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THE GUILD OF GOOD LIFE



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THE GUILD OF GOOD LIFE.

A NARRATIVE OF
DOMESTIC HEALTH AND ECONOMY.

BY

BENJAMIN WARD RICHARDSON, M.D., F.R.S.

PUBLISHED UNDER THE DIRECTION OF THE COMMITTEE
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PREFACE.



AT the request of the Editorial Secretary of the Society for the Promotion of Christian Knowledge, I undertook to write this book in such a form as might be specially attractive to working men and women.

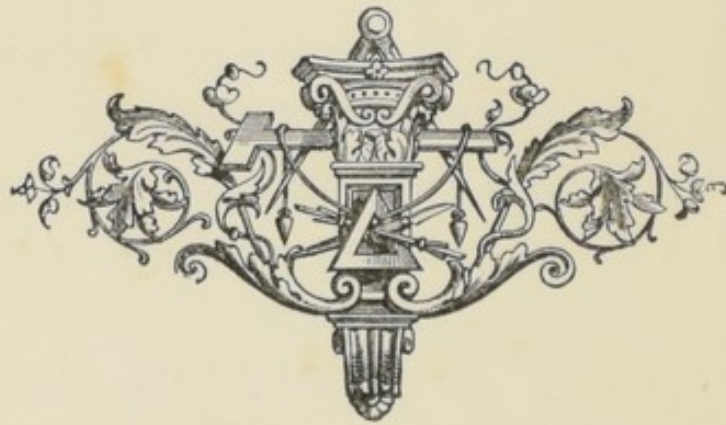
In construction the book has assumed, therefore, the narrative character which it here presents, some parts being taken direct from observation of natural facts in daily life.

The "Guild of Good Life" which is shadowed forth in these pages, although at this moment, like the persons who constitute it,

purely ideal, might easily become a real society, located in all parts of the kingdom, doing for all classes, as well as its own, work of the true regenerative sort, leading up to the best and highest.

I am grateful to the Society for the Promotion of Christian Knowledge for the opportunity of setting forth the project of such a progress.

B. W. R.





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DOMESTIC HEALTH AND ECONOMY.

CHAPTER I.

TWO WORKMEN-FRIENDS.



“THEY write and talk a lot about us who live in the East End of London and elsewhere where things are not so splendid as they might be; but they don't seem to me, as lives on the spot, to know much about our business or ourselves.”

“They don't know nothing about us,” was the response.

“Well, if they don't know nothing, they must know something,” replied the first speaker. “I say they know nothing.”

“You are too sharp to-day, you are, Mr.

Sarcasm. You're as sharp as two folks—one dead and t'other fast asleep—you are."

"And you think you're witty, and has me there, do you, Master Philip? If you get so bright as all that you'll cut yourself with your own shining wit, as Jem Dix, the glazier, did with his shining glass, and the doctors will have to shut you up for a quiet rest of a few months. But, I say, that wasn't what we were talking about. What were we talking about when you let out so uncommon clever?"

"You was saying as how them rich uns as was spouting at a meeting about us working men right and left, didn't know nothing about us."

"There you are again, ungrammatical and eloquental as ever. Never mind; you give me the cue to the argiment, which is what I wanted. But, I say, here's your sister-in-law Judith coming in. She's after you."

"And what if she be? I don't care if she finds me in no wusser place than the Thrift Coffee House, which all the swells of the East End come to, and a great swell o' the West End came and opened and made a speech about Pastrana, as kep' a coffee-tavern for the lord mayor when Oliver Cromwells was top sawyer, and all that."

"Pastrana! humbug! Why, Pastrana's a stuffed woman that old Barnum has got. The man you mean who opened the first coffee-house in London was called Pasca. I know that because I read it in Chambers's 'Information.'"

"Pasca, then—I don't care. And what I say is, if Judith don't catch me in a wusser place, let her come."

"Well, she has come; and now we'll all have coffee together."

"So we will, old man; and if she don't give you a quid for a quo, Mr. Sarcasm, my name ain't Philip Cross, it ain't."

"She's a very clever woman, Phil; we all know that."

"She's a scholar, Master Sarcasm, she is; an' she's a woman o' fortin, I can tell you. She reads, an' she writes, an' she calcilates like a 'rithmetic, she does. Now, she's bin attendin' a lot o' lectures, she has, at the Society of Arts; and I be hanged if she ain't been in for a prize o' ten guineas for a discoors she's gone and wrote; an' if she don't get it, I'm a Dutchman."

"I dare say she will, Philip, for she is mighty clever; and she's been very 'cute in getting Martin Swift and Stephen Gold to come and help her make the society for mutual improvement for us and our missuses which she was telling us about last night. Go and tell her this is the room where we're to meet, and that we'll have some coffee and a chat before the rest are here for business."





CHAPTER II.

JUDITH CROSS.



JUDITH CROSS had a simple but painful history. Her father was a jeweller in the City Road, and although his business was in a very small way, and indeed consisted rather of work for other jewellers in the flourishing parts of the City than for retail customers, he had managed to save a little money, which he had profitably invested.

Judith, an only child, had been brought up entirely at home, had been fairly educated, and had been the *jewel* of the home. Her mother died while she was a girl, and she then kept house. To economize, she and her father took in some respectable person to reside with them, who lived as one of themselves, taking meals with them and finding a home which was as cheerful as it was homely.

Every man has some social hobby, and David Jessel, father of Judith, had his.

His hobby was Odd Fellowship.

He got into the order in early life, and he lived in it. To him its secrets were real solemnities, its titles and honours appalling. When in due course of events he was raised to the head of his lodge, was surrounded with all the regalia and ceremony attached to that distinguished office, and was addressed for the first time by the title of "Noble Grand," his heart swelled within him. "It was more than he could bear, it was indeed."

"Noble Grand, Brother David Jessel!" Nobody, no brother, at the end of the term of office, had ever gone through the duties so nobly and grandly as David.

He had held, during that term of office, evening receptions at his private house, at which he once invited as many as fifteen of the brethren at a time and their ladies, until all the lodge and its wife had seen the jeweller's two pretty drawing-rooms and their young mistress, the blooming Judith.

"The 'Lodge of Good Health,'" said the immediate Past Noble Grand, as he moved a hearty vote of thanks to David at the close of his year of office, "ought to be called the lodge of good luck to have had such a man at the head of it."

"And good health is good luck—the best of luck," observed the young secretary of the

lodge, Richard Cross, as he seconded the resolution.

"Ah, you are in the best luck of all, my boy, you are," whispered another member of the lodge to the secretary. "Fortunate day for you, Dicky, when I brought you to be initiated in the 'Lodge of Good Health.'"

And Richard Cross smiled, and nodded his full content.

He might well do so, for he had been favoured above all by David Jessel. He had become the home-bird in the envied nest, and by a natural, if not foreseen, consequence had become the betrothed of Judith.

And when Judith became Mrs. Cross, which she soon did, she remained at her father's home as before.

A braver fellow than Richard Cross I never knew. He was a fireman by occupation, and he took a pride in his work. Once when I saw him in his helmet dashing into a fire to save some children from what seemed certain death, the great Hector, and the words—

"The field of combat is the sphere for men,"

by one and the same act of thought came, with the sight, into my mind.

He himself had one idol, one hero, one intent. His idol was Judith. His hero was Braidwood. His intent was Duty.

One day, after nearly twenty hours of exhausting work at a great fire, while returning

home under the glare of a midday sun, he was smitten by the sun, and carried to the hospital, where, as we have seen already, he laid on his bed and died.

In my professional life I have seen sorrow many times nobly borne, but never before as by the idol of poor Richard Cross, whom the "Lodge of Good Health"—how strange the satire of the words!—buried with full Odd Fellows honours.

Every member of the lodge was there in sad array, except one.

The second chief mourner who should have been there, the Past Noble Grand, Brother David Jessel, was not there.

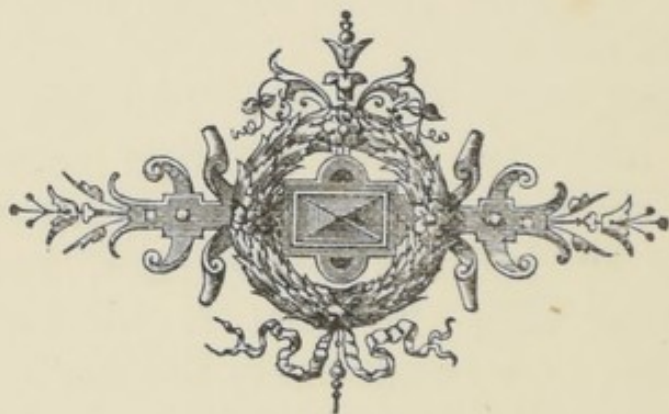
For soon, very soon, the "Lodge of Good Health" had to hold another similar sad ceremony over good David Jessel himself.

In spite of Judith's loving care, and to him ever cheerful face, the Past Noble Grand, like other nobles, and commoners too for the matter of that, followed his beloved son-in-law to the same honoured grave.

A small freehold house; the good will and stock-in-trade of the jeweller's business; the sum for widows from the admirable "Lodge of Good Health;" an insurance on the life of Richard Cross for four hundred pounds, and interest amounting to fifty pounds a year from her father's savings, left Judith, who had no child, richly provided for, as her immediate circle considered. "Quite a woman of fortin,"

as Philip Cross, Richard's only brother, called her.

She let the business, retained the upper part of the house, and for many months lived alone in silent sorrow.





CHAPTER III.

A NEW CAREER.



WHEN this modern Judith was recovering the shock of widowhood it was often asked what course of life would she follow? Would she marry again? Would she become a nurse or sister in the London Hospital? Would she go on the stage at the Britannia? Would she take to outdoor preaching?

These were the questions which those who knew her put to themselves. They all felt that she would do something, as a mission, which the majority of women would not do.

What was it to be?

One evening, when the days of her widowhood were few, and she felt the absolute necessity of shaking off the gloom that was making her "worse than nothing," she put on

her bonnet and went out into the streets of the great crowded place. She had no destination, but her eyes, as it seemed to her, were strangely opened to see and know good from evil.

She wandered along the streets, caring little which way, and making little progress in respect to distance; for although there was nothing going on that was really unusual, she began to see more than she had ever seen before.

There was a strange-shaped vehicle passing rather slowly which all the people appeared to avoid. Why? She went close to it, and was warned off.

"Small-pox inside," said the driver. "Better not come too near the ambulance, ma'am; we are going to the hospital with a very bad case."

"We must stop a moment to look in," said another man, who was in charge as attendant.

The ambulance stopped, the attendant looked in, and Judith, whom nothing short of physical force could have checked, looked in also.

But such a sight met her gaze, it startled her!

"Is it a man?" she asked; for that which she looked at had not left on its face one human feature that could be called natural.

"It is, ma'am; and, poor fellow, he's gone! Dead, ma'am, and a happy release. Let us shut the door. It is of no use our driving to the hospital, James," continued the attendant,

"for the poor chap is gone. Turn back to the house for fresh instructions. I told you we should never get him to the hospital."

"Can I go anywhere, or do anything?" asked Judith.

"Nothing, thank you, ma'am. Good day."

"Good day."

Bad day, bad day, thought Judith, when such things be; and she stood stock-still, watching the ambulance with its dead charge until it was out of sight.

Then she wandered on.

A little further on, and in the same long street, she observed, soon afterwards, a crowd that was surrounding a man who was talking loudly, and who had made a ring, in which he, with his wife and a very little child, stood near each other. They were all pictures of misery. The man, throwing out his cord, with a ball at the end to keep the ring open, was shouting out to the people the misfortunes of his own child, and setting them forth as wonders. The smallest child in the world, who could do feats of the most astonishing character. What these feats were, Judith had not the chance then to learn. She heard only a poor little plaintive, bleating voice, saying to the woman in the ring, as the man's voice ceased, "I can't do any more to-night, mammy."

She turned to the little body from which the voice proceeded, to see a poor, deformed, skeleton child, decked out in a tinsel crown

and ragged performer's dress, shivering with cold, hunger, and disease.

Judith's heart literally sank within her.

"Take the poor, dear child, home," said she, as she left a shilling in the mother's hand, "and put him to bed."

Then turning to the father, who, being in a kind of sullen and angry scare, required, as she saw, some soothing word, she passed a similar coin into his hand, and with a gentle voice urged him to get the poor child a good supper, and to bed.

"Yes, you may say home," said the man; "it's the arches is our home. You may say bed; it's the stones is our bed. But this," looking at the shilling, "this is summut, this is, certainly; and we'll do the best with it. Thankee, ma'am, indeed. Thankee."

And the man touched his cap, and the woman curtsied as she carried the performing child; and the child put its tiny fingers to its pale thin lips to throw a kiss to the beautiful lady—for to him Judith was a lady of rank and wealth, a queen; and the people dispersed as the performance abruptly ended.

Left alone on the sideway, Judith waited a moment to wonder where could be the arches, and where the bed, of which she had heard? Then she pursued her way again, careless as before where she would go, until she came on a new sight.

A public-house and gin-palace, one at one

corner of a street, another at the opposite corner; and people, men and women, in both, wrangling and fighting and swearing. Some excited with drink, others maudlin, others begging, others raging, others quite helpless.

Out of the bar of the gin-shop there staggers a woman. She tries to hold by the palings, and for some fifty yards down the chief thoroughfare she succeeds; then she falls. There is soon another crowd, shouting and laughing. A woman drunk on the pavement, and a policeman wedging his way in to the victim of the strong drink.

"Only drunk, ma'am, once more. I've had her up sixty times afore, and off she goes again the moment's she's out. Now then, Topsy—that's her drink name, ma'am,—up with you. What! too far gone to walk—eh? I don't believe it. But it's no use losing time; she could walk, but it's better for her to ride, ma'am—less noise, and less trouble."

A messenger is sent to the station close by. A stretcher is brought by three more of the police. Topsy is put on the stretcher, and, raised to the shoulders of the bearers, is carried away. She puts out her hand to the bystanders to shake hands, and say good-bye; she laughs; she cries; she swears; she sings; and laughing, crying, swearing, singing, she travels to the station, the court, and the gaol once more.

Three such sights in one hour.

Judith had lived in London all her life ; she scarcely knew any other place. She had walked these same streets thousands of times, and probably had passed by the same scenes a thousand times ; but they had never before deeply arrested her attention. This time, as she afterwards would say, "they bit her."

"If starving dogs had come round me and seized my flesh, I should hardly have been more stricken with grief and terror."

This was the thought which filled her mind as she hastily returned to her own home.

When she had composed herself and had had time to think over what she felt to be her duty, she resolved what she would do. She would devote herself to the promotion of an effort to forward the time when such things as she had seen should cease to be.

But how to begin ?

She reasoned that, as all great works have small and homely beginnings, it would be best for her to influence, towards the object she had in view, all whom she knew and who would work with her.

And thus in her mind she constructed the society, some of the proceedings of which are about to be set forth in the succeeding pages of this work.





CHAPTER IV.

THE "GUILD OF GOOD LIFE."



HE two friends whom we left in our first chapter were working men, but they were earnest admirers of Judith, and were anxious to render her every assistance in her new project. Philip Cross, her brother-in-law, though rather rough and uncultivated, was one whom she could entirely trust. Matthew

Bailey (commonly called Master Sarcasm, because of a failing he had of saying sharp reproofs) was, though an oddity, a tower of strength. He had travelled over the greater part of the planet, and had collected a mine of useful and entertaining information, by narrating which he had made so many friends that he had no difficulty in getting quite a respectable

meeting at the "Thrift" to hear Judith's scheme and to join in carrying it out.

The company which was thus got together was soon at business. Judith explained what she wished to form, namely, a society which was not to be a gloomy and prosy society; not a lecture society entirely, nor a debating society entirely, but a society in which the members should learn to be happy as well as healthy. The idea took well, and the name of the "Guild of Good Life" was adopted by the members for the society.

The member who suggested and carried this appropriate name was Martin Swift. He, like Richard Cross, Judith's late husband, had been a member of the Odd Fellows "Lodge of Good Health," and from this connection, no doubt, formed the idea of calling the new institution the "Guild of Good Life." The new institution would have many of the advantages of the other institution, but it would have wider social advantages; it would have women amongst its members, and it would have no secrets.

A better man for completing the organization of this effort could hardly have been found than Martin. Men often are what their names represent them to be, and Martin Swift was of this kind. He was truly swift in whatever he had to do. He was the driver of a fire-engine, and he let everybody know when he was at his work that Swift was the word as well as the

man. When he was writing "his pen flew along the paper," his mates said, "like a swallow." They often joked him on his Christian name; they called him "Day and Martin," and "Martinmas Day," and Mr. Sarcasm had even presumed to call him "Betty Martin." But when he was called by his surname there was no joking; he was Swift to resent and check all nonsense then.

To add to their success, Mr. Swift had induced the well-known friend of all good causes, Mr. Robert Meadson, to take part with them and to come to their conference. His presence was felt to be sufficient of itself to give certainty of result. He it was who had removed from the walls of his own house in the West End of London the pictures that beautified them, in order that the people of the East End might, in multitudes, be made happier by the sight of them. He it was whom his medical compeers—for he was a retired medical man—called "the wandering scholar," because, having thrown up the emoluments of his profession, and given up his heart to seek and search out by wisdom concerning all things which are done under heaven, he had found, wandering among men, the readiest means of fulfilling his heart's desire.

Assisted by one so practical and wise, the work of the evening resolved itself into the production of the following programme :—

MEETINGS OF THE "GUILD OF GOOD LIFE."

Thrift Coffee House, West Rider Street, E.

FIRST SESSION, 1882-3.

1882.

Saturday, Nov. 11th. "The Care of the Young ; or, How to bring up Healthy Children." In Four Chapters.

By JUDITH CROSS.

Dec. 9th. "Health and Happiness." In Three Chapters

By DR. BOISON.

1883.

Jan. 13th. "Cleanliness ; or, Wash and be Clean." In Three Chapters.

By MATTHEW BAILEY.

Feb. 10th. A Conversazione, and Description of "A Healthy House and Home." In Three Chapters.

By ROBERT MEADSON, F.R.C.S.

Mar. 10th. "Food and Feeding." In Three Chapters.

By NOEL COOK.

April 14th. "Drink and Drinking." In Three Chapters.

By MARTIN SWIFT.

It is a rule that each member of the Lodge shall always bring two strangers to the Monthly Meetings.

The Chair will be taken punctually at 8 p.m., and the Meeting will break up at 10 p.m.

At each Meeting a quarter of an hour will be allowed, previous to the reading of the principal paper or lecture, for any member or visitor to bring forward any map, diagram, picture, or other object of interest that may be instructive, and briefly to describe it.

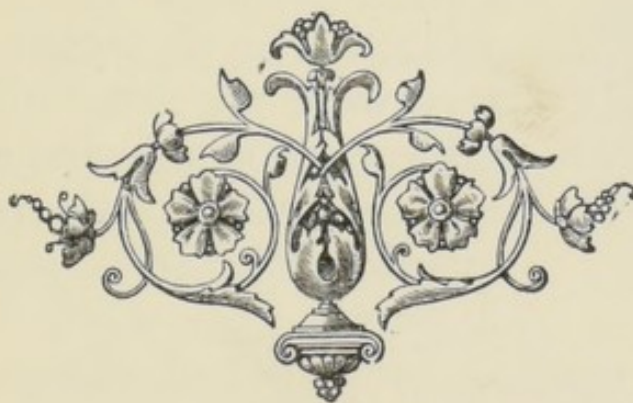
The Chairman for the occasion will decide if any discussion or vote be taken on the paper of the evening.

MARTIN SWIFT,

Honorary Secretary.

It was nearly half-past ten before the members of the committee had closed their labours.

But they had made an excellent start. They had been favoured with the assurance from Mr. Meadson that his friend, Dr. Boison, should give one of the lectures of the season ; and they had also received the invitation from himself to come, with any other members who might join the society, to his house to spend an evening, and to see the various improvements which he had introduced for maintaining, at a moderate cost, the health of a household.





CHAPTER V.

THE FIRST MEETING.



IN accordance with the programme drawn up by the committee of the "Guild of Good Life," the members met at the Thrift Coffee Tavern on Nov. 11th, 1882. The chairman and secretary were provided with a proper table, comfortable and convenient, and the reader of the paper of the evening had an adjustable reading-desk and what is called a Victoria reading-lamp, of all lamps the least trying to the eyes. Before the chairman there was placed a really handsome nosegay, which gave cheerfulness and beauty to the room. The members were accommodated with comfortable seats, so arranged that all present could see the speakers at the chairman's table. The air of the room was warmed to 62° on Fahren-

heit's thermometer, and about the room were hung three or four thermometers, so that it was easy to see that the warmth everywhere was equal.

I name these little details because it is very important, whenever a number of people meet together for mutual improvement, that they should be placed under conditions which exclude all discomfort. Nobody can learn anything well when the body is over-heated or is sensibly cold. Nobody can learn anything well when the bodily senses are interfered with and the senses of hearing and sight are interrupted.

In order to make the evenings as useful as possible, there was placed on the seats a leaflet containing some useful rules or quotations, which the members of the lodge could carry away, and if they liked could retain for miscellaneous reading.

When the members had all taken their places and the time had come to open the proceedings, Mr. Meadson, who had just put in his appearance, was invited to preside. As it was the wish of everybody present, he assented, and in a business-like way explained why they had met, and what they were about to do.

He then called at once on Mrs. Judith Cross to read her paper on "The Care of the Young; or, How to bring up Healthy Children."



CHAPTER VI.

THE CARE OF THE YOUNG ; OR, HOW TO BRING UP
HEALTHY CHILDREN.—FEEDING OF MOTHER
AND CHILD.

JUDITH'S TEXT.



THE good old proverb, "Train up a child in the way it should go, and when it is old it will not depart from it," admits of being applied in practical daily life in many practical ways, but in nothing is it more applicable than in the matter of health. We are such creatures of habit, that whatever we learn thoroughly, and practise thoroughly, we continue to practise with such ease, that it becomes a part of ourselves, and is, indeed, hard to give up. Moreover, the sooner we begin to learn and to practise anything the more firmly it is fixed in the mind, and the more firmly it is engrafted into our nature.

This is true in respect to both good and bad things ; and for this reason it is most important to teach the young all that is good, and nothing that is bad, as early as possible.

PERIODS OF LIFE.

There are three periods of life to which we may refer when we are speaking or thinking of the young.

There is the first period, the baby period, when the little child is entirely dependent upon those who are taking care of it.

There is a second period, which is called the period of childhood, when the child is largely dependent on others, but when it has a will of its own.

There is a third period, when the child that was is passing into a man or a woman, when it has not only a will of its own, but often a strong will, and when it begins to put itself under the influence of associates of its own age and station.

In all these periods careful training is called for ; but as the training required differs in each of the periods, and as the first period is extremely important, I shall only treat on it in my paper to-night.

CARE OF THE YOUNG IN THE FIRST PERIOD OF LIFE.

In the first period of life, what is known commonly as the infant or baby period, there are

three or four important matters of training to keep in mind. These are all so important, that if they are left to chance, or if they are neglected, it is quite impossible that the child can grow up well, and hearty, and healthy. These four things which are so truly necessary are—1. Feeding; 2. Sleeping; 3. Clothing; 4. Exercise.

FEEDING.

Mother's Milk.

The newly born infant should always, when it is possible, be sustained on one food, namely, its mother's milk. It is the duty of every mother to nurse her own baby. This duty is as binding on the richest mother as on the poorest, and on the poorest as on the richest. We all know that it is the most natural thing for this to take place. The mother who nurses a child from her own breast learns to love the child, and the child learns to love her beyond any one else on earth. The love gained by this means is indeed so strong that many women have learned to love foster-children, that is, other people's children whom they have nursed, with an affection that has never ceased afterwards. It is also true that some foster-children have learned to love their foster-mothers better than their real mothers. On the ground, therefore, of love and affection alone the mother should nurse her own child.

But there are other reasons.

The infant that is nursed by its own healthy mother is better nourished, and grows better, than if fed from any other supply of food ; and it ought to be nursed in this way for six months at least, eight months not being really too long.

If it should in any case unfortunately happen that the mother cannot nurse the infant ; if, for instance, the infant be deprived of the advantage, owing to the illness or the death of the mother, then it must be fed by hand, but in a proper and systematic way, on milk.

Milk a Standard Food.

Parents ought to know that milk is what may be called a standard food. That means that in milk there exists all the food that is necessary to sustain life and promote growth.

In milk there is a substance called cheese, which substance goes to make up the fleshy and other soft structures or parts of the body.

In milk there are salts of lime, which help to make the bony parts of the body—the skeleton, as it is called—and which give firmness or solidity to the bones.

In milk there is butter and sugar, two substances which are very slowly burned in the body, and which supply the animal fire or warmth.

In milk, lastly, there is water, which acts as the drink of the food, which slakes the

thirst, which carries the other foods into the body, which distributes the other foods over the body so that each one may be applied to its proper uses, and which makes up sixty-nine parts out of a hundred by weight of the whole of the body.

Good and Bad Milk.

Milk, I repeat, is a perfect or standard food, a food on which the young child can live if it be supplied with proper milk. If it be supplied with milk that is not good, then, of course, it is not well nourished. If the milk does not contain sufficient cheese, then the muscles are not properly nourished. If it does not supply the proper quantity of mineral food, lime, then the skeleton is not well nourished, and the child, when it is put on its feet in order to learn to walk, not finding its legs able to bear the weight of the body, becomes bow-legged and ricketty. If the butter or sugar is deficient, then the child is not warmed sufficiently, but becomes chilly, easily liable to take cold, very irritable, and very thin. If the milk contain an improper quantity of water, then some mistake is soon observed. If there is too little water the milk is too rich ; it does not digest in the stomach and bowels, and either makes the child vomit or deranges its bowels, causing it to be troubled with wind, with spasm and pain, and with diarrhœa, or looseness of the bowels. If the milk be too freely mixed with water, the food

is not sufficiently nutritious. It fails to give the required food for building the body, or the required food for warming the body ; and so from these causes also the child is rendered thin and feeble.

Other Foods than Milk.

Perhaps you may think that as milk is liable to be bad, from one or other of these causes of badness, it would be best to give some other foods. You must not think so ; because, when you go away from this standard food, you have to invent a standard food yourselves, which very few people can do properly. You would have to weigh or measure out the proper quantities of foods of different kinds in their right proportions : so much meat, or animal food ; so much mineral food ; so much butter or sugar ; so much water ; and the chances are ten to one you were not correct in what you did, because you would not have time to carry out so many details even if you knew how to work them.

It is, in fact, too often the case, that people who try to bring up their infants on other food than milk, injure them, or even slowly starve them to death, from ignorance on this one point of the mixtures of foods. The mother will give the child nothing but sop, that is, bread soaked in water, with a little sugar. This food is not enough. It does not contain the flesh food for building up the muscles, and

other fleshy parts of the body ; it does not contain the mineral food for building up the skeleton ; while it contains too much of the starchy and sugar foods, which supply the animal warmth ; and it contains too much water.

The child fed in this way grows, as a matter of course, very feeble, and very hot and feverish, and very fretful. If you feel its little limbs, they are like water—so soft and flabby. If you touch its skin, you feel it at one time hot and burning, at another time cold and clammy. It cries a great deal, and when it is about to cut its teeth, and while it is cutting its teeth, it is exceedingly fretful, and often convulsed. If it should grow up to the age when it might stand on its feet, had it been well fed, it cannot stand because its legs bend, the bones being too feeble to bear the body. Numbers of the children of the poor die in consequence of such bad feeding ; and numbers of the children of the rich die because the feeding is bad in the opposite direction, because, that is to say, food of too rich a quality is given to them—too much meat, as well as too much sweet, too much liquid.

Follow Nature.

It is best, therefore, on the whole, to follow nature in respect to the food given to infant children, and to let them have milk on which to live until they become possessed of their first set of teeth and are able to use them for breaking up, or masticating, more solid food. Milk may

be faulty, it is true, but milk is not so likely to be faulty as food which is merely guessed at, and which must be sometimes very faulty indeed.

Milk may be faulty, but it need not be, if care be taken in regard to it, and on this subject of care, I must make a few practical observations.

Care of the Nursing Mother.

When a mother is nursing her own child, she should be careful about herself. She is feeding her child as she is feeding herself. If she is feeding herself badly, she is feeding her child badly; and if she is feeding herself healthily and well, she is feeding her child healthily and well. I know it is a very hard task for poor women to live in such a way that their child, whom they are nursing, shall be properly nursed. I fear it is also a hard task for rich women to live in such a way that the child whom they are nursing shall be properly nursed. The poor woman cannot get all she wants; the rich can scarcely help getting more than she wants. I must try to forget the poor and the rich in what I say, and must only suggest what is right for the poor as well as the rich, and for the rich as well as the poor.

It is wise that the nursing mother should be exposed to as little worry and alarm as possible. Everybody knows, without requiring any doctor or other learned man to say it or explain it, that whatever upsets the nerves makes the

body for the time unhealthy, and, as a matter of course, whatever makes a nursing mother unhealthy, makes the food she supplies to her infant unhealthy also. Let this hint be a warning to husbands as well as wives, to fathers as well as mothers. Let the father remember that, for the sake of his child as well as his wife, he should treat his wife at all times, but never so carefully as when she is a nursing mother, with gentleness and consideration. Let him recall that she should not only be supplied with proper food, but that she should on no occasion be subjected to starts and frights, and tears and fears, by sudden anger, or other bad or thoughtless acts, by which quiet and peace of mind are replaced by anxiety, worry, and dread.

The mother who is nursing her child should have plenty of sleep. It is not necessary that she lie in bed an unusual time—that, indeed, would not be good for her ; but she should have at least eight to nine hours of rest in bed, and of all things she should go to bed early. Late hours are most injurious. Late rising, if she has gone to bed in good time, is also injurious.

There is no reason why she should not do moderate work, if she is in good health ; and to spend some time out of doors in the open air is always useful when the weather is fine. Exercise, in fact, is good for the mother and for the infant when it is so carried out that it does not lead to exhaustion.

Good Food for the Nursing Mother.

Much attention should be paid to food. It is very bad to take heavy meals. It is best to take food in moderate quantities four times a day, than to take two or three light meals, containing little or no nourishment, and one heavy meal, of dinner or supper. The food need never be expensive, nor what is called luxurious ; luxurious food is anything but good food.

Milk is always a good food, and whole meal and oatmeal are very good. I have known a mother, while nursing, sustained by well-cooked oatmeal porridge almost alone. Oatmeal, with milk and water and a little sugar, is no doubt a sufficient food, and if it were pleasant to the palate at all times, it would not be necessary to take much else.

To vary it, it may be replaced by light animal food at one meal of the day, and with the meat fresh vegetables may be taken with advantage. Potatoes and cauliflower and sea-kale and tomato are all good, and some fruits, which now are becoming very cheap, are always useful. An orange, an apple, a pear, can be obtained by most people who are prudent and who are in work. The idea of fruits as food is now very little thought of, but it is quite sound as a practice, for we are essentially fruit-eating animals.

Bread may be freely eaten, but if the bread is

to perform full service it should not be the very white bread. Many people think that because it is fashionable to eat the whitest bread, therefore the whitest bread is the best for food. There cannot be a greater delusion, and for a nursing mother to have such a delusion is indeed unfortunate. White bread contains chiefly the starchy part of the flour: it contains very little of the gluten which is the flesh-making food of flour; and it contains next to none of the mineral substance which is the bone-making portion of food. The coarser, or brown bread, the bread that is made from what is known as whole meal, is the proper bread. When I am visiting the poorest people, those who have no choice of foods, and who think that if they can only get bread to eat they are fortunate, I see, day by day, what evil comes from the custom of having for food the white bread. The mothers are so thin they look like starved mothers, and they are so, while the babes are absolutely wretched and starved because the mothers are. I try under these circumstances to make the mothers understand that this white bread is the worst food they can take, and in the end the dearest, and if I can get them to believe this, and to change the food for something cheaper and better, it is astonishing how much healthier the mother and the infant soon become.

Sometimes I teach the mother what to do, and show her how to prepare a cheap meal. I

mix for her three table-spoonfuls of oatmeal with a quarter of a pint of milk, if I can get it, and I add three-quarters of a pint of boiling water. I let this stand by the fire to stew for two hours, and then it is ready to be taken as a good meal. I say, take with this a little brown bread if you have some, and season the porridge as you please. You can have a little salt with it if you like that; or if you like to have it sweetened, add to it sugar or a tea-spoonful or two of golden syrup. Afterwards have a little fruit.

I always try at the same time to get the mother to adopt the French plan of having a stew-pan or pot at all times by the fire, so that all the remnants of food may be set aside and kept slowly cooking. But as we are to have a paper on "Food and Feeding" on another night of the society, I will do no more than mention this excellent French plan of saving food.





CHAPTER VII.

WHAT FOOD THE MOTHER AND CHILD SHOULD
NOT TAKE, WITH SOME SIMPLE RULES FOR
WEANING THE CHILD.



HAVE tried to make very clear so far what the mother and child may have as food. I am now going to state what they may not have, if the mother wishes herself and her baby to have good health. She must not take tea, or if she ever takes it, it must be merely as a treat now and then in very moderate quantities—say, one teacupful once in the day. Tea is a luxury and a very expensive one too. It is not a food, and it is not so natural a drink as water. It is what is described by some doctors as a stimulant; but when it has for a few minutes stimulated, then it depresses or lets down, and sometimes makes

the person who takes it very nervous and timid, and unable to do anything pleasantly and well ; when it is taken too freely it also causes indigestion, brings on spasms and distension of the stomach, and often heartburn, and leads the person who indulges in it to feel as if he or she could not get on without it, and then it soon causes bad results. Women who take large quantities every day are rendered hysterical, weak, and quite unable to bear the fatigue and loss from nursing.

Tea also has a bad effect, through the nursing mother, on the baby. The baby is not properly nourished ; it suffers, like the mother, from the stomach, which gets out of sorts, and it pines and frets all day and night. I shall do a great service to all mothers who hear or who read this paper, if I induce them by it to give up tea.

Coffee is not good for nursing mothers, although it is less injurious than tea ; but cocoa is fairly good. Cocoa really contains some nourishment, and when it is not too rich, two cups of it may be taken twice a day without harm. It should be remembered that there are two kinds of cocoa sold in the shops. In one kind the whole of the cocoa is there, the cocoa and the fat, or butter. This is very rich cocoa. In the other kind the fat, or butter, has been extracted, and this, which is not so rich, is sometimes sold as cocoatina. There are persons who cannot digest the rich or whole cocoa, but

who can digest the milder kind easily. It is well, therefore, to give both kinds a trial, if one does not suit, and not to cease to take cocoa until both kinds have been found not to agree.

I have made an objection to tea as a drink for nursing mothers. There is another drink, or, I should perhaps say, other drinks, which are still more dangerous and more seductive. These are the drinks sold as strong drinks—drinks which contain spirit or alcohol, drinks which are known as spirituous or alcoholic. These drinks are sold as—

Beer or ale ;

Porter or stout ;

Wines, like claret, port, and sherry ;

Spirits, like gin, rum, and brandy.

There is no temptation to which the woman who is nursing, be she rich or be she poor, is so seriously subjected as the temptation of drinking these very injurious things. They are always at hand ; they are, if I may so express it, in everybody's mouth ; and everybody who is not informed of and conscious of their bad effects is ready at one time or another to recommend. If the weather is hot, they are recommended because the weather is hot. If the weather is cold, they are recommended because the weather is cold. If a person is weak, he or she is told to drink them, in order to get strength. If a person is strong and active, he or she is told to drink them, in order to get rest and quiet. The utmost inconsistency is

indeed said and preached about these drinks, more indeed than about anything else in the world.

Nursing mothers are particularly liable to be taken in by these drinks. The nursing mother feels low, and when she feels low she is led to take a glass of something to keep her up. For a short time she feels a benefit, or thinks she feels a benefit, from that which she has swallowed. The supposed good effect is very short; in an hour or two the sinking or weakness returns, and then the supposed support has to be resorted to again. Just in proportion as this experience has to be repeated the feeling becomes stronger and stronger, that the drink that has been swallowed is necessary, until at last the woman cannot live without the drink, and then her health, her strength, and sometimes her happiness and good name, are lost.

The drink which nursing women are most commonly induced to take is *stout*. How this came to be the case I cannot say. It is a fashion of this century I fancy, for I cannot find in any old books a word about stout. I have found a good deal about small beer, and table beer, and new ale, and old ale, and October ale, and other malt liquors, but nothing about stout. Our grandmothers and the mothers of many of us brought us up very well without stout, and why mothers of the present day cannot bring up their babies without it I cannot understand. Stout is a malt liquor, which contains a good

deal of sugar, and may therefore be fattening ; and it contains spirit, and must therefore be intoxicating. When a person who is not used to it first takes it he gets from it dizziness, weight in the head, a feeling of sickness and desire to sleep. These are not the feelings which a mother ought to get ; and I am quite sure she never gets them without being brought to a very bad state, or without bringing her body into a bad state also.

I saw a mother quite lately who had got into this habit of drinking stout, and who had almost ruined her poor husband, a kind and a hard-working man, by the money she would spend on this liquor. She would frequently have six half-pints a day, and, as he said in the most innocent way, "she must have it, because she can't take anything else." The cost of this one thing was a severe tax on the man's earnings, the woman was nearly poisoned by it, and the babe was half poisoned by it ; that is the least I can tell you. I went to see the woman, and a more muddled, poor, helpless creature I never set eyes on. I asked her to show me the baby, and it was a sadder sight than its mother. It was utterly dull, drowsy, and lifeless ; its skin was coarse and scaly ; it had not cut a single tooth, although it was eight months old ; and it looked—you mustn't laugh—just for all the world like a baby-topper. It was a baby-topper, for the strong drink entered its body with its own mother's milk ; the craving for such drink

was engrafted on it in these earliest days of its life, and if it should grow up to be a man, the risk of the tendency for it to long and crave for the same drink is much increased.

The mother, when I spoke with her, defended what she did, of course. She insisted that the stout kept her up; that it made her fat; that the baby didn't sleep if she left it off; that she couldn't eat a bit of dinner until she had taken a glass; that the doctor ordered it for her at first; and that Mrs. Price, her husband's master's wife, had nursed all her children upon the same plan. The last reason she was very strong upon; but she did not care to add, what she might have done, that her husband's master's wife, the example of a mother, lost four of her children, under their second year, out of six altogether, and died herself from fatty disease of the heart, brought on by the bad practice which she had so unsuccessfully carried out.

I urge it strongly on nursing mothers that these strong drinks are the worst drinks they can take, and that stout is the most deceptive of them all. The name is a snare. I can only believe that it is the name "STOUT" which deludes so many. The innocent drinkers think that as it is called stout, or double stout, or treble stout, or nourishing stout, or London stout, and so on, it must be good because stout is a maker of stout, and to be stout is to be in good health. It is all a name, a false name, and yet a persuasive one.

In place of stout, the nursing mother should take good oatmeal porridge, and those other simple foods and drinks which I have described already. On stout the baby cannot have its muscles built up ; on stout the baby cannot have its bones made strong ; on stout the baby cannot cut a good and proper first set of teeth.

SHORT RULES.

To sum up my subject so far, let the following brief heads stand as a practical lesson :—

1. Every healthy mother should nurse her own infant.

2. The infant should be nursed from eight to nine months.

3. No other food but mother's milk is required when the mother is well and her power of nursing is good.

4. The mother while nursing should be careful to preserve her own health, and should be aided in preserving it.

5. She should be saved as much as possible from excitement and exhaustion.

6. She may take outdoor exercise every day, and she may work every day with advantage if she does not by such means produce exhaustion from fatigue.

7. She should go to bed early and take a sufficient number of hours for rest—nine hours.

8. She should live on simple nutritious diet, and take her meals at regular times.

9. She should avoid tea altogether, or take it in the most moderate quantities only.

10. She should on no account indulge in any kind of alcoholic or intoxicating drink.

To these rules I would add one other. I would suggest to the nursing mother that she should, as far as ever she is able, let the infant have its food at regular hours. If a baby is fed regularly when the mother goes to bed and when she gets up, it will rarely wake in the night. And if it is fed at intervals of three hours in the day, it will generally sleep quietly between the times, or if it wake up will be free from fretfulness or crying, a certain proof that it is in good health and is doing well.

A babe that is always fretting is always ill ; of that be quite sure. But some think that when a child is fretting it is in a bad temper. No such thing. Many poor children are rendered bad-tempered for life by bad nursing at the time when the temper is being formed. Some people, again, think that when an infant is fretful and is constantly crying as if in pain, that it is good to give it soothing syrups and drugs of that kind to cause it to sleep. This is another and most serious mistake, leading frequently to the actual death of children. The soothing bottle is a false remedy for bad nursing, and without a doctor's special order should never be used.



CHAPTER VIII.

ARTIFICIAL FOOD FOR INFANTS.



F the mother fails to supply the infant with its natural food, or if from any cause the infant must be brought up by hand-feeding, the rules to be followed are very simple, and when they are correctly followed are very effective.

The next best food for the infant, after its own natural food, is the milk from the cow. It should be remembered, however, that cow's milk is richer than the natural milk intended for the infant, and ought, consequently, to be made thinner by adding water to it, presuming, of course, that it is good new cow's milk when it comes into the house for use. If this rule of thinning the milk be not followed out, the milk

is sure almost to cause sickness, with pain and much restlessness ; and the stomach so disturbed is a long time before it gets into order again. This is very bad, because the disturbances which have commenced lead those who have charge of the baby to try a number of other foods, all of which often turn out wrong in action ; and so for weeks and weeks the little child suffers, and sometimes dies from irritation of the stomach and bowels.

The best proportion of cow's milk and water for the infant is made up of equal parts of each. Half a pint of water and half a pint of milk may be mixed together with four teaspoonfuls of best sugar. This, as a rule, answers every purpose. It is always good practice to boil the water before mixing it with the milk, and if the milk be added to the water, so soon as the water is taken off the fire, and poured into the basin, or large cup, all the better. The mixture made in that way should be allowed to cool until it is "new milk warm" before it is used as food. The sugar may be added while the mixture of milk and water is hot.

I recommend that the milk and water should be mixed together while the water is quite hot for two reasons : By boiling the water you destroy any poisonous substances which may be in it, and which, coming from an impure water supply, it is likely to contain. Boiling, therefore, purifies the water, which is one very good reason for boiling it. The second is that

the mixture of hot water to milk helps to keep the milk sweet for a longer time than if cold water were used, unless the water were very cold indeed. In summer-time, when milk changes so rapidly, this fact is most important to know.

After the mixture of milk and water has been made, it should be put into a clean bottle, and set aside in a cool place, with the bottle well corked. From this bottle, which I should like to call the store-bottle, the feeding-bottle ought to be charged when it is wanted.

There should always be two feeding-bottles—one that is in use, and another lying ready for use in clean cold water. And please to bear this always in mind—

Milk should never be left in the feeding-bottle.

If it be left in the feeding-bottle it soon becomes sour and unfit for food.

Those of you who have had to feed children from the bottle are aware that there is attached to the bottle a little mouth, or nipple, made of indiarubber, which the infant holds in its mouth when it is feeding. It is of the utmost importance that this indiarubber nipple should be kept very, very clean, and that it should be often replaced by a new one. If the cleanliness and changing here insisted on be not attended to, the indiarubber quickly becomes foul, and gives a nasty taste and smell to the food, and this causes dislike to the food, and not unfre-

quently makes it sickening to the taste and injurious.

The milk food should never be given too warm nor too cold. It should be given at the warmth of the healthy human body itself. Nothing can be simpler than this rule. If the food neither conveys the idea of heat nor cold to the person who is giving it, it is right in regard to warmth.

As the child grows older the mixture of cow's milk and water may be changed in quality; the milk may be more, the water less. At two months the milk may be increased one-third, the water decreased one-third. You may now mix two equal cupfuls of milk with one equal cupful of water, in order to make the mixture. At six months the milk may be used alone.

When the infant is from six to nine months old it has to be weaned. It is quite safe to defer weaning until nine months of age. It is not good to deprive the child of its first natural food all of a sudden. The thing should be done gradually. For milk there should be given or substituted whole meal, wheaten porridge, or oatmeal porridge with fresh milk. No other kinds of food are wanted, and it is very bad to give such young children bits of animal food, animal soup, and different sorts of puddings. Until the first set of teeth are cut it will be best not to give anything that requires to be chewed, because teeth are required before chewing can be carried out.

And here, if you please, I want to say a word very seriously about drinks for little children. I do want, very earnestly indeed, to say that intoxicating drinks are most dangerous drinks for these little ones. They are dangerous at all ages, but at this age they are really poisonous.

When the child has cut its first set of teeth then it may begin to take a little light solid food. A little may now be given, and those of you who are not vegetarians may give a little well-cooked animal food. It is not necessary, if you have other food to give, that I am quite ready to admit. Instead of butcher's meat, light puddings and custards—which are animal because they contain eggs—may be given. A little fresh fruit is also very good. Little children love to have fresh fruit, and it is natural for them to have it. Oatmeal and wheaten porridge and milk should still be the staple foods.

When I was speaking of drinks for children I forgot to speak about tea and coffee. Tea and coffee are both bad, and should not, on any account, be given to the young. They make the child first excitable and cross, and then peevish, fretful, and sad.

One thing more I want you to bear in mind, and that is, that the child should always be fed at regular times. A meal should be given about every three hours during the day.



CHAPTER IX.

SOME FURTHER ADVICE FOR THE REARING OF HEALTHY CHILDREN.



VERY great care should be taken in respect to sleep for little children. People often think that children can be waked up whenever they like to wake them. This is all very wrong. I really do not believe that a baby can sleep too much. There was a story going the round of the papers not long since, about a doctor who put babies to bed almost as dormice are put to bed, and who let them sleep "dormouse," as they say, for many months. Of course this was a joke, but it was not so bad a joke as some jokes are. It was towards the right thing. In a children's hospital, where I went to learn to nurse, we let the children sleep as

much as they pleased. They woke up for their food at regular times, and when they woke, as the food was always ready, we let them have it at once. It was wonderful how well this plan acted. There was very little crying and very little trouble indeed.

When it can be done, the infant should always sleep in its own little bed or cot. It should lie on a soft bed, and it should be kept very warm. Its head should be shaded from the light, but the room in which it rests should never be dark in the daytime. The room should not be kept close.

It grieves me very much to be saying all these things, while I know that so many poor people who ought to be following out what I say, and would follow it if they could, cannot because they have not the means to do it. It is well, however, to tell the right thing, because then those who cannot do all can do some part, and every little bit done is better than nothing.

And then there is a great deal that is done, and had better not be done, in order to get children to sleep. The most dreadful consequences follow. The child cries because it is in pain from bad food, or because it is tired from being kept from sleep too long, and the mother thinks that it must have something to quiet it and to make it sleep. She gives it some soothing syrup, or poppy syrup, or some other drug which she has got at a chemist's, and so gets it off. She could not do a worse act, as I have already said.

I notice that mothers who have had no experience, and a good many who ought to have learned experience, seem as if they never could let a child alone. They take it up when it is sleeping beautifully; they walk about with it, shake it and jog it as if it were something to play with. When this goes on for a little while the child won't go to sleep without such nonsense, and then it doesn't sleep well; it constantly wakes up with dreams and startings, and gets fretful and feverish.

The most that can be required in the way of motion for getting it to sleep is the cradle, and the old-fashioned cradle, which the mother works with her foot, is all that is wanted. If the sleep can be got even without that all the better.

I have often seen little children taken up at all hours to be noticed, as the father and mother call it. All fathers and mothers like to have their children noticed, and they think a stranger, be he ever so kindly, quite rude if he or she does not ask to see the baby. So the poor baby is taken up, perhaps from a very happy sleep, and with quite a sudden start is brought into gaslight and noise to be admired. This is really very bad, and you must not think I am too particular in making a great fuss on the matter.

Babies are, I believe, often injured for life by these rude and sudden surprises. The little things are frightened; they look scared and fall back from a stranger with a fear they can only show by crying and hiding their faces

in their mothers' bosoms. Certainly after a time they seem to grow more confiding, but this is no reason why they should have been taken out of their little cots and put into a fit of terror. If a very strong person could take any of us out of our beds in the middle of the night when we were quietly sleeping, and carry us into a bright blaze of life and introduce us to somebody we didn't know, how should we like it? We very likely should kick and scream as much as the babies do.

It is very natural that you should laugh at this idea, but after all it is not a laughing matter. Infants feel these things at the time, and when they grow up, though they do not remember them, they are impressed by them and are made nervous and easily startled by them.

I knew a little child, who is growing into a man, who had a drunken father who used to come home intoxicated when that child was a baby. Sometimes he would be foolish, and would take the baby from its bed and jump it in the air, and cuddle it, and kiss it, and sing to it. At another time he would be in a passion when he came home, and rave and storm at his poor wife until the baby would wake up in its cot and scream as loud as its mother did, and get quite faint with fright. Well, that child, who, I say, is growing up to be a man now, although he does not recollect his father, because the father died while he was quite a small boy, is still suffering from the frights which he got

from that father. He starts at the least noise, as if afraid that something dreadful is going to happen to him.

I do not want you to imagine, however, that a baby must not be noticed and must not be made happy. Not at all. When the baby is awake it should be amused by those who know it best and love it most. It is very nice to hear a mother sing gently to her child, and it is a mode of making a child fond of music for its mother to sing to it before it even knows the words she is singing. In Germany, the poorest mothers sing to their children so well that all the German people are musical people, or nearly so ; and I think this makes them a very homely and industrious and attached people.

I think this is a very good place for me to say a word about teaching children to walk. The child should not be allowed to try to walk until its legs are strong enough to bear the weight of its body. There is common sense in such a course, as you all must feel. But too often, indeed generally, fathers and mothers are so anxious to see their children toddling about, they put them on their legs before the legs are half strong enough. You see a mother, without meaning to do any harm, lifting up a tiny baby by its arms, or perhaps by its wrists, and so make it stand on its toes before her, as if it were on tiptoe. It is really cruel ; and you observe how the poor thing resists what is being done to it, by trying to get away even

from its own mother, or by striving to get on to her lap.

If any strong body were to lift any one of us in that way, we should struggle too, I can tell you. The limbs are all on the stretch, the muscles are wearied, and the toes are made exceedingly painful. Then children are made to walk by being led, or put in a go-cart, or enticed to stand. They do walk, but they walk feebly, and they grow up with bent legs, and they have to be taken to the hospital, where, though they be ever so skilfully treated, they don't get the natural form of limb which they ought to have. What numbers of bow-legged children we meet in the street, do we not? Nine out of every ten of those children were made bow-legged by being put on their feet too soon and by not being well fed.

You say, what, then, is to be done in order to teach a child to walk? I answer at once, Don't try to teach. Let the child alone, and it will learn to walk alone. If walking had to be taught, nobody would have walked at all, because there would have been nobody to give the first lesson. Let the child alone. It will soon, as it gets strong enough, try to get on its feet, and when it gets on its feet it will learn to stand, and when it has learned to stand it will learn to step, and when it has learned to step it will learn to toddle, and when it has learned to toddle it will learn to walk. It will have a good many tumbles, you may be sure;

but if the mother or nurse is careful to find good places for its first efforts, it won't hurt itself, and it will get safer and more confident every day.

ON DRESS FOR THE YOUNG.

The young in their first days should always be warmly clothed, and the clothing should be light and porous. It is a great mistake to wrap up babies in close, heavy material for dress. We see often, in wealthy parts of the town, the babies wrapped in costly furs and skins. The poorest need not desire any such kinds of dress except for the prettiness of it, for which, of course, something may be said, though it is not wise for health to be sacrificed to prettiness.

Very porous flannel is the warmest and lightest material for keeping up the temperature or heat of the body ; it need not be put next to the skin, but it should envelop or clothe the whole of the body except the head. Of late years, we have seen in the shops different kinds of coloured flannel, and particularly that which is of bright red colour. Such flannel looks nice, perhaps, but it had better not be used. The dye in such coloured stuffs contains sometimes a poisonous substance which very much irritates the skin, and causes a painful and rather dangerous rash. It should be remembered, too, that these coloured garments do not show the dirt as white ones do, and so are apt to get unwholesome, which is very bad.

It is tempting to buy a substance for clothes which does not show the dirt; and I fear many people buy clothes that will not show dirt, because they think it saves expense and trouble. But we must keep in mind that because dirt is not seen, it is not necessary to suppose that dirt is absent, and very often those things which hide the dirt, while they are not offensive to the eye, are very dirty.

On the whole, white flannel is best, and those who can knit worsted bodices and cloaks are doing well in knitting these for wear. Everything knitted loosely in thick worsted is warm, elastic, porous, open, and good.

I have not yet quite done with clothes, for I want to say that the clothes which the child wears should always be conveniently loose. To make the clothes upon a little baby that is rapidly growing fit tight upon the body; to put bands and fillets round the body and limbs, is the worst possible plan; such things chafe the delicate skin and keep up constant pain.

There was a baby in its mother's arms crying in the tavern a few minutes before this meeting began, and the mother, a steady, respectable woman, was put out because she could not think what could be the matter. She was sure the baby did not want food, and it wasn't ill, and no one could be kinder to it, and all that kind of talk. I took her into the housekeeper's room, and asked her gently about the dress. She undressed it to show me, and there across the

little body a band of tape for holding up the under clothes was cutting with quite a sharp edge into the skin. The child might well cry ; it was really in agony, and when we loosed the tape, it became in a few minutes as good as any one could desire. This is a practical lesson, telling mothers to be on the look out against chafings from bands and creases and tucks and folds.

Pins ought not to be neglected. Ordinary pins should not be used ; but the nursery pin—that very ingenious contrivance by which the point of the pin is protected by slipping with a spring into a little socket—is the pin for the baby's clothes.

A good mother will look over the baby every day to see that there is nothing that hurts in the dress, and if it cries without obvious cause, she will inquire in the same way at once. It is quite astonishing what mischief may be going on from slight causes which are not perceived. A little baby was brought into the hospital with one of its toes nearly off. It was found by the doctor that a long hair, probably from the head of the mother, had, by accident, got wrapt once or twice round the toe, and that had been sufficient to cut quite through the toe and cause the loss of it.

EXERCISE IN THE FRESH AIR AND CLEANLINESS.

I wish what I have next to recommend could be carried out by all parents. I wish that it

could be provided that every infant could have exercise out of doors every day, because that is what is absolutely necessary, except when the weather is so unfavourable that to go out is dangerous.

In cold weather it is necessary to be careful to wrap up the child warmly, and to protect it from both wet and cold. In hot weather it is necessary not merely to clothe it more lightly, but also to protect it from the rays of the sun. Children seem to be easily affected by the direct rays of the sun, and some in every hot seasons are killed by what is called sunstroke. To protect against this accident the head should be covered from the sun with a loose light shawl or scarf.

When the weather is fine, the child may be out of doors four hours, not all at one time, but two hours twice in the day. In the heat of the day, in summer, it is safest indoors. In the early part of the morning and in the cool of the evening it should have its walk in the open air. Some day, under wise and generous rule, the poorest people will have parks, squares, and gardens so near to their own homes that their children can have the exercise which is needed. Until that good time comes those who live near the great open places should not lose the benefits they offer.

Remember also to keep the body of the child very clean by proper washing, and in its earliest days take great care that the eyelids

are washed with pure water, using a fresh bit of cotton wadding each time as a sponge. Many children lose their eyesight from neglect of cleanliness of this kind.

With these observations, I close my short paper on the way to bring up a healthy child until it is able to run about and ask for what it wants. Next year, if I live so long, and if the "GUILD OF GOOD LIFE" wishes me, I will follow the subject up, and speak about the Kinder-garten and the way to carry out the teaching of children from their first to their tenth or twelfth year.

Whatever you do, bring up the infant to regular habits. Teach it to let all natural necessities occur at regular times; then the different duties or functions of the body will follow in the most perfect order, and much time will be saved and much labour. Remember, too, that regularity of natural habits is a common cause of regularity in the performance of those artificial or self-made duties of which life is made up. In this way you will, from the first, prepare your children for their duties all through life, which is itself the first duty of man and of woman equally as the parents and protectors of those who belong to them.





CHAPTER X.

HEALTH AND HAPPINESS.

(By EDMUND BOISON, M.D.)



THE second meeting of the "Lodge of Good Life" was held in the ordinary course at Thrift Coffee House, on Saturday, December 9th, 1882. The chair was occupied by Mr. William Trustyman, the hon. treasurer of the lodge.

The minutes of the last meeting having been read and confirmed, the chairman called at once on Dr. Boison to read his lecture on "Health and Happiness," of which lecture the following is a copy :—

We often ask when we sit by our firesides, and we ask still more frequently when we are alone communing with ourselves, what is the secret,

or what are the secrets, of happiness? I do not think any one knows overmuch about the matter, and I am no cleverer than the world in general. I merely claim to have tried to look at the question as one that can only be discovered after an examination of the facts which are connected with it, and it is in that sense I shall speak to you to-night. You need only think that I am trying to make you think, and then we shall get on together right well.

You know that I am a doctor by profession. It is a very hard profession to follow. It is harder than any other profession, and much harder than most trades. A man must be as strong as a lion to do the work of sitting up at night, and climbing stairs, and studying to keep up with the time, as is required of every doctor who is determined to do his duty. A man must be patient and courageous and long-suffering to go through all a doctor has to go through in the course of days, months, and years, listening to the saddest stories told by human lips, and seeing the saddest sights which human eyes can rest on.

I do not say this as a form of complaint—pray do not imagine that, for I am proud and happy to belong to my profession—but I say it as a fact, and as leading to the remark that it is by hearing what we hear, and seeing what we see, that we doctors are led to think sometimes on the secret or secrets of happiness in a special way.

I begin with this first notice, that the secret of happiness is not often in the place where it is looked for. My children sometimes play at a game, which amuses them very much, and which they call "the thimble secret." They turn all their comrades out of a room except one. The one who is left hides a silver thimble in some place where he can see it in whatever part of the room he may be. Then he lets in the rest, and they all look for the hidden thimble until one of them finds it, or until they all confess they can't find it and give up the game. It is very curious when you are in the secret to see how close some of the seekers get to the hidden thing and yet don't find it. They may have it under their very noses, they may touch it, and yet not find it.

It is often the same with happiness : men and women may have it in their very possession and yet not know where to find it. I shall endeavour to show to-night how the secret is best discovered by those who want to find it.

But before I begin, let me say that I think many persons are deceived in respect to the happiness which others possess. I believe it is a general fact that every person who is not happy thinks every other person must be unhappy. So you hear a rich man, who cannot feel content even with his riches, talk about the poor, and say how miserable they must be in their small homes and on their, to him, needy fare. Well, I know well enough how the

poor are pinched, and how wretched many of them are, but I know also that a man is not necessarily unhappy because he is not rich, and I know that the holding of riches is not a sure passport to happiness. The thimble of happiness is just as likely to be found in a cottage as in a palace.

There are some people—I am sure you have met such people—who tell you that there is no such thing as happiness, and when you say you think there is, they ask you for the proof. Well, at the first blush, the answer seems to be not so easy as it looks, but I hope I may find you some proofs. I will try.

The first proof is, that children are, as a rule, happy when they are not made miserable. Do not think of this saying or treat it as if it meant nothing, for I assure you it means a good deal. It means that children are born to be happy, and that whether they are so or not depends largely upon what is done to them in early life especially. I am sure that many of you here remember being very happy when young. I remember some parts of my life which were unspeakably happy, and yet I cannot say that I was unusually fortunate at that time, for my mother died when I was very young, and I was left in a great measure to myself, having neither brother nor sister and not many playfellows.

There is a second proof of happiness in that some men and women all through life are, under nearly every kind of circumstance, serene

and happy. These, as one of them has said, "are born of a happy disposition." There are some very famous historical people who are of this nature. The great Dr. Priestley was of this nature; and if you read the life of Dr. Benjamin Franklin, I think you will find there just such another kind of man. He was always contented, and he was fond of inventing proverbial sayings which had for their prime object the formation of the contented mind. I often turn to these proverbs, and think there are few like them. Such sayings as those which Father Abraham makes poor Richard say are quite in point.

"Drive thy business, let it not drive thee."

"Early to bed and early to rise,
Makes a man healthy, wealthy, and wise."

"Industry pays debts, while despair increaseth them."

"Little strokes fell great oaks."

"Fly pleasures, and they will follow you."

"What maintains one vice would bring up two children."

These and many more similar little bits all show a man who is naturally contented or happy, and who would instruct others to the same purpose; and I could supply you with very many more similar examples if it were necessary, but one instance in proof is enough for the present purpose.

There is a third proof of happiness, which is more directly homely, and which appeals to

everybody almost, more or less. That proof is the personal experience which comes upon us every now and then, in spite of ourselves and in spite of all sorts of circumstances of being happy in mind. We do not know why it is, but we are really light-hearted and happy. We say the weather is cheerful, or that we are unusually well, or something has occurred which brings peace and content. What we want to learn is, why this kind of peace and happiness should not last when it comes. I do not know why it should not last. That is what we have to find out.

On the other side, we sometimes get fits of gloom, we don't know why or wherefore. Everything looks dark; everything in the future seems bad; we forebode that things will go wrong which are really not likely to go wrong. We blame ourselves quite unjustly for many things we have done for the best. We calculate what might have been *if* such and such had taken place. We fill our minds with "ifs," and some make themselves old before they are young by these despairing trials.

Lastly, on this point of proof, we get it by observing others. If we watch those who are about us we know by their voice, their manner, their look, whether they are happy or not. We discover they are happy when they speak cheerily, look bright and merry, and move easily and lightly and enjoy our society.

We have now found four proofs of happiness:—

Its existence in childhood.

Its continual presence in some particularly fortunate persons.

Its occasional occurrence in most persons at particular times.

Its presence as we see it in those who are about us in our daily life.

“First catch your hare, then cook it,” says the famous Mrs. Glasse in her cookery book. I wish we could say of happiness that, having caught it, we could keep it and arrange that every one could feed upon it.

I shall proceed to ask how far we can and how far we cannot catch and retain happiness. If we could find out the circumstances or conditions under which it comes and stays with us, we should settle a very great question ; and of this we may be sure, that happiness, like everything else in nature, comes and goes under natural rule and law. There is no accident either about its coming or going if we could see the reason why it comes and why it goes. It is because we are ignorant that we are puzzled on the subject, and are led to look upon it as a puzzle which no one can unravel.





CHAPTER XI.

THE CAUSES OF HAPPINESS.



IN order that we may make a good search after happiness it is necessary to look into the causes which bring it about, with a glance also at the causes which prevent it being brought about. The study of this subject is very interesting, and it is also, in many points of view, very simple.

There are, I would first observe, some causes which are out of our control to a certain extent. We do not make these causes. They are made for us, and, strange as it may seem, they are, strictly speaking, natural causes. We may sometimes avoid them, but we cannot prevent them.

There are other causes which we ourselves make for ourselves. They are not all under the control of everybody, because every one is not

his own master. But they are, all perhaps, capable of some modification, and some of them are entirely preventible under the exercise of self-restraint and good management.

We will call the first of these sets of causes the *natural*; the second, the *artificial*.

The first and chiefest of the natural causes must be set down to the weather. When we meet our friends and acquaintances day by day, there is no subject we speak upon so much as this subject of weather. We say this is a dull day, a cheerless day, a gloomy day, a depressing day; or, may be, this is a bright day, a cheerful day, an agreeable day; or we say this is an unsettled or changeable day. In all these remarks we are really referring more to ourselves than to the weather itself. We are expressing our own sensations, and as all people like to speak of themselves most, or of their own sensations most, the weather comes in for more talk than any other topic of discourse.

There are some conditions of the weather in which people generally feel happier than under other conditions. When the weather-glass is high and the air is comparatively dry, people are usually happy. When the weather glass stands high, the air is pressing heavily on the mercury in the barometer and raising it up, and when, with this, the air is not damp the state is very favourable to health. The wind under such circumstances is what is called bracing, which causes all the vital organs of the body to

be filled with blood, and new strength and energy to be felt. In towns and districts which lie below the level of the sea dry states of the air are always good, unless the dryness be so prolonged as to produce a drought.

But there is another state quite the opposite to the above which may be also favourable. In ascending a mountain we rise in the air, and so are made to bear a lighter pressure of the atmosphere. At the sea-level the pressure of the air on our bodies is fifteen pounds on every square inch. Every square inch of the outer surface of the body is exposed to this pressure, and every square inch of the great breathing surface of the lungs over which the air passes to reach the blood is under the same pressure. If we descend below the sea-level the pressure is increased. If we ascend a mountain side the pressure is decreased. The balance is very nicely set. When we ascend to a height the pressure of air is taken off, and, up to a moderate extent, the circulation is relieved, so that the blood comes more freely, and the heart, working more easily, feels lighter.

When the air is dry—not too dry, not painfully dry—the circulation is also freer. More air in the pure form reaches the blood, and the blood is more freely oxidized and is purified, by which the whole of the functions of life are quickened and improved.

Do not, however, suppose that rain is included in this view about moist or damp air.

Rain purifies the air. When there has been a long dry season in great cities like this London, and the air a long way up is charged with dust, the spirits become depressed because the air is close and, as it is said, "stuffy." This is very unwholesome, and the rain, when it comes, is a cleanser. It literally and truly washes the air, washes down clouds of dust and gives us free breathing, so that rain is good. No; it is the damp, murky air in which dust can be retained that I refer to as depressing air. Such damp air is always depressing to the spirits, because it interferes with the free purification of the blood.

We learn, then, a few simple lessons about the weather in respect to its weight, and dryness, and freedom from dust.

The mind is happier when the air is comfortably dry and when it is free from dust.

If we cannot alter the pressure, we can in our houses do something to keep it free of moisture and free of dust.

We need not have wet clothes and wet things about our rooms by which the air becomes damp and chilly.

We need not have dusty things in our rooms by which the air is loaded with uncleanness.

Oh, you say, how can poor people avoid damp and dust in their close rooms? I admit there is a difficulty. But go into the houses of different poor people of the same class, and see how different is the story as you go.

In one poor person's room you will see no

damp, no dust. The slops and wet clothes and wet rags are all rapidly wrung out, dried, and put away. The dusty furniture and carpets are cleaned; the tables and chairs are bright and clean; the grate is clean; and the place under the fire is free of cinders. All that means purer air, less dust in it, and a happy home.

You go into another house, and what do you find? Slops everywhere; the teacups and saucers, the plates and dishes, set about unwashed, and holding water or tea or what was last in them; wet dusters and tea-cloths and washing towels hanging about; dirty water in the hand-basins; dirt sticking to and drying on the legs of the chairs and tables; dust lodging wherever it can hold; the grate dirty; cinders and dust under the grate; soot falling from the chimney; dust under every bit of carpet on the floor. All that means bad air, damp air, dusty air, and a home that cannot be happy because it is unwholesome.

It needn't be money that makes these differences—not a bit of it. I was to-day visiting a workman's house, where the owner of it was a plumber in good work, getting, whenever he liked to lay to like a man, his tenpence an hour for ten hours a day, eight shillings and fourpence a day, or fifty shillings a week. That is not bad. Throwing in a fortnight's holiday, it is one hundred and twenty pounds a year. But here in this man's rooms there was all the wet and dirt and discomfort I have just

described. His people are all unhappy. Of course they are. The man says how can he smoke his pipe in a place like that. I tell him he had better not smoke it at all, but get the place put clean and right. He and his family can never be happy till they do, we may be quite certain.

From his house I go to another house, where the rooms are smaller, but all so pure and clean in that house that I wouldn't mind living in it myself; and the man who has these rooms is a tailor, he is getting on in life, he can't do what he once did, and he, with more responsibilities on him than the other man, can only earn thirty to thirty-five shillings a week. So you see it is not money alone that keeps the place happy; as cleanliness of air and freedom from damp play their part also.

Let me, if you please, give one other good illustration.

Every man almost has a clock in his room, and clocks, as you know, require to be freed of dirt—cleaned. I knew two students once, who lived on the same floor in different rooms of the same house. The two bought for themselves one day, the same day and at the same shop, a clock, and each set his clock in his own room. It was soon found that the clock belonging to one student had to be cleaned twice as often as the other.

One day, when the clock that had so often to be cleaned was taken to the clockmaker's,

the owner of the clock complained that his comrade's clock was much the better of the two.

"They are the same make, sir," replied the clockmaker, "in every respect."

"Then why does his go so much longer than mine without cleaning?" asked the student.

The clockmaker hesitated to tell the whole truth until he got a nice way of putting it, for he was a canny Scotchman, and never liked to lose a customer by even a right word in the wrong place. At last he gave his explanation.

"Ye ken, sir, ye sit up o'er long compared wi' Mr. Edward, and thot means mair fire and mair doost at nicht, an' the clock just cotches mair doost in consequence, and that stops it."

The explanation was polite, and true as far as it went; but, indeed, it was only half the truth, for Edward's room was as striking a contrast in its way to his friend's whose clock went wrong as my tailor's of to-day was a contrast to my plumber's. Clocks stop sooner in a dirty room than in a clean one. Remember, please, the fact; I need not wait to apply it.

There are some other states of the weather which require to be named as causes of happiness or unhappiness. A nice light, bracing, dry cold is good for happiness; but cold air when it is severe, and cold air when it is damp, is very depressing and hurtful. A long and piercing easterly wind, with its chilling cold, checks circulation, and seems to take the very life out of even a strong man. A damp cold, a bitter

cold air in a London fog!—it makes one almost unhappy to think of it.

A dry genial warmth acts like a bracing cold and does good. A long warmth with moisture checks the vital action, and produces a degree of depression which may be as severe as that which is produced by an intense cold.

Connected with cold and warmth as causes of unhappiness, we have to take the seasons into our account. Those seasons of the year which are most exhausting are those which are most depressing to the mind. In winter, all people who are not well protected from the cold bear misery on their faces; but the spring months are most trying of all.

The body is lowest in vitality in the spring months. About the beginning of October it has commenced to lose flesh rather rapidly, and the waste, with loss of power, goes on for six months. Then a change takes place; but it is not until the summer has restored the vital powers that decided change of mind towards a happier state takes place. The mind of all enfeebled and excitable people is more depressed in the months of April, May, and June, than at any other season, and thus it happens that more people commit suicide in those three months, in this country at least, than at any other time of the year.



CHAPTER XII.

RULES FOR HAPPINESS.



YOU say again, perhaps, of what good is it for us to be told all these things if we can do nothing to avoid them! I am coming to that point; and I do not think that matters are really so bad as they seem to be. We cannot, of course, change the order of the seasons; but we can do much by our mode of life to make happiness independent of seasons.

In the cold seasons we can do an immense deal by one simple act alone, which is as much a saving of money as it is of peace of mind. We can all go to bed earlier and spend more time in bed than in warm weather. I once ventured to invent a proverb which was as follows: "Make the sun your fellow-workman;"

and truly it is not far from the mark. I believe that if within an hour or two at each end of the day this plan were generally followed, everybody would be a great deal happier and much more work would be done. It is positive that much more rest, and much more sleep, and much more warmth, is wanted in the cold winter months.

But what do we see people doing in these months and in the exhausting months of spring?

We see them going through the very hardest and most exhausting tasks. We see members of Parliament sitting up half or all the night, carrying on laborious debates, and getting fretful and anxious with themselves, and angry one with another.

We see rich people holding balls and dinners and assemblies, and looking, after awhile, as wretched and miserable as they can, and harping on getting away to new scenes where they can get a change and be happier.

We see the poorer people following suit, and sitting up late at night, and keeping their children up, and having to rise, which is so much the worse for them, in the early morning in order to go to work, unrested and most unhappy.

All this misery might be met, I repeat, with saving of money by the plan of going to bed at early hours in the dull, short, cold days.

Go to bed, I say, at those times, by nine o'clock, and let children go one or two hours sooner. By the time to rise, even as early as six,

nine good hours' sleep is then secured, and that is not a minute too much for a hardworking man or woman. If, under hard work, much less than this is obtained, the sleeper is unhappy all the next day, and, as Sir Isaac Newton used to say, is not worth a hair in a periwig.

In addition to good sleep in the cold weather, keep your bodies as warm as you can without oppressing yourselves with clothes. Many people weary themselves by weight of clothes, which is a mistake. There are no clothes so good for winter as the loose-knitted hose which our grandmothers and great-grandmothers used to produce from their needles. I could wish that some of these could return to us to set us a good example of cheap and simple family work in these times.

In the warm weather, in order to be happy, it is good practice to take much less sleep than in winter; and I need not say that to clothe lightly is then the rule. Heavy clothing in summer is sure to cause depression of mind.

There are some further details which I would have liked to put before you, but I am forced by the pressure of time to pass from where we now are to the study of those artificial modes of making or destroying happiness, which are more immediately under our own control.

I will not keep you much longer.

We know that to keep the air we breathe quite pure is an essential to happiness. I have

said, keep it free of dust. It is as important to keep it free of impure gases and vapours—such gases, for example, as we throw off from our own lungs and such as escape from sewers, and drains, and pantries, and closets, and close rooms in our houses. Children who spend all the day in large, airy, clean, well-ventilated schoolrooms, see how much happier they are than are the children stowed up in close schoolrooms in small houses. The children in Board and National and British schools are often in this respect much better off than the children of wealthier people, who are sent to many high-priced private academies. Children who play in the streets and parks and squares are much happier than those who are kept in rooms at the back of shops, or in small nurseries and living-rooms upstairs.

Remember the rule.

Fresh air, and plenty of it, for happiness as well as for health.

Let me turn from air to foods and drinks as causes of happiness. No more important subject could come before you. I may, however, be brief, because Mr. Noel Cook is, I see, to take up foods and drinks. I shall merely touch on foods and drinks in relation to happiness, and I shall state but one rule as a rule to be commented upon, namely, that all foods and drinks which stimulate—I do not know any better term, and every one knows what it means—conduce to unhappiness in the long run.

All highly seasoned dishes are bad for happiness of mind. All over-rich dishes are bad.

Too much animal food is bad.

Tea, in excess, is very bad for happiness. There can be no mistake on this point. Our poor women in industrial districts who take tea three, and, it may be, four times a day, are much injured in health by the practice, which is a costly practice as well as a bad one.

Wines, spirits, beers, and all forms of what are called strong drinks, are bad for happiness. Be not for a moment deceived on this point. The alcohol in these drinks stimulates. It relaxes the blood-vessels of the body ; it causes the blood to flow rapidly through the brain and nerves ; it seems to make people happy, and for a short time the effect it produces is, to many persons, pleasant. But the pleasure is as a restless dream, and the after effect is sorrow. In time, the very delight that is courted by alcohol is so often courted that it ceases to please ; and then comes the mad craving, the incessant desire, the persistent unhappiness, the degradation, the shame.

If it be urged that some can use strong drinks without running into danger, I answer that even such persons would be as well and as happy if they did not incur the danger ; and that, after all, the persons named are but few compared with those who are rendered irretrievably miserable.

Beyond food, there are certain habits which

some men follow as a means to happiness, and which call for a few words.

There are those who indulge in deadly narcotics like opium, under the idea that, by shutting up a part of their daily lives in miserable dreams, they find the good they want.

I need not tell you that all such hope is a false hope. I commend you, if you would be happy, to leave all such false hopes far behind. I would extend this advice also to the use of tobacco, which in the end only depraves and falsifies the real happy life.

Lastly, my friends, there are certain habits of thought which lead, as surely as the sun leads the day, to the loss of happiness.

I put all such habits as I now refer to under the one term, craving habits. Whoever craves for one particular thing as the darling object of his life, under the idea that to gain that thing in neglect of all else is to be happy, is a broken and a deceived man.

They who crave for what they are pleased to call repose from labour, from daily reasonable work, as a means of happiness, crave with a vain hope. I have known men in all professions, I had nearly said, who crave in this direction until they have succeeded ; but, as a rule, I know no men who, having succeeded, are more unhappy. They know not how to pass their time or spend their days. Often they are obliged to return

to their old or to seek some new pursuit that life may be bearable.

There are others, more foolish still, who crave for wealth and power, and desire to rule and be somebody and be obeyed. Another dream. Those who have succeeded have, in my long experience, been the saddest, the most overburthened of men. I have sat by such in the hours of what the world thinks their triumph, but I never saw any happiness in them. I have thought such persons fortunate if they could so much as maintain an equable mind in which sadness had no resting-place.

I called my lecture "Health and Happiness." I have said little about health, because happiness implies health.

Let there be health, and happiness is to be expected as the result.

The bases or foundations of health are :—

Reasonable protection of the body from natural dangers.

Regular periods of rest, according to the season.

Simple habits in eating and drinking ; the drink the universally distributed fluid, water.

Repose of mind, without cravings for false pleasures and false powers, which, when they come, fail to satisfy.

And these also, in so far as the physical life is concerned, are the foundations of happiness as well as health, for they two are one.



CHAPTER XIII.

CLEANLINESS ; OR, WASH AND BE CLEAN.

(BY MATTHEW BAILEY.)



MATTHEW BAILEY'S paper on the subject of cleanliness drew together a large attendance of the Guild at the third meeting of the session.

At some of the friendly evening meetings two subjects had been much talked about by the members in an informal way. The first of these subjects had reference to the formation of public laundries in the city in one of the most crowded parts. The second had reference to the Jewish Passover, and to the care which the Jews take with their houses during the period of what is called the Passover cleaning. As was natural to Mr. Bailey, he had kept perfectly quiet when he heard these discussions

going on, and much curiosity was excited as to the opinion he would give respecting them.

Moreover, Matthew Bailey was a very popular character in the little community, and that had its effect in bringing the members to hear him.

Amongst those of the members present was one David Lavis, a Jewish member, who, though a working man, a compositor, was, like many of his class, quite learned in Jewish customs and in the language of his people.

By unanimous and hearty vote, Mr. Lavis was moved to the chair, and, in spite of his own modest protests, was made to preside.

Matthew Bailey at once was called upon by the chairman to read his essay on

“CLEANLINESS; OR, WASH AND BE CLEAN.”

“Wash and be clean” (said Mr. Bailey) is a very old saying. So is another saying which I have heard ever since I was a boy, and that is the saying that “Cleanliness is next to godliness.” The first of these sayings is in the good old Book, as you all know; and I thought the second was too—in fact, I would have made an affidavit about it afore I looked for it. I went to look for it as certain to find it as the commonest text we all know.

I turned to Proverbs, but it wasn't there; and, to make a long story short, I looked for it from Genesis to Revelation, but it isn't there. Then I went right through the Apocrypha,

but it isn't there, though there is there such a lot of useful reading that I am right glad I had to go through it.

At last a man who belongs to the Methodists, and is a preacher among them, told me that John Wesley had invented the saying, for which I am sure we are all very much obliged to him. He was a clever man, he was, and a good one.

"Wash and be clean"—that is my text. If we could discover a way by which all England could wake up some fine morning perfectly washed and clean—clean in body and clean in mind, that is to say—there would, I believe, be such a change that everybody would wake up good. Cleanliness of that general sort carried out to its completion would, he says, soon do away with diseases altogether.

Now, if that is only half-and-half true, it would be the best draught of half-and-half that ever was drawn. It would save more money than ever was saved by anything else; it would prevent a lot of misery; and it would make people better satisfied, and more and more friendly and more thoughtful of each other. Then all the stuff and nonsense about lawyers' bills and legal expenses would go to the good, and we should be richer and happier generally.

So we'll talk, if you please, about the saying "Wash and be clean."

KEEP YOUR CLOTHES CLEAN.

The first word I have to say, then, is that cleanliness must begin at home. Some say charity must begin at home, and they are right; and I am right, too, when I say cleanliness also must begin at home. Indeed it must. Don't make any mistake on this point.

If a man be ever so rich and ever so clever, if he's not clean about himself and his house, he's not in a sound state either of mind or body. In all my travels I never met with a dirty man or woman who was quite right in body and mind. I have seen different sorts of people dressed in the most curious of fashions, according to their country and their habits. I don't care much about that, for custom soon makes all much the same. Witness fashion amongst women, from bishop's sleeves, which I remember, to no sleeves at all; and from crinoline hoops to petticoats as tight as trousers and far more entangling to the feet.

But I do care for cleanliness. If the costume is clean all is pretty much the same, for that which is matter of taste varies from year to year; but cleanliness or uncleanness never varies in the person who takes up with one or the other. A clean person in respect to his clothes is always a clean person, and a dirty one a dirty. It's all nature, or habit, which is second nature.

Keep your clothes clean, then. They are

the first things you get into and they are the very last things you get out of, so that they are like yourself, for the matter of that.

It's a great point to teach your children to be clean from the first. They smell so much sweeter when they are in clean clothes. You smile; but don't, because what I say is very true, and I'll give you a case in point.

I went one day to do a job for a gentleman who is in charge of a great model school for boys and girls as have lost either father or mother, or both, in which it was thought everything had been done for cleanliness. When I'd done my work, the gentleman says to me—

“Perhaps, Mr. Bailey”—speaking, you see, like a gentleman to a gentleman—“perhaps, Mr. Bailey, you'd like to look round the establishment?”

“That I should, sir,” says I. “Indeed, I was about to take the liberty of asking if I might.”

“No liberty,” he replies. “If you'll be good enough to wait a minute while I lock up the office papers I'll go with you.”

Of course I waited, and he went all round with me; and when we were comin' out of the girls' school we met the lady who looks after them, and she asked me what I liked best in all the departments.

“Well, ma'am,” says I, “you'll excuse me for what I, as a plain man, am going to say; but what I like best is the baths and beds, the

sweetness of the air in the schoolrooms, dormitories, and the clean faces and hands and bodies and dresses of the children."

"Spoken like a philosopher!" says the lady, which made me get quite red in the face, I can tell you. "The two things are closely connected, Mr. Bailey—very closely indeed."

"Indeed, ma'am," I remarked; "how so?"

"Why," says she, "when I began to work here I noticed always that the girls' school-room, whatever we might do, had still a peculiar bad smell. One day the rector's wife came, and I named it to her. She noticed it also, and she called one of the girls who was very sharp, and asked the girl if she knew what it was from. And what do you think that child said? She said, 'It was only the pinafores.' This was a new suggestion, and we acted upon it. We put all the girls in clean pinafores next day; the smell was quite gone, and from that day we never had it again, Mr. Bailey, because we have never since let the pinafores get dirty."

"I dare say not, ma'am," I replied, as I took out my rule and ran it over a pinafore. "Each of these pinafores measures half a square yard, and as there is a hundred and fifty of 'em here, that is seventy-five square yards of surface—a big surface for smell if it be dirty."

"That is very practical," said the gentleman, as he took me to look at another part of the building.

Well, it is practical ; and the smell is as bad or worse with workmen who go about in close shops in greasy, dirty aprons and loose, coarse jackets. That's as bad as it can be ; and there's no saving in it neither, because when a thing is very dirty it costs more labour to wash it, and it calls for soda, which eats into it, and it wears out quicker.

I say once more, therefore, keep your clothes clean. There are many ways in which you can do it.

For workmen one way is to have a good working blouse, which is easily put on and off, and which is easily washed. In most trades this can be adopted. When I began to wear a blouse in our shops my mates said I looked an object, and made some fun of me. I didn't care ; I kept myself clean.

My blouse, which is made of strong canvas, fits me nicely. It is very cheap, and I can clean it myself without trouble by merely laying it out and washing it well over with soap and water before it gets filthy.

Under the blouse I wear a pair of canvas pjamas, I call 'em, like what men wear in hot countries, and which in plain language are loose trousers ; and I cap the whole with a cap of the same material.

I keep two sets of these outer work-clothes. They cost me a few shillings, and I save a good suit of under clothes a year. They fold up in a neat bundle or roll, and to keep them

dry I roll them in an oil-cloth cover, like that which young ladies carry their music in.

Here is the apparatus all ready for work.

[Mr. Bailey here showed a new suit of these outer clothes for workmen, and then proceeded—]

When I go into the shop I put these things on, and before I go out I take them off, to find my clothes under them as clean as a new pin—no stains from the wood, paint, or varnish on them; no patches of glue; nothing of the sort. I come out of my shell like a gentleman, and only have to wash my hands and face and trim up my wig a bit, to be ready to talk with any gentleman who may do me the honour to converse with me.

I am glad to say that all my mates do the same thing now, and I can tell you that they look so well it's often very difficult to distinguish the master from the men when the men leave their work.

Cleanly Habits with Clothes.

As regards the ordinary clothes, whether they are clean or dirty is a matter entirely of habit.

Perhaps some will say, No, it's a matter of business or occupation.

I stick to my text; it's a matter of habit.

I know, of course, that some businesses or trades are cleaner than others. I don't deny that my work, of cabinet-making, is much cleaner work than some others, such as brick-

laying, for instance ; but I notice that amongst men in what are called dirty trades there is as much difference between men of the same trade as there is between men of different trades.

I know a bricklayer who is always clean when you meet him after work. I know another bricklayer who is never clean—clean on no day, not even on Sunday. Yet these men are usually working on the same scaffold.

The one can be clean, the other can't. Why ?

Because it's all habit.

There is another thing also I notice in respect to this question. Men and women who go much to the public-house are never clean, whatever trade they may be following.

One bad habit breeds another, like breeding in-and-in, as the cattle-breeders say.

The clean habit is, after all, the easiest as well as the healthiest. You know when a coat or a waistcoat gets covered with dirt and the dirt sets on it what a time it takes to clean, or if an apron gets stained through and through with dirt what a time it takes to wash it. But if a thing is always cleaned as it is dirtied, nothing is easier than to keep it clean.

Clothes should not only be kept clean by washing or brushing ; they should be ventilated. When they are taken off the body they should be turned inside out and hung up in the air. This is a capital plan ; for it helps to keep the body clean as well as the clothes.

Health won't be clothed in dirty raiment.

What now is wanted for us working people is a set of good laundries in every district, to which we can go without loss of time and wash, and dry, and mangle, and iron our clothes for ourselves at a cheap rate. It is a very dangerous thing to wash up dirty clothes in a living-room or kitchen. It is bad for health, because it makes the air damp; it rusts everything; it leads to much expense for fuel; it costs a lot of time, and, when the job is done, it's only half done, and everybody is miserable all the while it's being done.

At a public laundry a good housewife can wash and dry, and mangle and iron, and press all the clothes and things wanted in the sixth of the time she can do it in at home, and at one-sixth the expense, and the living-rooms are not turned topsy-turvy.

I go in, therefore, strong for public laundries, and I don't go in for 'em on what is called a philanthropic scale. That's all nonsense. We want to help ourselves, and to go our own gait in carrying out the principle "Wash and be clean," and when we learn to do that on our own account we shall wash and be healthy.





CHAPTER XIV.

CLEANLINESS OF THE BODY.



HAVE been speaking up to this time about the apparel which covers the body, concerning which I should have said a great deal more, in detail like, if I had been writing a book on my text instead of delivering what I hope you won't consider too long a sermon.

What I have said must do for this present, because I've got to take up now another topic, which I introduce by the advice—

KEEP YOUR BODY CLEAN.

Don't stop at keeping your clothes clean. Keep your body clean also. There are many people who think if they only keep up a re-

spectable outside look, they're all right. They ar'n't so. They say there was a man who played Othello, the Moor, in the Britannia Theatre, and who was so conscientious, that instead of merely blacking his face and hands to look like a blackamoor, as other players do, he blacked himself all over. He was a simpleton, I dare say you'll say; but he wasn't half such a simpleton as the man or woman is who washes face and hands, and never lets the rest of the body know the taste of fresh water. But what a number of people, to be sure, do so much washing and not a bit more!

There was once a man in our shop who never had a bath in all his life since he could remember.

The skin wants to be kept free so that all parts of the surface may perspire freely; for don't forget, or remember if you never heard it before, that the skin is always perspiring or giving off water, though you may not see it. It is giving off what the doctors call the invisible or insensible perspiration. If you take a piece of metal tube, about two inches in diameter and a yard long, and bend it in the middle into a right angle, and put one end of the tube into your bed, under the clothes at the foot of the bed, before you get into bed, and the other end of it into an empty basin or jug on the floor, you will find in the morning that three or four ounces of water have run out of that tube into the basin.

Where did that water come from?

It came from your body. It is the condensed water of the invisible perspiration that is always going off.

Two pints a day, at least, go off in that way, and in hot, dry weather much more. If you were to stop the going off altogether you would soon be very ill.

I understand also, from a book on physiology, that gases go off from the skin as well as vapour, and that the same gas goes off as that which we breathe from the lungs, called carbonic acid, a gas which is produced by the burning that goes on in the body and which is very poisonous to retain.

Once, for some ceremony or another, it is said that a little boy was gilded all over his body, by which the action of his skin was stopped, and thereupon he became cold and insensible as if he had been choked; and I believe he died from the mischief that was done to him. I heard that when I was in Florence, and the account is told in some of the doctors' books here.

I name these things to show that it is very important to keep the skin open and free.

The water that goes off from the skin is derived, I believe, from the blood by many thousands of little sweat-glands which lie deep under the skin. From each of these little glands there comes a fine tube, which is coiled like a corkscrew, and the mouth of which opens on the skin.

The skin is covered with these little mouths, which can be seen with a strong glass, and out of which the water is always oozing ; but their surface is so great that, in ordinary circumstances, each tiny drop of water when it comes to the surface goes off in vapour, like the invisible steam from the steam-engine, when the body is warm enough to drive it off. But when the body is not warm enough, when a person suddenly gets cold and faint, for instance, then the sweat stands in great beads, as people say, on the face and other parts, and you see the points out of which the fluid is poured. Perspiration is then sensible.

If you have a dirty skin then, you can't help stopping up some of these minute pores, and the skin doesn't act as it should, because it can't ; and so more work is put on the other parts of the body that have to get rid of fluid from the blood. The lungs and the bowels and the kidneys have to do more than their own share of work, which isn't fair, and especially if one of 'em happens to be weak or has a tendency to disease or is diseased.

It's the same with the human body as it is with a body of men in a workshop. In order that a job may be done quickly and well, all must work fair. If in the middle of a job I am foreman to I let one man do less than his share, and put more on another than he can do, and he breaks down, the job breaks down for a longer or shorter time, and the whole

thing may come to a standstill by the failure of that one man.

The same in the human body; if you take the work off one organ and give it to another, the animal machine goes wrong, and sometimes the whole breaks down just because one organ does.

When you keep your skin going right well and cleanly, the internal organs, which are of vital importance, have a good chance of going well. You give them the best chance they can have, and that's the best thing you can do.

Wash and be clean.

I am going now to tell you something at which I dare say you will laugh again. I don't care about that, because I would rather make you laugh than cry, and I, for my part, always remember best the things and the sayings I've laughed at. Well, what I say now is, that I believe we who wear clothes in these civilized parts want washing a great deal more than the savages do who hardly wear any clothes at all. When I was abroad in the South Sea Islands, I used to see hundreds of people who went about nearly naked, and I was surprised how clean they always looked. You see they didn't care about umbrellas, and whenever it rained they got a natural shower-bath; and when they came to a running stream or a river, in they went and swam across, just as if they took it to be a natural way of getting on. And when they were out on the sea in their canoes

they got in and out, when they wer'n't afraid of sharks or alligators, just as they liked. They were always being thoroughly well washed, and that made 'em clean from head to foot.

We can't go about as the savages did, although I do believe we often wear too many clothes. We wrap ourselves up in thick clothes which soon pick up dust and dirt, and that is the reason why we should pay more attention to bathing. We want to clear the skin of the dirt which is accumulated by the clothes.

HOW TO KEEP THE SKIN CLEAN.

Let the skin be kept clean.

How is it to be done ?

There is only one plan. The skin must be kept clean by daily washing it from head to foot in clean water.

"Ah!" replies some good man or woman here, "that is all very nice and true and wholesome, and to rich people sound enough; but what about us who haven't a bath in the house, and have no means of enjoying such a thing?"

To that observation I beg leave to borrow a very short reply. There's a machine with a crack-jaw name quite lately invented for making your pulse give out sounds, so that the doctors may hear the pulse beat as well as feel it, all about which you'll find the account of in *Chambers' Journal*. Well, what do you think the pulse makes this machine say, when it begins to talk ?

It makes the machine say, " Bother it ! bother it ! bother it ! " with every stroke.

And that's what I say to the bath, when it is named as a necessity for all as would wash their bodies from head to foot.

I say about the bath, " Bother it ! bother it ! bother it ! "

In plain language, you can keep yourself—everybody can—perfectly clean—clean *cap-a-pie*, as the French, I suppose, would express—without any such a thing as a bath.

You want something, no doubt ; but all you really want is these six things :—

Half a gallon of water.

A lump of soap.

A piece of flannel, or a sponge.

A hand-basin in a washing-stand to hold your water.

A tub, very shallow, to stand in.

A rough towel.

There are very few people who are not set up with all these little requirements, and they are all that really are wanted.

You pour some water into your basin ; you stand in your tub before the basin ; with your sponge or flannel ; you give yourself a complete soaping and rinsing, letting your head and feet have their full share ; and then you dry yourself thoroughly with your rough clean towel.

Time required for the whole process, five minutes.

Result, as good a cleansing as you could wish to have.

Only you must keep it up every day, every morning or every night, every day.

Most people do it in the morning. I always do it at night, afore I go to bed, by which means I get off all the dross of the day, sleep like a top, and get up in the morning ready for work, after another wash of face and teeth and hands.

The writing down of this word *teeth*, reminds me, by the way, to tell you to be sure to include your teeth in your regular cleansing of the body.

I remember the day when among poor, and even among moderately well-to-do, people, it was thought to be a sort of fad or conceit to clean the teeth. The result is, that the teeth of poor people are rarely so good as those of people who are better off.

That is a very unpleasant fact to confess, but it's better to confess it and then to rectify the error; a good confession and a good amendment being two of the capitlest improvements in human nature.

You will clean your teeth, if you are wise, when you clean the rest of the body; and mark you, always do it at night, because then you go to bed with the mouth quite clean, and sleep without any bad odours from decomposing substances entering with your breath into your lungs.

In cleansing the teeth, take care also that you do not use too much rubbing. If you do

you injure the delicate surface of the teeth, which is mischievous. Have a very soft brush, and use it, as if you were chasing a beautiful ornament, as gently as you can, taking care to have plenty of water.

Of all mistakes that are made, pray don't commit the mistake of grinding hard powder upon the teeth, like chalk powder and other grit, which wears down the enamel. You may now and again, but very rarely, use a little finely powdered charcoal, but avoid that also if you possibly can.

Somebody has sent me up a bit of paper, inquiring whether the warm or the cold bath is the best to have. I am just coming to that point. The cheapest plan, of course, is to get accustomed to cold water all the year. This also is the most practical plan, inasmuch as it is not always easy to get water hot or warm. I advise, consequently, that you should learn to wash in cold water, if you find that you can stand the process. If, however, you always feel cold after the washing is over, if you don't get that nice glow over all the skin which is called the reaction, then it's the right thing to have the water just warm enough not to feel unpleasant.

One gentleman I know always warms the water for his bath up to 80° of the thermometer, Fahrenheit, and this he does winter and summer and all the year round.

Keep your body clean.

Teach your children in their turn to keep their bodies clean. As Mrs. Judith Cross has told us, after Solomon, "Train up a child in the way he should go; and when he is old, he will not depart from it." That is very true about the washing. If a boy or girl gets into the habit of having a wash from head to foot every day, the want of it becomes so strong it is looked for like a breakfast or a supper.

In that great school, which I mentioned a little while ago, the scholars, one and all, on the boys' side at all events, have their sluice every day, in the same simple sort of way as I have recommended, and the good it does them is unmistakable.

They will be clean boys and clean men all their lives, I warrant, unless they get led astray into drink or some other wrong course.

Don't run away with the idea, however, that because I have said so much about a basin, and a tub, and a towel, that I am opposed to baths. I ain't a bit opposed to them. I think the baths and washhouses are splendid institutions, and I often go and take a bath.

I likewise recommend you all to have your children, boys and girls, sent to the swimming-baths, to learn to swim in the best style they can learn.

I only wish you, when you can't get a bath, or can't afford one, not to let that be your excuse for neglecting to wash, and be clean from head to foot, every day of your life.



CHAPTER XV.

A FEW MORE IDEAS ON CLEANLINESS.



BEFORE I bring this paper to a close, I have a few more words to add on some other points bearing on cleanliness.

CLEAN AIR.

Take all the pains you can to keep the air in which you work and live as clean as possible; that is to say, as free from dust as possible, and as fresh as possible.

In order to carry out this plan, let your houses be as light as you can. I dare say we shall hear about this next time we meet, but I must refer to it now, in this casual way, in order to observe that no house, and no room, can be kept clean if it be kept dark.

Light enables you to see where the dirt

lies ; but light is of more use even than that, for it is a purifier of the air. It destroys the poisonous animal substances which often cause disease.

Keep the air free of dust, and then the lungs will be free.

Also keep the air free of bad vapours and bad gases, which make smells or which cause the rooms to seem close and oppressive.

I tell you how you may know when the air of a room is dirty.

At the time when the sun is shining on the window of the room, close the shutter, except in one hole, through which let the sunlight come. If, then, the air is very dirty from dust, you will see on looking into the room at the line of the sunbeam that the air is loaded with particles of dust, which float about and look like actual bits of dust.

It is only when you see the dust in that way that you can imagine what is taken into the lungs when you are sitting in a dirty room.

We cannot see the bad gases which are often distributed in the air, but we can feel them. They give us headache, and make us feel faint, or sleepy, or dull.

The grand trick of keeping the room clear of dust and bad air is divided into two parts. The first part is to keep the room or shop as free from dust as you can ; the second is to let in fresh air freely from without—in other words, to ventilate.

CLEAN WATER.

After clean air, it is necessary to be sure to get plenty of clean water. It is now very well known that water is often the carrier of various poisonous substances which cause disease. The substance which causes cholera sometimes travels by water. The substance which causes what is called drain-fever, or, as the doctors call it, typhoid-fever, is sometimes carried by water.

You must, therefore, keep the water you drink quite clean and pure. You mustn't let it stand in a dirty cistern; you mustn't keep it standing about in dirty vessels or exposed to bad air.

Every man who has any skill at all can make water clean of a great deal of what is impure in it by putting together a charcoal filter.

For this purpose let him get a four-and-a-half gallon barrel, into which he can fit a tap. Into this barrel, four inches above the opening for the tap, let him put in a false bottom, perforated all over with a large number of gimlet holes. Then let him lay on this false bottom three inches of fresh burnt charcoal.

The filter is immediately ready. All that has to be done is to fill the barrel nearly to the top with water from the tap that supplies the house. The water will soon begin to run through the charcoal quite clear and purified. If at first it looks a little dark, put it back into the filter, and continue to change it until it does run clear.

I am a little bit of a fad in respect to my

filter. I take the trouble to make all the holes in the false bottom which supports the charcoal with a long iron skewer, made red hot at the point. When all the holes are made, I then char the false bottom all over before I put it into the filter, and thus make a still better filtering bed. It doesn't cost much trouble, and it makes the job more complete.

We have varnished up the outside of our barrel filter oak colour, and have put round it brass hoops, so that it looks quite nice and bright on our little sideboard. We never drink any water that hasn't gone through that tap.

Every month my wife cleans the filter out. She removes the charcoal and puts in some fresh, taking care not to throw the old stuff away. The old stuff she puts by the fire in a pan to dry, and when I get a few minutes I make it red hot, by which I purify it and render it ready for use again as good as at first.

I see a good many working men here, and I know there isn't one of them who couldn't set up just such a barrel as I have described. When they have set such a barrel up, they needn't say that they are "obliged to drink beer because they can't get good water."

Charcoal filters water very well, but I don't think it purifies all water. Water sometimes, it seems, gets charged with some poisonous matters which charcoal don't remove. When cholera or fever is about, mere filtering is not enough. Then the water must also be boiled.

CLEAN FOOD AND FEEDING.

There's a lot to be learned by all classes of the people about clean food and clean feeding. The Jews are the wisest people going—though I say it afore our chairman—in respect to clean food. We Christians very often take food which they won't look at, because it isn't what they call *kocher*; that is, in such a state to eat as is by their law wholesome. If I'm wrong here the chairman will put me right.

At the slaughter-houses the Jews have a man who is trained to inspect the meat, and if it shows no sign of disease or dirt, or other unwholesomeness, he claps on a mark with a set of cabalistic signs which their folks understand, and they eat it; if it don't show the signs they don't eat it.

I was one day standing in a slaughter-house which belonged to a Jewish butcher, and there were four carcasses—two oxen, two sheep—which looked fair enough to me, but which wouldn't pass muster with the inspector.

"Well, master," says I, "what do you Jews do with the carcasses which you won't eat?"

"Sell 'em to you Gentiles ten per cent. cheaper if we can't make a better bargain," replied the inspector. "Your people will always eat them for ten per cent. under market price; anyways, your butchers will buy them for that reduction as fast as we can turn 'em out, so we don't lose veray mooch."

It's astonishing, too, what a lot of dirty carcases they do reject in this way for us to eat. I've got some figures about that as would surprise you, and one day I'll show you them.

See that your meat is clean, then ; and I mean all your meat, animal and vegetable.

Have all your vegetables well washed before you cook them ; and have the fruit washed. When fruit disagrees with the children, it is oftener the dirt that is on the fruit that disagrees than the fruit itself.

There is a common saying that every man must, in his lifetime, "eat his peck of dirt."

Don't you believe that, or that there is any *must* in the question. A good many do, and some men eat a good many pecks, but there's no must about it at all. No one need do it.

Everything that enters the body ; every utensil from which food is taken ; every cloth used for cleaning and drying utensils ; every drop of water used for cleansing cooking utensils, as well as for cooking, should be clean.

While I am on this question of clean food, there is a custom common among working men which I must particularly call attention to, because it is such a very bad custom.

Every morning as I go to work I see dozens of working men going to work also, and most of them carrying their dinner tied up in a handkerchief. The dinner may be in a basin, but it is tied up in a handkerchief, to be carried in all weathers, wet or dry, clear or foggy.

Then I see many men, when they get to the shop, quite content to put their dinner anywhere until they want it. They'll put it with their coat on a heap of shavings; they'll hang it up against a damp or even a dirty wall; they'll tie it to the steps of a ladder; they'll find some old recess or cupboard, into which they'll throw it as if it wasn't of any importance at all, instead of being the very substance they are going to turn into their own flesh and blood.

Well, I say very plainly that all such tricks as these with food are uncleanly and wasteful. They are destructive and thoughtless tricks which are played, not because there is any necessity for them, but because there is a silly want of thought about the whole subject.

Food of the very best so treated becomes dry, hard, tasteless, and dirty. It won't digest as it ought to, and is a source of bad feeding.

There isn't a working man living who couldn't cure himself of this bad habit of keeping his dinner. There isn't one who couldn't, if he liked, make himself a light basket, cleanly lined, with a clean knife and fork, and all the etceteras nicely arranged.

If I by this lecture could get all my working mates to set a reform of this one sort only I shouldn't think I had worked in vain, because every man as followed out the plan would save both health and money.

I haven't quite done with cleanliness in feeding yet.

There are some work-people who will go straight from their work to their victuals without washing either their hands or their faces. They sit down to eat, and they take up their bread and their cheese, or it may be their meat sometimes, with their dirty fingers.

The habit is uncleanly at the best, but it is dangerous also in some trades. To people who work in lead it is particularly dangerous. With their food they swallow small particles of the lead. The lead accumulates in time in their systems, and then they fall sick from lead-poisoning, and many become palsied and die.

In one factory a doctor, who knew the reason why a great number of the workers got to be poisoned by lead, suggested that all the work-people should use knives and forks entirely. This rule, carried out, would remove most of the dangers connected with working in lead.

CLEANLINESS IN WORK.

I shan't spend much time in talking about cleanliness in work. There are two sets of workmen—the clean and the dirty; and often in one shop where there are two men of the same name one is known from the other by this sign. In a shop I know there's clean Jackson and dirty Jackson. You know similar cases.

You know, too, that, taking it all round, the clean man is the best man and earns most money, even if he ain't the cleverest.

I will only add one word, therefore, to them

who are working at trades where much dust is given off—trades like tool-grinding, and flax-dressing, and cigar-making, and wood-turning, and furniture-trimming.

In people working at these sorts of business the lungs get very dirty from the dust unless they are protected by a light mask.

Light masks of crape or muslin should always be worn in these works ; and I am very sorry that the prejudice against all contrivances to save the lungs from the dust still prevails.

Ebenezer Elliott, the corn-law rhymers, as true a man to his cloth as ever lived, regretted the fact in his day, and he's been dead, I dare say, a quarter of a century ; and he would have to regret it still if he could look at us all again, hard at it as ever. It's a great pity.

CLEANLINESS OF LIFE.

I conclude by saying that, to all the cleanliness I have spoken about so far, there ought to be added cleanliness of mind, of heart, of conversation, of life.

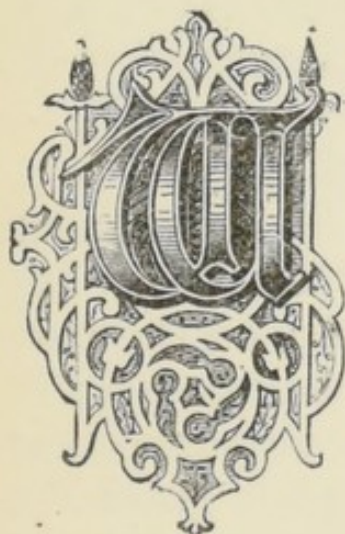
Bad habits, bad language, dirt and swearing, go very close together. They are all commonly associated. Intemperance is the very bane of cleanliness. It makes more people unclean in body and mind than anything.

Let us "wash and be clean."



CHAPTER XVI.

SOME JEWISH CUSTOMS ON CLEANLINESS DESERVING IMITATION.



WHEN the paper of Mr. Bailey ended, there was a general desire that the chairman, Mr. Lavis, should make some comment on those topics relating to Jewish wisdom and customs, to which the author of the paper had referred.

With some hesitation, Mr. Lavis, seeing it was a general and earnest wish, and no mere compliment to the chairman, briefly complied.

Mr. Lavis spoke to the following effect:—

The statement made by our friend Mr. Bailey, that the saying, "Cleanliness is next to godliness," is not in the Jewish Scriptures, is

quite true; but the other statement, that the saying is a proverb invented by the distinguished John Wesley, is not quite so correct.

With all respect to that great and excellent man, John Wesley, I am obliged to claim that the saying is of Jewish origin, and is in itself very ancient.

We Jews have a series of writings to which we attach great veneration. They are called the Talmudic, and some of our people are much revered among us, because they understand these writings better than their fellows. In the Talmud, in a part of it called the Mishna, there is a little portion, or tract, known as the tractate *Sota*. In that tractate is the sentence, only a little modified. It there runs as—

“Outward cleanliness is inward purity.”

Or, as I have also heard it read—

“Outward cleanliness is inward piety.”

This is a matter, however, of lesser moment than some others to which our attention has been invited, and I am glad to state, on the part of my people, that a great deal may be said in favour of their cleanliness and in support of the idea that from that cleanliness, much good has accrued, even under circumstances that have been very unfavourable. It is a fact that in every country in which the Jews are permitted to live, their length of life is, on the whole, greater than that of those who surround them, and that they bring up more children from infancy to manhood than any of their neighbours. I could

show you this in reports which are undeniable, but it is sufficient to state the fact now.

In the midst of persecutions, in quarters of towns most unfavourable, in poverty, and in severest hardships, this fact is plain and distinct.

There are many causes which are at work to produce so strange a result. The very poverty we have undergone has had to do with this good result.

You sometimes say "the poor Jew;" you sometimes say "as rich as a Jew;" you sometimes say "a regular Jew." These are opprobrious terms, perhaps, but they are true.

Most Jews are really poor according to the common idea of poverty; that is to say, the Jews have no more than they require to supply their daily wants.

Most Jews are rich, because they have enough to supply their daily wants, and they are therewith satisfied; or, as a great Jew said, "having food and covering, we shall be there-with content."

Most Jews are very thrifty, or careful; and as those about them are often thriftless, and are proud of being so, it is said of such as are careful, "a regular Jew;" which, after all, is no reproach when it is rightly understood.

These causes have all helped to carry us through many, many difficulties and dangers. There are, however, other causes which will interest you more at this moment, and which are nearer to the subject in hand.

By our Mosaic Law we are forced to be clean. If you read the law on this subject, you will be surprised what stringent rules are laid down for our guidance.

All that part of the law which relates to unclean food is, as we have heard, exceedingly strict, yet not a bit too strict. The care we take with our food preserves us from many diseases which other persons who are less particular suffer and die from.

Another great point of cleanliness, to which Mr. Bailey did not allude, is our Passover cleansing, and I shall be content to let my short address end with a reference to that ceremony ; convinced that if I could do no more than teach the value of this one act, I should be quite a benefactor to all who were profitably influenced by my words.

The Passover cleansing, when it is faithfully carried out, is the completest piece of house-cleaning that is known in any community. The idea about it is that nothing in the way of leaven—nothing, that is to say, which can set up fermentation—is to be left in the dwelling occupied by man and his belongings.

It would be foolish to assert that the plan here carried out has for its object the health of the people as they understand it. Our people generally follow it as a religious observance. It has come down to us from the great lawgiver, Moses himself, and we obey it as a part of our duty in a Biblical point of view.

At the same time the act is strictly and in the fullest sense health-giving, or sanitary. It cleans the house of all dead, all useless, all offensive matter. It cleans the house of vermin, the presence of which always shows bad and unclean housewifery, and for once in the year it gives the house as well as the people a new start in its useful life.

I do not like to seem to talk of my own home, but I really should have liked you to see what we did there last Passover time. I should tell you that my wife's mother is what is called a strictly orthodox Jewess of the old school ; she has no doubts about what ought to be done, and what she does, she does with all the determination of a Jewess, combined with the obstinacy of a woman who has her own opinions. I don't interfere, because I know the process of Passover cleansing to be a useful one, and so the women-folk have their own way, and I have mine.

You should see them at their task ; it would do many good.

They take every article of furniture, everything out of every room, until nothing is left but the four bare walls.

When they can carry out their full design, they bring all the things that can be removed from the rooms out of doors, and expose them to the air. Bed and bedding, linen, blankets, cushions, chairs, tables, crockery—the whole house that is inside the house.

They empty with the utmost care every cellar, cupboard, closet, dark corner, passage.

They have no sooner emptied a room of its contents, than they begin to clean down the walls and the floor. When they are down on the floor, they scrape out every joint, every crevice, so that no leaven shall remain. They treat all openings in the walls and woodwork in the same way.

At this point of the proceedings I begin my part of the cleansing business. I come in with the distemper brush and the paint brush. I give the woodwork one coat of paint, and I give the walls one coat of colour.

And here I would observe that I do not always use colour of the same tint. I change from year to year in the different rooms. A room that was grey last year I should make a rose tint or a green the next, and so on.

You ask me why?

I do it for change. I am sure that monotony is bad for health and bad for the mind. You see how well this is shown in Nature. She gives the green spring, the red summer, the russet yellow autumn, the pale winter. That is her variety. And it is good for all her children; and I, in my tiny universe called home, humbly imitate her wise ways.

Meanwhile my people, while the woodwork is being painted, and the walls new coloured, and the floors thoroughly cleansed, are attending to the things which have been removed

into the open air. Every article is completely cleansed and purified. A bottle would not even be left uncleansed. If it be an empty bottle it is cleansed inside as well as out, if it is to be kept for future use.

All trace of leaven is swept away. And our house is clean and new garnished.

I assure you that there is both pleasure and comfort in the Passover cleansing when it is all over. We reckon the events of our lives by it, as some women do by the ages of their children. We seem to start afresh in the journey through life.

But pleasure and comfort are of less importance than the health which springs from this system of religious health-seeking.

The reason why our children escape so much more easily than others the catching diseases occurring in childhood is largely due to the observances I have named. Once a year, at all events, they are entirely freed from danger of infection, and that is peculiar to them in perhaps all the countries in which their lot is cast. The effect is wonderfully told in the freedom from early death which they experience.

I will venture before concluding to give one illustration.

A few years ago an inquiry was made at Frankfort, about the deaths of the Jewish and the other people, Jews and Gentiles.

Both peoples were living under the same

conditions, except that the Jews were not so free. They had to live in closer quarters; they were, as a rule, very poor; they were allowed no voice whatever in making the laws under which they were permitted to live.

What was the difference of value in the young life of the Jews and Gentiles under these circumstances?

I will tell you.

During the first five years of life the Jewish children died at the rate of twelve in the hundred.

During the first five years of life the other children—Gentile children I call them, without meaning any offence—died at the rate of twenty-four in the hundred.

So you see two of the Gentile children died to one of the Jewish.

Of the Jews who passed into full manhood or womanhood, fifty-four in the hundred reached the age of fifty.

Of the Gentiles who passed into full manhood or womanhood, thirty-eight in the hundred reached the age of fifty.

So you see nearly one-fourth less of the Gentiles who became men and women reached fifty than of the Jews.

It is true that there are other conditions than the cleanliness which may have led to these great differences. The Jews are a more homely people than others, and they take great care of their young people. That is true.

But again, the very cleanliness, apart from its direct good, is a cause of the homeliness, and leads our families more than any other to feel the meaning of the old song—

“There’s no place like home.”

All these things pull together and all in the same direction, which leads me to feel that I cannot resume my seat with any better proof of what Mr. Bailey has told you about the value of cleanliness and its power to check sickness and misery.

I agree with him that perfect cleanliness—cleanliness of home, of person, of mind—would wipe out disease as a duster wipes off dust, and that our friend Dr. Boison himself would soon have to get his living by teaching instead of doctoring, if everybody would wash and be clean.





CHAPTER XVII.

A CONVERSAZIONE.



ON the 10th of February the great event of the session of the "Guild of Good Life" came off, according to the official programme, at the house of Mr. Meadson, in Tintern Gardens.

The host had spared no pains to make the gathering a success; and if his guests had been the richest of the land they could not have been better or more heartily entertained.

Let a guest feel that he is respected, and he will win respect.

That was Mr. Meadson's practical idea, and it answered well.

The guests as they arrived were treated to tea and coffee, with a number of nice and wholesome eatables, and were then conducted into

the large drawing-rooms, which had been specially prepared for the occasion.

As they entered, they received the following

PROGRAMME.

At 8.0 p.m.

A Madrigal : "Down in a Flowery Vale."

By the Amateur Madrigal Society.

8.20.

An Exhibition of some Rare Books, showing the change from Writing to Printing.

8.40.

Pianoforte Piece : "Irish Diamonds."

By MISS BLUMENTHAL.

9.0.

"Some Microscopical Demonstrations."

By Dr. EDWARD BOISON.

9.20.

A Glee : "Oh ! Lady Fair."

By the Amateur Glee Association.

9.40.

"A Short Description of a Healthy House."

By MR. MEADSON.

The different parts of this programme were carried out with complete success ; and as each person who had something to tell told his story in the simplest as well as the clearest form, every listener was able to follow him.

Dr. Boison had mounted in one of his microscopes some little animal structures taken from the body of a dead fish, which structures, although the animal had been dead many hours, were still in motion. They resembled the points of fine hairs set in lines, and they were all moving together in waving motion, almost like heads of corn waving in the wind.

He explained that these little animal structures were called ciliary bodies, and that there are similar bodies in the human organism in some parts, especially in the lungs.

By means of a beautiful diagram, which everybody could see, he showed that in those tubes in the lungs, which are called the bronchial tubes, these ciliary bodies are placed along the delicate inner membrane of the tubes, and are moving always in one direction towards the windpipe or opening from the lungs into the outside air.

Next he pointed out what the use of these little structures is. He showed that they carry or waft back out of the lungs, any particles of dust which may be drawn into the lungs in the act of drawing in air charged with dust.

Finally, he explained how workmen and workwomen who were employed in rooms where there was much dust were saved from certain death by this beautiful provision of ciliary motion; because, if the ciliary bodies were not there to carry the dust back to the windpipe and mouth, the fine tubes leading from the bronchial tubes to the minute air-bladders in the lungs would be stopped up, and life would cease.

Unfortunately (he added) there are occupations in which the dust is of so cutting a nature that the fine ciliary protectors are destroyed, and then the lungs become fatally diseased.

The mischief thus produced was illustrated

from a microscopical specimen of a potter's lung, where death had been caused by the dust and the irritation arising from it.

Finally, there was shown a set of masks of different constructions, which, being worn in working hours, prevent the dust from entering the lungs and save the workman.

Up to this time no mask has been invented which meets pleasantly all the conditions required. Some masks are effective, but are so ugly that no one will wear them. Others are too cumbersome; others are not effective.

There is still a discovery, therefore, to be made in this matter of workmen's masks for persons who work in dusts.

The demonstration was followed by the glee, after which Mr. Meadson, in order that all the company might hear what he had to tell them concerning a healthy house, invited them to step across a small garden with him, under a covered way lighted up gaily with Chinese lanterns, into his "workshop." The workshop was, for the time at least, converted into a lecture-room, in which, on and near the lecture-table, were designs, maps, models, and all that was necessary to make everything perfectly clear and intelligible.

Martin Swift, who had already been drilled into the work, assisted the lecturer by pointing out the parts requiring illustration as the lecture proceeded.



CHAPTER XVIII.

A HEALTHY HOUSE AND HOME.

(By ROBERT MEADSON, F.R.C.S.)



UR main object in meeting here to-night is to consider what are the best means of securing health in those little centres which we call home. If we could begin there with our reforms, all reform would come in perfect natural order.

In some great and savage forms of warfare the enemies of beleaguered people have won their wicked way by going to the sources of water supply and polluting them. Then, from those small and original sources, disease has spread until it has reached the whole of the community.

In some cases diseases have been spread in times of peace—not by design, but by accident or pure ignorance.

In like manner in all times many diseases have spread through a community, purely by accidental neglect or ignorance, commencing in the homes of the people.

In the last century in this country it is awful to think how the houses and homes of the people were infested by diseases. Small-pox was literally in every house at some time or another, and there the poison of it was laid up and concealed, to become active on every person who was susceptible to it.

A foolish law excluded much daylight in order that taxes, largely for purposes of war, might be raised, and many dark rooms in which people slept could never be kept clean because it was impossible to see where dirt was hidden.

Then, again, the houses were covered or roofed with thatch, in which the causes of disease were easily held, and in numerous instances, which I am old enough to remember, the people actually slept under the thatch, with no ceiling but that over them.

To our shame be it said, there are in our country districts thousands of mud-built, thatched houses in the present day. They are traps for disease.

My wish now is to indicate how a house and home may be made so healthy that diseases cannot easily be introduced into it; and in which, if the diseases do get into it, they can quickly be got out again.

I shall, therefore, first call your attention, if

you will kindly be seated, and will bear with me for half an hour, to two or three subjects relating to the reformation which is required in the house accommodation of our country.

And first I will direct your minds to what may be specified as—

THE ESSENTIALS OF A HEALTHY HOUSE.

I could in this section of my address dwell on a wealthy home, on a middle-class home, on a comparatively poor home, or on a very poor home or lodging. I think it will be best to take for description the third of this series—the comparatively poor home; the home of the workman who is well enough off to determine to have a house, however small, for himself and his family.

The essentials of a healthy house, small or large, are—

1. Freedom from damp.
2. Freedom from all impurities made in itself or connected with it.
3. Abundance of light.
4. A supply of pure water.
5. A supply of pure air.
6. An equable temperature and convenience for personal cleanliness.
7. Means for good cooking and for washing up cooking utensils.

There are other wants which might be included, but these are the seven great wants of the house.

FREEDOM FROM DAMP.

Most houses are damp. In country places damp is quite as common as it is in towns like London.

The causes of damp are five in number :—

The building of towns in close valleys, in which there can be no free circulation of air and no efficient means for evaporation. Our ancestors probably selected such a position in ignorance of the wants of health, and having regard only to present convenience and comfort.

The erection of houses upon a clay soil without due provision for water drainage.

Bad construction of the house itself, from the introduction into it of bricks and other materials eager to absorb water. Timber impregnated with salt, derived from the sea water with which it became saturated on its voyage from abroad.

Drainage from sinks and baths having defective connections, so that water weeps into the house at the joints of pipes, instead of flowing immediately into the sewer ; and gives out unwholesome odours and pestilent vapours in the neighbourhood of the leakage.

The half-burial of houses underground, and the construction thereby of the unwholesome well called the area, from which damp air ascends, drawn into the upper apartments by the superior warmth of these rooms.

If you will keep these causes of damp in your minds, you will remember how to avoid them in so far as they can be avoided.

You will look specially to the basement of the dwelling for the causes of damp. You will take care in the basement that the floor be raised from the earth that is under it. If the soil be a clay soil, you will take up the boards of your lower or basement floor, and see that there is no accumulation of water or damp beneath it. If there be, you will remove the wet that has gathered there. You will introduce a drain by which the water which gathers there will be carried off; you will cover in the wet surface with some substance that will absorb or prevent wet; and, above all, you will take care to ventilate under the floor, so that a current of air is always passing between the floor and the earth beneath.

It is wonderful how easy these improvements are to carry out when there is a good and intelligent will. In my practice, when I was a dispensary surgeon, I knew a shoemaker who was constantly coming to me with rheumatism, and was as constantly bringing one or other member of his family to me suffering with the same disease.

"It seems to be in the whole family, sir," he said; "but it don't come down to us either on my wife's side or my own. I think it's the place we live in."

"Where do you live?"

He told me the street, not a new street, and not a bad street to all appearance.

"In what part of the house do you live?"

"In the basement."

"Are you close packed?"

"No, sir; we take the basement because we get more room there. We've a little kitchen, a living-room, two bedrooms, and an extra room which is my workshop."

"Is it damp and cold?"

"Sometimes it is, sometimes it isn't; but it always is after much rain, even in summer."

"Will you let me come and see it?"

"With pleasure, and thankfulness to you."

I went, sending beforehand a basket of tools, with which I can work pretty well. I went after a wet day, and I found the whole of that basement so cold and damp, it was no wonder they were all ill who lived in it.

With the assistance of the shoemaker, I took up three floor boards of the living-room—an easy job enough, as you know—and there at once I found the enemy. The floor was laid on a well of clay all through, a well about eighteen inches deep. In one place, as we could see by letting down a candle, there were half a dozen shallow clay basins, so to speak, all containing water which was very dirty and not over pleasant to the smell. We then went to the back room, and there, taking up some more boards, we found that the water oozed in under the floor from a small yard behind.

We very soon remedied all this in a simple and inexpensive way.

We bought a few bricks and some cement, and we got a working bricklayer, a brother of the shoemaker's wife, to come in one night and lay a brick drain between the yard and the basement. That was cure number one.

We then made an opening back and front between the under surface of the floor and the outside, by which we got a current of air always freely passing beneath the floor. That was cure number two.

Next I recommended my shoemaker, who was an ingenious man, to lay some rough boards, egg-chest boards would do, and give them on each side a good coating of tar. I told him to take up a board close to the wall, all round the basement, and, having cut his boards into two-foot lengths, to point one end and drive the board into the clay, so that it, the board, could lie flat against the clay, and in that way to box the space all round. In a week that was done, making cure number three.

He had now cut off the source of water oozing by a drain ; we had ventilated ; we had put a dry wall all round the sides of the clay beneath the floor ; and we had only to deal with the flat bottom of the clay, from which we had already taken up the water. I suggested to him to meet the difficulty there, which was now very small, by laying down on the surface all over the clay some dry cinders, which act quite as well as

gravel when they are nicely sifted. He begged all the cinders of the house for this purpose, and soon got four or five inches of cinder surface on that clay floor. This was cure number four.

From that time the basement, where this man lived, was as dry as a bone, and the difference the freedom from damp made in him and his family was like a miracle. What is more than all, the people in the house benefited by the change as well as himself, because to commence from the bottom is always sound and good policy.

I may add further that the house was improved in value, damp being as bad a destroyer of houses as of men; and if the foolish owner had studied his own interests, he would have done for all his houses what we did for one. Of course he wouldn't. "He was not going to spoil good tenants by pampering them, or go in for new-fangled ideas." Not he! "He was a practical man, knew how to get his rents, and that was enough for him!"





CHAPTER XIX.

DRAINAGE AND DUST CLEANSING.—SUFFICIENT
LIGHT.—PURE WATER.



IN every house there is made daily so much refuse, which has to be carried away in the fluid or in the solid form.

That which has to be carried away in the fluid form we call sewage.

That which has to be carried away in the solid form we call dust, or rubbish.

The sewage is carried off, or ought to be, by drains; the dust and rubbish, collected for a time in the dust-bin, by the carrier's cart.

DRAINAGE OF THE HOUSE.

We have first to consider the drainage of the house. In entering on this question, I may

state as a general principle that good drainage is the basis of domestic sanitation. No house is a safe refuge for its inmates, unless the drains are perfect. This is a condition of things which appertains but to few houses in our vast metropolis, even in the wealthiest neighbourhoods; for in innumerable cases already recorded, and in others doubtless still to be brought to light, there have been found the most alarming imperfections, so that in not a few instances the house stands over a cess-pool of large proportions.

In the construction of a house, the main drain should receive as careful consideration as the foundations. The following are among the chief results to be secured :—

1. The main drain *should run in a straight line* from the back to the front of the house.

2. It should, whenever possible, *be laid outside the house*, and should under any circumstances be easily accessible.

3. The size of the drain-pipe, according to Mr. Chadwick's estimate and experience, *need not exceed a diameter of four inches*.

4. *It should be laid with a gradient or fall* of one in thirty.

5. It should be allowed to carry away nothing but sewage water, the soil-pipe connected with the drain being amply sufficient, if correctly constructed and well supplied with water, to flush both soil and drain-pipe efficiently.

Dependence upon the rainfall for flushing

the drain is anything but a good or economical plan, because, from the irregularity of the supply, it follows that in seasons of drought the drains are practically left without flushing, while in times of heavy storms, a drain of the proper dimensions described is insufficient to carry off the surplus volume of water.

The material of which drain-pipes should be composed is still a matter of opinion. Those commonly employed of earthenware answer extremely well; but the highly glazed interior surface, at first considered essential, has been found to attract fatty matters flowing from the kitchen and scullery waste-pipes. A slightly roughened surface, or one formed by hardened clay, is less likely to become cloyed with the fat, because the tiny spaces filled with air prevent attraction.

The jointing of the parts composing the drainage-pipe is a matter of the utmost importance, and all drain-pipes when laid should be afterwards subjected to a water test, in order to detect leakage in any part of the course. Messrs. Maguire's method of cementing each joint into a cup is an excellent plan.

The *ventilation of the drain*, in order to prevent the escape of sewer gases into the house, may be accomplished by an opening at each end of the drain, *i.e.* in the back and front areas. The opening at the back Mr. Chadwick calls a man-hole; and it is so arranged that from it a man can pass a brush through

the drain to force any obstruction onwards, from back to front if necessity require.

There is here a diagram supplied by Messrs. Maguire, of Dublin, in which all the points I have named are well shown; and here too is a model which indicates how the tubes are laid in a basement, and which explains itself.

You see now how very simple a thing it is to remove all the fluid refuse from the house. Everybody ought to understand this completely, and every woman in her own house ought to know where the drains lie as well as she knows where the kitchen is or the parlour.

If I had my way I would have the drainage-tubes in strong glass, concealed by nothing more than a thin metal cover that was easily removable. We should then be able to see at any time if there was any obstruction, or any other difficulty in the way of perfect drainage.

THE REMOVAL OF DUST.

Properly the dust of every house ought to be carried clean away from it every night. In some towns this plan is carried out, and it is a great advantage.

In London we have not got that convenience yet. We have to keep our household dust a week or more, in what is called the dust-bin.

While this nuisance lasts we are forced to make the best of it, and I will give you one or two useful hints about it.

1. Never put into the dust-bin what you can burn. The dead leaves of cabbages and other vegetable substances can be put on the kitchen-fire perfectly well, where they consume easily. Put into the dust-bin, they decompose and cause a very bad odour.

2. Never put bones or other changing decomposing substance into the bin. Bones should be kept in a separate tub, and should go, when they have been cleaned of all that is on them, to the bone-merchant as soon as possible.

3. The dust-bin should be placed outside the dwelling-house, as a matter of course; and—please bear this in mind—the bin ought never to be a fixture. It ought to be so loose that the dustman can take it up and carry it to the cart and empty it straight away.

I have my dust-bins made of iron, like iron boxes, each two feet high and eighteen inches square. They are provided with a lid and with a handle, by which they are carried; and we have four of them in the area, for holding a week's refuse. If you cannot manage to get such a bin as this—you see one of them here—a barrel does nearly as well, and, indeed, quite as well if it be tar-painted and fitted with a good lid. The dustmen prefer a round barrel to a square metal box because it is easier for them to carry on their backs, but it does not wear so long.

SUFFICIENT LIGHT.

While I am still dealing with what are the darkest places in the houses, let me refer to the removal of darkness ; that is to say, to the admission of light.

If you look at the large model of a cottage, built on the best modern principles, which Mr. Swift is now asking your attention to, you will see that everywhere there is provision made for letting in light in the purest possible manner. The windows are large, and wherever an outer door opens from a passage, there is glass in it to let in light.

You really cannot over-estimate the value of light. There can be no cleanliness without it. You have to go into a sick-room that has been kept dark for a few days to form an idea of the danger of a place from which light has been excluded.

You will find all dark houses dirty houses, as a general rule. How, indeed, can it be otherwise ?—for dirt cannot be seen in the dark, nor even in the gloom ; and what is not seen is not often taken away. The senses have to be warned and even alarmed before the mind wills to act resolutely in the way of reform of abuses, and blunders, and obstacles of all kinds.

There is still more than this to be said in respect to light. Light is itself a health-giving agent. Light is itself a purifier. Light helps

to destroy those agents which infect a house and produce disease.

You have all heard of the poison of the snake. You read, some years ago, about the poor keeper in the Zoological Gardens, who was bitten by a snake, and died from the wound. This poison is fearfully fatal, and fearfully rapid in its action; but it has been found that even if it be exposed to intense sunlight it loses its extreme poisonous properties. In like manner, no doubt, sunlight kills the poisons which cause the infectious diseases. Thus sunlight purifies houses, makes the air wholesome, and gives a healthy atmosphere in which to live.

Light also has a good effect on living beings themselves. It freshens them, and it leads to good growth of the body. Persons who are born and live in dark valleys and dark recesses, persons who live in dark places in our large cities and towns, become pale and weak from the closeness and absence of light. You all know how plants droop and suffer when light is removed from them; as when we shut out some vegetables, such as celery, from the light during their growth to make them white.

In like manner, when we shut up young people from the light they become blanched, white-faced, white generally.

Ghosts, which are supposed by the superstitious to visit the earth, are always represented as white in the darkness; and the saying, "You are as pale as a ghost," is very often applied to

people who are of ghostly appearance, because they are living in places where there is not sufficient light to give them colour.

All the rich and vivid and vital colours go with the sun. In the northern regions everything is white, because the sun is so long absent there, and has so little power. In these temperate parts the colours increase in number and beauty. In the tropics, where the sun is most active, colour is most gorgeous, growth is most active, life most prolific.

Pray do not forget these facts about light; let light flood your dwellings. You may shelter yourselves from its direct effects, but let it generally into all your rooms from morning till night. You understand that I refer to sunlight.

Let me add another word of a practical kind on this topic before I go to another. If you are so unfortunate at any time as to fall sick, and are obliged to keep your room, don't because you are sick bury yourself in darkness, as many do. You cannot do a worse thing. You may have a screen or curtain between you and the light if the light excites or irritates you, but all the while let the daylight fill your room. By that means you will keep your room fresh, and your nurse will see that it is clean and in order.

PURE WATER FOR THE HOUSE.

Mr. Bailey, I know, has given some excellent rules respecting pure water. He has not said one word too much, and what he has suggested

on the subject of the filtering of drinking water, and on the boiling of water during times when there is an epidemic, is most sound advice.

I have only one or two words to add to what he has said.

Take care to keep your cisterns clean, and be sure mind that dirty things be not kept over the cistern and give cause for impurities getting into it.

I was shown one day some water which was most disagreeable, and was asked the cause. My reply was, that the cistern must have some kind of communication with the water-closet. That was not directly the fact.

There was, nevertheless, a communication, and it was of this kind: The brush, like a large bottle-brush, which was used for cleansing the closet, was always kept on the lid of the cistern which held the drinking water. The fibres of which the brush was made became rotten, broke off, and fell through some openings in the lid, and into the water.

When the cistern was emptied to be cleaned, there was a small heap of these dirty remnants of the brush gathered up from the floor of the cistern; and it was from these that the water had been rendered impure.

SOFT WATER FOR THE HOUSE.

We have here a very ingenious contrivance for catching and filtering the rain-water which falls on the roofs of our houses. I wish it could

be largely applied, as soft water makes washing easy, saves soap, and saves time.

As it is, we let our rain-water stream away into the sewer. It is a wanton waste.

One of you asked me when we were in the drawing-room how his wife could make water soft for washing purposes. I am glad I have the process of softening water for the house here going on, after the very simple modification of Porter Clark's process, by Mr. Alderman Hallett, of Brighton. We have before us a hard water. It has got in it a large quantity of lime. When a water is hard it is always charged with lime or chalk, which comes from the soil. Chalk soils yield hard waters.

To soften hard water, we proceed as follows:—

Mr. Swift has made a quantity of lime-water by adding nine ounces of fresh burnt lime to forty gallons of water. It is essential that the lime be freshly burned.

He has labelled this, you see, *Lime Water*. Unless the lime had been well burned, it would not have dissolved, but here it is well dissolved, and when that is remembered lime-water is very easily made.

Mr. Swift will next take some of the hard water. He will put nine pints of it into a separate vessel, and add to it one pint of the lime-water. In a little time the whole of this water will be quite soft and clear, with a layer of white chalk at the bottom.

It is a very beautiful chemical experiment,

for in it chalk has been made to expel chalk. I must not be led into explaining the reason now, but must ask you to remember how easily the change is effected.

If you wanted to do it on a larger scale, you would follow Mr. Hallett's plan of having a two-gallon stoneware cask. Into that you would put one pint and a half of lime-water, and afterwards fill up with the hard water. When the cask has stood all night, you have soft water which can be drawn off by the tap.

In some places—Canterbury is one good example—all the water is softened in this way, and everybody can be supplied with soft water for all domestic purposes.

The saving of soap is enormous. Here, from Mr. Hallett's paper, are the figures:—

“One hundredweight of lime will do the work of twenty and a quarter hundredweights of soap.

“The cost of one hundredweight of quicklime is *eightpence*.

“The cost of twenty and a quarter hundredweights of soap is £47 1s. 8d. The saving is £47 1s. 0d.”

Such saving is worth a good deal to working people. And at the same time, the water is improved for drinking purposes, and for making tea and coffee.



CHAPTER XX.

PURE AIR.—WARMING.—DECORATION.



FREEDOM from damp.

Good drainage and every ready means for removing refuse from the house.

Abundance of daylight.

Pure supply of water.

These are four of the fingers on the right hand of health.

There is a fifth finger which we may call the thumb, for it stands almost alone. This is

PURE AIR,

and plenty of it.

Every man now knows how important it is to have plenty of fresh air in the house, and in the bedrooms especially.

Everybody complains of close air, but how few are able to get the air they crave for in a steady and healthy way!

I am free to admit that up to this time no one has discovered any means of admitting air into the house in a manner quite agreeable and effective. The schemes for ventilation are legion, but no special one is applicable to all houses and all conditions.

I shall not attempt to explain the different modes in any detail. It will be most practical for me to describe those modes which I think are cheapest and most suitable for the class of small house which we have now under consideration.

Keep, then, in mind, please, in the first instance, this leading fact, that in ventilating a room two things are necessary—

1. You must let air enter the room from outside.

2. You must let air out of the room in the proportion as near as possible as you have let it in.

In studying the how to do these two things, we shall do well to take the last first.

How shall we let the air out?

About this there need not be much difference of opinion. The proper outlet for the air from a room is by the chimney. In the chimney there is, usually, sufficient warmth to make an outgoing current, and that should in every case be made use of, but in none so much as in the small room. If the chimney is encouraging air to enter it at the upper part of the room, air will get in somewhere from outside to fill the

place of that which goes away, and so the air is changed to a certain extent. It ought to be changed three times per hour out and out.

The opening between the room and the chimney ought to be at the top of the wall of the room which is in front of the chimney. It should be about six inches from the ceiling. Into this opening should be fixed the ventilator.

One of the cheapest and best of all, I think, is Kite's box ventilator. It is made of tinned or galvanized iron; it requires no valve, and it can be inserted quite as easily as you can insert a brick.

We have to see as a further step how to let the air into the room.

For a steady, always acting method of letting in the air, Mr. Hinckes Bird's costless ventilation is one of the best. It is as follows, as you will see in the model:—

You lift up the lower sash of your window, say four inches. You place now a piece of board between the sash and the window-sill in such a way that the piece of board will fill up the open space and support the window. You leave that piece of board in the place where you have put it.

You have now left between the sashes in the middle of the window an open chink, up which the air from without can ascend into the room at all times.

In my house I carry out this same plan by letting the top sash down, instead of lifting up the lower one, and I introduce the piece of wood

between the upper edge of the top sash and the under part of the framework of the window frame. I think this looks better; but that is purely a matter of taste.

The tubes known as Tobin's tubes are very good for ventilation. They are square tubes, which run up in the room about six feet in some corner or space, and are open at the top. At their lower part they communicate with the outside air. Generally speaking they answer very well.

Sherringham's valve is a very good one. This is a box, which is inserted in the wall of the room usually between the windows, and which communicates with the outer air. The current of air as it enters is diverted towards the ceiling, and striking that is driven down into the room.

Again, Kite's ventilating box is as applicable for letting in air to the room as it is for letting air to the chimney from the room. It is inserted from the outside, as if now the room were the chimney, and it serves its purpose very effectively.

In a house I once lived in I ventilated all the rooms from the air above the house. I carried a ventilating shaft from above the roof clean though to the basement. I made every room communicate with this shaft, and so arranged it that whenever the temperature or warmth of the room was raised, the air began to descend from above and enter the room about three feet from the ceiling.

If I were building a new house I would ventilate every room from such a descending shaft.

WARMING AND VENTILATION.

To combine warming with ventilation is a great advantage, and the day, I think, is not far distant when all houses, great and small, will be ventilated and warmed by one process.

You will observe on the table a stove called the Calorigen, and you will see on the walls a drawing showing that stove in action. The stove is the invention of a very ingenious man, Mr. Webb George.

The stove works with either a coal or a gas fire. The principle of it is that air from the outside is brought into the stove, and, without coming into any contact with the air which is coming from the fire itself, is heated by passing through a coil, and so heated, is distributed into the air of the room.

The present room in which we are is warmed and ventilated by one of these stoves—the large one at the right far end of the room under the small window.

The same principle has been introduced by Captain Douglas Galton into the fire-grate. In his fire-grate, air brought from the outside is made warm at the fire and is then delivered into the room a few feet below the ceiling.

In some houses this same principle is applied to the kitchen-grate, and from that grate pure

air flues are distributed to all the rooms in the house. When there is a good fire in the kitchen every room gets some share of the warm atmosphere.

The plan is so good it must be generally adopted in course of time. You will see the vast economy of it at a glance. It costs nothing but the first setting to get the advantage of warm air all over the building from one fire. For eight months of the year this is sufficient of itself: and during colder months, when other fires are wanted, they need not be so large as they would be if the whole of the heated air were wasted up the chimney.

It is a truly valuable method to keep up an equal warmth in every house. Sixty degrees (60°) by Fahrenheit's thermometer is the right warmth to be maintained. You can buy a thermometer for a shilling, and with very little practice can learn what degree of fire in your house keeps it at 60° in all parts.

Warmth of an equal kind is actually necessary in this variable climate for all weakly persons, young and old. A wave of cold passing over our land kills with all but mathematical precision.

The late Dr. Farr wrote down a rule on this subject.

If a sudden accession of cold kills, the numbers it kills run in proportion to ages,—taking equal numbers of persons at the ages stated—and doubling every nine years.

If one is stricken down at 39 years	
Two are stricken down at 48	„
Four	„ „ 57 „
Eight	„ „ 66 „
Sixteen	„ „ 75 „
Thirty-two	„ „ 84 „

Thus the weak and aged are very susceptible to cold, and, in fact, the weak at all ages are.

So, following Mr. Bailey's terse advice about cleanliness, I close this division of my subject by saying, "Keep yourselves warm."

COOKING ARRANGEMENTS.

Be sure to have a good cooking-stove, of which so many now are made, it is really difficult to say which is best.

Whichever you select let it be one that has the following three good points:—

1. That it produces little smoke.
2. That it has a good boiler.
3. That it has a well-ventilated oven.

If the stove consumes most of its own smoke you have fair evidence that it is economical in regard to fuel.

If it has a good large boiler, the water of which is quickly heated, you have, by it, always at hand one of the greatest requisites for cleanliness and health—plenty of hot water.

If it have an oven that is well ventilated, you have the means at command for roasting in the oven as well as baking, and that is a saving as well as a luxury.

I will, with your kind permission, enlarge on this topic in another session of your society, and will perhaps make it a topic for half an hour's special explanation and demonstration. Keep the principles in your minds, and think out details for yourselves.

DECORATIONS IN THE HOUSE.

"Home is home be it ever so homely," is the old proverb, and it is a true one ; but homeliness need not mean cheerlessness, and the means for health need not mean anything less than beauty.

Let the walls of your rooms look as bright and cheerful as you like, and change the colours of them every year if you please, as our friend Mr. Lavis said he did.

I quite agree with Mr. Lavis that the distemper colouring is best for all walls. It really may be got up now to look like paint, and with a little skill in designing may be put on the walls with such good taste as to half furnish a room of itself.

Art, too, is now so cheaply munificent in her beautiful gifts that you can put on your walls, for shillings, pictures for which our grandparents would have paid pounds. Be quite sure that nothing is lost by pleasing the eye with beauty. The palate is not more an organ of sense than the eye, and both should be wholesomely fed.

Flowers should find a place in every house. They are healthful as beautiful. I never enter a house, however poor, in which flowers are

kept with order and pride and neatness, but that I feel sure that the people who reside in the house are good people, that they have taste and tenderness and industry.

By faintest marks great truths are oft-times traced.

And this mark of flowers in the dwelling-place is one which tells with singular power.

The Ladies' Sanitary Association endeavoured some years ago to encourage window-gardens amongst the poor, and offered prizes for those who cultivated the best gardens. I am sorry the competition is not kept up. It may be worth our while to revive it.

And now I have only to thank you for the kind attention you have given me, and to express the hope that you will enjoy the rest of the evening to your heart's content.

CLOSE OF THE CONVERSAZIONE.

After Mr. Meadson's lecture was ended the whole of the company returned to the drawing-room, where they were entertained with more music, with a reading, and with the examination of many works of art, literature, and science.

They parted from their host, feeling that they were not strangers, but that a friend, having the same hopes and desires as their own, had contributed to their healthy and independent enjoyment.



CHAPTER XXI.

FOOD AND FEEDING.

(By NOEL COOK.)



THE fifth meeting of the session of the "Guild of Good Life" was held in usual form, on March 10th. The treasurer of the Guild, Mr. Trustyman, occupied the chair.

The minutes of the last meeting having been read, and a hearty vote of thanks passed to Mr. Meadson for the entertainment he had given to the members and their friends, the chairman called for the paper of the evening, which had been duly announced, and was now to be read by Mr. Noel Cook.

I am going to try in this lecture (Mr. Cook observed) to offer some simple facts about—

FOOD AND FEEDING.

Food is one thing, feeding is another thing ; so the subject naturally divides itself into two parts.

I will do my best to explain what food is.

Next, I will do my best to give some idea of values of food for the purposes of feeding.

Lastly, I will refer to feeding, or the application of food for the support of life.

WHAT FOOD IS.

We all commonly say that food is the substance we take into our bodies to support them and to give us warmth and strength.

That is quite true, but it is a very rough account of what food is, after all. If we said no more than this, one food would be the same as another, as we should think.

Different foods are required, however, for different purposes. The body that has to be fed is made up of different parts, and the food required for building up those parts must, therefore, be different also according to the requirements.

The body that has to be fed is not built up merely ; it is moved—it moves itself.

There must be food, therefore, that will enable it to move.

The body must be of a certain warmth—98° and a fraction over by Fahrenheit's ther-

mometer. If it fall many degrees under this warmth it dies from cold.

Thus we see very plainly—don't we?—that there must be two kinds of food on a broad scale.

There must be *building foods*. There must be foods which *supply animal warmth* and the *power to move*.

There is another food wanted, which is a drink as well as a food. The foods which build up the body, and which give warmth and strength, must be carried into the body; must be distributed through the body; must be changed in the body; and, when they have served their purpose, must be carried as residue out of the body.

This last-named food, which is a drink also, is water.

Thus water becomes one of the most useful of foods, as it is also one of the most abundant.

Water makes up over sixty-seven parts per cent., by weight, of the whole body.

If the body of a human being that was just dead, and that weighed one hundred pounds, were left in the sandy desert under the sun's heat, it might dry down until it had lost all its water. If that occurred, when all the water was gone from the body and it ceased to weigh any less on further weighing, then it would be found that all the residue, including the bones, would yield no more than thirty-five pounds. Sixty-five pounds of water would have been lost by the evaporation.

Let us sum up, then, what are the necessary foods, and place them in line.

1. Water.

2. Foods to build up the body and repair waste.

3. Foods to give vital warmth and power.

Water as a food will, no doubt, be dealt with in the next paper, this day month, by Martin Swift. I shall consequently refer to the foods which build up the body and to those which supply vital power.

THE FOODS WHICH BUILD.

The foods which build up the body are called in these days by different names. They are called—

Constructive foods.

Nitrogenous foods.

Colloidal or jelly foods.

Saline or mineral foods.

These seem to be hard names, but they are simple enough when they are explained.

These foods are called constructive because they construct, or make up, the body.

They are called nitrogenous when they contain the element nitrogen as their most important parts, as foods.

They are called colloidal when they are like jelly in character, colloidal meaning a gelatinous or jelly-like substance. Collodion is a jelly-like substance, though it is not a food; but it takes its name from its appearance.

They are called saline, or mineral, when they are like earthy or mineral substance.

I will show you a piece of animal structure, which contains in itself both colloidal and mineral substances united. It is a long bone, a rib from a sheep. If I take a piece of this bone and put it in the fire, a great part of it burns. What does not burn remains as a white ash. I weighed one hundred grains of bone yesterday, burnt it in a furnace, and collected the ash.

The ash is here, and it weighs sixty-eight grains.

If you subtract sixty-eight from a hundred, there is left thirty-two.

There was, therefore, in that bone which I burnt sixty-eight grains of substance that wouldn't burn, and thirty-two grains of substance that would.

A few days ago I weighed another hundred grains of bone ; but, instead of burning it, I let it soak in a solution of hydrochloric acid, commonly called spirit of salt. Now observe what I have got. I have got the bone ; but see, it is as soft as a piece of jelly. My little son, who was at the sea last year, said it was a bit of seaweed. It does look like it. It is so soft and bendable I can tie it into a knot.

This is the animal substance which would burn ; this is the jelly of bone, the colloidal substance, the nitrogenous substance. It and the mineral substance, or ash, combined made

up or constructed the bone, and for the purposes of body-building we want these two substances just as much as we want bricks and mortar for the building of a house.

We find the substances in certain parts of our food.

The jelly-like foods are supplied to us in the flesh of animals—the lean, as we usually say; in eggs; in cheese; in common jelly; in the part of flour or bread called gluten; in the cheesy or curdy substance which is present in milk and peas and beans.

The mineral substance, which is so necessary to make bones and teeth, we derive from the earthy substance that is present in wheat, or oats, or peas and beans, or the juicy parts of animal meat, the gravy.

If children are not fed with a sufficient quantity of building nitrogenous food, their muscles feel watery and flabby, and they are bodily weak.

If they are not fed with food which contains a sufficient quantity of mineral or earthy matter, their bones become feeble and bend under them, making them rickety and bow-legged.

What numbers of poor crippled children there are about, terribly crippled by this one error in feeding alone, the error of not giving them food containing enough of mineral substance! Cheap as it is when people understand how to get it, it is not given them.

WARMTH AND MOTION-GIVING FOOD.

When we feel our own bodies and compare them with other things about us—water from the pump, the handle of the pump, wood, or iron, or stone—we say we are warm. We know there is in us a fire which, in life, is always burning.

We call this burning, the animal fire, the lamp of life, the vital heat.

And when a person is dead we say he is cold as a stone.

The animal fire, therefore, must be kept up in us, just as it must in a steam-engine, else we can't go on.

To keep up the animal fire we must have fuel that will burn when it gets the air, and that fuel we find in foods, but in different kinds of foods to those we have been talking about already.

We get that fuel in the foods which will burn.

The foods which will burn are called by different names. They are called—

Carbonaceous foods.

Hydrocarbon foods.

Combustible foods.

Respiratory foods.

They are called carbonaceous foods because the substance called carbon,—of which common coal is an impure specimen, and lampblack, got by burning oil or fat and collecting the black, is a fair specimen,—is the base or starting-point.

They are called hydrocarbon foods because another element, hydrogen, is combined in the foods with the carbon.

They are called combustible foods because in the body they undergo slow combustion, that is to say, slow burning, to produce animal warmth.

They are called respiratory foods because they burn in consequence of coming into contact with the vital part of the air we breathe, or respire, by which contact they are made to burn, just as coal burns out of the body when we set fire to it and blow the fire to supply air.

We ourselves are always blowing the fire. With every breath we draw we are blowing the animal bellows and keeping the fire alive.

What are the foods that burn in this way?

They are—

Animal and vegetable fats and oils.

Starch and starchy substances.

Sugar and sugary substances.

The fat of meat, the different kinds of oils that are eaten, and butter, are respiratory, or burning, foods.

Potatoes, which contain so much starch; bread, which contains a great deal of starch, these are respiratory, or burning, foods.

Sugars, common sugar, grape-sugars and sugars of all fruits, and milk-sugar, these are all respiratory, or burning, foods.

Now that we know what foods are, and what their use is, we can go a step further and under-

stand what comes before us when we sit down to our meals, and why we look for different kinds of things to eat on which we may live.

In order to get everything clear in our minds on this subject, we will take some of the common foods as they come before us, and look at the way they are composed, and of what value they are for the different purposes for which we want them.





CHAPTER XXII.

VALUES OF COMMON FOODS FOR FEEDING.



O understand what we have had before us in a practical way, let me show you a description of a standard food, one that answers all purposes. Can we find such a food in nature ready made for our hands, or our mouths, if you think that more correct?

Yes. Milk is such a food.

Our grandmothers and grandfathers and all before them knew that as a fact, but they did not know why. They knew that men and all milk-feeding animals could live on milk without any other food for some part of their lives. But they did not know why as we know.

We know that milk answers every purpose because it contains everything that is wanted.

Milk contains the foods that build up the body.

Milk contains the foods that keep the animal fire alive.

Milk contains the water that carries the foods over the body.

THE MILK OF THE COW.

This is the plan in the example of cow's milk :—

							Per cent.	Per cent.
Constructive foods for building up the body	Flesh-forming	Cheese ...	...	...	3.98		
		Albumen ...	...	...	0.94		
	Mineral ...	Phosphate of lime and other salts					4.92	
Combustible food for keeping up the animal fire ...		Butter ...	...	...	3.50		
		Sugar ...	...	...	4.00		
							7.50	
Water ...	...	...	...	...	...	...	86.88

							100.00	

This is a very plain and simple lesson. Look at it, and you will see at a glance what foods Nature wishes you to live on, and the proportions in which she sets them out.

If Nature, instead of giving us milk, in which all she wants for us is mixed together, were to set us down at a table and supply everything in the separate form, so as to give us one hundred ounces of food for two days' consumption, she would give us about five ounces of dry animal food for building purposes, equal to one pound and a quarter, or twenty ounces, of fresh, moist, uncooked meat.

Three-quarters of an ounce of mineral food.
One pound and a quarter, or twenty ounces,

of dry food for keeping up the fire, equal to one pound and a half or twenty-four ounces of such food as we take it, in the mixed form of potatoes, bread, butter, fat, oil, sugar, in the fresh state.

Water for diluting and distributing the food, three pints, or sixty ounces.

Supposing these two days' fare were divided into six meals, then for each day there would be at each meal—

Three ounces and not quite a quarter of animal food in the fresh state ;

A little less than a quarter of an ounce of mineral food ;

Four ounces of food for warmth ;

Ten ounces, or one tumblerful, of water.

I put this forward as a fair average sample for man and woman. Of course, under very severe work, or under very severe weather, or under idleness, or indeed very hot weather, the proportions would vary.

The Laplander in his cold lodging wants a pint of train-oil a day to keep up his animal fire. The Indian in the tropics wants double the quantity of water and not much more than half the quantity of heat-giving food which I have specified.

My object has been to supply a general standard, nothing more.

DIFFERENT COMMON FOODS AS FEEDERS.

If we turn to the different sources of foods and ask how they stand in respect to our daily

food, we gain another very valuable set of facts. I will refer to a few of these.

Wheat.

When we cut a grain of wheat in half from top to bottom, and look at the cut surface with a very strong magnifier, we find that all round the edge there are five layers of flat cells which look like coverings, or skins.

Within them there is another layer of square cells which, when the grain is moist, are filled with a glutinous fluid.

Inside we find the body of the seed filled with an immense number of many-sided cells, or little cavities.

Those outer layers of the wheat grain contain the mineral food.

The square cells contain the gluten, or animal food.

The cells in the centre contain the starch, or heat-forming food.

The quantities per cent. of these foods in dried wheat are :—

Building food	...	{	Flesh-forming	...	13'6	15'3
			Mineral	...	1'7	
Heat-producing	...	{	Starch	...	69'0	70'2
			Fat	...	1'2	
Water	...		...	...	14'5	100'0

In whole-meal flour from wheat we get all these parts entire, and then, if every irritating

part be removed, we have all that is nourishing that the wheat can give.

Unfortunately, in order to get white flour, the outside part is often removed, and thus we get the starch in greater excess than is natural.

Fine flour, for instance, contains per cent. :—

Building food	...	{	Flesh-forming	...	11'0	
			Mineral	...	0'9	11'9
Heat-producing	...	{	Starch	...	74'3	
			Fat	...	0'8	75'1
Water	...					13'0
						100'0

Look at that ; see how bad it is for balance of what we want. Naturally the starch is in excess in the wheat itself. But imagine a white loaf with three parts out of four starch. It can't support all life, and yet people often try to feed their children on sop of white bread—because they know no better.

Rice.

Rice is a food very much like to white flour in quality, but containing still more of the heat-forming food.

Rice contains per cent. :—

Building food	...	{	Flesh-forming	...	7'5	
			Mineral	...	0'5	8'0
Heat-producing	...	{	Starch and cellulose	...	76'9	
			Fat	...	0'5	77'4
Water	...					14'6
						100'0

Starch, as you will now infer, cannot of itself support life; but, with proper quantity of flesh-forming and mineral food, it is a very cheap and excellent heat-producer.

Beans.

Beans and peas are capital foods. They contain in the form of caseine, or cheese, plenty of building material, and they also contain a large quantity of heat-making material, as well as mineral food.

Haricot beans, dried, contain per cent. :—

Building food	...	{	Flesh-forming	...	28·5	
			Mineral	...	2·9	
					—	31·4
Heat-producing	...	{	Starch	...	52·6	
			Fat	...	2·0	
					—	54·6
Water	...					14·0
						—
						100·0

With a proper addition of water, there is everything that is wanted for food in beans, as far as actual material is concerned.

Mushrooms.

Mushrooms are excellent food. They come near to milk, and they ought to be cultivated on a very large scale in great towns.

Mushrooms, fresh, contain per cent. :—

Building food	...	{	Flesh-forming	...	5·00	
			Mineral	...	0·50	
					—	5·50
Heat-producing	...					4·50
Water	...					90·00
						—
						100·00

Potatoes.

Potatoes, which are so commonly used as food, are good food, but chiefly in one direction.

Potatoes contain per cent. :—

Building food	...	{	Flesh-forming	...	4.6	
			Mineral	...	1.0	
					—	5.6
Heat-producing	...		Starch	...		16.4
Water	...		...	...		78.0
						—
						100.0

You will see here that the potato is over three parts water, and that the greater part of the solid matter is heat-producing. It is so, and no one could live healthily on potatoes alone for any length of time.

What, then, of the potatoes and buttermilk of Irish celebrity?

Well, that is a different thing altogether. The buttermilk is the milk with the butter, or heat-producing food, extracted, but with the cheese, or flesh-forming substance, left.

So Patrick in the golden days of potatoes and buttermilk merely exchanged one heat-producing food for another, butter for potatoes, keeping the potatoes and the cheese of the milk for his own use, and selling the butter for somebody else's use. Exchange here was no robbery, for potatoes and buttermilk turned out to be one of the most admirable and simple foods ever discovered for human subsistence.

GREEN VEGETABLES.

There is very little nourishment in green vegetables, because they contain so much water. Take, for example, cabbage as a food.

Cabbage contains per cent. :—

Building food	...	{	Flesh-forming	...	1'50
			(albumen)		
Heat-producing	...	{	Sugar	...	5'0
			Starch and flour	...	5'0
					10'00
Water	...				88'50
					100'00

Carrots and turnips are still less nutritious than cabbage.

At the same time fresh vegetables of the kind named are not without their value. They are healthy as foods although not sustaining. You mustn't depend on them for a day's work.

FRUITS.

Some fruits are very nutritious. Bananas are exceedingly good as well as delicious. They contain per cent. :—

Building food	...	{	Flesh-forming	...	4'90
			Mineral	...	0'80
					5'70
Heat-producing	...	{	Sugar	...	19'70
			Fat	...	0'50
					20'20
Water	...				74'10
					100'00

It would be very good if we could get bananas cheap.

Apples and pears contain about eighty-five per cent. of water, and six to seven of sugar, with very little, not one per cent., of flesh-forming food. But they contain a vegetable acid called malic, which is very wholesome. Apples contain one per cent. of this acid, pears less.

Grapes contain eighty per cent. of water, and thirteen of sugar, or heat-producing food, but not one per cent. of flesh-forming food. They also contain an acid, tartaric acid, in the proportion of nearly one per cent. This acid is very wholesome.

Figs are more nutritious. Dried figs as they are sold in the shops contain about seventeen per cent. of water, six of flesh-forming food (albumen), nearly three of mineral food, and over sixty of heat-producing, including fifty-seven of sugar.

Figs ought to be used much more than they are.

Dates are excellent food. The dried dates contain twenty per cent. of water, over six of flesh-forming food, nearly two of mineral food, and over sixty of heat-producing, including fifty four of sugar.

In some countries where dates are abundant, the natives live on them, I believe, to a large extent, and no wonder, considering how nutritious they are.

ANIMAL FOOD.

You will be sure to want to know something about animal foods and their value. I will state as shortly as I can what I know about them.

Animal foods, then, including in them mutton, beef, veal, pork, contain as a rule, per cent. :—

Over seventy per cent. of water ;

From three up to eleven per cent. of flesh-forming food ;

One to two per cent. of mineral food ;

One to eight per cent. of heat-producing food—fat.

You may consider this is a wide range, and so it is. I will give you a few examples.

Leg of Mutton.

Flesh-forming food	...	...	11 per cent.
Mineral food	...	...	3 to 4 "
Heat-producing food (fat)	...	8 "	9 "
Water	...	70 "	75 "

Neck of Mutton.

Flesh-forming food	...	...	9 to 12 per cent.
Mineral food	...	...	1 " 3 "
Heat-producing food (fat)	...	8 "	9 "
Water	...	70 "	74 "

Veal Cutlet.

Flesh-forming food	...	...	8 to 10 per cent.
Mineral food	...	...	1 " 2 "
Heat-producing food (fat)	...	5 "	6 "
Water	...	72 "	75 "

Beef Steak.

Flesh-forming food (lean)...	...	12 to 15 per cent.
Mineral food	...	1 " 1½ "
Heat-producing food (fat)	...	3 " 4 "
Water	...	70 " 74 "

Pork Chop.

Flesh forming food (lean)	...	10 to 12 per cent.
Mineral food	...	1 "
Heat-producing food (fat)	...	8 to 9 "
Water	...	70 " 74 "

The quantity not accounted for in reckoning up the hundred is skinny substance and sinew. Bone is excluded altogether in the calculation.

Salted Foods.

Salted foods are not so nutritious as fresh meat. The salt, which has no nourishing value, adds to the weight and makes the food less wholesome. We know that sailors who have lived long on salted provisions become subject to sea-scurvy, a very serious disease.

Salted ham contains per cent. :—

Flesh-forming food (lean)	...	8 to 10 per cent.
Mineral and added salts	...	6 „ 7 „
Heat-producing food (fat)	...	8 „ 9 „
Water	...	62 „ 60 „

Fish.

Fish forms a food which is very good, and if we could only get fish cheaply we should be much better off than we are, so long as we have recourse to animal bodies for our sustenance.

Mackerel, as one specimen of fish, contains:—

Building food	...	{	Flesh-forming	...	13'5	
			Mineral	...	3'1	
					—	16'6
Heat-producing	...		Oil and fat	...		12'5
Water	...			...		70'9
						—
						100'0

Fresh bloater contains :—

Building food	...	{	Flesh-forming	...	14'5	
			Mineral	...	2'6	
					—	17'1
Heat-producing	...		Oil and fat	...		11'5
Water	...		...	...		71'4
						<hr/>
						100'0

There are many other fishes which are excellent food. The sturgeon is as rich in flesh-forming substance as beef and mutton, and, indeed, it yields splendid steaks. The salmon abounds in oil. Cod-fish and whiting are more watery. All fishes that are commonly eaten supply the phosphates and earthy salts freely.

Some think that fish is useful for the nervous system, and they certainly do answer well as food for those who have much brain work to carry on.

You must not blame me if I have been a little tedious in these particulars. It is quite impossible to understand anything about foods and their values, unless trouble be taken to learn the details.

It will, I dare say, have struck you that the vegetable foods contain the same necessities for life as the animal foods do. That follows of necessity, because all the food we eat, whether it be flesh or vegetable, comes originally from the vegetable world.

When we eat flesh, we eat the flesh of some animal which has got its own flesh from the grass or other vegetable substance. If you

think of it, all the domestic animals that we feed on—sheep, oxen, goats, fowls, pigs—subsist on vegetable food, and make it into flesh for us; and if it should happen that we fed on any animal that had lived on animal food, that animal must have got its food from some other animal, which went to the vegetable world for its supplies.

We could, therefore, live direct on vegetarian diet and fruits if we liked, and that we should find it a very cheap mode of living, for the simple reason is certain because it would be going first hand for all our food. I am not a vegetarian, but I am bound to say so much in respect to the vegetarian system.

I ought not to close this part of my discourse without recommending you to get, for study, Mr. Church's excellent book on food, from the South Kensington Museum Science Handbooks. It will cost you a shilling, and will save you many pounds a year if you use it well. I am greatly indebted to it for many of the facts which I have read to-night about the values of foods.





CHAPTER XXIII.

SAVING IN FOOD.



SHOULD like to see the vegetarian and fruit-living plan brought into general use, and I believe it will be. We only want to learn better how to prepare vegetable food for us to live on it altogether.

For my part, I do live on it pretty well altogether.

I have oatmeal porridge, with bread and a very little butter, followed by an apple or pear, for my breakfast.

I have often never more than three ounces of animal food with my dinner. But then I take haricot beans or peas-pudding with it, a little potato, a few grapes, or a fruit pudding.

I have weak tea or coffee, with a small cupful of milk and a little toast, for my tea.

I have a small dish of whole-meal porridge, with jam, for my supper.

This is very near vegetarianism. I work on it first-rate, and there is no one here who couldn't, with little varieties as to fruits and vegetables according to season.

One shilling and sixpence a day would buy all I require.

But we English people are most wanton in what we do with food, and if there doesn't come a serious day of reckoning in this matter I am very much mistaken. It is really shocking to see the waste which is every day going on, one person striving against another to see who can waste the most.

I am old enough to remember the cotton famine, and I remember also a paper that was written then, and which I copied.

In that paper the author said, in describing the foods that fall from the table, that such is the waste in the houses of the majority of English people who are what is called in comfortable circumstances, that if a family consist of six persons there is enough food lost in that family to feed a seventh. Assuming, at the lowest calculation, that a twentieth part of our population is to be considered in moderate circumstances, and not including in the estimate the mansions of the rich, it seems clear that there falls from the tables as food directly lost as much sustenance as would feed 166,000 persons. Let no one start at this fact, but

rather reflect upon it. Let him calculate rigidly what in his own household is lost; let him ask himself how much more is lost than he dreams of; and he will not quarrel with the figures we have placed before him.

To form some kind of idea as to the actual amount of food that is wasted in England, this same author made a comparison between this country and some other countries. He took for this purpose France, our nearest neighbour, and he told us what I shall next read.

Accepting the population of France at 35,000,000 of persons, and dividing amongst them equally the foods used in the way of oxen, sheep, goats, pork and bacon, poultry, game, fish, eggs, and cheese, we find that in the consumption of these staple articles the average for each person does not exceed two and a half ounces, while in England it exceeds seven and a half ounces.

It may be urged that the difference is due to our modes of life; that is to say, to our necessities. We require more animal food than the Frenchman is an every-day argument, and we may require about one ounce per person more, which quantity, in fact, means an immense difference. But it is impossible that we should require five ounces more, although, in our vanity, we sometimes claim that one Englishman is worth three Frenchmen.

Upon what, then, does the enormous difference in food depend?

It depends on the waste that goes on here.

In respect to animal foods (and the same rule obtains to some extent to vegetable foods), this is the great fact, that, after giving the Englishman three parts of food to the Frenchman's two parts, the food that would be considered necessary for *twenty millions of people* in England would feed *thirty millions* in France without any outcry or any danger.

If further facts were wanting to show that sheer extravagance is the main cause of this vast difference, we may find them in France itself, by a method of research fairer than that of comparing England with France. It appears, then, that even in France the waste of food increases enormously in great centres of population, where the means of existence come readily to hand, where men and women are too much occupied in pleasure or in business to think about what can be saved, and where luxuries are considered to be the necessities of existence.

This fact attains to the highest development in Paris. In that one city the average consumption of animal food rises positively above the average of all England. It reaches to nearly nine ounces per individual per day. Thus, in her great centres, France also is so extravagant that, if a comparison were instituted between her town and her country populations, she too could support without pressure some five millions more people than she now does on her present resources.

We might continue this illustration by comparing English cities and villages in the same way, but the results would only be a repetition of that which is seen in France, in magnified proportions.

If it be asked in what kind of foods may saving be carried out, I answer in nearly all. The residue of coffee that has been used for six persons will always with care in manipulation make an excellent cup for a seventh, and the same holds good in regard to tea. Potatoes, greens, vegetables, bread, and the residue of all animal food, can be turned to good account. A bone is not finished that has simply been cleared by the carver. Treated afterwards by a skilful cook it yields a good residue of jelly, much fatty substance, and a small allowance of remaining fleshy food.

In many parts of France there is in every household a vessel in which all these important oddments are carefully collected, and are kept in the form of stew for many days, and when they are required, they yield, not one only, but two or even three dishes. A little rice, or flour, or oatmeal, or arrowroot, all articles of small value, together with appropriate seasoning, serve to effect these changes and to produce wholesome and nutritious meals, which in England are quite unknown.

In order to fix this fact in a practical way on the mind, I will give one very fine receipt for saving by a great French cook, the late Mr. Soyer.

No man ever gave us cheaper, or better, or more scientific directions on the subject of foods in the form of soups and panados than Mr. Soyer.

Soyer was guided to his results by three great secrets: he made all the productions of nature available; he wasted nothing, and he reduced the animal and vegetable substances into what he called "a glaze," mixing them with flour and producing foods which are palatable, nutritious, concentrated in form, and easily preserved and distributed.

By the ordinary methods of cooking he assumed, and it is believed correctly, that fifty per cent. of the animal and vegetable substances are lost. Now I give his receipt for a soup, which it were impossible to beat.

For one hundred gallons of this soup, the following are the ingredients:—

	£	s.	d.
12 lbs. of solid meat at 8 <i>d.</i> per lb., cut into pieces one inch square, or 16 lbs. with bones at 3 <i>d.</i> per lb.	0	8	0
3 lbs. 2 oz. of dripping	0	1	0
12 lbs. of onions, sliced thin	0	0	8
6 lbs. of leeks, sliced thin; 6 lbs. of celery, sliced thin; 8 lbs. of turnips, washed only, and cut into dice half an inch square	0	1	3
37½ lbs. of flour, seconds	0	7	0
25 lbs. of pearl barley, previously soaked	0	6	9
9 lbs. salt	0	0	3
1 lb. 7 oz. of sugar	0	0	9
	£1	5	8

Take twelve pounds of the solid meat, or sixteen pounds with the bones (legs or clods of beef are excellent for the purpose), cut them in pieces about an inch square ; put the dripping in the pot or boiler, and light the fire ; when the fat is melted add the onions. Fry ten minutes, or until a thick glaze is produced, then add the salt and sugar and four gallons of cold water ; next add the flour ; keep stirring quickly until quite smooth ; add the barley, and fill by degrees with hot water. Boil for three hours, or until the barley is quite tender, and serve.

In case either the barley or rice does not produce the thickness required (as those ingredients may differ in quality), then add, if too thin, a few pounds of flour or oatmeal, previously mixed with cold water, to make it into a liquid batter, and pour it in when boiling, about twenty minutes before serving it out. The proper thickness is easily ascertained when the soup hangs lightly on the back of the spoon or ladle.

The soup, which will keep several days, is at once nutritious and palatable ; it costs not quite three farthings a quart.

Since we learned to make this soup in our house we have rarely been a week without having some of it, and I wish I had time to give you some similar receipts, though there are few so good.

I shall conclude by offering three short suggestions from what has been said above.

1. Get fixed in your minds what food is, where it all comes from, and for what particular uses each kind of food is designed.

2. Keep as near as ever you can to the first sources of supply—fruits and vegetables.

3. In cooking don't boil away nutritious matter from food, but keep all you can. Take a hint from the French as regards the stewpot, in which nothing is lost, and boil your potatoes in their skins if you wish to preserve all the food they contain.





CHAPTER XXIV.

DRINK AND DRINKING.

(By MARTIN SWIFT.)



HE last meeting of the "Guild of Good Life" was held at the usual hour and place, on April 14th.

Dr. Edmund Boison occupied the chair, and called upon the honorary secretary, Mr. Martin Swift, to read the paper of the evening on "Drink and Drinking."

Mr. Swift then read the subjoined address :—

WHAT IS STRONG DRINK ?

In the paper read at last meeting by Mr. Noel Cook, the composition of foods and drinks was so fully set forth that I need not, as I had at first intended, point out what are natural foods and drinks.

Mr. Cook most clearly showed that water is the one fluid which enters as the natural fluid into the composition of the human body, and of the bodies of inferior animals. There was not, in fact, brought forward by him one word in respect to any other fluid as forming part of anything in the body.

I shall not, therefore, trouble you with any further proof of this fact, but shall go straight to the question whether any other fluid than water is good for the body.

My observations on this subject are reduced to a very narrow limit, because there is only one fluid which can be called a rival to water. We hear of water-drinkers and we hear of people who drink wine, or spirits, or beer, or stout. In sober truth, however, they all are water-drinkers. When the drink which these wine and spirit and beer drinkers take is examined, it merely differs from the water taken by the water-drinkers in that it contains, with one or two harmless things which water-drinkers would not object to, another fluid, which is called alcohol, or spirits of wine, or ardent spirit, in greater or lesser proportions.

In wines the quantity of this fluid varies from 10 per cent. to, in what are known as fortified wines, 25 per cent.

In spirits the quantity is more. In brandy it is 50 per cent. ; in whiskey, 48 ; in rum, 44 to 48 ; and in gin, 38 to 40.

ALCOHOL, SPIRIT OF WINE.

In the flask which is on the table there is contained a few ounces of this strong spirit.

As a fluid the spirit is light, hence the name spirit; it has a pungent odour, a burning taste.

If you put a lighted match to it, it burns.

If you weigh it by the side of water, you find it is lighter than water. You would have to put 1000 ounces of it into a scale to balance 795 ounces of water.

It mixes with water in all proportions with great readiness.

It dissolves a great many things which water won't dissolve.

It dissolves resins and some fats and resins, so that the chemists find it very useful to them.

It preserves dead things from undergoing decay; so the doctors use it for preserving parts of dead bodies.

The doctors also use it for many useful purposes; they make tinctures with it, and from it they get, by chemical skill, such excellent things as chloroform and ether which save so much pain.

This fluid, so valuable, you see, in various ways, is called also the spirit of wine. Why it is called so is worth noticing.

The people of the ancient world did not know of this fluid as a separate thing. They knew about wine, which they made by fermenting the juice of the grape, but they thought that

wine was a distinct drink, quite distinct from water.

But about six hundred years ago the chemists, who were chiefly Arabians in those days, discovered how to distil. They put different substances into a pot which they called a retort; they applied heat to the retort, and when the vapours began to rise from the retort and to condense, or form into liquid, in the tube which rose from the retort, they collected that liquid drop by drop as it distilled, and found out how it differed from that which was in the first place put into the retort.

Well, one day some chemists put wine into the vessel or retort, and collected what distilled over.

That which distilled was this fine spirit which we have before us. The rest was water.

Thus it was discovered that wine essentially consists of water with a certain quantity of spirit of wine.

But it had also been found that the fermentation of other things than grapes—barley, for instance—would yield a strong drink, and then this liquor was distilled and the same spirit obtained.

After a while the distillery of this strong spirit became quite a business, and it was found necessary to settle when the strong spirit came off from the still in sufficient strength to be saleable.

To try this, after gunpowder was discovered, they tested it with gunpowder. They mixed the spirit with gunpowder. If it contained so

much water that when they put a match to the powder it would not light, they said it was not strong enough ; but when it got stronger and would light and fire the gunpowder, then it would do. It was proved, and as it stood proof, it was called "proof-spirit."

We often hear this word, and of a spirit being so many degrees above or below proof ; now we know how the term came to be used.

Proof-spirit is one part water and one part absolute or perfect spirit.

Absolute spirit is now usually called alcohol. The word was introduced about two hundred years ago, and means a something very finely divided. Once it was applied to a powder used by fine ladies to stain their eyebrows with.

The word alcohol is now in common use in connection with spirit of wine.

We speak of alcoholic drinks, spirits, wines, beers, ales, stouts, cider, perry, all drinks which contain alcohol.

We speak of the alcoholic revenue, or the taxes raised by the sale of alcoholic drinks.

We speak of alcoholic diseases, or the diseases produced by the drinking of beverages containing alcohol.

We speak of the alcoholic mortality, or the deaths produced by alcohol.

And we speak of "alcoholics," or the people who drink alcoholic beverages freely, and who produce in their own bodies the state known as the alcoholic constitution.



CHAPTER XXV.

WHAT GOOD IS STRONG DRINK ?



HAVE tried to show what strong drink is. I now propose to consider what is the good of drinking strong drink.

I need not tell you that thousands upon thousands of people drink the strong drink called alcohol as a regular habit, and that they think it does them good.

They do not drink it for the same reason as they drink water, to quench thirst. They don't give it to babies, nor to animals like dogs, and cats, and horses, and cattle, to quench their thirst. They take it themselves, because I suppose they think it feeds them and does them good.

Is it a food ?

Mr. Cook, you will remember, told us what are foods.

He told us there is—

Water food.

Food which is flesh-forming.

Mineral food.

Food which is heat-producing.

If this spirit before us be a food, it must belong to one or other of these classes of food.

That the spirit cannot take the place of water for drink, everybody knows. Taken, largely diluted with water, as in the common alcoholic beverages, it makes one thirsty instead of quenching thirst. If it enters the blood in any excess it injures the blood ; poisons it, to use a plain term.

It is not, then, a water food or drink.

Is it a flesh-former ?

We may determine that at once by seeing what it is made of. Mr. Cook properly told us that all flesh-forming foods, like all flesh, contained the element nitrogen as their root or base. This is true.

Alcohol contains no nitrogen. It is made up of two parts of carbon, six parts of hydrogen, with one of oxygen, and of nothing else. It cannot, therefore, form flesh, and when you hear of its doing so you may be quite sure you are hearing what cannot be true. People talk of a generous wine. If there be such a thing, the generosity does not lie in the spirit but in some other food mixed with the spirit in the wine, and possibly useful. I can't say. I can only repeat that it

is not because of the spirit that the wine is generous.

Alcohol does not belong to the class of foods which build up the body and form flesh.

Is it a mineral food ?

Impossible. The mineral foods are earthy foods. The great mineral food which feeds bone is phosphate of lime. Alcohol contains no phosphorus, no lime, no earthy base.

Of all things it is not a mineral food.

If, then, we fed on alcohol, or tried to feed on it, we could neither have water for the blood ; nor substance for the muscles and brain, and lungs, and skin, and other parts ; nor bone for the skeleton. We should, indeed, soon be in a sad plight. Not to speak in joke, we should soon be nowhere.

Is it a heat-producer ?

This question is the most important of all. Alcohol burns in the spirit lamp ; does it burn in the body ? If it burns in the body it is a food coming under the last class I have named.

The stronghold of those who have spoken in favour of strong drink has been that the alcohol keeps up the animal warmth and vital power ; and we must all admit that it seems to warm the body, because when it is taken it produces a red face, a glow, and a sense of warmth.

But when we come to look into the facts, the evidence turns the other way round entirely.

If we take the temperature, or warmth, of the

body by means of a delicate thermometer when alcohol has been swallowed, we find that, after a short flash of warmth, the body begins to cool, that it cools below what is natural, and is a long time in recovering itself.

So in persons who are intoxicated and incapable the temperature falls dangerously low, and if they are exposed to cold in that state they are apt to die.

The animal fire, so to speak, is banked out.

For this reason it has been found in very cold regions, as in the Arctic regions near the North Pole, that the sailors and others who do not drink spirits in any form bear the cold best and go through extreme fatigue the most easily.

In the last expedition a sailor named Adam Ayles, a teetotaler, went nearer, it is said, to the North Pole than any of his mates, and kept up better than any one of them. Sir John Ross, Dr. Rae, and many other Arctic explorers, bear witness to the fact, that cold and alcohol act in the same manner, and that they who have taken tea and coffee and other simple drinks have done best work and enjoyed best health under severe cold.

There is still another proof on this subject which is very strong against alcohol. The body in burning produces a gas, a product of the combustion, the same as a burning taper or fire does. That gas is made up of the carbon of the burning body and of the oxygen of the common air which is taken in by the lungs in

breathing, and in proportion as the fire burns so is the gas produced.

If there is a good fire there is a good quantity of gas. If there is a little fire there is a little quantity of gas.

When a person is under the influence of alcohol there ought to be a good animal fire if the alcohol burns in him, and a good quantity of the gas, which is the product of the burning, ought to go off from his lungs by his breath.

But the opposite is the case: there is less of the gas of carbon and oxygen than when the body is free of alcohol.

It is impossible under these conditions to suppose that alcohol is a heat-producer in the body. It chills the body and it reduces the products of burning.

And what if it did produce heat in the body as it does in a fire, in proportion to the quantity of it supplied to the fire—what would or could happen to those who take it in such large quantities as some do?

They would burn out; they would be in one continual fever, instead of being the miserable, cold, blue-nosed, dark-faced, shivering creatures we see them to be.

But what, you will ask, about the first flush of warmth which we feel if we take alcohol?

That is easily explained. It is the same as the heat which is felt when the hands have been exposed to snow and are returning to warmth again.

When the hands or other parts of the body have been exposed to extreme cold, the small blood-vessels are so weakened by the cold, they cannot contract on the blood which is pumped into them by the heart, and so they become, for a time, filled with the warm blood from the heart; and that blood, exposed over a wide surface, supplies the heat which is felt as a glow all over the surface of the body and gives up the heat to the surrounding air, thereby cooling the body in the long run by robbing it of its heat, instead of supplying warmth.

For these reasons I venture to think that alcohol is not a food, and that there is no food in it.

You may perhaps say, in opposition to this view, that men who drink large quantities of beer grow very fat and bulky, and you may point to the draymen as proofs of this idea.

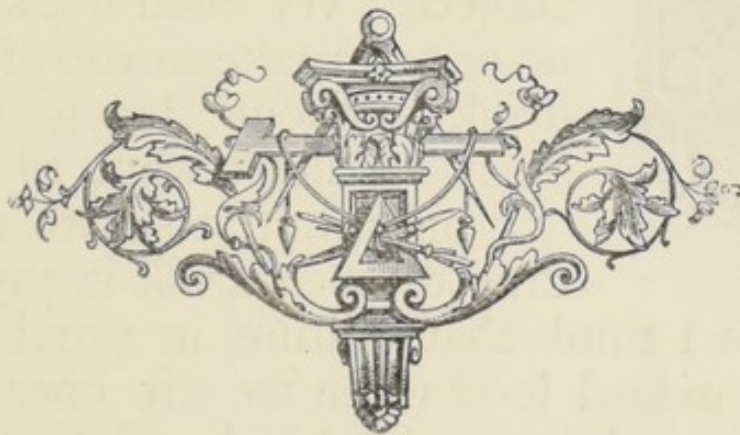
I repeat that there is a sad truth in the appearances derived from great beer-drinkers, and that such drinkers do get very fat.

But to get fat is not to be healthy. On the contrary, it is to be very unhealthy; for fat is deposited as an entirely inactive and cumbrous substance about the heart, and on the intestines, and in the muscles and nervous system, much to the danger of life. It is the sweet substance or sugar in the beer which causes the fat, while the alcohol tends to reduce the power of the body.

For these reasons, men who get fat on beer are exceedingly bad subjects. If they meet

with any shock or accident they are easily killed by it, and the great Sir Astley Cooper used to say that he dreaded, as a surgeon, to have to perform on them the slightest operation.

They are almost always short-lived, and worse or better evidences, as you like to take it, of the evil effects of beer or ale, as alcoholic drinks, could not anywhere be found.





CHAPTER XXVI.

WHAT HARM IS STRONG DRINK ?



THE question what harm is there in drinking strong drink need not take a long answer.

We need not refine on the subject. We need not say that no one can take a drop of strong drink without being injured by it. I don't want to say so.

I only want to state that no drop of such drink is any good.

If it were I think that Nature, in providing us with a standard food when we are born, would have indicated such a food in her design. She didn't, and none of us are so wise as she is. She started us as perfect teetotalers, and therefore I think she meant us to continue in the same line.

To this argument I would add that there is ever present in those who drink alcohol this

great danger, that the drink begets a desire for itself. It makes those who take it feel it to be a necessity for them and their lives. And just in proportion as it makes them feel it, it sells them body and soul, and kills them body and soul.

When it does get this hold, then comes the multitude of dangers to health, to life, to character, to happiness; dangers which outweigh all temporary pleasure and all reasonable advantages.

There comes to a country like ours, from this one system of drinking what is not drink, deaths at the rate of fifty thousand a year; deeds of violence innumerable; accidents untold; poverty, degradation, crime.

I need not dwell on these results, because you know them as well as I do. My business is not to tell you what you know, but to insist on what so many do not know, namely, that the cause of this evil is not a food, that it is not a necessity to man as a drink any more than it is to plants and animals lower than man, and that it has no place as a food or a drink in the natural course of life.





CHAPTER XXVII.

THE CLOSE OF THE SESSION.



S Mr. Martin Swift's paper brought to a close the first session of the "Guild of Good Life," it was followed by the usual votes of thanks and farewells which are generally spoken on such memorable occasions.

That all the lessons that had been brought forward at the various meetings were turned to useful, practical accounts could not be expected; but good seed was sown, and much more was effected than perhaps the most enthusiastic looked for.

An excellent feeling of friendship had been generally produced by the meetings; exchanges of thought, forbearance, tolerance of opinion, and mutual good will.

There was personal improvement also.

Philip Cross had become quite another man. He had learned a great deal by conversation ; he had read hard, for him ; he had got to write and spell, and speak much more correctly than he did before ; while in manner he was beginning to recall, to those who knew his brother Richard, that still well-remembered and excellent man.

As to Mr. Sarcasm, he was so much changed for the better that his new name had nearly deserted him. He had become Mr. Bailey, not even Mat, and he was now beginning to start well in business on his own account, with wood-carving as an art added to his other accomplishments. In time it was hoped that Philip would join him, and that Bailey and Cross, cabinet-makers and wood-carvers, would be a noted firm.

Martin Swift had indeed been Swift to a good purpose. Encouraged by Mr. Meadson, he had worked out a new experimental method for saving life which had brought him quite a name in his circle, and which promised to extend his fame to a circle much wider and more critical. He was on the eve of being able to give up the driving of the fire-engine, not for a nobler, but for a much more independent and less anxious vocation.

He was felt to be sure to do honour to the "Guild of Good Life." "If he don't become an M.P.," said Philip Cross, "I'm a Dutchman."

But the most sensational change anticipated

by the Guild had reference to Judith Cross. It was noticed for some time that the friendship between her and the wandering scholar was ripening into something more; and when that sly Mr. Bailey, in bidding her good night, observed to her, "I suppose we shall meet again next year at Tintern Gardens," the slight start she gave and the colour that rose to her cheek sent them home quite sure that if they lived they would, and that Mr. Meadson would have a helpmeet by his side to give them welcome.

THE END.









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