has gone down to the grave the victim of a neglected cold. Neuralgias, rheumatisms, asthmas, pleurisies, pneumonias, to say nothing about catarrhs of the nose, throat, and larvnx, injuries to the eves and ears, and other local disorders, owe their beginnings to exposures, and result in difficulties which at the beginning are commonly regarded the most trifling of ailments. Before you recklessly expose yourself to the danger of taking cold, reflect that the cold which may result may be the first of a series of steps downward, the last of which may lead you into an open grave.

Mind the Weather .- "Never mind the weather" is a trite remark, but one which leads to most pernicious results, if followed. One who disregards weather changes, is certain to suffer seriously in health. No one disputes the necessity of wearing different clothing in the winter-time from that which is proper to be worn in the summer season, and yet the shock to the system occasioned by a fall of the barometer twenty or thirty degrees within twenty-four hours in midsummer, is greater than that occasioned by the gradual transition from summer-time to the zero temperature of winter. Sudden changes are exceedingly trying to the body, and should be guarded against, rather than endured, by the proper adjustment of clothing. The idea which many people entertain that summer clothing should be laid aside and winter clothing adopted on a certain day of a certain month is highly erroneous and pernicious. The clothing should be adapted to the weather at all seasons of the year. If cold weather begins earlier in the fall than usual, warmer under-clothing and thicker outerclothing should likewise be adopted at an earlier date. The principle to be universally followed is, Keep warm.

THE HAPPY FIRESIDE.

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

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

THE CORN SONG.

HEAP high the farmer's wintry hoard ! Heap high the golden corn ! No richer gift has Autumn poured From out her lavish horn!

*

Through vales of grass and meads of flowers, Our plows their farrows made, While on the hills the sun and showers

*

Of changeful April played.

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We dropped the seed o'er hill and plain, Beneath the sun of May,

And frightened from our sprouting grain The robber crows away.

All through the long, bright days of June Its leaves grew green and fair, And waved in hot midsummer's noon

Its soft and yellow hair.

And now, with autumn's moonlit eves, Its harvest-time has come; We pluck away the frosted leaves,

And bear the treasure home.

-Whittier.

COMMON SENSE.

BY "QUIXOTE."

FARMER STYLES was in a "humor," and while he was putting a loose hoop on the wash-tub, he kept up a continual muttering,

"What is the matter, father?" inquired his daughter Sallie, while an amused smile brightened her roguish face,

"Oh! I was just a wishin' there was a little common sense in the house," growled the farmer, as he gave the hoop a twist.

"Is it an oil or a powder?" asked Sallie, mischievously, "and will it help one in fixing a hoopless wash-tub?"

"It's mighty handy on all occasions ; and I declar' for it, if your father had n't a come of a good stock of it, an' kep' it well cultivated since, I dunno but what we'd all been in the church-yard or the paupers' house long ago.

"Now just hear your mother and old Aunt Sallie a-coddling and a-coaxing of Harvey. I just don't wonder the boy's gone to a shadder, with two old women always a-hoverin' over him, and breathin' their tales of pity and woe into his ears. Always a-tellin' him of how poorly he looks, and they're so sorry he's a-failin' so fast. The whole neighborhood of old gossips comes and pours the most despairin' stories of how this one was took in the same way as Harve', and how he failed up ; and then how that one broke down and died of the same complaint; and when they've all exhausted their stories, they heave a sigh, and shake their heads, and croak worse'n the "Raven" you was readin' about. I declar" fur it, they jest 'pear like a lot of turkeybuzzards a-waitin' fur the poor boy to die. Seems as if the whole town would be terribly worked up if Harve' did n't die. I jest believe there's a streak in most folks that's sorter onhealthy, and makes 'em delight in condolin' and ruminatin' on diseases.

"Law! I've jest listened to those women till I'm all of a sweat. There they set, and pictured the sick and dyin' that's died of dropsy, and consumption, and cholera, and small-pox, till I fairly felt sick with the mental strain, and there's Harve' a-lyin' and takin' it in till his eyes was most wild. I could n't stand it, and says I, at last, 'You women folks all better clear home, er I'll have a grave to dig before night.' Your ma and Aunt Sallie looked seared at my speakin' so at the neighbors, but I jest continued, 'Seems as if a lot of women could find something a bit cheerful to talk about when they come to visit a poor, shut-in mortal, 'stead of diggin' up the graves and takin' out the skeletons of the last twenty years,' and I dove out of the door, fur I knew there'd be some freezin' expressions. I s'pose your ma and Aunt Sallie will fix 'em all up, but I hope I've put a spell of quiet on such talk before Harve'.''

"Why, father!" exclaimed Sallie, "what in the world will they say? I don't blame you for feeling provoked; but to speak out like that is just like a man. If I had been there, I would have changed the topic of conversation and avoided hurting their feelings."

"Like as not *yon* would; but I tell you, when folks air in a bad condition, it takes a remedy equal, to do 'em any good. Harve' has an imagination, and I could jest see how he was a fairly livin' in those sickly scenes. The whole thing is wrong. He is n't treated right, and no one gives him the least chance to get well."

"Why, father ! everything that could be done for his comfort, is done. I'm sure ma and Aunt Sallie don't leave a stone unturned."

"That's jest the trouble. That's jest where I think the treatment's all wrong. Harve' has n't done a thing for himself for the last year. Everybody's been a-runnin' and waitin' on him hand and foot. He's jest like a Chinese woman's foot-all swaddled and bandaged up. His room is the most onlikely place in the house. Your ma and Aunt Sallie air afraid to let the wind er the sunshine in, fur fear poor Harve' might get a fresh breath of heaven's air. What on airth did the Creator make the air fur? and aren't the lungs meant fur to take it in? He's got a look like a cellargrowin' pertater. It jest makes me feel bad. Why Sallie, you know Harve' was a fine growin' young fellow two years ago! Looked brown and red, and had a manly swing to his gait. He was a fust-class farm hand, and in a fair way of bein' a man. Then, he was converted; that was all right. I was glad on it. Then, somebody said he ought to de-

vote his talents to the ministry. Well, that was all right. Then, he went to studyin' night and day. Now, Sallie, I jest believe that when Satan can't keep us from bein' converted, that he sets in directly after to make wrecks of us in some other way. If he can't drown us in the mire of sin, then he'll try to burn us up in some volcano of false zeal. Well, he set to on Harve', and there that boy jest set and read and studied, and got absent minded, and then he went to college, and kep' at it till the more he's larned the less he 'pears to know; and now he's jest a poor yaller-complected skeleton, and he's coddled and waited on, and jellied, and caked, and angel-caked, and petted, and cooed over, till he's no more account than a cotton-batton doll." (The farmer's face was mapped with surly wrinkles.)

"Well, what would you do? You know the poor boy is sick. Dr. Augear gives us very little encouragement, and poor Harve' feels terribly to think his prospects are so blighted. Do n't you think the Lord sent it on him? I know ma and Aunt Sallie think so. You know, 'Whom the Lord loveth he chasteneth.'"

"No; I do n't think the Lord had a thing to do with it," said the farmer. "The Lord gave us a brain, and he expects us to use a little common sense. I know he is disappointed time and again. If any one was to do as Harve' has,—jest set down without exercisin' a mite, and think of nothin' but dyin' souls and theology, he'd come out the same knot-hole.

"For my part, I can have no patience a-listening to theology out of some poor thinchested dyin' creetur. Give me the words of life out of a live bein'. I don't believe in these preachers that shut themselves up like bats in a dark room, and weave sermons out of a pile of musty old books for a live man to live by. Give me a man that has to contend with the trials of life."

"Like wash-tubs with the hoops off, and women without a common stock of good sense," put in Sallie.

"But there's no use," sighed the farmer.

"The whole community has set to to kill that boy. If there's anything that would make a well man sick, some of our Christian neighbors sends it over for Harve' to eat; and when he turns away from the sickening stuff, then you and Aunt Sallie and mother all set to, and whine and coax and tease, till the poor boy gives in. He's lost his independence so that he's no mind to stand agin' you. Well, I'm clear disgusted. I s'pose there is no way but to buy a grave-lot, and get ready for a 'dispensation,' just because folks haven't anything but onairthly uncommon nonsense in their heads, and I'm a bigger gump than the rest of you to submit to it."

Farmer Styles walked off in a "huff," as his wife said. When he came in at noon, there was an air of determination about him as he remarked, "Well, wife, I've made up my mind to send Harve' to a Sanitarium I've been readin' about. There's no use of his stayin' here; he'll be sartin to die if he does; and if he goes, he can't more than die anyhow."

"Why, pa! air you a-goin' to send him away to die among strangers ?"

"Jest so," said the farmer, and in spite of tears and entreaties and scolding, the farmer started away with Harve' on the evening train. (TO BE COSTINUED.)

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OLD-FASHIONED GIRLS.

BISHOP COSGROVE, of Davenport, Iowa, recently delivered a notable sermon in that eity, on the immoral tendencies of the times through the breaking down of safeguards which once protected girls and young women. As a model for the rising generation, the Bishop pictured the "old-fashioned girl" of thirty years ago, in the following words :—

"She was a little girl until she was fifteen years old, and she helped her mother in the household duties. She had her hours of play, and enjoyed herself to the fullest extent. She never said to her mother, "I don't—I don't want to," for obedience was to her a cherished virtue. She arose in the morning when called, and we do not suppose she had her hair done up in papers and crimping pins, or banged over her forehead. She did not

grow into a young lady and talk about her beau before she was in her teens, and she did not read dime novels, nor was she fancying a hero in every plow-boy that she met. The oldfashioned girl was modest in her demeanor, and she never talked slang, or used by-words. She did not laugh at old people, nor make fun of cripples. She had respect for cripples. She had respect for her elders, and was not above listening to words of counsel from those older than herself. She did not know as much as her mother, nor did she think that her judgment was as good as that of her grandmother. She did not go to parties by the time she was ten years old, and stay till after midnight, dancing with any chance young man who happened to be present. She went to bed in season, and doubtless said her prayers, and slept the sleep of innocence; she arose in the morning, happy, and capable of giving happiness. And now, if there be an old-fashioned girl in the world to-day, may Heaven bless and keep her, and raise up others like her."

WEDDING-JOURNEYS.

THE question of wedding-journeys is like many others, in that it has been thoroughly discussed, conclusively settled, and laid away among the things which have been finally passed upon, and which can bother us no more; but the world continues to act as if the decision had been exactly the opposite. Theoretically, it is ridiculous that when people have determined to settle down for life and have a fixed home and established methods, they should begin by going away, and passing the first weeks of this new life in a hurried and breathless rushing about, as if their only joy were in ceaseless motion and continual change.

Suppose the case of a young man who works hard, and earns his own living as a clerk, a piano-tuner, a salesman, or in some other respectable occupation; who has lived carefully, laid by a few hundred dollars, and feels that he can at last afford to get married. His bride is a young woman in his own walk in

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life, who has been accustomed to live comfortably, but economically; and upon this reasonable and healthy basis, their plans for married life are laid. Nine times out of ten, they go far to wreck the whole affair simply by a wedding-journey. In the first place, they both purchase expensive clothes. They are married with considerable state; and if they were to stop with that, and go from the church at once to the home, and begin house. keeping, they would find that a serious inroad had already been made upon their savings.

But that is not the programme by any means. From the church they ride in a carriage to the railroad station. There they take chairs or a whole compartment in a parlorcar, and make straight for the nearest big city, and there they put up at the largest and most expensive hotel. Then begins a life of pleasure and sight-seeing. They do as the people about them do, and for a week or two they live as if they were millionaires. The money that the young man has drawn from the bank melts away like snow in the sun; but as it is his wedding-journey, he feels bound not to consider the expense. When he close of his vacation approaches, he finds it necessary to send for the rest of his savings to get home with ; frequently these are all spent, and he has to borrow.

When the young couple return, and take up life in their new home, how does the matter present itself ? They have had a taste of luxury to which they were unaccustomed, and they are recalled to the realities of their former mode of life,-the life of careful economy, of thrift and self-denial, which is to be theirs for the future. But they are at a tremendous disadvantage. In the first place, they must be more than human if they do not think with regret and longing of their brief taste of luxury, ease, and splendor; and if husband and wife are, perhaps, lacking in sturdy strength of mind, and not fortified by a Christian contentment with their state in life, discontent and repining and envy are almost sure to cloud their happiness. The details of their narrow domestic life, which

would naturally be accepted as a matter of course, and as a part of their common happiness, will be found dull, sordid, and distasteful, because so different from the life of which they have had a fleeting glimpse during their wedding-journey.

To this unhappy result is too often added a more serious practical consequence in a load of indebtedness, for not only are the savings of years thus recklessly squandered for a few days' pleasure, but as we have said, in very many cases the money which pays for a little prolongation of the indulgence is borrowed, and has to be repaid by painful economies, extending over many months and years.

In a word, the evil is a double one. The young people begin their married life out of tune, and spoiled for true rational happiness; and, moreover, they have paid such a price for a few days of an artificial and, for them, wholly unsuitable existence, that they are heavily handicapped in the early part of their race; and it is very fortunate if even their children do not feel for years the evil effects of their parents' yielding to the tyranny of custom in the matter of a "wedding-journey."— *Catholic Review.*

GOOD ADVICE.

Miss Louisa M. Alcott, writing upon "Early Marriages," in the *Ladies' Home Journal*, concludes her excellent article with the following good advice :—

"Boys, for such I love to call you, and such most of you are till five-and-twenty, set up a high standard of manhood, and never tire of trying to reach it. Do not begin your day with a cigar, and end it in a theater, billiard-saloon, or club-room. Learn to take pleasure temperately, and so keep the power of enjoyment fresh and strong. Seek the society of wise men and good women, and be sure the taste for wisdom and virtue will grow by what it feeds on. All things influence the young for good or ill; choose the best, and let it teach you the true conduct of life as naturally as sun and rain nourish a young tree. ⁴Keep innocency; for at the end it shall profit thy soul much, and open heaven to thee. Never believe the pernicious saying that, ⁴Young men *must* sow wild oats.⁴ All men may sow good seed if they will, and reap honor and happiness instead of the bitter crop so many mourn over when the harvest comes. Keep a clean mind, a brave spirit, and a tender heart; then you will have the right to ask some sweet woman to cast in her lot with yours, and make life rich and happy.

"Girls, do not be in haste to wed. Build up healthy bodies by good food, plenty of exercise, and sleep. Learn all the useful household arts before you attempt to make a home. Cultivate your minds with the best books, that you may be able to teach your children much that school-training alone will never give you. Choose your amusements wisely, for youth must have pleasure, but need not waste itself in harmful frivolity. Above all, select your friends with care. Avoid girls who live only for flirtation and enjoyment ; and use the privilege, which all women may claim, of declining the acquaintance of young men whose lives will not bear inspection by the innocent eyes of women. Let no delusion of wealth, rank, comeliness, or love tempt you to trust your happiness to such a one. Watch and wait till the true lover comes, even if it be all your life; for single blessedness is far better than double misery and wrong. Spinsters are a very useful, happy, independent race, never more so than now, when all professions are open to them, and honor, fame, and fortune are bravely won by many gifted members of the sisterhood. Set your standard high, and live up to it, sure that the reward will come, here or hereafter, and in the form best suited to your real needs.

-Little Lulu, of Brooklyn, at three years of age made a visit to the country. She enjoyed all the new things, until one day when she ran with distressing cries to her mother, in reply to whose inquiries she said, "Oh, mamma! I burned me on a big fly."

Temperance Notes.

-The best anti-poverty society is an anti-liquor society.

-Speaking of the value of prohibition in Kansas, the editor of a Parsons local paper says : "Before we had prohibition, there were twenty-one saloons in Parsons, and I had from one-fourth of a column to a column of police items every day. Now I cannot get together more than a half column once in three months. We have no city debt, and have a public library building, paid for, which cost \$40,000."

—A young man recently died in New York from the effects of cigarette smoking. Notwithstanding the warnings which are being continually published concerning the evil effects of cigarette smoking, the habit seems to be increasing, not only among boys, but among those of more mature years. People who smoke cigarettes do more smoking than those who use cigars or a pipe ; and heart disease caused by the poison, and ultimately resulting in death, as in the case above mentioned, is becoming a very common occurrence.

-Mrs. S. F. Chapman, superintendent of Southern work for the National W. C. T. U., writes thus: "I sat in the train yesterday behind two rum-dealers, who were discussing prohibition, and one informed the other that the most they had to dread was the weakening of the right wing of their army, the high license Christian men. 'For,' he said, 'the Christians hold the balance of power; and if they withdraw their support, the traffic is gone.' Is it not a dreadful thought that this traffic in souls is unwittingly kept up by professing Christians?"

-A correspondent of the N. W. Christian Advocate, says: "Among the facts that prove the success of prohibition in Kansas, I do not remember to have noticed that any one has called attention to the almost entire cessation of juvenile drunkenness. Before the adoption of prohibition, nothing was more common than to see boys in their teens swaggering about the streets of towns and villages, in all stages of drunkenness. Prohibition has put an absolute end to this. In Council Grove, our county seat, where, before prohibition, I have seen in one day a dozen boys in all stages from tipsy to helpless drunkenness, in the last five years I have not see one. Then the town had a population of 1000, now over 3000, and the population of the county has increased in the same ratio. Three times as many people, but all the boys saved from the drunkard-maker's power! If prohibition has accomplished nothing else, is not this a glorious triumph?"

⁻Character is the only foundation for real success.

Popular Science.

-In a Swiss museum there is a watch not larger than a pea, inserted in the top of a pencil-case, which not only indicates hours, minutes, and seconds, but also days of the month. It is a relic of the time when minute watches were inserted in finger rings, shirt studs, etc.

-An artificial ivory of creamy whiteness and great hardness, is made from good potatoes, washed in diluted sulphuric acid, then boiled in the same solution until they become solid and dense. They are then washed free of the acid, and slowly dried. This ivory can be dyed and turned, and made use of in a variety of ways.

—An old Mount Washington guide, who says he never carries a compass, gives the following ways of finding the points of the compass: "You will notice that three-fourths of the moss on trees grows on the north side; the heaviest boughs on spruce trees are always on the south side; and, thirdly, the topmost twig of every uninjured hemlock tips to the east."

—Some one thus computes the amount of salt in the Atlantic Ocean : "If a box six feet deep were tilled with sea water, and the water allowed to evaporate in the sun, there would be two inches of salt left on the bottom. Taking the average depth of the ocean to be three miles, there would be a layer of pure salt two hundred and thirty feet thick on the bottom of the Atlantic."

To Preserve Ropes.—A journal devoted to the interests of builders, says :—

"It is often very important to prevent the deterioration of ropes used in crecting scaffolds which are to remain up some time, and especially in places where the atmosphere is more than usually liable t) attack the hemp. It has been recommended to soak the very dry ropes in a bath containing ninety grains of sulphate of copper per gallon of water, allowing them to remain three or four days, afterward drying them. This treatment protects them, as well, against the attacks of insects. The copper may be fixed either by a coating of tar or by a solution of soap and water. For tarring the ropes, it is preferable to pass them through a bath of boiling tar; then, to extract the excess of tar, draw them through a ring which compresses them afterward hanging them up to dry. In the other process the ropes are soaked in a solution of soap and water, containing four hundred and fifty grains of soap to one gallon of water. The salt of copper which forms in the fibers preserves them better than the tar, the action of which is merely mechanical."

Whitewash and Fire.- A writer in the American Analyst says :- "White wash has many uses, political and moral (or immoral rather), as well as economic. But as a fire-extinguisher, it has not been hitherto generally recognized. 'Do you know,' said a scientific gentleman the other day, 'that it is next to impossible to burn a whitewashed fence? And do you know further, that in France, to protect the frame and interior of buildings from fire, the walls, beams, joists, and the under side of floors are thickly coated with lime-wash before they are placed in position? It is so; and if this course were adopted here, it would save many a house, many a village, from destruction. I do not mean to say that it will prevent the spread of a fire once under great headway, but from its uninflammable character, it is a guard against the prime ignition that often leads to dire results." This little hint set the writer to inquiring, and the doctor's words were confirmed."

Why Pipes Burst.—The principal cause for the bursting of pipes is frost. Water has the greatest density, that is, it occupies the least space, at a temperature of 39.2° F. Above that temperature it expands, and below that temperature it expands until it reaches the freezing-point, 32°. When the freezingpoint is reached, the water begins to solidify, until all the heat is expelled, and ice is formed. The water has expanded nine per cent in the operation. Below the freezing-point, the ice contracts again.

After the first freezing occurs, and the pipe is swelling, the ice next to the pipe contracts or breaks, and allows more water to come in contact with it. This, in turn, freezes, expands, swells the pipe a little more, and then contracts. This operation is continued until the pipe bursts. When this occurs, there is a movement of the softer ice to the break, and the space left fills with water and freezes, thus enlarging the fissure a great deal. This soft ice frequently runs out on the pipe and forms icicles.

[∞] This expansion of water may be illustrated by taking a basin level full of water, and exposing it to a temperature lower than the freezing-point. When the temperature of the water reaches 39.2⁻⁷, it begins to expand, and will run over until it is frozen. After the surface is frozen over, the solidification of the lower portion of the water causes the center to rise above the level—a phenomenon which is often seen. The mere fact that water when frozen is less dense than when liquid, is proved by the floating of ice.

Another cause for the bursting of lead pipe is the water-hammer. Under direct pressure systems of water-supply, the water-hammer is sometimes very forcible, and its continuation often develops a burst at some weak point in the pipe. A remedy to prevent this, consists of a rubber cushion, which gradually breaks the force of the blow.—Sanitary News.



"Blessed are the Pure in Heart."

THE FOE OF INNOCENCE.

MANY parents imagine that in bringing their children up in absolute ignorance of the evils prevalent in the world, they are thereby insuring their innocence. A more fatal mistake cannot be made. Children will sooner or later become acquainted with vice, impurity, and evil of all sorts. To be forewarned is to be fore-armed. One of the greatest responsibilities of the parent lies in the direction of imparting proper knowledge at the proper time. We quote from the Indian Purity Trumpet, an excellent monthly, which comes to us from Bombay, India, the following forcible paragraphs upon this subject :--

"Much as parents may desire it, they cannot bring up their children packed in cotton wool, safely stowed away in bandboxes, labeled, "This side up.' Whether we like or not, we have to face the difficulty that our little ones, like ourselves, have corrupt fallen natures, and that it depends to a great extent on the training given by parents as to which side shall be uppermost,-that which is evil and corrupt, or that which is pure and noble. Unless children imbibe high principles at home, we may rest assured that when sent forth to fight their way in the battle of life, evil will predominate, and that the side will remain uppermost which the parents least desire to see.

"The writer remembers the master of a school coming into the room, and asking his pupils if they knew how to teach a boy to swim without letting him bathe, adding that the mother of one present had written to say that her boy was never to be allowed to bathe till he could swim! Had that fond, but foolish mother lost her boy by drowning in the first boat accident he met with, how forcibly her folly in trying to keep him out of danger, instead of enabling him to overcome it, would have come home to her!

"Another instance of good-intentioned, but fatal mistake in this respect is that of the mother whose son was condemned to death. On visiting him in prison she cried, 'O my boy! what has brought you to such an awful end?' The young man sternly replied, 'Mother, youngare the cause.' Bursting into tears, she asked, 'Why, what harm have I ever taught you?' The son made the sad reply, 'You neglected to teach me any good, and as I did not know better, I have sunk lower and lower.'"

KEEP THYSELF PURE.

An Arabian princess was once presented by her teacher with an ivory casket exquisitely wrought, with the instruction not to open it until a year had rolled around. Many were the speculations as to what it contained, and the time was impatiently waited for when the jeweled key should disclose the mysterious contents. It came at last, and the maiden went away alone, and with trembling haste unlocked the treasure; and lo! reposing on delicate satin linings lay nothing but a shroud of rust; the form of something beautiful could be discerned, but the beauty had gone forever. Tearful with disappointment, she did not at first see a slip of parchment containing these words : "Dear pupil, may you learn from this a lesson for your life. This trinket, when inclosed, had upon it a single spot of rust; by neglect, it has become the useless thing you now behold, only a blot on its surroundings. So a little stain on your character will, by inattention and neglect, mar a bright and useful life, and in time will leave only the dark record of what might have been. If you now place a jewel of gold within, and after many years seek the result, you will find it still as sparkling as ever. So with yourself; treasure up only the pure and good, and you will ever be an ornament to society and a source of true pleasure to yourself and your friends."—Sel.

DISSIPATED MEN AND FOOLISH WOMEN.

A CORRESPONDENT of the Woman's Journal says: " In treating dissipated young men as equals,girls do a wrong which they can scarcely realize. Such men should be made to feel that until they redeem themselves and walk with correctness and honor the path of right, good people will stand aloof from them. Girls who respect themselves will not be seen with such young men, and will decline to receive them on the familiar footing of friendship. It is a mistaken friendship, to poultice when caustic is needed; and I am inclined to think that a little sharp decision on the part of the girls of to-day would go far to correct the general looseness of morality among young men."

Let a woman be right herself, and she cannot bear that which is vile and evil and wrong. Men carry the brand of sin upon their faces; and a pure-minded, healthful, God-fearing woman, can only look with pity or with loathing upon the votaries of the cup and the followers after vice and sin.

But when women have not the fear of God before their eyes; when their lives are full of petty crafts and trickeries; when fashion rules the hour; and they care more for what men will say than for what God has said; when they will deform themselves until they cannot draw a natural breath to save their lives, and cramp their lungs and stomachs until rosy health, beautiful complexions, and fair foreheads give way to sallow cheeks, muddylooking foreheads, sunken eyes, and painted and powdered faces; when they will stimulate and dissipate until they are feeble and helpless and useless, there is little chance for them to find fault with the bad habits of young men, or to object to anything they do. They cannot take care of themselves, they need some one to take care of them, and they must marry soon or they will look so bad that no one will have them; and so, as beggars cannot be choosers, they take the first offer, and plunge themselves into sorrow, misery, and an early grave,

Let young women fear God and take care of their health, and they can then afford to do right, and exhibit to the world such specimens of true Christian womanhood as the votaries of folly and fashion know nothing of. — The Christian.

—The Inter-Ocean, referring to a recent horrible case of seduction in Chicago, says: "The seduction of an innocent woman or girl is a crime whose consequences are often more painful than those of murder, whose motive is viler than that of any other imaginable deed. Its effect upon the victim is death in life, relief from which is often sought in suicide. And yet there are States, Illinois being one of them, to whose disgrace be it said, that they have provided less punishment for seduction than for petty larceny."

— The National Teacher's Association, which convened in Chicago during July, and was attended by upwards of ten thousand teachers, in response to an appeal addressed to them by Miss Frances E. Willard, President of the National W. C. T. U., and national superintendent of its department for the promotion of Social Purity, adopted important resolutions for the protection of youth against the temptations and perils of social vice.

-Eleven States and two territories have, during this year, amended their laws by raising the "age of protection" for girls. In Kansas, Colorado, and Mississippi the "age of protection" is now eighteen years.



THE HONEY OF THE BIBLE.

HONEY was formerly very plentiful in Palestine; and hence frequent expressions of Scripture which import that that country was a land flowing with milk and honey. Moses says that the Lord brought his people into a land whose rocks drop oil, and whose stones produce honey. Deut, 22:13. (See also Ps. S1:16.) Modern travelers observe that it is still very common there, and that the inhabitants mix it in all their sauces. Forskal says the caravans of Mecca bring honey from Arabia to Cairo; and often in the woods in Arabia has he seen honey flowing. It would seem that this flowing honey is bee-honey, which may illustrate the story of Jonathan. 1 Sam. 14: 27. Apparently, it could not be palm-honey which Jonathan found, for it was a honey-comb, and so far out of his reach that it required the putting forth the end of the rod that was in his hand, to be able to dip it into the refreshing delicacy. John the Baptist, too, ate wild honey. Matt. 3:4.

There is, however, as incidentally alluded to above, a vegetable honey that is very plentiful in the East. Burckhardt, speaking of the productions of the Ghor, or valley of the Jordan, says one of the most interesting productions of this place is the Beyrouk honey, or, as the Arabs call it, Assal Beyrouk. It was described to him as a juice dropping from the leaves and twigs of a tree called gharrab, of the size of an olive-tree, with leaves like those of the poplar, but somewhat broader. The honey collects upon the leaves like dew, and is gathered from them, or from the ground under the tree, which is often found completely covered with it. It is very sweet when fresh, but turns sour after being kept for two days. The Arabs eat it with butter ; they lso put it into their gruel, and use it in rubbing their water skins, for the purpose of excluding the air. (Travels in Syria, p. 392.)

Honey was not permitted to be offered on the altar of the Lord (Lev. 2:11), for which various reasons are assigned. Conjecture, however, has hitherto been fruitless. But, though God forbade honey to be offered in sacrifice, he commanded the first-fruits of it to be presented to him ; these first-fruits and offerings being designed for the support of the priests, and not to be offered on the altar. By the word word, debash, the rabbins and lexicographers understand not only the honey of bees, but also the honey of dates, or the fruits of the palm-tree, or the dates themselves, from which honey is extracted ; and when God enjoins the first-fruits of honey to be offered to him, the first-fruits of dates seem to be meant ; for generally the produce only of fruits was offered.-Bible Encyclopædia.

AN EASTERN INN.

The occasional mention in the Bible of the public house, or inn, known in modern times in Oriental countries as the *caravanserai*, will render interesting to our readers the following sketch of one of these establishments, if such it may be called, which is given by Volney, in his "Travels : "—

"There are no *inns* anywhere; but the cities, and commonly the villages, have a large building called a *khan*, or *kervanserai*, which serves as an asylum for all travelers. These houses of reception are always built without the precincts of towns, and consist of four wings round a square court, which serves, by way of inclosure, for the beasts of burden. The lodgings are cells, where you find nothing but bare walls, dust, and sometimes scor-

GOOD HEALTH.

The keeper of this khan gives the pions. traveler the key and a mat, and he provides himself with all other necessary articles. He must, therefore, carry with him his bed, his kitchen utensils, and even his provisions; for frequently not even bread is to be found in the villages. On this account, the Orientals contrive their equipage in the most simple and portable form. The baggage of a man who wishes to be completely provided, consists of a carpet, a mattress, a blanket, two saucepans with lids, two dishes, two plates, and a coffee-pot, all of copper well tinned; a small wooden box for salt and pepper; a round leathern table, which he suspends from the saddle of his horse; small leathern bottles or bags for oil, melted butter, water, and brandy (if the traveler be a Christian); a pipe, a tinder-box, a cup of cocoa-nut, some rice, dried raisins, dates, Cyprus cheese, and, above all, coffee-berries, with a roaster, and wooden mortar to pound them.

Peasants' Diet in Palestine.—The diet of the modern peasant in Palestine is probably no less simple than was that of his predecessors of two thousand years ago. When he starts out on a journey to his distant farm lands, he drives before him his patient oxen, and carries, in a leathern bag upon his shoulders, a few olives, a little cheese, and a quantity of the thin, tough bread which constitutes the staff of life in that country. When he stops to take one of his two simple meals, he builds a little fire, and heats his bread to freshen it.

Who will say that the simple repast of the Oriental laborer is not enjoyed by him as thoroughly as the American or European epicure enjoys his elaborate feast? Certainly we should expect to find a people of such simple habits free from the foul breaths and other dyspeptic symptoms which are almost universal among those whose tastes have been vitiated by what we proudly term the "higher civilization."

-Break one thread in the border of virtue, and you do not know how much may unravel. -Geikie.

HEALTH BIBLE-READING.

HY H. F. PHELPS.

SIMPLICITY OF DIET.

1. How should we eat? 1 Cor. 10:31.

2. Does diet have any 'effect upon the character? Judges 13:3, 4.

Note.-It most assuredly does, or this angei visitor would not have given this caution.

(a) What expression indicative of danger is used by the angel?—*Beware*.

(b) What are we to understand by the word "unclean"?—That which, being physically unfit for food, would cause disease, is certainly unclean.

(c) Who was this child that was promised? — It was Samson, who was the strongest man in the world, and belonged to a society that was temperate in all things.

3. Does diet have any effect upon the mental faculties? See the history of Daniel and his three friends. Dan. 1.

4. For what purpose were these men and many others chosen? Verses 3, 4.

5. Did they attend the schools of Babylon? Verse 4, last clause.

6. What was provided for their food? Verse 5. (a) At whose expense?

(b) How long was this to continue?

7. What did Daniel purpose in his heart? Verse 8, first clause.

8. After coming to this conclusion, what did he request? Verse 8, last clause.

9. Was Daniel a friend of the prince? Verse 9.
 10. Whom did the prince fear? Verse 10, first clause.

 (α) Why was he afraid ?

(b) What danger did he fear would come from this course ?

11. How long a time was desired by Daniel to test this matter ? Verse 12.

12. What kind of food was desired? Ib.

Nore.-From the best authorities the food desired was a vegetable desired.

13. What was the result of this trial? Ψ erses 13-15.

14. What food was now given to these men? Verse 16.

15. Did God favor these men beca use of their temperate habits? Verse 17.

16. How long did this continue ? Verses 5, 18.

17. Will not God favor us if we are temperate in our habits?

18. Who presided at the grand examination day? Verse 19, first clause.

19. Who graduated with the greatest honors on this occasion? Verse 19.

20. How much better were they than all others, and in what did they excel? Verse 20.



BATTLE CREEK, MICHIGAN, NOVEMBER, 1887.

AN ANCIENT VEGETARIAN.

WE give our readers herewith an engraving made from an instantaneous photograph of Madame Girard, a native and resident of



MADAME GIRARD.

the town of Sant-Just-de-Claix, France, who has attained the remarkable age of more than one hundred and twenty-six years, and is probably one of the oldest human beings now living, having been born in March, 1761.

All scientists agree that man, like other animals, should live at least five times as long as is required to attain adult development. This would place the natural limit of his life at about one hundred years. There have been, however, numerous instances of persons who attained a much greater age than this, the most remarkable of which is the case of "Old Parr." an Englishman who died at the advanced age of over one hundred and sixty years.

It may be asked, Why do not all human beings attain to this great age? This is indeed a serious question, in view of the fact that the average length of life in civilized countries is scarcely more than forty years. The only answer is that most human beings die violent deaths. By this we do not mean that they are killed by railroad collisions or other accidents, but that their lives are cut short by other than natural means. Indeed, a careful study of the subject compels the admission that most people die as the result of causes within their own control.

It is interesting to note in this connection that the habits of all persons who have attained to very remarkable ages have been simple and abstemious. The account of Madame Girard states that her diet is quite simple, consisting chiefly of vegetable foods, with little or no meat. Old Parr was equally abstemious.

The Emperor William of Prussia, one of the most illustrious of royal personages now living, is more vigorous at ninety years than most men at fifty. He eats but once a day, and eschews flesh food, as well as tobacco, in which he sets an example worthy of the imitation of his countrymen.

-A writer in the Medical News traces thirteen classes of diseases to the inhalation of sewer gas, the moral of which is evident.

A VEGETARIAN NATION.

THE Chinese are vegetarians, partly on account of their religion, from force of long habit, and per force of circumstances. Their country is so densely peopled with human beings, that the land must be closely cultivated to the best advantage. As every one knows, flesh-eating is a most wasteful practice, as the same amount of land will support thirty or forty times as many persons taking the products of the earth at first hand, as when taking corn and other vegetable products at second hand, in the form of flesh. In view of these facts, it is not singular that the few foreign cattle found in China are carefully preserved for labor, instead of being eaten. A recent writer makes the following assertions :---

"Beef is never seen on a Chinese table, oxen and cows capable of working the plow being counted too valuable to the farmer to be consigned to the butcher. Very severe penalties are attached to the slaughter of these animals. The punishment for the first offense is a hundred strokes with a bamboo, and then two months in the wooden collar. Should love of beef or desire of gain induce a repitition of the crime, a second judicial flogging is followed by exile for life from the province.

THE COCAINE HABIT.

THE alacrity with which every newly-discovered lethal drug is seized upon by the ever increasing army of persons, whose overwrought nerves are clamoring for the negative pleasure of obliviousness to pain, is evidence of incalculable and increasing mischief growing out of the high-pressure life of the present day. It has been scarcely three years since the drug known as *cocaine* was introduced to the medical profession in this country; and yet it has already come to be numbered among the "vice drugs," and it is found to be productive of evils even worse than those of any of the narcotic and stimulant drugs which have been longer known.

Dr. J. B. Mattison, who has had a very extended experience with this drug, and has

made a thorough investigation of its effects as observed by others, remarks as follows :----

"I think cocaine for many, especially for the large and increasing number of opium and alcohol habitues, the most fascinating and seductive, dangerous and destructive drug ex tant; and, while admitting its great value in various disordered conditions, earnestly warn all against its carcless giving in these cases, and especially insist on the great danger of self-injecting, a course almost certain to entail added ill.

"To the man who has gone down under opium, and who thinks of taking to cocaine in hope of being lifted out of the mire, I would say, 'Don't,' lest he sink deeper."

INFLAMMABLE BREATH.

CASES in which the breath has taken fire when exposed to a flame have occasionally been reported. It has been commonly supposed that in cases of this sort the cause was a saturation of the breath with the vapor of alcohol, but recent experiments have shown that it is impossible to render the breath inflammable by this means. The real cause of the phenomenon is found to be the eructation of inflammable gas from the stomach, where 'it has been produced by fermentation of the food. The gas produced in this way is found by analysis to be identical with the so-called marsh gas, which may at any time be found bubbling up from the soft mud at the bottom of ponds and stagnant pools. A case is reported by the British Medical Journal, in which a confirmed dyspeptic, on essaying to blow out a match, produced an explosion, the noise of which was so loud as to awaken his wife.

Another confirmed dyspeptic, while lighting his pipe, experienced an eructation of gas from his stomach, which ignited, and burned his beard and face.

From these facts, several important conclusions may be drawn :----

(1) It is dangerous for a man to be a dyspeptic, at least dyspeptics should be very careful to keep away from the immediate vicinity of an open flame; (2) it is hazardous for dyspeptics to smoke; (3) smokers must be very careful not to become dyspeptics, a requirement rather difficult of execution, as tobacco is a well recognized cause of dyspepsia. On the whole, it is safer to be neither a dyspeptic nor a smoker; then one can blow out candles and matches, and light fires to his heart's content, without running the risk of taking fire himself.

THE UNWASHED.

According to a contemporary, "It is a wellknown fact that a considerable number of Parisian ladies admired for their beauty, never wash themselves at all. Face, neck, and shoulders are carefully wiped every morning with a dry towel, and then rubbed with a fine ointment: they then appear in all the freshness of youth, with tints varying from dazzling white to a deep pink. Only once a year, generally in autumn, the complexion begins to show cracks and wrinkles. Then the beautiful woman disappears for a season. All visitors are refused admission: 'Madame is indisposed.'

"A fortnight later she emerges like a chrysalis, as beautiful as ever. She has undergone a transformation, a kind of molting process, which is kept a close secret from everybody except her husband, who has to pay two thousand frances for it. Her beauty is the work of enamel. \Box Of course, this artificial crust effectually prevents any facual expression of the lady's feelings; she can only smile faintly with her lips; she is incapable of blushing, and remains cold and impassive like a statue."

We cannot vouch for the truth of the foregoing. It impresses us as being a little overdrawn; nevertheless it may be true, for many facts which are well vouched for go to show that nothing is impossible to the Parisian woman determined to be in fashion at all hazards. The greater marvel will be if, when the above facts become known, a multitude of American women who are given to aping the fashionable imbeciles of the Old World, do not at once undertake the cultivation of beauty after the same fashion.

LESSONS FROM A MONKEY.

DR. ALLISON, an eminent London physicianhas been studying the habits of monkeys, of which he writes as follows :---

"Some time ago I bought a rhesis monkey, intending to study his habits. He is about eighteen inches high, and tame. I feed him on the same food I take myself. He likes fruit best of all; raw grains and cooked vegetables next. He prefers his potatoes without salt, and his rice without sugar. Peas he will not eat unless very hungry. He always eats with his hands, the same as the Turks; and as he does not wash them beforehand, he swallows much dirt. When I give him hot food, he has to wait until it cools before he can eat it. I tried this plan a few times with my porridge and stews, and had to wait before I dare finger them.

"I think that if mankind were forced, like my monkey, to eat with their fingers, we would not damage our teeth and stomachs with hot foods, nor would we indulge in soups. Soups are very good for exhausted people, but not so good for persons in health, as they are not as easily digested as more solid articles; in fact, the superfluous fluid they contain must be absorbed before digestion goes on. Every food I offered him was, first of all, smelled of; and then, if the smell was agreeable, he ate it; if otherwise, he threw it down.

"If mankind would always be guided by the sense of smell, we would eat less rotten cheese, high game, etc., than we do, and consume more delicious fruits, whose aroma naturally attracts us.

"The monkey is also a nose-breather, and I never saw him breath once through his mouth,—another good example which mankind might follow with benefit, as we naturally are nose-breathers."

-Mechanical work is generally calculated as foot tons; that is, so many tons lifted one foot in height. A fair day's work for man is calculated to be three hundred foot tons, an ordinary day's work four hundred and fifty tons, the maximum day's work, six hundred foot tons. Faith-Cures.—Notwithstanding the constant exposures of the arrant knavery connected with the business, the faith-and-mind-cure quacks continue to do a thriving business. It seems to do little good to expose the absurdity of the so-called philosophy of these pretenders; for there are, apparently, plenty of people who delight in being humbugged. Nevertheless we take this means of recording the fact that a lady who was recently announced as cured of a chronic nervous disorder was, within a week, a mental wreck. Not long ago the papers announced that another victim of the mind-cure craze attempted suicide,

We heartily indorse the sentiments expressed in the following paragraph, which we quote from the *Medical Recorder* :—

"The physician, over and over again, comes across illustrations of failures of the faithcurer, and he observes that the effect upon the patient's mind is bad. The will power of one who has once been hypnotized is enfeebled, often permanently; and the process of faith-cure is a form of mesmerism. Persons benefited for a brief time through the stimulus of emotional excitement relapse into a worse state than before. It is a kind of emotional intoxication, and the mind suffers from it as from all morbid stimulants. So far from faith-curing and magnetic healing taking away the work of the physician, it actually adds to it; and probably nothing would give a larger field for the work of the neurologist and alienist than a wide-spread indulgence in faith-curing."

—Within the last ten years, the general enforcement of health laws has, according to recent reliable statistics, resulted in saving the lives of many thousands of people. The Register General of England and Wales calculates that not less than three hundred thousand persons have survived the last five years who would have been in their graves, had it not been for these laws. The average length of human life has been increased nearly three years.

Liver-Poisoning.—The civilized gormand expresses disgust when he hears about the bird'snest puddings and rat pies of the Chinaman or the redolent "knappee of the Burmese; but half an hour later you may see him sitting down to a hotel table, and ordering such offal as calves' brains, sheep's kidneys, beef liver, pig's feet, and other viscera too offensive to mention.

If we talk to such persons about the impropriety of consuming as food such disgusting articles, we are looked upon as squeamish, hyperæsthetic, moonshiny, etc. It does no good to tell a person having a taste so perverted, that to eat certain things is nasty. He must know that they are likely to kill him outright, or he is not the least disturbed. Here is a fact for such a one, if numbered among our readers :—

"A certain family obtained the liver and other meat from a calf killed that day. The liver was salted, and put in a cool place; next day it was cooked, and eaten at the midday meal. The nine persons who partook of it were taken ill very soon afterward. The symptoms, in the main, were those of choleranostras. There was also with the profuse diarrhea a great deal of vertigo, injection of the conjunctiva, and reddening of the face and neck. Investigation showed that their liver was yellower than normal, and injected with bile; microscopic examination revealed evidence of an acute hepatitis, just beginning. Tests made by inoculation and feeding failed to give any results upon other animals. There was no evidence of putridity, and other portions of the same animal were eaten with impunity."

-An outspoken newspaper is responsible for the following advice, which is appropriate at all seasons of the year: "Do not spend your money for a motto, 'Save my Lambs,' until you "have cleaned out your cellars, privies, back yards, and alleys. Diphtheria, typhoid fever, and other zymotic diseases are not kept out of your homes by mottoes." Danger in Cold Sleeping-Rooms.—The idea that cold sleeping-rooms are conducive to health is a popular error, which, unfortunately, has been encouraged by some writers who have undertaken to instruct the public in matters pertaining to health. It is indeed true that sleeping-rooms should not be overheated, and that sleeping in overheated rooms increases the susceptibility to cold; but this is only one extreme. Sleeping in rooms which have not been warmed at all, is the other extreme.

In the winter-time the unheated rooms of a house become like the condensing chamber of a distillery. The warm vapor coming from the kitchen, laundry, water-basin of the furnace, and all sources from which moisture evaporates, rising with the warm air of the house, is condensed upon the walls, furniture, and bedding of cold bedrooms. The consequence is, that when a person retires to sleep in such a bod, he is compelled to undergo an experience very similar to that of a cold wetsheet pack. The cold, damp sheets and quilts abstract a large amount of heat from the body, and expose the individual to all the evil consequences of sudden chilling, such as internal congestions, colds, pneumonias, pleurisies, etc. Many a fatal illness has been contracted by the exposure incident to sleeping in a spare hed.

Every sleeping-rccm should be heated sufficiently to insure dryness to the bed-clothing, and such a degree of warmth as will not produce severe chilliness.

An Apt Illustration.—Prof. Huxley, who has contributed so much to the popularization of modern theories of biology, has very aptly compared the human body to an army:—

"Of this army, each cell is a soldier; an organ, a brigade; the central nervous system, head-quarters and field telegraph; the alimentary and circulatory system, the commissariat. Losses are made good by recruits born in the camp; and the life of the individual is a campaign, conducted successfully for a number of years, but with certain defeat in the long run.'

Why Girls Fade .- The Society of Collegiate Alumnæ have been making inquiries into the causes of ill-health among American school-girls. The charge has been made that school-girls suffer chiefly from the so-called forcing system of education. While there is undoubtedly much to be deplored in many of the educational methods still in vogue, the investigation referred to shows very clearly that in the majority of schools there are very much more patent causes for the growing frequency of early decline among school-girls. For example, a class of sixty girls, between twelve and eighteen years of age, were asked what time they retired the night before. The average bed-time was found to be twenty minutes before midnight. Of ninety girls questioned one morning respecting their diet, twelve, or one in seven and one-half, had eaten no breakfast. Of these twelve, six had brought no lunch, while the other six had only cake, pie, or something else equally indigestible.

The Moral Value of Cleanliness.—It is a trite saying that "cleanliness is next to godliness," yet sanitarians very seldom give thought to the principle involved in the adage quoted. In a country like this, where the luxury of cleanliness can be so easily secured, it is a sad reflection that scarcely half a dozen cities in our country, numbering more than sixty million people, provide public baths; and it is probable that not more than one-fourth of the houses of our best cities contain a bath-tub.

We heartily indorse the opinion recently expressed by the mayor of Reading, who, in advocating the introduction of public baths, remarked :---

"I am persuaded that uncleanliness produces immorality and crime; for in proportion to the decrease of personal importance which an individual experiences, is he lost to the legal restrictions about him. Beclouded faces drive men from light, and darkness breeds dangers of all kinds; so that, apart from sanitary benefits, public baths would, in my estimation, reduce crime."

*

Killed by Tobacco .- An enemy of the tobacco-habit asserts that he saw several flies light on a tobacco-user who had just taken a bath; and there was still poison enough left in the perspiration to kill the flies, all of which were dead_within five minutes by the watch, after they came in contact, with the smoker's epidermis. He traces from this observation the conclusion that thousands of women are killed by the absorption of nicotine while occupying the same bed with their husbands, and considers it more than possible that many children are killed in the same way. He also asserts that if he were a tobacco-user, he would sleep in a stable, or the pig-pen, or "out-doors under a tree, far from every living animal."

We cannot vouch for the observation referred to, but we have long been of the opinion that a tobacco-user is "not fit to be kissed," nor to sleep with, nor to live in the midst of a civilized community.

Wholesale Poisoning of Food.—Prof. Bartley, of Brooklyn, has recently called attention to the fact that salicylic acid is largely used in the preservation of foods and drinks. Fortunately, it is less used in foods than in wines and beers, which are in themselves unwholesome, even when not contaminated with this poison.

Beer-drinkers should certainly take warning from the facts exhibited by Dr. Bartley. He says that the average beer-drinker consumes from twenty-five to thirty grains of this poison daily, which is amply sufficient to produce serious consequences, and is undoubtedly responsible for some of the mischief recognized as the result of beer-drinking.

-Mr. Weston, the great pedestrian, believes himself to be one of the most healthy men living, notwithstanding the produgious feats of endurance which he has accomplished, and which would seem sufficient to break down the constitution of almost any man. If He thinks every man ought to walk far enough to get himself into a good sweat every day before dinner.

Telephones and Contagion.—Attention has been called to the fact that the telephone may be a source of infection, or contagion. It is certainly apparent that if, in using, the mouth is brought in contact with the telephone, it may readily become the means of conveying disease. It has been suggested that the mouthpiece should always be disinfected by some germicide solution, after using; but this seems to be unnecessary when it is remembered that in the proper use of the telephone, the mouth is never brought in contact with the instrument.

Mr. Blaine's Health Habits.—According to the New York World, Mr. James G. Blaine owes to simple habits of life the excellent health which has enabled him to do probably more work than any other public man in the United States now living. Here is what Mr. Blaine says about himself as regards his mode of life :—

"Well, I have a very strong constitution, and, more than that, I have taken great care of myself. I believe I owe a great deal to this. For instance, I have always been careful to keep my feet dry. I have no bad habits, and have never been addicted to the use of stimulants. I do not smoke or use tobacco in any form; in fact, I never had a piece of tobacco in my mouth. I never took stimulants. Never was in the habit of taking a glass of liquor, even occasionally. I do not know the taste of rum, whisky, brandy, or gin.

-Dr. Wm. Pepper has made an extensive study of consumption in Pennsylvania, which shows that the disease prevails more extensively among the foreign-born and negroes than among native whites. Jews were found to be less subject to the disease than the general population. This immunity of Jews may be fairly attributed to the fact that they refuse to eat the hog, an animal which is more generally diseased than any other used for food; and require a careful inspection, both before and after slaughtering, of all animals used for food.



Cooked Milk .- The popular prejudice against the cooking, or scalding, of milk, is, in the opinion of the writer, entirely unfounded. The fact that scalded milk is of use in diarrhea is not evidence in support of the popular notion referred to. The reason why cooked milk is beneficial in these cases is that it is easily digested and "sterile," or deprived of its germs; so that it does not irritate the intestines, but, on the contrary, furnishes a bland and simple food by which the irritation of the mucous membrane of the bowels is soothed, just as a raw and irritated surface on the skin is relieved by the application or a poultice. Being easily digested, no undigested residue is left behind to act as a mechanical irritant. The increasing frequency of diseases originating in milk, has called attention to the advantages of subjecting milk to heat of a sufficiently high degree to destroy the germs of disease, before using it as food. A recent writer upon this subject, speaks of it as follows :---

"At one time it was thought that the matter of pure milk required only cleanliness in a dairy and in those who had charge of the milk-supply. The mere fact that milk comes from a country dairy has been regarded as a guarantee of its wholesomeness. As a matter of fact, it seems that the danger is greatest in dairies most remote; for here the first cases of such diseases are often not recognized, when occurring in the families of those having the care of milk.

"Of late it has been conclusively shown that the cow herself may suffer from a disease that is now rarely regarded as of any importance among dairy-men, which may give to the milk, at the moment of entering the pail, the power of producing scarlet fever in those who consume it in a raw state. The habitual boiling of the milk before consumption is urged as the only safeguard. This should be done immediately upon receiving the milk from the milkman. If it is then set away upon ice for five or six nours before using, the taste, which is usually regarded as an objectionable feature, will scarcely be noticed."

Plugging the Back Passages of the Nose .--In some cases of severe hemorrhage it is necessary to plug the posterior nostrils, or back passages of the nose, by which it communicates with the throat. The writer has known of many cases in which persons have died through want of knowledge of the efficacy of this simple remedy. All intelligent physicians are familiar with the proper means of plugging the nose, and have at hand the proper instruments; but as it sometimes happens that neither the intelligence nor the instruments are at hand, we think it worth while to give our readers the following description of a simple and easy method of plugging the nose, which was suggested by an eminent physician of Philadelphia :---

"A piece of fine silver wire, fifteen inches long, is doubled; the closed end is left rounded; the free ends are neatly twisted together; ja slight bend is given to the bar thus formed, and a stout thread, twenty-five inches long, is tied to the twisted end. The blunt end of the wire, with the concave aspect downwards, is pushed along the floor of the nasal passage, and through the naso-pharynx, until it is seen in the pharynx, the patient assisting by holding the tongue with a depressor. The end of the wire in the pharynx is now grasped by forceps, the ingers, or anything convenient, and pulled through the mouth; the thread is cut; a piece of absorbent cotton is tied to it, about ten inches from its mouth end; and the tampon is pulled into position by drawing, on the nasal end. The nasal and mouth ends of the thread are then tied together, so as to form a loop, which is hung over the nearer ear to be out of the way. If the plug be caught by the edge of the soft palate, it can easily be guided past it by the finger. In one instance, not happening to have any wire with him, Dr. Haynes managed very well with a piece of straw from a broom. An advantage of this method is that the nasal passage can be traversed by the wire, notwithstanding extreme deviation of the septum. The operation may be preceded by free use of cocaine spray to nose and pharynx, which will entirely prevent gagging, and may itself prove hæmostatic."

Test for Water Impurities.—The Sanitarian gives the following simple tests for mineral impurities in water :—

TEST FOR HARD OR SOFT WATER.—Dissolve a small quantity of good soap in alcohol. Let a few drops fall into a glass of water, and if the water turn milky, it is hard; if not, it is soft.

TEST FOR EARTHY MATTERS OR ALKALI.— Take litmus paper dipped in vinegar (which turns it red), and if, on immersion into the water, the paper return to its true shade, the water does not contain earthy matter or alkali. If a few drops of sirup be added to a water containing an earthy matter, it will turn green.

TEST FOR CARBONIC ACID.—Take equal parts of water and clear lime-water. If combined or free carbonic acid be present, a precipitate is seen, and if a few drops of muriatic acid be added, an effervescence commences.

TEST FOR MAGNESIA.—Boil the water to a twentieth part of its weight, and then drop a few grains of neutral carbonate of ammonia into a glass of it, also a few drops of phosphate of soda. If magnesia be present, it will fall to the bottom.

TEST FOR IRON.—Boil a little nut-gall, and add it to the water to be tested. If the water turn gray or slate, black iron is present. Or, dissolve a little prussiate of potash; and if iron be present, the water will turn blue.

TEST FOR LIME.—Into a glass of the water put a little oxalic acid, and blow upon it; if it get milky, lime is present.

TEST FOR ACID.—Take a piece of litmus paper; if it turn red, there must be acid; if it precipitate on adding lime-water, it is carbonic acid; if it turn a blue sugar-paper red, it is a mineral acid.

For Dysentery. —The pain of dysentery with constant tendency to relieve the bowels, may be greatly relieved by making the patient lie upon his back in bed, with the hips well lifted upon a pillow. Straining of the bladder may often be relieved in the same way.

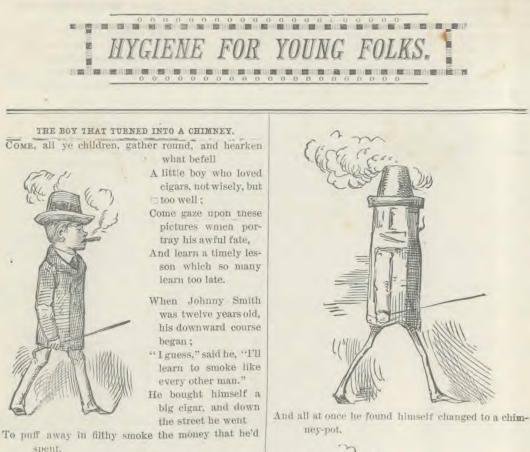
To Remove Dirt from the Eye.—Make a loop by doubling a horse-hair. Raise the lid of the eye in which is the foreign particle; slip the loop over it, and placing the lid in contact with the eyeball, withdraw the loop and the particle will be drawn out with it.

Capsicum in Opium-Poisoning.—The Medical Standard reports a number of cases in which persons apparently fatally poisoned with opium, have been revived and aided to recovery, by injecting into the rectum a dram of tincture of capsicum mixed with coffee.

—Foreign surgeons have succeeded in dispensing with glass eyes, by grafting upon the stump of the eye which has been removed the front part of the eye of a rabbit. The appearance of an eye improved by this means is said to be very much better than that of a glass eye.

—A Parisian lady of high standing has petitioned the French Chamber of Deputies for the abolition of the present law prohibiting women to wear male attire, and desires the enactment of a law giving women entire liberty of dress.

GOOD HEALTH.



But ere he'd smoked a single week,-so fast the poi-



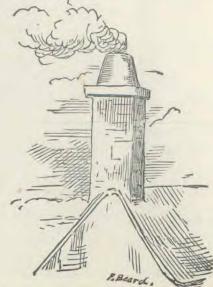
son worked, That in the vile tobacco like an evil demon lurked .--Before he'd smoked a single week, a dreadful change alas!

In Johnny's form and visage was by smoking brought to pass.

His legs grew thin and spindling, his hat changed to a cone;

His arms clung fast unto his sides, his coat turned hard as stone;

His brains dried up within his skull, his head grew melting hot;



And now upon a roof-tree perched, he moves nor hand nor foot;

His arms are cased in mortar, and his throat is chocked with soot;

- But all day long he stands and smokes, —he can't do aught beside, —
- And as he wished to learn to smoke, let's hope he's satisfied !

A LITTLE BOY'S PAINFUL LESSON."

WHAT do you suppose is the matter with the little boy in our picture?

He has the earache, and is suffering very severely. Where do you think he found his earache, or rather, What do you think caused his ear to ache?

He forgot to obey his mother, who

told him to be very careful to put on his rubbers before he went to school. He had forgotten just where he left them the last time he wore them, and so he did not have them ready to put on when he was preparing to start to school; and before he had hunted them up, he forgot all about them, and so ran off to school without any rubbers over his shoes to protect them from the dampness of the wet walks and from the grass upon the playground.

It had been raining all the night before, and all the morning until nearly school-time, and so the ground was very wet; and by the time Joseph had reached the school-house, his leather shoes were wet through, so that his stockings were wet also. He knew he had done wrong in disobeying his mother, and so he did not like to ask the teacher to allow him to dry his feet at the register; and he went with wet, cold feet all day. When he got home at night, he did not feel very well. He said nothing to his mother, however, but pulled off his shoes and stockings, and went to bed a little earlier than usual.

His throat felt sore, and he was feverish, but he would not complain, for he knew that it was his own fault. Pretty soon he fell asleep. He dreamed very unpleasant dreams. He thought in his dream that some one was driving a nail into one of his ears. Every blow of the hammer struck a terrible pain through his head. He struggled to free himself, but a horrible-looking villain held him fast. In his distress, he screamed with all his might.

Just then he woke up, and found his mother bending over him. It was midnight. All had been asleep for several hours, but he cried out so loudly in his sleep that his mother had been awakened and had come to his bedside.

He did not find any one driving a nail into his ear as he had dreamed, but the pain was there just the

same; and it really seemed every moment as though some one was thrusting some sharp instrument right into his ear.

At first he sobbed and cried so much his mother could not find out what was the matter; but presently he composed himself a little, and then confessed to her that he had disobeyed her in neglecting to wear his rubbers, as he had been told, and had had his feet wet all day.

His mother now understood that he had taken cold, and was suffering from an inflammation of the ear in consequence, so she did not upbraid him, thinking that he had been punished sufficiently for his disobedience, but, as any kind mother would do, en-



deavored to relieve his pain; and this is what she did : she brought some hot water from the kitchen and some soft flannels, then she made him lie upon one side, so that the painful ear was uppermost. Then with a soft sponge she squeezed a little warm. water into his ear, and laid over it a sponge wet with water as hot as he could bear. Then over all she placed a large flannel cloth, several folds thick, which she had wrung out of very hot water. At first little Joseph thought the water was so hot it would certainly burn him, but under the circumstances he did not like to say very much; so he kept very still, and pretty soon his ear began to feel better. After an hour or so his mother placed a large linseed poultice over his ear, and toward morning he was enabled to go to sleep.

The next day he could not go to school, but as you

see in the picture, had to stay at home with his head done up and a great poultice all over his ear, while other little boys, who were not so careless and disobedient, were having a happy time at their lessons or with their sports. You see Joseph does not look very happy to-day. He is probably thinking how much better it would have been for him if he had not disobeyed his mother. Probably this painful experience will be a lesson to him; so that another time he will not forget to put on his rubbers when the ground is cold and damp, just as his mother had always told him to do.

Question Box.

| CF Ail questions must be accompanied by the dui, name and address of the writer, as it is often accessary to address by letter, the person asking the question.)

Skin-Friction — Acid Phosphate, — G. C., New York, inquires :—

 Is a damp towel as good as a dry one in bathing and rubbing the skin? I cannot get a redness of the surface nearly as well with a dry as with a damp towel. Do you consider a good flesh-brush a proper thing to use on the skin?

2. Do you consider acid phosphate a good healthful drink?

Ans. 1. A better reaction of the skin is secured by the use of a towel moistened in cool or tepid water.

2. It would be difficult to show that acid-phosphate drinks are seriously injurious to the system if taken in moderate quantities; but phosphoric acid is a wellknown poison, and if taken very freely, would undoubtedly produce serious injury.

Moles.—E. A. R., of Connecticut, asks : Will you please give directions for the removal of moles from the face ?

Ans. Moles may be removed by excision, or cutting away with scissors; by the application of some caustic, as strong acetic acid or acid nitrate of mercury; or by means of galvano-cautery. We are, on the whole, rather better pleased with the lastnamed remedy than any other.

Baking-Powders-Aconite. -H. W. B., of Vermont inquires :--

1. What baking-powder do you consider the purest and best?

2. Is there any harm in using aconite to induce perspiration in the case of colds?

Ans. 1. We cannot recommend any baking-powder. All baking-powders are unwholesome, though some are worse than others. We can indorse none. Baking-powders are as unnecessary as unwholesome. The sweetest and most toothsome bread can be made without baking-powder, yeast, or any other raising ingredient beside water and pure air.

2. Aconite should never be used except when prescribed by a physician. It is a poison, and may easily do much mischief. It is a powerful depressant of the heart's action. Perspiration may be easily induced by drinking hot lemonade or some other hot drink, accompanied, if necessary, by some form of warm bath.

Nervous Dyspepsia.—M. K., of Iowa, has for ten years suffered with depression of spirits, dullness of mind, and inability to concentrate the thoughts, for two or three hours after eating. Is also very nervous. Feels better when a small quantity of easily digestible food is taken. Wishes to know the nature of the malady.

Ans. The disease described is one commonly known as nervous dyspepsia. The symptoms are undoubtedly the result of poisons which are formed from abnormal fermentations taking place in the alimentary canal, which are the result of deficient secretion or poor quality of the digestive fluids. The patient will probably find relief by using an exclusively fruit, grain, and milk diet, taking milk in moderate quantity. Take in addition a saline sponge-bath every morning, to be followed two or three times a week by an oil-rub. Fomentations for ten or fifteen minntes after each meal, or a bag filled with ice-water placed over the stomach for an hour after each meal will be found beneficial.

Hygienic Cook-Book-Chocolate, etc.-L. P. W., of New York, inquires :--

1. What is the best hygienic cook-book? where can it be obtained? and what is its cost?

2. What objection is there to the occasional use of chocolate as a beverage or as a flavor ?

3. Is tapioca prepared with fruits and fruit juices unwholesome?

4. How much food is required by a boy seventeen years of age, growing rapidly, and taking a moderate amount of exercise?

5. How should the quantity of food be distributed between breakfast and dinner, if a person takes but two meals a day?

Ans. 1. For 25 cents, you can obtain from the Health Publishing Co. a copy of the Cooking-School, which contains a choice assortment of healthful recipes.

2. Chocolate used as a beverage is unwholesome on the account of the theobromine which it contains. If used in small quantities for flavoring, the amount of theobromine taken would probably be so small as to produce practically no effect.

3. No; tapioca is a wholesome food when combined with other food elements, but as it is wholly farinaceous in character, is of little or no practical value when taken by itself. 4. The amount of solid food, or that free from water, required by a growing boy of seventeen, is probably about eighteen to twenty ounces. This is calculating the food as wholly free from water, the only basis on which calculations of this sort can be made.

5. From considerable observation, we have arrived at the conclusion that dinner should be the heartier of the two meals, when but two meals are taken. The digestive organs can do their work better if the body is not too much taxed with other work, hence the heartier meal should be taken when the heaviest work of the day has been done.

Cotton-Seed Oil.—J. N. T., of Iowa, says: Please give your opinion of the use of refined cotton-seed oil for cooking purposes.

Ans. In experiments with cotton-seed oil it has not proved satisfactory. The oil has invariably given to the cooked products a flavor which is disagreeable to most persons. The principal objection to the use of butter and lard for cooking purposes is that they are free fats. The fact that these fats are of animal origin is of little importance after food has been cooked, as any germs which they may contain are likely to be killed by the heat to which they are subjected.

Nevertheless, to one of undepraved instincts, foods of vegetable origin must always be more acceptable than those derived from animals. Another objection urged against the use of cotton-seed oil, and which may have some weight, is that the oil may retain some of the well-known medicinal properties of this plant, though we cannot speak on this point from personal knowledge.

Literary Notices.

SYNOPSIS OF PHRENOLOGY AND CHART DESCRIB-ING THE PHRENOLOGICAL DEVELOPMENTS.

The above is the title of a little pamphlet issued by Fowler and Wells Co., 775 Broadway, New York, for the use of those interested in phrenology. It describes each faculty in seven different degrees of development; viz., very small, small, moderate, average, full, large, and very large; and offers in a condensed form the general knowledge necessary to the student of this science.

AFRICA AND THE DRINK-TRAFFIC AND FREE RUM IN THE CONGO.

The National Temperance Society has just published in pamphlet form an important article by Archdeacon Farrar, contributed to the *Contemporary Re*-

view, upon the demoralization of the native races of Africa by the drink-traffic. The pamphlet also contains W. T. Hornaday's striking letter to the New York Tribune, entitled "Free Rum on the Congo." The subject is one of great moment, and the appalling facts given in this pamphlet, on eminent authority, concerning the terrible havoc caused by strong drink among the natives on the Congo and elsewhere in Africa, should suffice to arouse Christian men and women in our own and in all civilized countries to the importance of prompt and vigorous action. Alcohol, introduced among them by traders of Great Britain, our own and other countries, for the sake of gain, is rapidly destroying these untutored natives, whom it is the laudable mission of Christians to seek to civilize and Christianize. This timely pamphlet should have the widest possible circulation. Price, 10 cents.

Address J. N. Stearns, Publishing Agent, 58 Reade Street, New York.

PHYSICIANS' VISITING LIST.—The well-known firm of P. Blakiston & Co., Philadelphia, have recently issued the thirty-seventh yearly edition of their popular "Physicians' Visiting List." It is of a size suitable for the vest pocket, and for convenience, compactness, and durability, is unequaled. It contains the following useful tables and specific information :—

A Calendar for 1888 and 1889; Table of Signs, to be used in keeping accounts; Marshall Hall's Ready Method in Asphyxia; Poisons and Antidotes; The Metric, or French Decimal, System of Weights and Measures; Dose Table, revised and rewritten for 1888, by Hobart Amory Hare, M. D., Demonstrator of Therapeutics, University of Pennsylvania; List of New Remedies for 1888, by same author; Aids to Diagnosis and Treatment of Diseases of the Eye, Dr. L. Webster Fox, Clinical Assistant of Eye Department, Jefferson Medical College Hospital, and G. M. Gould ; Diagram Showing Eruption of Milk Teeth. Dr. Louis Starr, Professor of diseases of children, University Hospital, Philadelphia: Posological Table, Meadows; Disinfectants and Disinfecting; Examination of Urine, Dr. J. Daland, based upon Tyson's "Practical Examination of Urine" (5th edition); Incompatibility, Prof. S. O. L. Potter, author of "A Hand-Book of Materia Medica and Therapeutics;" A New Complete Table for calculating the Period of Utero-Gestation ; Sylvester's Method for artificial respiration, illustrated; Diagram of the Chest. Beside this there is the visiting list proper, including blanks for memoranda, accounts, names of patients, etc., making it of great practical value to every physician.

GOOD HEALTH.



CONDUCTED BY MRS. E. E. KELLOGG.

THE THANKSGIVING DINNER.

A SPECIAL dinner for Thanksgiving has so long been a time-honored custom in most families, that the majority of housewives consider it quite an indispensable adjunct to our national holiday. While we admire the beautiful custom of gathering one's friends and neighbors around the hospitable board on such an occasion, we are in no wise in sympathy with the indiscriminate feasting so universally indulged in at Thanksgiving dinners, whereby people's stomachs are overloaded with not only an excess in quantity, but with a decidedly unhealthful quality of food, leaving the participants with dull brains and aching heads for days to come.

But this is not the extent of the evil. We are convinced that this holiday feasting has much to do with the excessive use of intoxicants noticeable at such times. Tempted to overeat by the rich and highlyseasoned viands which make up the bill of fare, the irritation resulting from an overburdened stomach creates a thirst not readily satisfied. Any person who has noted how frequently one is called upon to assuage thirst after having partaken too largely of food on any occasion, will hardly doubt but that too much Thanksgiving dinner will be detrimental to the cause of total abstinence ; and if, as is generally the case, the food is rich and highly seasoned, it forms another incentive to the use of strong drinks.

Then, for the sake of health and the cause of temperance, while an ample repast is provided, let not the bill of fare for the Thanksgiving dinner be so lavish as to be an incentive to gormandizing; and let the viands be of the most simple and wholesome character practicable. As an aid in this direction, we offer the following bills of fare :—

NUMBER ONE.

SOUPS.

Mock Bisque,

VEGETABLES.

Green Corn.

Creamed Potatoes,* Baked Sweet-Potato, Green Peas (canned) or Mashed Peas,* Scalloped Vegetable Oysters.

*See March number.

GRAINS.

Cerealine, Pearl Wheat, with raisins steamed and added just before serving, with cream and sugar dressing.

RELISHES.

Cabbage Salad, Cream, Stewed Cranberries, Baked Sweet Apples, Cauned Fruit.

DESSERT.

Apple Meringue,	Rice and Tapioca Pud-		
Plain Buns,+	ding or Farina Blanc		
Almonds,	Mange,*		
Bananas,	Apples or Oranges.		

NUMBER TWO.

SOUPS.

Baked Bean Soup,* Vegetable-Oyster Soup.

VEGETABLES.

Baked Potatoes,	Mashed Squash,
Macaroni with Tomat	o Stewed Sweet-Corn
Sauce,*	(canned or dried).
GR	AINS.
Steamed Rice,	Wheaten Grits,
	or Hominy.
REI	ISHES.
Celery,	Cream,
Prune Butter,‡	Apples in Sirup, ‡
	or Compote of Apples, §
Steamed figs,	Canned Fruit.
DES	SSERT.
Red Sago Mold,	Apple Tart,
Nuts,	Pears,
California Grapes,	Apples.

Nore.-Good light whole-wheat bread will, of course, form a part of each bill of fare.

Green-Corn Soup.—Open a can of green corn, turn it into a granite-ware dish, and thoroughly mash with a potato-masher until each kernel is broken. Then rub through a colander to remove the skins. Add

* See March num	ber. + 1	See	Ju	ly	number.
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\$ See May number. § See April number.

|| Prepared the same as Peach Tart, see September number.

sufficient rich milk to make the soup of the desired consistency; season with salt and a little cream; heat to boiling and serve. Some prefer the soup thickened a very little with flour or corn starch.

Vegetable-Oyster Soup. -Scrape all the outer covering and small rootlets from the vegetable oysters; lay the oysters in a pan of cold water to prevent discoloration. The scraping can be done much easier if the roots are allowed to stand in cold water for an hour or so before they are needed. Slice enough of the prepared roots to make one quart, and put them to cook in a quart of water. Let them boil slowly for two hours, or until very tender. If it is desired to make the soup with an especial oyster flavor, a piece of salt cod-fish about an inch square may be boiled with the vegetable oysters, and removed as soon as the roots are tender. (We do not especially recommend this, however, and persons whose tastes are unperverted will prefer the soup without this addition.) When tender, add a pint of milk, a cup of thin cream, salt if desired, and, when boiling, a table-spoonful or two of flour, rubbed to a paste with a little milk. Let the soup boil a few minutes until thickened, and serve.

Mock Bisque Soup.—Heat two quarts of strained stewed tomatoes to boiling; stir in four table-spoonfuls of flour braided in water, then let the whole boil until thickened, stirring constantly that no lumps may be allowed to form; add salt if desired. Have ready a colander placed over a clean soup kettle; turn the mixture through it, then add two cups of hot thin cream. Let all boil together for a minute, then serve.

Scalloped Vegetable Oysters .- Boil two quarts of sliced oysters, well washed and scraped, in two quarts of water until very tender. If desired to give an especial oyster flavor, boil a piece of salt cod-fish about two inches square with the oysters, and remove is when they are done. Skim out the oysters when tent der, and put a layer of them in the bottom of a pudding-dish, and cover with a layer of bread crumbs; then add another layer of oysters. Fill the dish with alternate layers of oysters and bread crumbs, having a layer of crumbs for the top. To the water in which the oysters were boiled, add a pint and a half of thin cream, salt to taste, boil up, and thicken with a heaping table-spoonful or two of flour rubbed smooth in a little cream. Turn this over the oysters and crumbs, and bake half an hour. If there is not enough juice thus prepared to cover all well, add more cream or milk. Stewed tomatoes are a very nice accompaniment for scalloped vegetable oysters.

Cabbage Salad.—Take one pint of finely chopped cabbage, turn over it a dressing made of three tablespoonfuls of lemon juice, two table-spoonfuls of sugar, and a half-cup of whipped cream, thoroughly beaten together.

Rice and Tapioca Pudding.—Soak one-half cup of tapioca over night in just enough water to cover it. In the morning, drain off the water if any remains. Add to the tapioca one-half cup of rice, one cup of sugar, one cup of raisins, and eight cups of new milk, with a little grated lemon rind for flavoring. Put all in an earthern pudding-dish, and place on the top of the range, where it will heat very gradually to the boiling-point, stirring frequently meanwhile, so that the rice and typicca may not adhere to the bottom of the dish.

When the milk has reached the boiling-point, put the pudding in the oven, and bake till the rice grains are perfectly tender, but not until they are broken and mushy. The time required will depend upon the length of time used in bringing the milk to boiling; as the longer the rice has soaked previous to placing in the oven, the sooner it will be tender. Twenty minutes to one-half hour is usually sufficient; the best plan, however, is to ascertain if the rice is tender, which may be done by dipping a spoon in one side of the dish and taking out a few grains.

As soon as the rice is perfectly tender, the pudding should be taken out, as too lengthy baking evaporates too much of the milk, and makes the pudding dry and solid. When taken from the oven, it will appear quite thin. but after cooling will be of a delicious creamy consistency. Serve cold.

Red Sago Mold.—Take a quart of red raspberry uice, either pure or diluted with one third water, and sweeten to taste. Have ready one half-cup of best sago which has soaked for twenty minutes in just water enough to cover. Drain off any water that may remain. Add the sago to the juice, and cook together until the sago is transparent. Turn into molds. Serve cold with cream. Cranberry or strawberry juice may be used in place of the raspberry if preferred.

Apple Meringue.-Pare and core enough tart, easycooking apples to make a quart when cooked. Put them in a shallow, broad-bottomed saucepan, so that they shall not be piled deep upon one another, and add water enough to just cover the bottom of the saucepan; cover closely, and place where the apples will simmer and steam till perfectly tender. They should be quite dry when done. Turn into a colander and rub through. Add a little sugar to sweeten them, and a little grated, fresh or canned pine-apple for flavor. Beat light with a silver fork, turn into a pudding-dish, and put in the oven to moderately brown ten or fifteen minutes. Draw to the oven door, cover with a meringue made with four tablespoonfuls of sugar and the beaten whites of two eggs. Return for a moment to brown, and remove from the oven. Serve cold.

Cement for Glass.—Boil isinglass in water to a creamy consistency, and add a little alcohol. Warm the cement before using, but do not heat the glass. Publisher's Page.

The subscriptions of several hundred persons who have received this journal during the past year, expire with the present number. For the purpose of encouraging such to renew promptly, and to make subscriptions begin with the first of the year, we will send free the remaining number of the year to all whose subscriptions are received before January first.

Among the advertising pages will be found the rates at which this journal is clubbed with other popular journals. Publishers, in dealing with one another, allow what is known as publishers' discount. We give our readers the benefit of this commission, so that by ordering Goon HEALTH with one or more other journals, the discount thus secured is equal to the price of the journal.

We take pleasure in calling attention to the advertisement in this number, of Mr. A. Reid's portable steam oven. One of Mr. Reid's ovens is in use in the Medical and Surgical Sanitarium of this city, and is pronounced by the managers of that Institution to be a perfect success. It is just the thing for hotels, boarding-houses, and large families. It does all that Mr. Reid claims for it, which is perhaps as high praise as need be given it.

The publishers are about to put to press another edition of "Social Purity," an address by the Editor, which has been very widely circulated, and very cordially received. This little book ought to find its way into every family. By its discrete circulation doubtless hundreds may be saved from the sonl-and-body-destroying influences which are leading thousands of persons down to present and eternal ruin and to premature graves.

Notwithstanding the great improvements which have been made in this journal during the pastyear, the publishers are determined to make still greater improvements during the year to come. To this end they are making preparations for the enlargement of the Journal, and for still more altractive illustrations. The Journal will also, at the beginning of nextyear, appear in an entirely new dress, which will place it still further ahead of all competitors in this line of journalism.

Some of the early friends of the Journal, have sometimes thought that in endeavoring to present scientific topics on the health question, the Journal had departed from its primitive simplicity, and had placed its mental pabulum upon so high a shelf as to be above the reach of the common people.

It has certainly been the aim of the [managers' of the Journal to avoid this error. We are endeavoring to establish for the Journal a high character for scientific accuracy in all its teachings and to avoid extreme and ultra notions; and have tried to give special attention to the presentation of the simple, practical truths of domestic hygiene, stripped of needless scientific technicalities, and clothed in such language as to make them comprehensible to those whose minds have not been cultivated in this direction.

Whether we have accomplished thisfor not, can bestfibe determined by a review of the work; and the publishers would respectfully ask that those who entertain the opinion referred to would carefully review the columns of Good HEALTH for he last year, or for several years in the past, and then form a candid opinion respecting this matter.

If there is any journal published which better supplies the wants of the people in the direction of sanitary instructionwe would be very happy to have it pointed out to us as a model. As the end of the year approaches, please remember that among other things which are likely to expire with the old year, is your subscription to Goon HEALTH. Before you decide not to renew your subscription for the year to come, consider whether the benefit you have received from the journal during the past year has been sufficient to warrant you in expending the small sum of \$1.00 for it another year. Many of our subscribers write that they consider every number worth many times the amount of the year's subscription.

The present monthly circulation of GOOD HEALTH is 16,000 copies, which are sent to the following countries: United States, British Columbia, Nova Scotia, New Zealand, Hawaifan Islands, Sandwich Islands, Pitcairn's Islands, Australia, China, Japan, India, Egypt, South Africa, Italy, Switzerland, Germany, France, Turkey, Norway, Sweden, Denmark, British Guiana, British Honduras, England, Scotland, Iroland, and Wales. It is probable that there are few journals published which have so wide a circulation as has this journal.

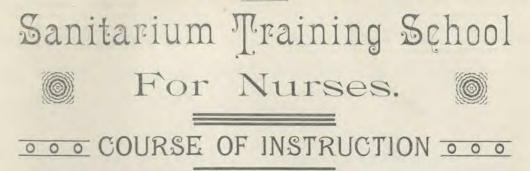
We call attention to the prospectus of our new health work, "Health and Temperance Sunbeams," which appears In the advertising columns of this number. A large amount of labor has been bestowed upon this work, which contains facts that have been gleaned from the most varied sources. A glance at the brief sketch of the contents of the work will be sufficient to convince any one that it is well worth reading.

The publishers have placed the price at a very low figure, so as to bring the work within reach of all classes. Sample copies of the work will be sent on receipt of price. The work will be sold chiefly by subscription. If there is no agent for our publications in your vicinity, write us, and we will either send one of our agents to call upon you, or, on receipt of the price of the work, will send it by return mail, post-paid.

A few months ago, we published an article criticising the Dry-Closet System, which, as we learn from Mr. Heap, has been misunderstood as referring to the Dry-Earth-Closet System which is being introduced by the Heap's Earth-Closet Co., of Muskegon, Mich.

We take this opportunity to correct any misapprehension which may have been obtained respecting our views of the Dry-Earth Closet manufactured by Mr. Heap. We believe this to be the most perfect apparatus of the sort hitherto devised. The energy and ingenuity manifested by Mr. Heap in introducing this important sanitary improvement, entitles him and his co-laborers to the encoaragement and coöperation of sanitary authorities everywhere. We cannot too heartily recommend this device; and we take pleasure in calling attention to an advertisement which will be found in our advertising columns, where it is more fully described. Those of our customers who prefer to do so, may order the closet of us. All such orders will be promptly filled, and satisfaction will be gaaranteed.

To Our Patrons in Great Britain .- For some years back there has been a steady increase in the circulation of Good HEALTH in England, Scotland, Ireland, and Wales, as well as among English-speaking people on the Continent. This fact, together with the increasing demand for our other health and temperance publications, has made us desirous of improving our facilities for placing our publications in the hands of the reading public of Great Britain. We are now happy to announce to our English friends that we have perfected arrangements with the GOOD HEALTH PUB. Co., Paternoster Chambers, 48 Paternoster Row, London, E. C., England, under the management of Eld. S. N. Haskell, to introduce all of our publications in Great Britain. Parties wishing to purchase or engage in the sale of any of our publications, should correspond with the Good HEALTH PUB. Co., at the address given above, who will give their orders prompt and satisfactory attention.



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



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

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

COURSE OF INSTRUCTION. The course of instruction com-prises two series of lectures, rec-

The course of instruction comitations and practical instruction,

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

METHODS OF INSTRUCTION. The instruction is both theo-retical and practical. Two or

three lectures are given each

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

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

SPECIAL ADVANTAGES. The advantages offered by this school are in many respects superior

to those offered by any other, not

excepting the older schools in the large cities. Its special advantages may be briefly stated as follows:-

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

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

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

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

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

UALIFICATIONS REQUIRED. Persons who desire to enter this school must possess the

following qualifications:-

- 1. A GOOD MORAL CHARACTER, WITH SATISFACTORY RECOMMENDATIONS.
- 2. ABILITY TO BECOME FIRST-CLASS NURSES.
- 3. GOOD HEALTH.

4. SUFFICIENT INTELLIGENCE AND EDUCATION TO ENABLE THEM TO ENTER UPON THE COURSE OF TRAINING WITH A FAIR PROSPECT OF SUCCESS.

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

The first year each student who puts in full time will be al-TERMS. lowed board, tuition, books, uniform, and three pairs of shoes. The second term students will be paid moderate wages, the amount depending upon their ability and proficiency.

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

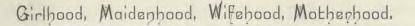
Members of the training school will be expected to conform to the same rules as regular employes.

For further information desired, address,

SANITARIUM,

Battle Creek, Michigan.

The Ladies' Guide in Health and Disease.



By J. H. Kellogg, M. D.

Honorary Member of the Sociat D'Hygiene of France, Member of the British and American Associations for the Advancement of Science, The American Public Health Associa-tion, The American Society of Microscopists, The American Social Science Association, Editor of "Good Health," Anthor of "Home Hand-Book of Hygiene and Rational Medicine," "Man the Masterpiece," and various other works.

HIS new work is intended to fill a want that has long been recognized by intelligent women in all parts of the land. For years a large and constantly increasing class of sufferers have been appealing

to science for some method of mitigating the pains and penalties of womanhood. Having devoted many years to the special study of the conditions which relate to human health at all ages, and in both sexes, and having enjoyed especially good opportunities for the study of the diseases to which the sex is peculiarly liable, as physician in charge of one of the largest health, medical, and surgical institutions in the United States, and in the treatment of thousands of women suffering with all forms of local disease, the author brings to his work in the preparation of this volume a thorough education and a rich experience, which have enabled him to produce a volume eminently

practical in character, and calculated to fill the place in the practical education of women for which it is intended. The following is a very brief synopsis of the work :-

The volume is divided into seven parts or sections.

The first part describes the great mystery of life,-the anatomy and physiology of reproduction. The subject is illustrated, and its interest heightened by references to the reproductive function in the various orders of the animal and vegetable kingdoms.

The next four sections bear respectively the following headings: "The Little Girl," "The Young Lady," "The Wife," and "The Mother."

The Little Girl.

This section considers the dangers to physical health to which little girls are exposed between infancy and the period of puberty; how they may be avoided, and how girls should be trained in order to secure their development into useful and healthy women.

The Young Lady.

This section treats of the special dangers incident to puberty in girls, the physical and mental training of young ladies, the evils of fashionable dress and how to dress healthfully, the relative mental capacity of the male and female brain, education of young ladies, personal beauty, courtship and marriage, and numerous other topics of special interest in connection with this period of woman's life.

The Wife.

The next section considers the duties, rights, and privileges of the wife, the danger to health incident to the matrimonial state, how to predict and regulate the sex of offspring, criminal abortion, etc., etc.

The Mother.

The next section is devoted to the consideration of the perils of motherhood and how they may be avoided, including instruction by following which child-bearing may be made painless in most cases, and greatly mitigated in all.

The following section of the work is devoted to a description of the various diseases to which women are especially liable, together with their proper treatment.

The concluding section of the work is an appendix, where is found rational home treatment for the diseases of childhood, such as croup, diphtheria, whooping cough, convulsions, measles, scarlet fever, etc., etc., also, full instructions for baths of various kinds, Swedish movements, postural treatment, electricity, massage, diet for invalids, many valuable recipes, medicinal recipes, and prescriptions for the various diseases treated in the work. A glossary and alphabetical index follow the appendix.

It tells mothers just what they ought to know, in language they cannot fail to understand; and daughters who value their health, and the happiness which follows health, cannot afford NOT to know what this book teaches them.

The work is appropriately illustrated by means of twenty-eight chromo-lithographic plates, cuts, and colored plates. For the purpose of removing a possible objection which might be raised, a few of the plates are printed on a sheet by themselves, are carefully concealed in a little pocket in the cover of the book, and may be removed at pleasure.

The book is complete in one volume of 672 octavo pages of printed matter, is printed on fine paper, and is beauti fully and substantially bound. The low price places it within the reach of all.

As a "Ladies' Guide in Health and Disease," it is invaluable, possessing the merit of being eminently practical and reliable, and giving the results of the very latest scientific investigations of the subjects treated.

We believe there has never been a book offered to can-vassers which is so sure of a sale in every family. We want active, intelligent agents—either male or fe-

male—in every town and township to solicit orders for this work. Our terms are liberal.

If you cannot engage in the sale of our publications, please hand these circulars to some good man or woman the can. The book is bound in the following styles:—

CLOTH, Embossed in Gold and	Jet,	\$3.90
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THIS FROM A PRACTICAL BAKER.

LeRoy, N. T., May 20, 1887.

To Whom it May Concern :-I bought a No. 70 Oven from Mr. Reld about a year ago. About six weeks ago I bought another No. 70. I am using them in preference to brick. I like them. I have seen all the kinds. This "takes the cake." J. W. BROWNELL School of Domestic Economy, Iowa Agricultural College, Ames, Iowa, April 3. 1885.

Adam Reid, Esq.,-(LETTER NO. 1.)-It is nearly a year since I first used your Bake Oven (No. 50), and I can say now what I have repeat edly said, that in all my experience I have never seen better work than that which your oven turns out. The one in use here works just as well as the one I first used at Chautauqua, N. Y., last year. Yours respectfully, EMMA P. EWING May 2, 1887

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

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

St. Teresa's Academy, Kansas City, Mo., June 5, 1886.

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

THIS FROM THE PROPRIETOR OF THE WHITCOMB HOUSE, ROCHESTER, N. Y.

Rechester, N. T., December 7, 1886.

Mr. Adam Reid,-DRAR SIR,-Your oven is such a success, both as a baker and roaster, that you can write out something good and strong-you cannot make it strong enough-and put my name to it. I will honor your draft at any time. [Signed,] RUSSELL COATS

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cts, per lb.		cts. per lb.
Oatmeal Biscult. 12 Medium Oatmeal Crackers. 10 Plain Oatmeal Crackers. 10 No. 1 Graham Crackers. 10 No 2. Graham Crackers. 10 Plain Graham Crackers. 10 Plain Graham Crackers. 10	Whole-Wheat Wafers	Avenola 13 Granola 12 Gluten Food 40 Infant's Food 40

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 For \$1,00, The True Ebucators, and the American Sentinel, a bright and able monthly, devoted to the defense of the U. S. Constitution as it is. The latter alone is fifty cents per year.
 For \$1.25, The True Ebucators, and the Library Magazine, a popular weekly literary journal that contains as much solid literature in a year as any of the great \$4.00 monthlies. The latter alone is \$1.00 per year.
 For \$1.25, The True Ebucators, and Good Health, the meet popular health magazine in America. The latter alone is \$1.00 per year.
 For \$1.50, The True Ebucators, and the New York Weekly World, and the complete "History of the United States." Ten cents must be added for postage on the book. The World, the leading newspaper of America, is \$1.00 per year, and the Eistory sells for \$1.00. for \$1.00. We believe that the above offers are unsurpassed, if not

We believe that the termination of application. Advertising rates made known on application. Address, THE TRUE EDUCATOR, South Lancaster, Mass.

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Are equal to those of any other health resort. It is noted for its Pure Water, Dry Atmosphere, Clear and Balmy Sunshine, Even Temperature, Mild Breezes, and the absence of high winds.

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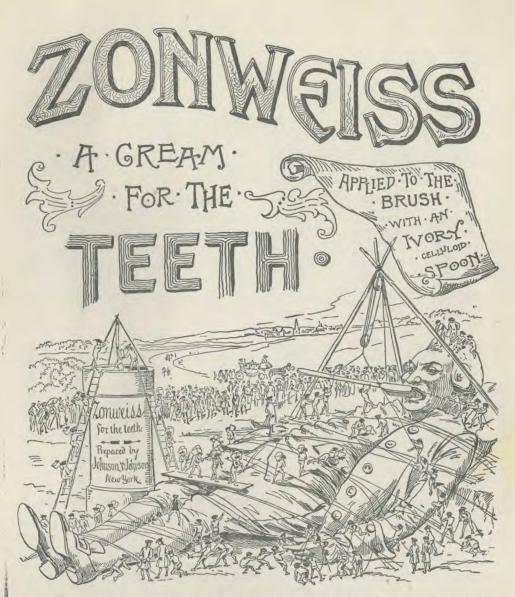
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"The efforts of these little fellows to find uses for my. toilet articles, particularly their attempt to scrub my. teeth with my tooth brush and Zonweiss amused me greatly and I was pleased to see that they appreciated an article of such rare excellence as Zonweiss!" - GULLIVER. ZONWEISS PREPARED JOHNSON & JOHNSON. OPERATIVE AND TOTS NEW YORK

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By J. H. Kellogg, M. D.

Chromo-Lithographic Plates, A Series of Ten, Each 32 x 48 inches in Size.

LL competent teachers of physiology and hygiene have for years felt the need of some more efficient means of illustrating these subjects than have heretofore been afforded, especially as regards the subject of hygiene.

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SCIENTIFICALLY ACCURATE AND THOROUGHLY ARTISTIC

in every detail of design and coloring, in which particulars they are quite unequaled.

These charts are specially designed for the school room, but they are equally serviceable for lectures. The whole subject of Anatomy, Physiology, Hygiene, and Temperance are illustrated in these Charts in a manner never before attempted. The following is a bare list of the Charts.

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HEALTH PUB. CO., Battle Creek, Mich.



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Turkish, Russian, Roman, Thermo-Electric, Electro-Vapor, Electro-Hydric, Electro-Chemical, Hot Air, Vapor, and Every Form of Waler Bath; Electricity in Every Form;

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