The making of the home : a book of domestic economy for home and school use / by Mrs. Samuel A. Barnett.

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THE MAKING OF THE HOME

THE MAKING OF THE HOME. A Book of Domestic Economy for Home and School Use

BY

MRS. SAMUEL A. BARNETT

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THE MAKING OF THE HOME

CHAPTER I.

INTRODUCTION.

The importance of the home it is impossible to exaggerate. What is liberty without it? What is education in schools without it? The greatness of no nation can be secure that is not based upon a pure home life.—ARNOLD TOYNBEE.

IT is the woman's work to make the house into a home. It is a beautiful work, and a greater one than that of the fairy about whom we used to enjoy reading when we were younger. I daresay we all liked to imagine ourselves the fairies, and try to think of all the things we should do if we had, were it only for one half-hour, the magic wand; but here, to our hands, is a still greater power. To nearly all of us comes, at some time of our life, this fairy-like chance of turning a house into a home. It may not always be our own house; some of us may have the chance only in other people's houses, as servants, as daughters, as housekeepers; while to others (if the great gift of love be given), the opportunity may offer itself as wives and mothers.

In one way or the other I hope this work will come to all of you; it is to be despised by none, and it is one which I trust each and all of you girls will strive to do well. A knowledge of the science

of Domestic Economy will do much to help you, and I doubt not but that every girl who wants to leave the world healthier, happier, wiser, and better than she has found it—and who does not?—will be glad to be able to learn something which will assist her in her womanly walk through life.

A woman's mission is a high one. On her, to a large extent, depends the good and the happiness of the family and, through the family, of the nation. One great Italian writer has said, "The angel of the family is woman; whether as mother, wife, sister, or friend, woman is the soother of life. She is to each of us a reflection of that loving Providence which watches over humanity. She has in her a treasure-store of gentleness sufficient to soothe every sorrow. She opens to us the possible good and beauty which lie in the future;" and in another place he tells women that they have in their "keeping the welfare of the future generations."

When you read such words as these, do you not feel that no trouble would be too great, no lesson too difficult to learn, which would help you to worthily fill so high a destiny?

A great many people think that economy only has to do with saving, and that, therefore, the science of Domestic Economy deals only with household saving. They have the notion that it is "a mean kind of thing," and not to be considered by people who—as they describe themselves—"need not be looking after every scrap;" but the word *economy* did not originally mean anything about saving. It had to do with the management of a house (and spending in housekeeping is quite as important as saving), so in this book I am going to try and tell you about everything that has to do with the keeping of a house, and the comfort of the people who live in it. I hope

to teach you the fairy secret, so that, in the future, the house under your care shall become a home, and the people who live in it be welded together into a family.

Our bodies are, as the great Hebrew poet tells us, "fearfully and wonderfully made;" and because of this, and also because we now live in what is called an advanced civilised state (which means that a great number of people live together, and have to consider each other in all sorts of little as well as in big things), we shall have to talk about many and various matters. We shall have to speak about food, drink, and clothes; about washing and cleanliness: about health and sickness; about money and its right getting, saving and spending; and as people are not born grown-up, but become good or bad men and women very much in accordance with how we treat them when they are little, we shall have to think carefully about little babies—about wise punishments for children, and also about their schooling and pleasures; and lastly, because people are something more and greater than their bodies, and are not content as soon as they are comfortable, like the oxen and pigs, we shall have to think of and plan for the other parts of their natures.

It will be one of the duties of the home-maker to consider recreation and education, and learn how best to get change for weary brains and tired hearts. She must know enough to be able to make a wise choice of work, and, what is still more important, choice of friends and ideals: by which I mean objects or standards of life to be aimed for and striven after. All this is included in Domestic Economy; and it is this task which we have to-day begun: you to learn, I to teach. We must each have patience with the

other, and if I go too fast, or tell you the same thing too many times over, you must try and catch me up, or bear kindly with my mistake, remembering always that the end and object of all my lessons is to make you queens. "Queens!" you will say. "How can that be?" But read on, and you will see how greater people than I have declared you may be queens.

One great author tells us that "a true wife in her husband's house is servant, in his heart she is queen;" and another wise man, in speaking to us, says, "Your fancy is pleased with the thought of being noble ladies, and with a train of vassals. Be it so: you cannot be too noble, and your train cannot be too great; but see to it that your train is of vassals whom *you* serve and feed, not merely of slaves who serve and feed *you*." This same author has a great idea of the power we possess by simply being women. He tells us that we are queens, enthroned by the right of our womanhood in many a heart, and that we cannot, if we would, put off that crown. So he bids us recognise the fact, and take all the duties which fall to our queenly lot. He says that we have not understood that we have this great power, and he reminds us of what we could do if we would. "There is not," he writes, "a war in the world, nor an injustice, but you women are answerable for it: not in that you have provoked, but in that you have not hindered. Men, by their nature, are prone to fight; they will fight for any cause, or for none. It is for you to choose their cause for them, and to forbid them when there is no cause. There is no suffering, no injustice, no misery in the earth, but the guilt of it lies lastly with you."

Is not this a queenly power?—to be able to make or stop war, to cause or soothe suffering, to encourage or hinder injustice—but with the power comes the

responsibility. If the woman has the power, she has also the task of deciding how to use it. And to do this she must educate herself: she must learn all she can, she must think long and carefully, so as to be sure that she is not using her power for her own happiness, but for the good of the larger world, and the other lives which are being lived outside her home. Woman's duty, though it begins in the home, and though it may seem to keep her continually in it, does not end there. The motto which is at the head of this chapter speaks of the nation as being based on its home, while another author tells us that (through the home) it is "the woman's duty to assist in the ordering, in the comforting, and in the beautiful adornment of the State."

I have quoted you these words to show you what great men think of woman's work and the influence of the home; and because I think that if you have these great aims in view, you will not weary of learning how to make a good home, nor tire of the details which tell how women's household work is to be done. Every one can do work, however tiresome, easily and gladly if the object to be obtained by it is great and valuable enough—and so, now that they have these noble ends in view, I trust my pupil girls will apply their minds to these sixty lessons, the object of which is to teach them how to turn a house into a home.

CHAPTER II.

THE CHOICE OF A HOME TO LIVE IN.—THE LOCALITY, THE POSITION, THE ASPECT, THE DRAINS.

You are not guilty because you are ignorant, but you are guilty when you are content to be ignorant. You are guilty when you refuse, or are too indolent to think, to use your powers of thought. You are guilty whenever you despairingly give up the search for truth, knowing that God would not have given you a love of truth without the means of attaining it.—JOSEPH MAZZINI.

BEFORE we begin our work I want to tell you that I am going to imagine you are very poor. Some of you may not be so poor, but the most difficult thing is to be a good housekeeper or home-maker when in the midst of poverty. It is far easier when there is more money to be had, and when every farthing has not to be considered; so for the purposes of our study it will be better for us to imagine that you are very poor, and then in real life, if more money falls to your lot, you will find the task of housekeeping easier than you had thought, instead of harder, as you would do if I began with the idea that you were well-to-do.

But, in order to begin housekeeping, we must have a house to keep; and there are a great many things to be thought of in choosing the house (or room) in which to live. We must try and see, if possible, that there is nothing about the house itself which will prevent it being turned into a home; but let us, as "order is Heaven's first law," think of the things to be avoided and obtained in order.

I. *The Locality or Neighbourhood.*—The house should be in a respectable neighbourhood. We must always remember that sin is to be avoided more than suffering, and that we had better suffer a little more because we pay a higher rent, than live in the midst of what is bad and wrong. We soon get used to wrong things; and children often get low standards and weak consciences because they see and hear what is wicked, on their way to and from school, if the house is in a street or court where the people have a bad character.

II. *The Position.* — If possible, the dwelling should not be far from the father's or the brothers' work, though this is not always easy, as in the case of bricklayers, who have to go to work in whatever place their employer accepts a contract. Still, it is a point to think about: for the pennies for the train or tram in bad weather, or when the men are very tired; the wear of shoe-leather and clothes; the extra fatigue; let alone the temptations of the street corners, all tend to run away with money that might be saved by the cheaper rent.

III. *The aspect,* or *floor,* of the room must be a matter of taste unless it affects health. If any member of the family easily catches cold, or feels pain at going upstairs, then it would be wise to choose a room looking to the south or west, and on the first or second floor; but as a rule it is thought to be more healthy, if the family are strong and well, to live on the third, or even the fourth floor. There the air is purer, and the little ones removed from what are often the sad and harmful noises of the streets.

IV. *The drains* must be carefully inquired into; and by drains I mean the large pipes which carry the dirty water used in the household into the sea, or

away to manure the land. It is very difficult to tell if the drains are in good order or not, because they are generally hidden under the ground, but if there is the least smell you may be sure that all is not quite right, and you can then refuse to take the room; or, if the smell should occur after you are living in the house, you must either tell the landlord or go and complain to the SANITARY OFFICER, whose address any policeman will tell you.

Sometimes people grumble about bad smells, but I think we should be grateful for them, because they tell us so unmistakably that dirt is in some place where it should not be. They call aloud in their own disagreeable way to us to ask us to make all things clean. Without smells, we might go on being dirty in ignorance, until some dreadful fever or illness bred of dirt came to us, and perhaps took away our health and strength.

Drains are not a very pleasant subject, yet they are so important a part of the house that I must say some more things about them. Lately, also, the learned doctors have been discovering that many of our illnesses come because we have managed our drains badly; and though you must not always be thinking of illnesses and fearing to have them, still it is only wise and right to see, if you are going to be a home-maker, that you do not keep just outside your window, or in the cistern, or hidden in the wash-house, a cruel imp who will perhaps pounce down on you just when you are all most joyous, and carry off your darling or lay low the strong bread-winner.

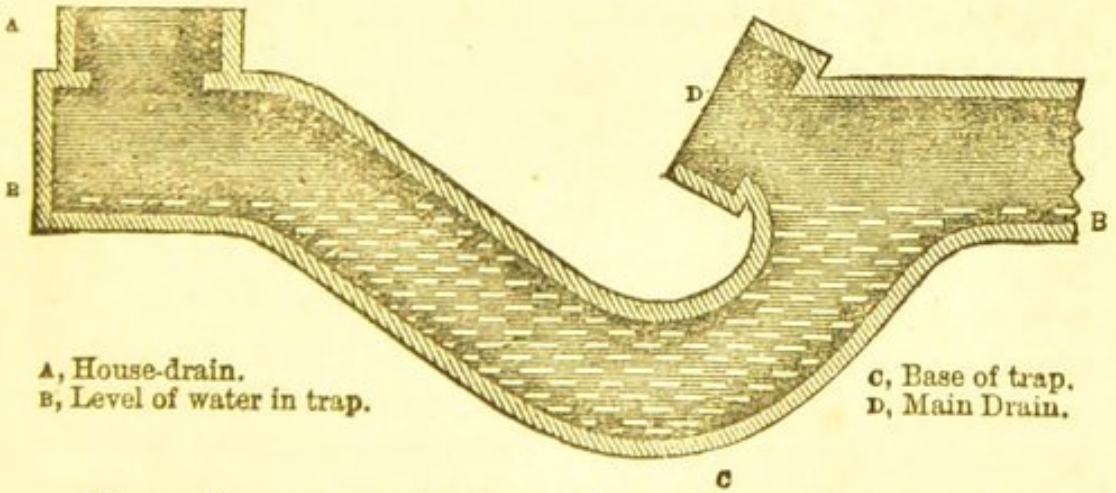
CHAPTER III.

THE CHOICE OF A HOME.—"WHAT TO SEEK AND WHAT TO AVOID"—THE DRAINS, THE DUST-BIN, AND THE WATER-CISTERN.

Inhaling bad air is drinking in death.—DR. DAVIES.

IT is of the utmost importance that the drains from the sink, or the water-closet, or the wash-house, should be *properly trapped*, which means that at some part of the pipe, which you cannot see, there should stand a little pool of water, which little pool must always be kept so full that it takes up all the room in the pipe and leaves no space for the bad smells.

Bad smells do not often get through water, so that if this little pool between you and the big drain is always kept full, the bad smells will be kept back by it in their proper place in the drain. But I fear that no explanation will convey to you exactly what I mean by a drain-trap, so I will make a little drawing of it, in which you will see where the pool ought to be.



A, House-drain.
B, Level of water in trap.
C, Base of trap.
D, Main Drain.

Sometimes people lose the value of their drain-traps by letting the water in the little pool become so

dirty that it, in its turn, begins to smell; but this is easily prevented by pouring some fresh water every day down the pipe of the sink or water-closet. Sometimes, too, careless people make the trap useless because they are in such a hurry for the water to run away that they pull up the strainer. Then dirty bits of vegetable and other nasty things get into the little pool, and by choking it up, make it impossible for it to do its own work. But the mischief does not end there. Vexed that the drain is choked, and that the water will not run away, the ignorant housekeeper will sometimes take a thick stick and endeavour to *unstop* the drain, but the ignorantly-directed pokes often succeed only in breaking or cracking the bottom of the basin, and then the purifying water flows out, and the bad smells rush up to poison the air. The best way of unstopping a drain, should it by accident get stopped up (but if the strainer is kept down it cannot easily get stopped), is to take a long and pliable cane or piece of wicker-work, and move it about gently in the drain, at the same time throwing large quantities of water down the pipe. When the obstruction is removed, feel with the cane gently all round the pool, to see that it is not broken, and that the little pool of water in it still remains at its right depth.

Secondly, the *dust-bin* should have a closely-fitting lid, and should, if possible, not be near a dwelling or window. In very poor and crowded neighbourhoods, such as where I have lived, and where every foot of room is of value, this is not always possible to secure; but then, every one can do something to prevent the dust-bin becoming disagreeable and unhealthy. For instance, it is not the ashes themselves which smell so much as the green vegetables, dead flowers, or food refuse. If these

things were burnt in the grate when the fire was low, it would help to save fuel, and do away with much of what now makes our towns so close and smelly.

Thirdly, the *water-cistern* should have a tight-fitting lid, and should be cleaned out every two or three months. The same cistern should not supply the water for drinking and cooking as well as the water for the water-closet, or sink, or wash-house. Water is often made dirty by bad-smelling air, and the same pipe which carries the water to the water-closet or sink sometimes carries the bad-smelling air back again into the cistern, poisoning the water for those who drink it or cook with it.

And lastly, all the drains should be outside the house, and as far from the dwelling or sleeping room as possible. It is not possible to give rules which would apply to all sorts of houses either in the town or country, but you will soon be able to see what is harmful if you remember these two or three useful lessons.

Smells mean that there is harmful dirt, and the smells which arise from dirt, either dirty substances (like pig-sty, ash-bin, or fowl-house) or dirty water, are often poisonous, and make impure not only the air we breathe, but the water we drink. Our duty, then, in taking a house is to see that the drains are so arranged that the smells do not get out either to poison the air or the water. And now we can leave the drains, and talk about the pure fresh air.

CHAPTER IV.

HOW TO GET CLEAN FRESH AIR INTO OUR HOME.

When pure air is breathed freely, plentifully, and continually there are few diseases which it will not enable the body to resist.—PROF. SIMPSON, M.D.

BEFORE we talk about *Ventilation* I must tell you the difference between good and bad air.

The air is composed of three gases, called oxygen, nitrogen, and carbonic acid gas. If you could think of a box of air measuring a yard each way, we would, in fancy, measure it, and we should find that rather more than three-quarters of the yard would be made of nitrogen gas, not quite one-quarter of oxygen gas, and just a tiny little strip, about as broad as a pin is wide, would be left of carbonic acid gas. As we breathe we take in a mouthful, say a few cubic inches, of this air into our bodies. It enters in the state that I have told you, chiefly nitrogen, partly oxygen, and the very small bit of carbonic acid; but it does its duty within our bodies, it works inside and cleans our blood, and it comes out again entirely changed. When we have breathed the whole yard in and out—and we shall soon do that, for we generally breathe 1,200 times in one hour—and we come to measure it again, we shall find that, though there is still about the same quantity of the nitrogen gas, yet that the eight inches of oxygen have sunk to six inches, and that the tiny strip of carbonic acid gas has broadened out until now it takes an inch and a half. This carbonic acid gas is poison to us. Here is a little table to show you the exact figures.

Pure air contains :—

Nitrogen . . .	79·02 per cent	100 per cent.
Oxygen . . .	20·94 ,, ,,	
Carbonic Acid . .	·04 ,, ,,	

Air which has been breathed contains :—

Nitrogen . . .	79·3 per cent	100 per cent.
Oxygen . . .	15·4 ,, ,,	
Carbonic Acid . .	4·3 ,, ,,	
Loss per cent. . .	1 ,, ,,	

If we could see the air when it comes from our mouths, we should call it dirty air : it would look to us as nasty as the water does in which we have rinsed a soiled cloth ; but we cannot see it, so often we forget all about it. But it is very important for our health and happiness to have clean air with which, as it were, to wash out the insides of our bodies. How to get rid of this soiled air, and put in its stead clean fresh air without making a draught, is what we mean when we talk about ventilation ; and it is a very difficult question. "Why, open the window wide, and let it come in," I fancy some of you might say, but in stormy or winter weather we cannot sit or sleep with the window wide open : and besides, how to get the good air in is not the only difficulty. How to get the bad air out is even a greater one.

A great deal has been written and said about this subject, but on the whole the best way of letting the dirty air get out of a room is by keeping the window open an inch or two at the top night and day, winter and summer. Many people buy sand-bags to stop up the cracks, because they say the draughts whistle in and give them cold, but they forget the head-aches, the sense of fatigue, and often bad temper, from which those same draughts of fresh air save them,

and very often the sand-bag buyer buys pains and illness the same day that she pays for her sand-bag.

I do not mean to say that draughts are good and healthy, but fresh air can come in without making a draught if it is admitted continually and evenly. You will perhaps ask what is and what causes a draught. A draught is a rush of air, and is caused by one sort of air rushing to fill the place of another sort of air.

Cold and hot air are like two playing boys: one tries to catch the other. Master Cold Air is always running after Master Hot Air, and if he is kept too long outside he rushes rudely in through every crack and crevice, whistling and making himself disagreeable; but if he is admitted in all kindliness by the housekeeper, who makes room for him by opening her window and letting out the breathed-up air, and then invites him in, he soon ceases to push and be rude. He mixes amiably with Master Hot Air and learns good manners, of which the secret in his case, as in all cases, is to be unobserved.

It is as true of ventilation as it was of drains, that it is impossible to give rules which will apply to all kinds of rooms and houses, but there are two things to be learnt about ventilation, and then each girl in her own home can apply them. One is that the air we have breathed becomes hot and dirty by the cleaning out of the human body, and as such is dangerous to the health, and must be changed; and the other is, that the hot and dirty air ascends, and must, if possible, be let out at the top of the room. For this purpose, if the upper sash of the window does not open, and if the landlord objects to the additional expense of making it do so, some holes might be bored in the window-frame; or the top panels of the doors can have little openings cut in them, or venti-

lators admitted. Anyhow, by the window and door, or the window and chimney, or the door and chimney, there must always be left some chance for Master Hot Air, and his brother, Master Dirty Air, to escape when pursued by Master Cold and Fresh Air; but the one opening must *always* be opposite to the other, so that these helpful playfellows may have no excuse for not going into all parts of the room.

CHAPTER V.

HOW TO WARM AND LIGHT OUR HOME.

"If men lived like men indeed, their houses would be temples—temples which we should hardly dare to injure, and in which it would make us holy to be permitted to live."—RUSKIN.

THE *warmth* of a room is closely connected with its ventilation. Indeed, a fire is one of the best ventilators; and if you notice, you will find that a number of people sitting in a room in the summer-time will make the air more dirty and hot than the same number sitting in the same room in the winter-time, when the fire is burning. The reason is simple: the fire heats the air, which, being hot, rises and goes up the chimney, calling as it goes to the cool clean air to come in and take its place.

Some people like their rooms warmed with hot-water pipes or closed stoves, but we English people love our coal fires, and if we can have them without hurting our neighbours, there is no particular reason why we should not do so. The chief objection to them is the smoke they make; and the smoke does a great deal of harm. It causes the ugly fogs from which those who live in towns suffer so much; it prevents plants and trees growing, so that even if there is

an open space in the midst of the town, it often cannot be made into a green and pretty garden, because the smoke kills the things. It spoils our carpets, dresses, and furniture, and, what is worse, it makes it more difficult for the little children to grow up healthy, and the sick people to recover thoroughly.

This is a great deal of mischief for our kindly, cheery fires to do, but their smoke does all this, besides a great deal more harm. If every one, in taking a house or a room, would try and get one where a *smoke-eating grate* was put in, the fire would not only cost less (for the fire, when it eats its own smoke, does not require so much coal), but every time the home-maker put on more fuel or made the bright blaze jump out, she would not feel as if she were helping to spoil her own or other folk's homes, or making life more difficult for those priceless gifts which we often do not half value: the green things, the little children, and the aged folk.

Besides the smoke-eating power of the grate, we should try and get one which is low down near the floor, because our feet and legs want warm air quite as much as the rest of our bodies; and also one which is broad in front, narrow at the back, and sloping inwards at the sides, something in the shape of an A lying on its back, only the grate might end where the cross of the A comes; it need not go as far back as the point. Then the material of which the back and sides of the grate is made should be carefully thought of. Fire-clay or fire-brick is better than iron or metal, because it throws back the heat better, so that when our fire is once made up it does not need so much fuel, and that is at once a saving of money.

An oven is a great gain in a fire-place; but if we have to choose between an oven and a boiler, it

is, on the whole, better to have the boiler, for reasons which you will see when we come to talk about cooking and washing.

The *lighting* of a house by night is so closely connected with its warming, that though the lamp or candlestick may properly be called articles of furniture, and talked of when we come to speak of furnishing, still we had better perhaps consider light here.

The first thing to learn about light is that in burning it takes up the air we want to breathe. It breathes, as it were, the same gas—*oxygen gas*—which is absolutely necessary for our health; and in burning it makes gas which is bad and poisonous for our bodies—*carbonic acid gas*.

One candle will require as much oxygen gas as one man needs, and its flame makes in burning as much carbonic acid gas as a person in breathing; while a gas-jet makes the same quantity of carbonic acid and takes as much oxygen as three men.

There was once a man who was very much interested in natural and practical science. He had a wife who was a timid woman, and often fearful of robbers. When he learnt the facts that I have just told you about the one candle breathing as much good air as a person, and one gas-jet as three men, he told his wife, warning her on hot nights and in their small room to make a point of burning as little gas as possible, not only for the sake of saving, but so as to keep the air clean and wholesome, and the room cool.

The wife, however, did not pay so much attention as wifely wisdom should have dictated. So one day her husband came in, and said to her, "Why do you keep three men in the kitchen? What are they there for?" "Three men, John!" she exclaimed; "I know nothing of them. They must be robbers!"

"Yes, they are," said her husband, "and they are robbing us of our clean air and good health as well as of our pennies." The wife, though she had had a good fright, soon saw what her husband meant, and in turning down the gas-jet quickly turned out the three robbers.

The second thing to learn about light is that it makes heat. Nearly all the heat that there is in the world is made by the joining together of oxygen gas and carbon.

Oxygen is, as you know, in the air, and the solid part of a candle is made chiefly of carbon. When the wick is lit the carbon is melted and drawn up by the flame, which, by burning, joins together the two friends, who are fond of one another, and are always ready to be together, namely, carbon and oxygen; and by being together they do good work, and make heat, and often brightness, where before there was darkness and gloom.

Now that you know that when we get light we nearly always get heat (except in the case of some forms of electric light), you will, I trust, in hot weather, or in a room or workshop where many people are together, be more careful about the light. Gas, lamps, and candles are often burnt carelessly and wastefully both by servants and householders; but besides the waste of money which this habit involves, you now understand how it robs us of clean air, makes us hotter than we need be, and more difficult to keep clean and healthy.

Of the lamp itself little need be said. Several new sorts of lamps have lately been introduced, and some people like the Duplex (which is so called because it has two cotton wicks, both of which burn together) the best, but it has certain disadvantages. In a small room it is very warm, and it cannot be

turned low without a disagreeable smell. Some people prefer the Silber Lamp, which burns paraffin oil. But it must always be remembered that gas, if it can be had, gives more light for less money than either lamps or candles.

And now we can imagine that we have chosen our house or room. We have thought about the house with regard to its locality, its position, and its aspect; we have also inquired about the drains, the dust-bins, and other means of carrying off dirt; we have looked at the cistern, and seen that the house windows can open at the top as well as at the bottom, and that there are other good means of ventilation; we have studied the grate; and now having taken our abode we will wait for the next chapter before we begin to furnish it.

CHAPTER VI.

HOW TO FURNISH OUR HOME.

"Economy is half the battle of life: it is not so hard to earn money as to spend it well."—SPURGEON.

YOU must still remember that we are not supposing that we are rich, and that the furniture we are talking about is only that for the homes of those who have to think about economy.

First, we must buy the useful, or necessary things, and then the ornaments or pretty things.

Among the useful things we shall want a *table* and *chairs*, a *chest of drawers* or a cupboard, and a *wash-stand*, and I mention them all together because the same thing can be said of them all; they must be good of their sort, and made either of wood such as mahogany or walnut, which takes

a polish, or of wood which has been painted and varnished. It is of no use getting cheap wooden furniture; it is made of unseasoned wood, and will warp and split, or if painted and left unvarnished, soon scratch and peel. The furniture must be well made. The table had better have four legs and a flap; the chairs must have four to six cross bars to each chair to insure their being strong; the chest of drawers is more useful if it stands flat on the ground and not on legs, and if its drawers are deep and wide; and the wash-stand must be big enough to hold the soap-dishes, sponges, and flannels, and have a back to keep the splashes off the walls.

The *bed* should be of iron, because it is more easily kept clean. Domestic vermin do not like iron houses; they choose wooden things in which to make their homes. Vermin can only live where there is dirt, and dirt is both more easily and more effectually eradicated from iron than from wooden furniture. Of the mattresses one had better be a palliasse and the other hair, wool, or flock, according to the length of the purse. I have also seen comfortable mattresses made of chaff, and these have two advantages: they are both cheap and easily replaced should accident or illness cause them to be soiled.

The bed cannot be considered furnished until it has its *bolster*, *two pillows*, at least three pairs of *sheets* and *pillow-cases*, a *counterpane* of patient patchwork or some pretty colour, and three *blankets*. The blankets should be of the best, but there need not be more than three (two over and one under blanket) for in case of cold weather, a *paper blanket* serves as well as the best Witney to keep out the cold. It is easily made; three pennyworth of brown paper stitched together will serve to cover a large bed.

The paper blanket should be laid between the other

two blankets, or under the counterpane, to prevent it slipping off, and holes should be pricked all over it with a large needle or stiletto. You will, perhaps, wonder why holes should be made; but in order that you may understand the reason, you must know that the body, when it is in health, and if it is kept properly washed with soap and water, gives out as much as two pints of perspiration every day. This sweat contains some of the carbonic-acid gas about which you learnt when we spoke of ventilation. It is poisonous and must be allowed to escape, or it will again enter into the body and cause illness. Under ordinary bedclothes it gets away through the meshes of the blankets, but it cannot penetrate paper, and that is why it is wise to make little holes in the paper blanket through which it may pass.

The *carpet* had better not entirely cover the room. It is cheaper and cleaner to have strips which can be easily taken up for scrubbing, and laid down in different places—for instance, near the window in the summer or the fire-place in the winter. An *arm-chair* is a great boon if money will allow of its purchase. Wicker arm-chairs are cheap and durable, and they can be made as comfortable as the best spring and stuffed chairs, by wool-stuffed cushions, and pretty, too, if the handiwork of patchwork or crochet coverings can be pressed into service.

The *fire-irons* and *fender* had better be quite plain, though they must be strong, and of iron. A poker and a shovel are sufficient, and they will both be more useful if not too long in the handles.

The *screen*, though it is one of the home-maker's best helps, cannot be bought as cheaply and readily as could be wished; but a fair substitute in the shape of a large clothes-horse can be bought at most hardware shops. It should be over five feet high and

have three flaps. It can easily be made by knocking some light laths together, and covering them either with bright cretonne, or unbleached calico, in which case it might be gradually covered with pictures as they come into the children's hands; or become the home for the Christmas-cards, which the widening circle of dear and absent friends makes every year more numerous.

Of the use of the screen I could say much, but there is but little need. Every girl who has been brought up tenderly by her modest mother can tell of its usefulness when the little ones have to be bathed, and the one room has to be divided for the sleeping-place of both boys and girls; or of its handiness in helping to give the room a home-like, comfortable look, when the washing has been unavoidably delayed, or father and brothers have come back before they are expected.

To the sick child or headachy mother it is often a grateful barrier against the light which the rest of the family need in the room; and even breakfast in the sleeping-room becomes more palatable if the beds and washing-appliances are kept out of sight by the helpful arms of the screen.

On drying-days it also plays a part, for it can be pressed into service by holding the clothes while they are airing, or by receiving them after ironing, before putting-away time begins, a quarter of an hour when they get more often dirty than at any other time during the wash.

The *bath* had better be an oblong tub made either of zinc, wood, or tin. It can be used not only for bathing the children, but for washing and soaking the clothes when washing-day comes round.

CHAPTER VII.

THE TOOLS WE NEED FOR WASHING, COOKING, AND CLEANING.

"Do not have in your house anything that you do not know to be useful, or believe to be beautiful."—Wm. Morris.

The utensils must now be described, and we shall need those for washing, cooking, and cleaning.

For *washing,* we have already in the shape of the bath, the chief utensil, the *tub;* but the washing-day will be a happier one if we can add another to it. Besides the tubs we shall want a *stool* or *tressels* to stand them on, a *boiler-stick* with which to draw out the clothes from the boiling water; and some *pegs* to fasten the wet things on to the line to dry; a *brush* with which to scrub the dirtier things; an *ironing cloth* or *blanket;* two or three *irons;* an iron-*stand;* and a *clothes-basket.* Besides these things we need for washing a fair stock of good temper and plenty of method.

It is a sad thing to see some homes on washing-days; by loss of temper or want of organisation the home-maker forfeits the right to her name, and though the washing may be all well done, and got away, she has by the steps of bad temper descended from her throne of Queen of Hearts and home-maker to the lower level of housekeeper.

For *cooking* we shall want a *kettle,* or perhaps two, a *frying-pan,* a *gridiron,* a *Dutch oven,* some *sauce-pans,* a few *skewers,* and a *stew-pan.*

It is good to have one kettle much smaller than the other, so that for a cup of tea the smaller kettle can be quickly made to boil, and thus save not only fuel, but also the wear of the larger and more expensive kettle.

Stew-pans are costly utensils, but if the purse will not allow one to be purchased a very fair substitute can be made by buying a *glazed earthenware jar* (costing 3d.) the mouth of which can be tightly tied over with brown paper. Standing by the side of an open fire, it can be made to take all bits and scraps too good (and what is not?) to be wasted, and which with the help of the stew-pot will turn into excellent soups or stock.

I have not mentioned a *bottle-jack* for roasting. It is an expensive, though useful, utensil, but a good substitute can be made with a bit of twisted wire and some strong worsted. To this makeshift, however, must be added the watchful eye of the cook, for it is apt to leave off turning just at a critical moment, and then the hardly-earned joint is spoiled. But all these utensils are quite useless unless we can add to them cleanliness and care; but these cannot be bought. Like most of the best things in the world, they can only be given, not purchased. I wonder if any of you will take the privilege of being such a giver!

For *general cleaning* we shall want two *pails*, and, on the whole, wooden ones are found the best, though to prevent them splitting a little water should always be kept in them; a *scrubbing-brush;* a *sink-brush;* a hard *rough broom;* a softer *short-handled one;* a *dust-pan;* and a *feather* or *dusting-broom;* and, I need hardly add, as many *dusters* and *kitchen-cloths* as the purse will allow. Sometimes thoughtless house-furnishers forget these last necessaries, and, after having spent their money on other things, they think that "bits of rag will do for cloths." This is a pity, but I hope neither you nor I will make this mistake.

For *fire-place* cleaning we shall want a penny

jam-pot to hold the blacklead and turpentine, a small *brush* with a long handle with which to apply it, and two *polishing-brushes.*

For *boot-cleaning* we shall want another *jam-pot* for the blacking, a *putting-on brush*, a *blacking-brush*, and perhaps a third, or a "*shiner*," as the shoe-black boys call it. And now we have talked about most of the necessary articles of furniture, and we can turn our attention to the ornaments or pretty things.

CHAPTER VIII.

HOW TO MAKE OUR HOME BEAUTIFUL.

"What we want Art to do for us is to stay what is fleeting, and to enlighten what is incomprehensible, to incorporate the things that have no measure, and immortalise the things that have no duration."
—JOHN RUSKIN.

IN our home the *wall* is the largest space, and so we will first turn our attention to the question of making it beautiful—or, at least, not unlovely. It is better not to have it papered, but *colour-washed.*

It is quite easy to colour-wash a wall; you buy at the oil-shop two balls, halfpenny each, of whiting, and about a quarter of a pound of colour. These must be mixed in a bucket of water; and into this you can pour a quart of good strong flour paste, made in the usual way; or if you can afford it, six pennyworth of size (also to be bought at the oil-shop). Stir the three ingredients well together, and when all three have been mixed to an equal consistency, put the colour on the wall or ceiling with a broad flat brush. The brush may be too expensive to buy, but if so, any friendly house-decorator will lend you one for a few

pence, and both pence and labour will be well repaid by the look of the room and the sense of cleanliness which is given.

In choosing your *colour*, choose a real colour, light shades of blue, or red, or green, or yellow; do not take a grey, or a drab, or a mud colour. Any shade of a true or primary colour will both look brighter, and also keep cleaner, than a shade of the secondary, or mixed colours. It is a good plan to have the lower half of the wall a much darker colour than the upper; and this is easily managed, for after the upper part is finished, a little black can be added to the wash. The black will not, in most cases, spoil the colour, but only make it darker, which is better for wear.

In most people's minds *ornaments* come next in importance as beauty-making things, and in choosing them you can have no better rule than the words that have been chosen as the heading to Chapter VII. Many ornaments are bought, not because the buyers themselves find anything admirable in them, but because they are "the fashion," or are supposed to be pretty. If a thing is intended to be ornamental, it should, at least to the person who owns it, convey an idea of something really or intrinsically beautiful in form or colour, if not also in memory, suggestion, and thought. Sometimes people think that the more ornaments they have in their room, the prettier it is. Now, I do not think that this is always true. Doubtless some ornaments add to the beauty of the room, but too many make it look crowded, and often littered; besides becoming occasionally a source of difficulty with the children, whose nature it is to romp and to examine the things they see. In the examination or the romp the things get injured or broken, and yet we should be unwise if we unduly scolded the children

for their curiosity or clumsiness. It is the duty of the home-maker to avoid evils as well as to cure them, and the ornaments which are likely to occupy too much time in the dusting, or to prove a source of difficulty to the little ones, must be sacrificed.

Besides the wall colour and ornaments, we can get beauty through *curtains*, *pictures*, and *flowers*. The curtains should be short, not much longer than the windows, and should be made of washing stuff. They need not necessarily be white, which, in large rooms, look soiled before they are dirty; but washing materials, such as *damasks* and *cretonnes*, are now plentiful, and need no more indication than can be given by a suggestion.

The choice of *pictures* is a more difficult subject, and it is one which each home-maker must decide for herself. Hardly anything tells more news about the home-maker—her character, aims, hopes, memories, and tastes—than her pictures. They speak about her and describe her feelings, perhaps better than she can do for herself. Sometimes, in one person's room, we find silly pictures of silly people; in another, pictures which illustrate coarse sorts of practical jokes; while in a third we get a sense of helpful pleasure, from the kindly faces and bright incidents that so silently suggest good thoughts to us.

Pictures are very influential neighbours. The little child is learning something from them when the busy mother fancies he is asleep, and is so glad that he is quiet. The growing lad, with his eyes just opening to the meanings of life, has been helped in his choice, and to fix his standard or ideal, by the pictures on his mother's wall. If the framed woman who has looked out on him, through his scrapes and over his pleasures, ever since he can remember, has gentle or upturned eyes and a modest manner, his

standard of women has unknowingly been helped to higher ground by that artist's work; but if his young ideas have gathered round the pictures of a girl with bold manners and foolish, unlovely fashions, his taste will have got harmed, and we shall, I fear, find him not so daintily particular in his choice of his girl friends as those who love him would like him to be.

Before we hang a picture on our walls we had better ask ourselves (if it be of a person) whether we should like our dear ones to resemble the picture; and if the picture be of an incident or place, whether it *means* something to us. A picture should teach some lesson; or help to remind us of some grand idea; or a happy, holy memory; or serve to inspire us with some gentle eternal hope; but perhaps enough has been said to set you thinking.

Another way of bringing beauty into our homes is by *flowers* and *plants*. People will often tell you that it is unhealthy to have plants or flowers in the living-rooms; but after you have read this chapter you will be able to reply to all such foolish remarks.

The leaf of every plant has thousands of little mouths, and out of all these little mouths breath is coming and going, just as it is doing with all of us; but instead of wanting, like the candle or gas does, the same sort of gas (oxygen) as we do, the plants want the gas which is poison to us. They breathe in the carbonic acid gas, and breathe out oxygen gas, which to us is life-giving, and this is one of the reasons why the country is more healthy to live in than the town. Thus you see that to keep plants and flowers in the room is not only pleasant and refreshing to our minds and spirits, but also good for our bodies. They, in their own sweet, quiet way, help the home-maker to ventilate her room, and make the air purer and healthier.

CHAPTER IX.

ON FOOD.—THE NAMES OF THE THREE BODY-FEEDERS.

"*You have work to do, work which must be done for the good of all men, the men yet to be, as well as the men who are now.*"—JOSEPH MAZZINI.

To most of you it will be news that the *food* we eat has very important work to do—indeed, three duties to perform. The body is like a steam-engine, which will not go unless plenty of coal or fuel is given to it. Food to us is like coals or fuel to the steam-engine: without it we should die, or stop, as the engine does if the stoker forgets altogether to feed it.

But our bodies (the wonderful bodies which we have known so long, and to which we have got so accustomed, that we are often careless about, are even more beautiful and complicated than the great and awe-inspiring steam-engine. They require *three sorts of fuel or food.*

To one kind of food is given the duty of *keeping the body warm and giving it strength.* You all know how useless and half-hearted you feel when you are very cold, and how (though it is often only an excuse for idle children) it is impossible to do your *best* work till you have had a run or a warm. Food has to help to keep the body at the same heat; and whether we are in hot India or cold Iceland, the body must always be maintained at the same temperature, which should be 98½ degrees of the thermometer.

It is the duty of another sort of food *to keep our bodies in repair.* Whatever we do—whether we walk, talk, work, or think—we wear away some part of our bodies; and as we are nearly always doing one of these

things, you will see how much work that food has to do whose duty it is to repair our bodies. You know, if you have had a hard morning's work, or a long walk, or a good game, how extra hungry you feel. That is because, in using some of your strength, you have worn away more of your body than usual, and it is calling out for some of the food which it wants to repair it.

The duty of the third sort of food is to enable the various changes to take place in the body which secure health and vigour, as well as to help *to keep the brain and nerves in good order, and to make the bones* strong and hard. Our brains, nerves, and bones, like everything else, wear away, and our blood gets dirty. We cannot go to a nerve shop, or to a brain or bone seller, and buy more; neither can we send our blood to the laundress to be cleaned; but Dame Nature steps in to help us, and if we take the right sort of food she carries it to the different parts of our bodies and remakes them strong and useful for us. For example, the common salt which is eaten with meat and vegetables passes into the blood, keeps it in a healthy condition, and helps to keep the heart beating; while lime, which is taken in several kinds of food, works within us to make and keep the bones hard and strong.

Now, you must learn carefully about these three sorts of food, for they cannot do their duty and keep us healthy unless they are put inside us in the right proportion. People may eat plenty of meat and yet die of hunger, because they have not taken in the proper quantities of each sort of food. In every pound (16 ounces) of food, we ought to eat about 13 ounces of *strength-giving* food; about 2½ ounces of *flesh-repairing* food; and about half an ounce of *mineral* food; as we shall find it convenient to call the third sort of food, whose duty it is to help carry on the work of the body.

(1) *Strength-giving* or *carbonaceous foods* are those which contain *starch*, which is to be found in potatoes, peas, and beans, and also in corn, rice, and maize; *fat*, which is taken in meat, and also in milk, and things made from milk, like butter and cheese, as well as in cocoa; and *sugar*, which you all know well, and some of which is in milk.

All these foods contain *carbon*. You will not have forgotten that when we talked about light I told you that the union of oxygen gas and carbon made heat. By breathing we take into our bodies the oxygen gas; by eating these carbonaceous foods we take into our bodies the carbon. In joining (and these two care so much for each other that, if they are near one another, they at once run together), they make heat, and in burning make warm the body.

Every time you move your arm, your leg, or any part of your body, you burn up a little bit of carbon, and if the carbon were not there to burn, you would not have the power or the force with which to move your limbs or your body. It is like a steam-engine which cannot move unless fuel be put on the fires. The fuel gives the engine its motive power or force by which it puts out its strength to pull the train. In the same way these carbonaceous foods burning with the oxygen make heat, which is the store-house of strength. This is why these sorts of foods are called *body-warmers* or *strength-givers*.

(2) *Flesh-repairing*, or *nitrogenous* foods are those which contain *albumen*, which, though it is seen best in its purest form in the white of an egg, is yet also present in small quantities in all kinds of meat, and in some proportion in most fish; *fibrine*, which is the fibres of the flesh of animals, and eaten in meat and fish; *gluten*, which is found chiefly in the inside of the outer husk of the grains we eat—it is the gluten in

brown bread and porridge which gives additional value to both these foods—and *casein*, which is the solid part, or curd, of milk, out of which, you know, cheese is made. Chemists have also found that there is in peas and beans, or in vegetables whose seed we eat when growing in a pod, a large quantity of a substance which they have called *legumen*, and which has the same character, and is quite as nutritious, as *casein*.

Most of these foods also contain albumen.

(3) *Mineral foods* are found in the mineral properties of *water*; in *common salt*, which, by keeping the blood pure, does us good; and in *fresh vegetables*, like greens, watercress, carrots, &c. It is also hidden in that useful food, the potato.

Now you must learn this chapter carefully, for if you are to plan the family dinners, they must not only be nice and appetising, but they must be wholesome and strengthening. There are foods which contain in some proportion all the three things essential to health, but they do not contain a sufficient quantity of each. For instance, if a man were to eat half-a-quartern loaf (two pounds of bread) in one day, he would get sufficient strength-giving food, *i.e.*, eighteen ounces; but being white bread, it would not contain enough of *gluten* (only three ounces), which you will remember is in the husks of corn, and is a flesh-repairing food. But supposing he were to eat a sufficient quantity of (white) bread to repair his flesh, he would take in too much of that which would keep him warm and give him strength. Food would thus not only be wasted, but would be eaten to the hurt of the eater.

CHAPTER X.

ON FOOD.—THE VALUE OF DIFFERENT KINDS OF FOOD.

"For the sake of health medicines are taken by weight and measure; so ought food to be, or by some similar rule."—SKELTON.

HAVING now learnt the properties which we must seek in food, it will be as well to see how cheaply, and with what variety, we can obtain these properties. It must not be forgotten that a full-grown man requires daily *twenty-one ounces of solid food;* 16 ounces of *strength-giving,* 4 ounces of *flesh-repairing,* and 1 ounce of *mineral food;* but he will get a considerable part of this last ounce out of the water he drinks and from the salt he takes; so we need not, perhaps, concern ourselves much about the bone, brain, and nerve-repairing materials, but turn our attention to the other two necessary properties.

Many people think that they cannot be healthy unless they eat a great deal of meat; but out of one pound of lean *meat* we only get three ounces of strength-giving food and three ounces of flesh-repairing food; all the rest, namely, 10 ounces, is either water or waste.

In one pound of *bread* there are nine ounces of strength-giving food, one and a half ounces of flesh-repairing food, and about five and a half ounces are water or waste.

In one pound of split *peas,* or *haricot beans,* or *lentils,* there are ten ounces of strength-giving food, four ounces of flesh-repairing foods, and one or two ounces of waste, water, and mineral foods.

After these foods *oatmeal* is the most nutritious; for a pound of oatmeal yields eleven and a half ounces of strength-giving food, two and a half ounces of flesh-repairing foods, and contains only two ounces of waste or water.

Indian meal, macaroni, vermicelli, and *semolina* are not quite such valuable foods as those of which we have spoken above, for they do not contain so much flesh-repairing substance. In every pound we find about twelve ounces of strength-giving, two ounces of flesh-repairing, and two ounces of water and waste.

Rice is a very useful food, for though in every pound it contains but one ounce of flesh-repairing food, it gives us fourteen ounces of strength-giving properties, leaving only one ounce for water and waste.

In one pound of *cheese* there are four and a half ounces of strength-giving, five and a half ounces of flesh-repairing foods, and six ounces of water, which, however, we must not forget, contains the necessary minerals, so that it is not all waste material.

In every pound of *butter*, or *suet*, or *dripping*, or *lard*, or *sugar*, there are fourteen ounces of strength-giving food, and the rest is composed of water and waste, for in these foods there is no flesh-forming food whatever.

Now we will make a little table of these facts,

Name.	Strength-giving, or Carbonaceous.	Flesh-repairing, or Nitrogenous.	Water or Waste
1 lb. of lean Meat ...	3 ounces.	3 ounces.	10 ounces.
1 lb. of Bread ...	9 ,,	1½ ,,	5½ ,,
1 lb. of Peas	10 ,,	4 ,,	2 ,,
1 lb. of Haricot Beans	10 ,,	4 ,,	2 ,,
1 lb. of Lentils ...	10 ,,	4 ,,	2 ,,
1 lb. of Oatmeal ..	11½ ,,	2½ ,,	2 ,,
1 lb. of Indian Meal	12 ,,	2 ,,	2 ,,
1 lb. of Macaroni ...	12 ,,	2 ,,	2 ,,
1 lb. of Vermicelli ...	12 ,,	2 ,,	2 ,,
1 lb. of Semolina ...	12 ,,	2 ,,	2 ,,
1 lb. of Rice	14 ,,	1 ,,	1 ,,
1 lb. of Cheese ...	4½ ,,	5½ ,,	6 ,,
1 lb. of Butter ...	14 ,,	—	2 ,,
1 lb. of Suet	14 ,,	—	2 ,,
1 lb. of Dripping ...	14 ,,	—	2 ,,
1 lb. of Lard	14 ,,	—	2 ,,
1 lb. of Sugar ...	14 ,,	—	2 ,,

and from this you will see that meat is by no means the most nutritious food, but that it stands top of the class (it should be at the bottom) for containing more water and waste than any of the other dry foods.

But people like eating meat. They enjoy its flavour; and as it is part of the work of the home-maker to give pleasure, she must see what can be done, if she cannot afford meat, to introduce cheaply its flavour, remembering always that she need not be discontented or distressed if she cannot get it itself, for that Dame Nature has bountifully given us the strength-giving and flesh-repairing foods in other, and often nicer, forms than meat.

It requires knowledge and careful thought to arrange the meals so that they shall contain the right quantities of the three different sorts of food; but still it is not only possible, but easy, to get all the necessary foods without eating meat at all. For instance, if a man eat soup containing half a pound of peas, or the same quantity of stewed haricot beans, it will do him as much good as three-quarters of a pound of lean beef, or the same quantity of boiled ham; and the price of the one will be three-halfpence, and of the other ninepence, or, if it is rump-steak, one shilling and a penny.

In the same way a supper of bread and cheese, composed of half a pound of bread and a quarter of a pound of cheese, will give him more than twice as much strength-giving, and nearly as much flesh-repairing, food as three-quarters of a pound of rump-steak; while a dish of oatmeal porridge, made of four ounces of oatmeal, will equal in strength-giving power a pound of the best meat; and if a pint of milk be added to the porridge, the dish will rank second to none in giving both strength-giving and flesh-repairing foods in exactly right proportions.

You will probably find it difficult to bear in mind all these facts and figures, but you must try and get some accurate, if general, idea about the value of foods.

You will notice that a person requires one ounce of nitrogenous, or flesh-repairing, food to every four or five ounces of carbonaceous, or strength-giving, food. It is the nitrogenous food which is the most expensive; and it is this sort of food which is, as you will learn from the table, found in a large proportion in meat.

It would not, however, be good for us to eat nitrogenous food in such large proportion to the other sort of food as it is found in meat, for you will see that in meat nitrogenous food stands in relation to carbonaceous food as one to one, instead of as one to four or five. This is the reason why wise people eat plenty of bread, potatoes, rice, and other vegetables, when they have meat for dinner. These foods are richer in strength-giving than they are in flesh-repairing foods, so by joining them to meat we obtain the right proportion of the two foods necessary for health.

But this valuable nitrogenous substance is found in even larger quantity in some other foods than it is in meat. In *lentils*, or *split peas*, or *haricot beans*, almost half the substance is nitrogenous, standing in proportion (as you will see if you turn to the table) to the carbonaceous substance, as four to ten. This flesh-repairing material makes these foods very valuable; but they are still but little used. Foolish people have a prejudice against them, and prefer to remain half-nourished (as every one must do who tries to live on tea and white bread) rather than try what they "have not been used to," or make the effort to cultivate a new taste. The wise home-maker should learn carefully what is needed to nourish those who are dear to her, or to whom she owes a duty; and no foolish fancies should be allowed to interfere.

CHAPTER XI.

ON FOOD.—ARE VEGETABLES, MILK, AND EGGS VALUABLE AS FOOD?

"There is incessant death and incessant life going on in every part of the body. Every part of the body is dying according as it is used, and every particle is born again by being built in and becoming a new part of life. Therefore you see the importance of knowing the constituents of food, and showing how different materials should be used."—THE RIGHT HON. SIR LYON PLAYFAIR, K.C.B., F.R.S.

IN the last chapter we talked only of three sorts of food, and in what proportion they existed in the various articles of diet which are known to all of us. To-day I am going to tell you of three other sorts of food—namely, *vegetables*, *milk*, and *eggs*.

The most nutritious of all the *root-vegetables* is the *potato*, and so we must put it at the head of the class. In every pound it contains three and a half ounces of strength-giving, and half an ounce of flesh-repairing, food. This is not exactly the right proportion, for in potatoes the nitrogenous food in relation to the carbonaceous foods stands as one to seven; while, as you have learnt in the last chapter, the exact right proportion, is one part of nitrogenous food to every four or five parts of carbonaceous food.

It is for this reason that people who, like the Irish, live largely on potatoes, add *buttermilk* to their potato fare. The *buttermilk* contains the nitrogenous food which the potatoes lack. Potatoes alone would give all the necessary strength, but potatoes alone could not repair the flesh, and keep it and the muscles fit to use the strength which it supplies. But if to the potatoes is added the flesh-repairing materials which are to be found in milk, the diet is ready to both strengthen and repair the body.

After the potato we must class the *onion*, every pound of which contains four and a half ounces of strength-giving, and rather more than an ounce of flesh-repairing food.

With these figures you will, perhaps, wonder why it is not put top of the class of vegetable foods, instead of second; but though it is so rich in nutritive materials, it cannot be eaten in such large quantities, and so we are not able to award it the highest position. It is nevertheless a most useful food, and one which the home-maker will often welcome.

Two other root-vegetables must be bracketed, and ranked third in our vegetable class, namely, *Parsnips* and *Carrots;* but they stand some way below the potato, for in every pound of them we find two and a quarter ounces of strength-giving, but only one-sixth of an ounce of flesh-repairing food. Below them again stand *Turnips*, which are only able to tender one ounce in every pound to help us to be strong, and contain but one-sixth of an ounce of flesh-repairing substance, all the remainder being water and waste.

The rest of the class must be filled up with such vegetables as *cabbage*, *cauliflower*, *rhubarb*, and *spinach*, which are useful as food, not so much on account of the strength-giving and flesh-repairing substances, as on account of the minerals they contain, and the effect they have in helping on the work of the body.

Every day all the food that the body has used, or which it does not require, should pass through the body. It is of the utmost importance that this waste material should not be allowed to remain in the frame, but it should be regularly got rid of. One of the uses of vegetables is to assist those organs whose duty it is to gather up and discharge the waste materials.

Besides this duty vegetables contain acids and the

minerals which are useful because of their influence on the blood. "The blood is the life," and if the blood is not kept pure and sweet, it is impossible to keep healthy or robust. Vegetables have important work to perform, and nearly, if not every day we must take them, and see that neither by carelessness nor indolence we hinder them in their labours.

There is still another food about which we have said nothing, and that is *milk*, and yet it is a most valuable article of diet, containing all the three necessary properties.

In one quart of milk we get three and a half ounces of strength-giving food, and rather more than one and a half ounces of flesh-repairing food. This large proportion of nitrogenous, or flesh-repairing food—three to seven—enables us to use milk when we want to add more flesh-repairing food to those articles of diet which already contain a great deal of strength-giving material.

That is the reason why milk is so often put with grain foods, which, if you turn to the Table, you will see contain proportionally a much larger quantity of strength-giving than flesh-repairing food.

Thus, a *rice pudding* made of a quarter of a pound of rice (three and a half ounces of which are strength-giving and a quarter of an ounce of which is flesh-repairing), and a quart of milk (three and a half ounces of which are strength-giving and one and a half ounces of which is flesh-repairing), would give seven ounces of strength-giving and one and three-quarters ounces of flesh-repairing food—the combination of the rice and milk providing exactly the right quantities for our sustenance.

Eggs are also valuable as articles of food. It is difficult to tell you the right proportions of strength-giving and flesh-repairing properties found in them,

because the size of eggs varies so much, and in some eggs the yolk—which is the strength-giver—is larger, while in other eggs the white—which is the flesh-repairer—takes up most of the room. But generally the flesh-repairing material predominates, and for this reason they are eaten with bread (which with its nine parts of strength-giving only contains one and a half parts of flesh-repairing material) and butter, which contains no flesh-repairing food at all.

If we calculate that most eggs weigh two ounces each, we shall find that of this nearly two-thirds of an ounce would be strength-giving food, and nearly one and a third ounces would be flesh-repairing food. Thus you see that they are very rich in nitrogenous, or flesh-repairing, food, and this is also the reason why they are used in puddings made from grains which are quite poor in flesh-repairing foods.

Name.	Strength-giving.	Flesh-repairing.	Water or Waste.
1 lb. of Potatoes ...	$3\frac{1}{2}$ ounces.	$\frac{1}{2}$ ounce.	12 ounces.
1 lb. of Onions ...	$4\frac{1}{2}$ „	1 (rather more.)	$10\frac{1}{2}$ „
1 lb. of Parsnips ...	$2\frac{1}{4}$ „	$\frac{1}{6}$ ounce.	$13\frac{7}{12}$ „
1 lb. of Carrots ...	$2\frac{1}{4}$ „	$\frac{1}{6}$ „	$13\frac{7}{12}$ „
1 lb. of Turnips ...	—	—	—
1 lb. of Cabbage ...	—	—	—
1 lb. of Cauliflower	—	—	—
1 lb. of Rhubarb ...	—	—	—
1 lb. of Spinach ...	—	—	—
1 quart of Milk ...	$3\frac{1}{2}$ ounces.	$1\frac{1}{2}$ (rather more.)	27 „
2 ounces of Egg ...	$\frac{2}{3}$ „	$1\frac{1}{3}$ ounce.	—

Now we have had a long lesson on foods and their various properties—a long lesson, but not too long, for it is of the utmost importance that the home-maker should not be in ignorance of the foods necessary to properly nourish those of whom she has the care.

It is not always poverty which makes many chil-

dren look pinched and starved. It is often ignorance on the part of their parents as to the kinds of food which are necessary for their sustenance and growth. It takes no more money to provide suitable food than it does to buy bread and tea; but it takes more forethought and more knowledge.

However little money the home-maker has to spend on food, she should, when she goes out shopping, always make it a rule to put on her thinking-cap at the same time as she puts on her bonnet.

CHAPTER XII.

WHAT TO DRINK.—THE FOOD-VALUE OF BEVERAGES: TEA.

"*God has created no useless thing.*"—JOSEPH MAZZINI.

IN order to keep ourselves in health, we must, every day, take into our bodies a certain quantity of liquid. A full-grown man who does active work, or who takes a walk regularly, should drink three or three and a half pints of liquid every day. A woman does not need such a large amount, and children vary so much that it is impossible to give any rules about the quantity they should have. It is well, however, to bear in mind that it is as unadvisable to drink, as it is to eat, between meals, and the frequent demands of restless children for "a drink of water" at all hours of the day will, by the wise home-maker, be firmly but gently refused.

The chief drinks of the English people are *tea*, *coffee*, *cocoa*, and *beer*. We will talk about each separately, and learn something about their values as foods, as well as how to make the first three for ourselves.

Tea is the dried leaf of a shrub which grows in China and some of the hotter climates of the world. The wise chemist can take tea to pieces, as it were, and see what it is made of, and tells us that it is partly composed of *tannin* (which is the same stuff as the tanners use to tan their leather); partly of *gum;* with a little *casein;* and a very small quantity of a peculiar substance called *theine.* Besides these there are other things in tea, but they are useless as far as nourishment is concerned, so we will not ask you to learn about them.

When we make tea we should first warm the pot, then put in the tea, and over it pour *boiling water,* not water which "has boiled," or is "just going to boil," but water which is really boiling—"galloping," as the cook would say. This boiling water takes up or absorbs the good that it can find in the dried leaf of the tea-plant. It unrolls the tightly-packed little leaves, and makes them give up all they contain; but even when they have given their all there is not much useful food for our service, and what there is comes from the substance called *theine.* It has for its two duties — first, that of exciting or stimulating the nerves; and, secondly, that of stopping or hindering the wear and waste of the body.

As the body works or lives, it wears away a part of itself; but theine, aided by the hot water, has, to a certain extent, the power of hindering this wear. This is why a cup of tea so often seems to satisfy or prevent hunger. It does not really feed or nourish the body, but by stopping or hindering some of the active labour of the organs which have to do the work inside us, it prevents them finishing the food so quickly, and so they do not so often call out for more victuals.

To make it plainer to you, we will imagine that the body is like a child with a plate of food before him. While he is eating it a neighbour comes in and shows the child a new toy, which interests him so much that the food is forgotten and left. Tea is like the new toy, it hinders the body using up the food quickly: just as the child feels lively and gets interested by the new toy, and so puts off taking his food, so when the body is made lively by the tea, the work of consuming the food is hindered.

This is what tea does for us, and a kindly helper it often is; but something can turn it from a friend into an enemy, and that something is *time*. Yes! and even quite a short time: ten, or even eight, minutes is quite enough to change this helpful friend into a hurtful enemy. You have heard that there is *tannin* in tea. This substance is very injurious to the health, but it does not leave the tea-leaves immediately. They must stand in the hot water some time before the tannin leaves them, and when it does it darkens or colours the water. The longer we let the tea "stand" and "draw" the more unwholesome it becomes. It is not "goodness" nor "strength," as people say, which is drawn out, but only the enemy tannin.

Now you have learnt two things about tea. First, that apart from the *milk* and *sugar* that are put into it, it is not food, only a *stimulant* and waste preventer or hinderer (though sometimes a useful hinderer); and, secondly, that it is injurious if allowed to stand long. We get all the value out of tea when it has been made five minutes. After that time it is not so good to drink. Does not this point to the careful home-maker using big cups and basins?

CHAPTER XIII.

WHAT TO DRINK.—THE FOOD-VALUE OF BEVERAGES: COFFEE, CHOCOLATE, AND COCOA.

"As the body wants food, so also does the soul require nourishment."—JOSEPH MAZZINI.

COFFEE is the berry of a plant which grows in the West Indies, and in other parts of the earth where the sun is powerful. Before it is fit for our use it has to be picked and dried, and then roasted and ground. Coffee is much nicer if it is roasted and ground just before it is used; but if we have not got a *coffee-roaster*, nor a *grinding mill*, the grocer will do both roasting and grinding for us, though in this case, if the coffee is kept long before it is made, it loses some of its freshness and fragrance.

There are various ways of making coffee. Some people like to make it in the same way as they make tea—namely, by pouring boiling water over the coffee and then straining it. Other folk think that it tastes better if it is boiled, so then their plan is to put the coffee in a little muslin bag and boil it in a pot or saucepan. Either way is good, though on the whole I am inclined to recommend the latter plan as being the most likely to get all the goodness that there is out of the berry. A cup of coffee has almost the same effect on the body as a cup of tea. Coffee is, however, free from the hurtful *tannin*; but, on the other hand, it does not contain so large a proportion of the helpful *theine* (which in coffee is not called theine, but *caffeine*). To make up for this deficiency, it contains a little *sugar* and a little *fat*, both of which are soluble substances, and both of which are strength-giving foods.

Thus you see, that though coffee may not have so much power to cheer us up as tea, it still has more capacity to feed and strengthen us. It is also cheaper than tea, and when boiled is refreshing by its fragrant smell as well as by its stimulating qualities.

There are two more of this class of beverage about which we can learn—namely, *cocoa* and *chocolate;* but we will speak of them together, because they both come from the same tree, and it is only the different methods of preparation which decide whether they be called chocolate or cocoa.

Cocoa is the nut of a shrub. It comes from the West Indies and has to go through a great many stages before it is ready for our use. There are many sorts of cocoa, and the choice can depend almost entirely on taste, for they are all nutritious in their different ways. If we decide on cocoa-nib cocoa, we must stew the nibs for three or four hours, until all the nutriment has left them. But if we decide on powdered cocoa, it is only necessary to mix the powder with water or milk, according to the directions which are printed on every packet.

Most of these powder cocoas are largely mixed with flour and starch; but a new cocoa has lately been sold, which contains no starch, but is mixed with a bean called the locust-bean, which in itself is nutritious. This new cocoa does not cost much more than the other sorts, and as it is more valuable as food, it will in the long run be the cheaper to buy.

If we take cocoa to pieces in the same way as we did tea and coffee, we shall find it contains much more strength-giving ingredients. Indeed, out of every pound, half a pound, or eight ounces, of cocoa is composed of *butter* or *fat,* while there are nearly three ounces of *albumen* or *gluten,* and as much of

the refreshing substance as there is in tea. But in cocoa this is called neither theine nor caffeine, but *theobromine*.

If you have borne in mind some of the figures that are in the Food Table, you will be interested to notice how high a place cocoa can take in the nutritive-food class. For in one pound it can boast of containing nearly nine ounces of strength-giving food, and three ounces of flesh-repairing food; or if we like to put it in another way, a pound of cocoa, costing 1s. 2d., will yield us as much strengthening food as three pounds of lean beef, costing 2s. 3d., and as much repairing nourishment as a half-quartern loaf.

You will thus see that cocoa is the most nourishing of all these three drinks, and it is one the use of which the wise home-maker will encourage by careful preparation.

CHAPTER XIV.

WHAT TO DRINK. — THE FOOD-VALUE OF BEVERAGES: BEER AND SPIRITS.

"*Alcohol is a poison, and total abstinence from the dietetic use of these drinks, in every shape, form, or quantity, is the only true, the only logical temperance and moderation in regard to them.*"—DR. M'CULLOCK.

UNDER beverages there still remains beer to be talked of. *Beer* is supposed by many people to be a great supporter of strength. "My man cannot get on without his glass of ale; you see, his work is so hard," has been said to me many times, and a great surprise it has been sometimes to those who have said this, when I have tried to explain to them how little real value ale has for strength-giving and flesh-repairing purposes.

In every pint of bitter beer we find about three-quarters of an ounce of strength-giving food (in sweet and strong ale there is rather more than this amount); about the same quantity of *alcohol*, and all the rest is water and waste.

Ale costs twopence a pint, and every year a great deal of money is spent on it by those who can often but ill afford it, under the idea that it is very useful as food. Many people have felt sorry to see this wasteful and useless expenditure, and so they have studied the subject, and written books to tell the real truth concerning it. One person says:—"The plain English is, that out of every hundred gallons of ale nearly ninety-two gallons are water." Another writer tells us that ale is not of much value—indeed, in a spoonful of ground rice or oatmeal there is as much strength-giving food as in a glass of ale; while "soup made out of a pound of peas or haricot beans will give a man as much strength as nine bottles of Bass's pale ale, or six bottles of Guinness's stout at tenpence a bottle."

But sometimes people will tell you that *malt* is very strengthening; so it is, but malt is only barley, and after the barley has gone through all the necessary processes to turn it into beer, there is very little of it left.

Mr. J. W. Kirton writes:—"How much barley is there in a gallon of ale? This can be ascertained by evaporating the ale." He then describes how the experiment is made, and goes on to say: "Scientific men have often made the experiment, and by careful tests demonstrated that the average quantity of solid matter found in a gallon of malt liquor is less than nine ounces." "This," he adds, "is not equal as food to a penny loaf."

Thus you see that ale is not of much value as a

food. Neither does it give strength, as it is so generally supposed to do; but there can be no doubt that people who take it feel as if it did them good, and helped them to do their work; and this feeling is caused by the *alcohol* which is in beer or ale. It is difficult to explain exactly what alcohol is; but perhaps you will understand if you are told that it is a spirit which is produced during the process of brewing, and produced out of sugar by the help of a little living body called the *yeast-plant*.

When we come to talk about cooking and baking you will learn all about the yeast-plant, but at present we will not talk about the production, but about the effect of alcohol.

There has been much discussion among learned men as to whether alcohol is, or is not, a food; but now it is decided that it is not a food—indeed, we may more truly call it a *poison*. It has, however, a large influence upon the frame, as each of us who has ever seen a drunken person must with sorrow have realised. This influence seems to consist in stimulating or hurrying the action of certain of the organs (especially the heart, and through it the circulation), and increasing *for a time* their power. You must notice, however, the three words that are italicised, for it is only *for a time* that these organs get additional strength; after a short time, generally about twenty minutes, the effect goes off, and the organs become weaker than they were before the alcohol was taken.

But while the effect lasts people feel stronger and more able to do their work, and so they say that the glass of beer or the spirits and water "does them good." They forget, or do not notice, that when the effect has passed off, they feel tired, or as if they wanted another glass. Alcohol is like a whip to a poor

tired horse. It may make him go a little faster, but it does not provide him with real strength to pull the load up the hill, or to trot many miles along the "hard high road."

I should not like to tell you all the sad diseases and terrible evils which come because people swallow this alcohol, which is poisoning them even while they take it to do them good.

Sometimes it is taken to help digestion, by which is meant the process of melting or changing solid food into a liquid. But if we go to a museum we shall see lots of little bottles full of liquid, in which are dead, but solid, animals. "What makes them remain solid? Why do they not melt into the liquid?" we shall ask, and we shall be told for an answer that the liquid is spirit, which prevents them from dissolving. And this is the same sort of spirit or alcohol which people put into their insides, with the mistaken idea that it will help the solid food to dissolve. "How mischievous," writes one doctor, "is the drinking of alcoholic drinks, particularly during meals! How absurd the popular, but too often medical, delusion, that they assist or promote digestion!" And two wise professors, who wrote a big book, declare that were it not that these drinks quickly left the stomach it would be impossi 'e for it to do its work of digestion.

There are many other things to be said about alcohol, but perhaps you have been told enough. You have learnt that *strength* cannot be got from ale, and that with the exception of the small quantity of barley there is no *food* in beer. You have also learnt that alcohol is a poison—a slow one, but, mind! not less *sure* because it is *slow;* and that the feeling of strength and power and vigour which comes after drinking a glass of ale is certainly followed, even if

we do not feel it, by a loss of power in those organs which have been specially influenced by the alcohol. And now we can dismiss alcoholic drinks, but not, I hope, forget all about them, for many a girl can do good in the world by telling these facts to those who waste their money, and injure their beautifully-made bodies, under the mistaken idea that the glass of ale is of some health-giving use to them.

CHAPTER XV.

WHAT TO DRINK.—COOL AND REFRESHING, WARM AND COMFORTING BEVERAGES.

"Make of the family the temple wherein you unite to work and sacrifice."—JOSEPH MAZZINI.

BESIDES the beverages we have talked of, there are many cold drinks which can be made at home, and be both refreshing and thirst-quenching. There is, for instance, *Lemonade*, which need not be made of lemons, but can be made with sugar and citric acid (an ounce of citric acid costs but 3d., and it does not take nearly that quantity to make a quart of the lemonade). The rind of a lemon or cucumber helps the flavour, and all is made palatable and refreshing by the *one pound of ice* which, if introduced by the home-maker on an intensely hot night, would be a great luxury, and ultimately save far more than the original outlay. To many people ice seems so great a luxury, that it is never considered as reasonably within reach of a small purse. In the country, it is true, it is impossible to get it, but in London and other large towns where it can easily be obtained, it

only costs twopence a pound, and if fetched just before wanted, it will often repay itself, as most of the home-makers who have tried it agree, by the refreshment and interest it gives. The bit of twopenny ice at home may become a beautiful crystal gate, shutting off the spirit-bar or public-house.

Barley-water and *oatmeal tea* are also refreshing and pleasant drinks. They are made quite simply, by pouring boiling water over the barley or oatmeal, or by letting the grain gently simmer for two or three hours. One table-spoonful of barley or oatmeal must go to every quart of water, and the flavouring be decided according to taste. Some folk like lemon, while to others a spoonful of black currant jam helps to make the draught more enjoyable. In cold weather these drinks are most refreshing when really hot. In summer the crystal lump, about which we have already spoken, must be made to play its part.

Of hot drinks, *linseed tea* is very nice. To make it you must put two table-spoonfuls of linseed into a jug, into which must be poured a quart of boiling water. The linseed and water can then gently boil until only a pint of it is left, and this (after sugar or lemon, or Spanish juice is added) is then fit to drink.

Rhubarb-liquor is delicious if properly made; and for children it is particularly appropriate, not only because, as a rule, they like it, but because it is an easy and simple way of giving them vegetables, which, you will remember, it is necessary to eat if you wish to be healthy.

To make rhubarb liquor, you must get two pounds of rhubarb, to which you must add a quart of water; then boil it for ten minutes, strain it off, and add the rind of a lemon, and an ounce or two of white

sugar. This drink is refreshing in hot weather, and seems to satisfy thirst better than cold water.

The French drink a great deal of what they call "*eau sucré*," which is nothing more nor less than sweetened water. You see the *cafés*, which answer to our public-houses, quite full of people, all sitting round little tables smoking and chatting, each person with a glass by his side. If you ask what they are drinking, you will learn, not that they are taking spirits, gin, or whiskey, or brandy, but nothing stronger than sweetened water.

In England, this beverage is not much used, but it has only to be tried to be enjoyed. Water, either hot or cold, with sugar added to it, makes an agreeable and wholesome drink, and if it is not exhilarating, at least it has the charm of being innocent. It does not, as some quaint writer has said of alcohol, go "into your mouth to steal your brains."

All these last-mentioned beverages cost next to nothing, excepting the invaluable, and therefore priceless, treasures of forethought and industry. But of these our home-maker must early lay in a good stock, that is, if she is going to be the queen of the home, because the servant of all its inmates.

CHAPTER XVI.

THE HISTORY OF A FEW DAYS MEALS.

"*Nothing lovelier can be found in woman than to study household good.*"—JOHN MILTON.

I AM so anxious that my little home-makers should really know about foods, that in this chapter we will go through a few days, and plan the meals for every

day. For each day we will arrange the food for a very poor family, consisting of father, mother, and four children.

We will consider that the man requires sixteen ounces of strength-giving and four ounces of flesh-repairing food; that the woman will need twelve ounces of strength-giving and three ounces of flesh-repairing food; and that the children will each want eight ounces of strength-giving and two ounces of flesh-repairing food, making the total sixty ounces of strength-giving food, and fifteen ounces of flesh-repairing food.

Name.	Strength-giving.	Flesh-repairing.
Father	16 ounces.	4 ounces.
Mother	12 ,,	3 ,,
Child	8 ,,	2 ,,
,, ...	8 ,,	2 ,,
,, ...	8 ,,	2 ,,
,, ...	8 ,,	2 ,,
	60 ounces.	15 ounces.

The sixty ounces and the fifteen ounces had better be divided between the three meals, giving, say, eighteen ounces and four ounces respectively for breakfast and tea, and twenty-four ounces and seven ounces for dinner.

Name.	Strength-giving.	Flesh-repairing.
Breakfast ...	18 ounces.	4 ounces.
Dinner	24 ,,	7 ,,
Tea	18 ,,	4 ,,
	60 ounces.	15 ounces.

We will first consider the *Breakfast*, and for it we can provide the family with *porridge* made of one

pound of oatmeal, a pint of milk, and a quarter of a pound of sugar or treacle.

BREAKFAST.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
1 lb.	Oatmeal	2d.	11½ ounces.	2½ ounces.
1 pint.	Tinned Milk ...	1d.	1¾ „	¾ „
¼ lb.	Sugar or Treacle	¾d.	3½ „	
		3¾d.	16¾ ounces.	3¼ ounces.

In this meal you will see that we have easily got about the right quantities of each substance. It may not always be so easy; but then, if we do not get the exact proportion in one meal, we must bear it in mind, and so arrange the other meals as to make up the deficiency.

For *Dinner* on this day we will get meat, and we will decide on *Irish stew*. We need only buy one pound of meat, but to this we must add three pounds of potatoes, a pound of onions, a few carrots, and a quarter of a pound of rice. And we need not fear to run into debt if we go out to do all this shopping with only one shilling in the purse, for there is no occasion to buy the best part of meat; the scraps or trimmings will serve our purpose. The secret of cooking Irish stew must be learnt in the cooking chapters; but now you must studiously look at the value Table—

DINNER.

Quantity.	Name.	Cost.	Strength-giving.	Flesh repairing.
1 lb.	Meat	6d.	3 ounces.	3 ounces.
3 lbs.	Potatoes	2d.	10½ „	1½ „
1 lb.	Onions.	1d.	4½ „	1 „
A few	Carrots	1d.	—	—
¼ lb.	Rice	½d.	3½ ounces.	¼ ounce.
1 lb.	Bread	1½d.	9 „	1½ „
		1s.	30½ ounces.	7¼ ounces.

We have got, as you will see, for our one shilling about the requisite quantities of strength-giving and flesh-repairing substances — indeed, more of the strength-giving food than we absolutely needed; but the day is not over yet, and there is still another meal to provide.

For *Tea* we had better have *coffee* and *brown bread and butter*, or, perhaps what is even nicer, brown-bread toast soaked in coffee. In the half-quartern loaf we shall get no less than eighteen ounces of strength-giving, and three ounces of flesh-repairing foods; and the coffee, to which we must not forget to add a pint of milk and an ounce or so of sugar, will be both refreshing and in a slight degree nutritious.

TEA.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
2 lb.	Bread	3d.	18 ounces.	3 ounces.
2 oz.	Coffee	2d.	$\frac{1}{8}$,,	$\frac{1}{8}$,,
1 pint.	Tinned Milk ...	1d.	$1\frac{3}{4}$,,	$\frac{3}{4}$,,
1 oz.	Sugar	$\frac{1}{4}$d.	$\frac{3}{4}$ ounce.	
		$6\frac{1}{4}$d.	$20\frac{5}{8}$ ounces.	$3\frac{7}{8}$ ounces.

Now we will add up the sum, and see the result of careful thought when brought to bear on one day's food. We find that we have provided for this healthily hungry family of six, three good meals at the cost of 1s. 10d., or but a little over a penny farthing each. For this sum we have given them nearly sixty-eight ounces of strength-giving food, and nearly fifteen ounces of flesh-repairing food. This is, as you will remember, even more than the quantity of strength-giving food that scientific men have decided to be necessary for the health and strength of a family of six.

TABLE OF ALL THREE MEALS, AND THE QUANTITIES OF NUTRITIOUS FOOD IN EACH.

Meal.	Food.	Cost.	Strength-giving.	Flesh-repairing
Breakfast	Oatmeal Porridge	3¾d.	16¾ ounces.	3¼ ounces.
Dinner ...	Irish Stew ...	1s.	30½ ,,	7¼ ,,
Tea ...	Coffee and Toast	6¼d.	20⅝ ,,	3⅞ ,,
		1s. 10d.	67⅛ ounces.	14⅜ ounces.

CHAPTER XVII.

THE HISTORY OF A FEW DAYS' MEALS (*continued*).

"*Man eats and drinks that he may work. He is* ENABLED *to work by eating what is sufficient; he is* HINDERED *from working, becomes heavy, idle, and stupid if he takes too much.*"—JONES OF NAYLAND.

IN the last chapter we only accomplished the feeding of our family for one day. In this lesson we will try to provide their bodies with three more meals, of both appetising and nourishing food. For *Breakfast* we will to-day provide *cocoa* and *bread*, with a little treacle for the children, while father and mother may have herrings as a relish to their fare.

Six tea-spoonfuls, or one ounce of cocoa, will make the necessary number of cups, and we may perhaps add the half-pint of milk; but that is not necessary, and must be looked on as a luxury. The table of this meal will closely resemble the table of the tea meal of yesterday, excepting that now we must count the milk, the treacle and the herrings as luxuries, and not necessaries as articles of diet. This must be remembered, because this meal looks as if it cost three-halfpence more, while in reality it costs twopence three-farthings less than yesterday's tea.

BREAKFAST.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
2 lbs.	Bread	3d.	18 ounces.	3 ounces.
1 oz.	Cocoa	1d.	½ ,,	¼ ounce (not quite).
½ pint	Tinned Milk ..	½d.	⅛ ,,	⅜ ounce.
1 oz.	Sugar	¼d.	¾ ,,	—
2	Herrings ..	2d.	—	—
2 oz.	Treacle	½d.	1¾ ,,	—
		7¼d.	21⅛ ounces.	4⅛ ounces.

The *Dinner* will consist of *lentil soup* and *bread* and *toasted cheese.* From the bread and lentils we shall get most of our strength-giving food, while the cheese is flesh-repairing food, and is a pleasant and tasty morsel with which to finish up the meal.

DINNER.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
1 lb.	Lentils	2d.	10 ounces.	4 ounces.
½ lb.	Cheese	4d.	2¼ ,,	2¾ ,,
1 lb.	Bread	1½d.	9 ,,	1½ ,,
		7½d.	21¼ ounces.	8¼ ,,

For *Tea* we will boil some *rice,* which can be taken with *bread* and *sugar,* while a *cup of tea* may be added for the elders. Tea is very unwholesome for children, but they will enjoy hot rice-water, especially if in it be stirred a tea-spoonful of some jam or syrup; and it will be even still more wholesome if another penny can be spared to purchase the pint of milk.

TEA.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
½ lb.	Rice	1d.	7 ounces.	½ ounce.
1 pint	Tinned Milk ..	1d.	1¾ ,,	¾ ,,
1 lb.	Bread	1½d.	9 ,,	1½ ,,
1 oz.	Sugar	—	¾ ,,	—
		3½d.	18½ ounces.	2¾ ounces.

To-day we shall have fed our family even more cheaply than we did yesterday, and I think quite as appetisingly.

TABLE OF ALL THREE MEALS, AND THE QUANTITIES OF NUTRITIOUS FOOD IN EACH.

Meal.	Food.	Cost.	Strength-giving.	Flesh-repairing.
Breakfast	Cocoa & Bread Treacle & Herrings	7¼d.	21⅞ ounces.	4⅛ ounce.
Dinner ..	Lentil Soup and Toasted Cheese.	7½d.	21¼ „	8¼ „
Tea ..	Rice Pudding and Bread.	3½d.	18½ „	2¾ „
		1/6¼	61⅝ ounces.	14⅛ ounces.

It must never be forgotten that hot food is more nourishing (because more appetising, and therefore more easily digested) than cold food.

It is for this reason that I have told you chiefly about hot foods. Most of the same substances are to be found in cold as in hot dishes, but the savoury smell, and the moisture of gravies or sauces, helps the appetite, and the enjoyment of eating assists the food to thoroughly do its duty.

Many people (and children particularly) are greedy, and think too much of food. Frequently this is because not having had nice food provided for them, their thoughts have been turned unduly to the subject, and they become greedy and so far bestial.

The thought of food should occupy but little space, except in the mind of the home-maker, and she must, especially if her purse be limited, give much earnest consideration to the subject.

CHAPTER XVIII.

THE HISTORY OF A FEW DAYS' MEALS (*continued*).

"God made the first man after a divine original, and after a divine original, too, He made the first home."—J. B. BROWN.

IN to-day's lesson we will again talk about foods, and I will show you other ways and other dishes by which the right quantity of strength-giving and flesh-repairing foods can be obtained at very little cost.

For this morning's *Breakfast* we will have *hominy*, which can be either baked as cakes, or boiled and eaten with treacle or sugar, like porridge. If we decide on the latter dish we shall want milk, which is always expensive, and sometimes difficult to get fresh in London and large towns; but a tin of condensed milk can be bought for sixpence-halfpenny or sevenpence, and that, when mixed with water, will make four quarts of good and wholesome milk. If you calculate the price of this tinned milk you will see how it only stands at a penny three-farthings a quart, instead of fourpence or fivepence, which milk costs if it is bought of the milkman.

BREAKFAST.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
1 lb.	Hominy	½d.	11½ ounces.	2½ ounces.
1 quart	Tinned Milk ..	1¾d.	3½ „	1½ „
¼ lb.	Sugar	¾d.	3½ „	—
		3d.	18½ ounces.	4 ounces.

For *Dinner* we will have *potato soup*, and *sago* and *apple pudding*.

In the cooking section you will hear how to

make both these dishes, but now I want you to learn the quantities, and to notice what a nice dinner can be made out of cheap and dull sorts of food.

DINNER.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
4 lbs.	Potatoes	3d.	14 ounces.	2 ounces.
1 pint	Tinned Milk ..	1d.	$1\frac{3}{4}$ „	$\frac{3}{4}$ „
2 oz.	{ Semolina or Ground Rice }	$\frac{1}{2}$d.	$1\frac{1}{2}$ „	$\frac{1}{4}$ „
2 oz.	Dripping.. ..	1d.	$1\frac{3}{4}$ „	—
2 lbs.	Apples	3d.	4 „	2 „
$\frac{1}{4}$ lb.	Sago	$\frac{1}{2}$d.	3 „	$\frac{1}{2}$ „
$\frac{1}{4}$ lb.	Sugar	$\frac{3}{4}$d.	$3\frac{1}{2}$ „	—
		$9\frac{3}{4}$d.	$29\frac{1}{2}$ ounces.	$5\frac{1}{2}$ „

We have allowed ourselves for materials little else than potatoes and apples, but careful cooking will turn them into a savoury soup and a tempting pudding. The cost is but ninepence three-farthings, only the cost of one pound of meat, and yet we have got for dinner to-day as much strength-giving nutriment as can be found in an eight-pound surloin of beef, and as much flesh-repairing nutriment as is got out of two pounds of lean mutton.

For this day's last meal we will provide *fish, bread* and *dripping*, and *tea*.

It is difficult to give an exact estimate of the food-value of fish, because there are so many different sorts, but the commoner and cheaper kinds of fish, such as whiting, haddock, cod, plaice, flounder, or brill, contain a good deal of valuable food-material.

In every pound of such fish we find half an ounce of strength-giving food and three ounces of flesh-repairing food; the remaining twelve and a half ounces being made up of water, and of those mine-

rals which I told you must always somehow get inside, in order to keep on the work of the body.

TEA.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
2 lbs.	Fish	6d.	1 ounce.	6 ounces.
1½ lbs.	Bread	2¼d.	13½ „	2¼ „
1 pint	Milk	1d.	1¾ „	¾ „
2 oz.	Sugar	¼d.	1½ „	—
	Tea	—	—	—
		9½d.	17¾ ounces.	9 ounces.

Now we will add up this day's meals and see what we have got.

TABLE OF ALL THREE MEALS, AND THE QUANTITIES OF NUTRITIOUS FOOD IN EACH.

Meal.	Food.	Cost.	Strength-giving.	Flesh-repairing
Breakfast	Hominy, Milk, and Sugar.	3d.	18½ ounces.	4 ounces.
Dinner ..	Potato Soup and Apple and Sago Pudding.	9¾d.	29½ „	5½ „
Tea ..	Fish and Bread ..	9½d.	17¾ „	9 „
		1/10¼	65¾ ounces.	18½ ounces.

Here you will see that you have for one shilling and tenpence farthing, no less than sixty-five and three-quarter ounces of strength-giving food, and eighteen and a half ounces of flesh-repairing food; having fed six people as wholesomely and as nutritively as the richest people in the land can be fed, at the cost of a little over a penny-farthing a meal for each person.

CHAPTER XIX.

THE HISTORY OF A FEW DAYS' MEALS (*continued*).

"*Sometimes the table robs more than a thief.*"—GEORGE HERBERT.

FOR another day our bill of fare could run thus: for *Breakfast, bread* and *milk;* for *Dinner, potato pie;* for *Tea, savoury rice* and *toast.*

For *Breakfast* for our family of six, we shall require a quart of milk and a half-quartern loaf. The bread must be cut, or, better still, broken into varied sized pieces, and the milk allowed to really boil before it is poured into the basins.

BREAKFAST.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
1 quart	Tinned Milk ..	1¾d.	3½ ounces.	1½ ounce.
2 lbs.	Bread	3d.	18 ,,	3 ,,
		4¾d.	21½ ounces.	4½ ounces.

For the *potato pie* we had better buy Australian meat, either tinned or fresh. There is a strange and foolish prejudice against Australian meat, but we will hope that people will soon learn that it is quite as nutritious as and much cheaper than home-fed meat, and then it will be more generally used and enjoyed.

In arranging these meals I am constantly thinking of their cost. The task before us is not only to provide a good meal; that, with a well-stocked purse, were an easy matter, but the difficulty of our task is to provide meals to give us sufficient strength-giving and flesh-repairing foods, as well as to meet our four requirements: 1, wholesome to eat; 2, pleasant to look at; 3, nice to taste; and 4, cheap to buy.

Potato pie will do all these, but more effectively

with two pounds of meat than with one; and the two pounds can be bought with the same, or but very little more money, if tinned meat is decided on.

DINNER.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
2 lbs.	Australian Meat ..	8d.	6 ounces.	6 ounces.
3 lbs.	Potatoes	2d.	10½ „	1½ „
¼ lb.	Onions	1d.	2¼ „	½ „
1 lb.	Bread	1½d.	9 „	1½ „
		1s.	27¾ ounces.	9½ ounces.

For *Tea* we will provide *savoury* or *sweet rice*. In the cookery chapters you will find instructions to teach you how to cook both, and they will each cost about the same money. For savoury rice we shall want onions, and for sweet rice sugar. To either a bit of brown-bread toast is a wholesome addition, and if the home-maker be as wise and as saving as my ideal home-maker is, she will have a little store of dripping in which to fry the bread and make a crisp-brown layer for her rice.

TEA.

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing
½ lb.	Rice	1d.	7 ounces.	½ ounce.
1 lb.	Onions	1d.	4½ „	1 „
2 oz.	Dripping ..	1d.	1¾ „	—
1 lb.	Bread for Toast ..	1½d.	9 „	1½ ounces.
		4½d.	22¼ ounces.	3 ounces.

or with sugar instead of onions the table would be—

Quantity.	Name.	Cost.	Strength-giving.	Flesh-repairing.
½ lb.	Rice	1d.	7 ounces.	½ ounce.
¼ lb.	Sugar	¾d.	3½ „	—
2 oz.	Dripping ..	1d.	1¾ „	—
1 lb.	Bread for Toast ..	1½d.	9 „	1½ ounces.
		4¼d.	21¼ ounces.	2 ounces.

Our table for this day's meals will, I think, show well.

TABLE OF ALL THREE MEALS, AND THE QUANTITIES OF NUTRITIOUS FOOD IN EACH.

Meal.	Food.	Cost.	Strength-giving.	Flesh-repairing.
Breakfast	Bread and Milk ..	4¾d.	21½ ounces.	4½ ounces.
Dinner ..	Potato Pie ..	1s.	27¾ „	9½ „
Tea ..	Sweet or Savoury Rice.	4½d.	22¼ „	3 „
		1/9¼	71½ ounces.	17 ounces.

Indeed it is almost the best table we have yet made, for we have got eleven ounces more of strength-giving, and two ounces more of flesh-repairing foods than is really needed, or than will be eaten. But what is left will do for another day, especially if it is put out of the reach of little picking fingers, and in the cupboard to which fresh air is a daily and welcome visitor.

CHAPTER XX.

HOW MUCH AND WHEN TO EAT.

"*As a lamp is choked by a superabundance of oil, a fire extinguished by excess of fuel, so is the natural heat of the body destroyed by intemperate diet.*"—BURTON.

WE have talked so much about food and had so many chapters on what perhaps has seemed to some of you wearying details, on the value and properties of food, that you may perhaps wonder what else you have to learn on the subject. But what I have to say in this chapter is as important, if not more so, as much of what has been said in the previous pages, for then we talked on *what* you were to eat, now we will talk of *how* we are to eat.

First, then, as to *quantity*. You have learnt that a man requires twenty and a half ounces in all in one day; a woman will require say about fifteen ounces; though, of course, if she is doing man's work, like many women unhappily do in the fields and mines, she will require almost a man's full share.

For children it is very difficult to give rules, for much must depend on their habits, size, age, sex, and activity; but it is of the utmost importance that they should not be allowed to eat too much.

The best way of preventing this is to provide plain but wholesome meals, and not to allow the children to eat at any other times. Children, however, are very fond of sugar and sweet things, and this taste should not be suppressed nor ignored. In this matter their taste guides them to like what their bodies require, and at most meals sweet things, in some form or other, should be provided for the little "sugar teeth." But by this I do not mean that children should be sucking "goodies" at all hours of the day. No! sweet food they want and sweet food they should have, but *at* and not *between* meals.

People often complain of over-work, and a great many illnesses certainly arise from undue fatigue. If we eat too much we over-work the stomach and other organs in our bodies, and more diseases arise from that sort of over-work than from any other, even from the cruellest taskmaster.

The quantity we eat is very much a matter of habit. It is necessary that the home-maker should know this, so that if she thinks that one of the family has had enough, she may with firmness refuse to give more, even though the child declare that "there is still room, and that he is hungry."

Most people eat too much, and a learned doctor who well knew the poor as well as the rich, told me

that in his experience he had known more people die of over-eating than under-feeding. He said that it was well at every meal to observe a good rule which he gave, and the rule was, "Always get up from the table with an appetite." And he explained the reason of his rule quite simply, by saying, "We must all have room to work, and if you fill the stomach full, the food has no room to work and cannot therefore do its duty. Half fill the stomach and leave the food moving space in which to perform its function. The good that food ought to do is often prevented because too much is taken."

It is better, if it can be arranged, to take about equal quantities of food at every meal, but it cannot always be so planned, and if not, the next best course is to take the largest and most comfortable meal at an hour when everybody can sit down to it together. This may be in the middle of the day, if the father's work and the children's school allow them to come home at that hour; or it may be in the evening, when both work and school are over, and the happy evening can be begun by a family "communion" meal. The meals had better be about five or six hours apart, so that if three meals are taken in the day, there should still be left twelve or fourteen hours when the stomach can rest, and sleep may be able to do its seven or eight hours' peaceful work, undisturbed by the action of the stomach.

Between meals nothing should be eaten. Mothers often give their children bread and butter, or cakes, or a "sup of milk" whenever they ask for it, fearing in their love to refuse them food, in case they should cause the pain of hunger; but the loving action is unwise. The stomach must, like everything else, have absolute rest, or else it will get unduly tired and weakened. "There, Johnny, take that and run

out," is what you, as well as I, must often have heard; and kind as the sentence sounds, it is not really so. It is often only another form of saying, "Take this food and with it take some form of indigestion."

Most foods take three and a half hours to digest and pass through the stomach. If the meals are taken so that five or six hours elapse between each, the stomach will be given one and a half or two hours of rest, and it needs quite as much as that; but if food is always being taken it keeps the stomach constantly at work, and then it gets tired and cannot properly do its duty to the meals, when dinner-hour or tea-time comes.

In the railway-train, or during a day's outing, I have sometimes seen a mother constantly give her children some sort of food; apples, biscuits, cakes, or sweets, and I have afterwards heard her express wonder and anxiety if the children get cross or feel sick before the day is over or the journey finished. But I have not felt astonished, knowing how imperatively the stomach demands rest, and how, if it does not obtain the demanded recreation, it will revenge itself by causing a sense of weariness, irritation, and sickness.

Little children must be taught, even when they are tiny babies, that they must not have food except at their regular meal-times, and then their stomachs will get into good habits, and they will soon cease to make demands at other and undesirable hours.

Besides the harm that this bad habit of continued eating does to the stomach and digestive organs, there is still another evil which attends it. What I am going to speak of is a terrible thing—one of the worst evils of our day, and one which, if we do not soon conquer it, may bring our nation to disgrace and sorrow—I mean *drunkenness*.

The childish habit of constantly eating cakes or sucking sweets may seem, at first sight, to have no connection with such a fearful sin; but a little thought may show us the relation. You have already learnt that our bodies soon adapt themselves to our habits. By constantly taking food the stomach becomes accustomed to being stimulated. By the time that the age of sugar-plums and apples is past, the stomach has got so used to continual feeding, that it craves for sustenance, and then the glass of ale is taken, and as the habit increases the public-house is more rarely passed. The ruin to health, the sadness and misery which follow this habit, are, alas! too well known to most of us. Big trees grow out of little seeds. By watchful care over the children's cakes, and "goodies," or even the oft-asked-for "drink of water," we each one of us may do something to prevent this small seed of a bad habit taking root and growing into a sin.

CHAPTER XXI.

HOW TO EAT AND HOW TO KEEP THE FOOD.

"I should like to see meals which are now mere scrambles, becoming points of real family union, occasions for showing forethought, kindliness, and self-respect."—H. R. H. THE LATE DUKE OF ALBANY.

THE *hours of meals* should be some of the pleasantest and happiest of the day, and around the dinner-table and tea-table should gather some of the gladdest and brightest home memories. The pleasure of eating which comes from the gratification of one of the senses, should be subordinated to those other pleasures, which may come through the interest of conversation, or the enjoyment of seeing. For all these reasons the

home-maker must give loving thought to the appearance of the meal-tables and the conduct of her family. I need hardly speak of the duty of putting all the things neatly and appropriately on the table; but besides this, however frugal the meal, the table should look well filled. To help this, flowers will lend their graceful assistance, or, if they are scarce, it is a good plan to stand some of the ornaments about the table, as they will do something to help make it look cheerful and welcoming. Hardly anything is more discouraging to those who have wearily toiled all day, than the sight of a cheerless table; and a table bare of everything except the necessary dish can hardly help looking cheerless.

It is generally a good plan to make every member of the family wait to begin the meal until all are ready, and then the few words spoken reverently to the Author of all Good, asking that "the food may be blessed to our use, so that we may be able to do His service," will direct all minds to the proper use of food. Children and young people naturally enjoy their food, and it is altogether desirable that it should be so, otherwise, when they are young, and their sense of duty feeble, they would not take enough to help them to grow and become strong; but it is very important, as I have already told you, not to over-eat, and thus greediness must be carefully guarded against. To refuse food, or to rebuke the little ones for gluttony, is not always the best thing to do, for the child then feels aggrieved, and his thoughts turn still more on the pleasures of eating. The best way is to give the thoughts and other senses something to do, and nothing is better for this purpose than lively talk or pleasant chat. Let each member of the circle be encouraged to tell the experiences of the day: the incidents of the day's work, the success at school, the

sights observed during the errands or walk, will help to make conversation; while the interchange of sympathy between the older and the younger people must gladden and refresh both.

When the meal is over all that is left should be at once cleared away, out of sight and out of reach, and if possible, out of the room, for food does not keep sweet and fresh, if it is long exposed to atmosphere as warm as most living-rooms necessarily are.

The question of keeping food is one of difficulty in the case where the family occupy only one room; but ingenuity and knowledge may be able to overcome it. First, then, all meat can be kept for some time before it is cooked by putting over it a thin wash or weak solution of *borax*. Borax is to be bought at the grocer's, and is very cheap. A solution is made by putting the borax into a cup or saucer of water until it refuses to melt. When melting ceases you will know that the water cannot use any more borax, and the mixture is then ready for use. With a small brush or a piece of rag it must be laid over the meat, which will then keep for days—indeed for months; but this plan is better for uncooked meat than for cooked meat. For cooked meat a draught is, perhaps, the best preservative.

A small cupboard with lock and key with a perforated zinc or wire front, or with lots of holes pierced all over it, can be placed outside the door in the passage, or better still hung on a nail outside the window. If the latter plan be adopted the cupboard must not be too large or too heavy for the home-maker to lift inside her room, as this she must often do for cleaning, or, if it is wet, for drying, purposes.

It is essential that the food cupboard should be kept spotlessly clean, and also dry. There are in the air millions of little germs, and if these are allowed

to settle they grow and breed. It is their growth and increase which makes food and milk "turn off" and go bad. Damp and dirt both encourage the growth of these little germs, and that is the reason why the food cupboard must be kept both dry and clean.

Another way of keeping food is to partly cook it, or if it has been already cooked, to warm it up again. The little germs cannot stand heat, and, though moderate heat does not kill them downright, it still stops their growth and increase for a time, and so serves to keep the food sweet and fresh.

CHAPTER XXII.

ON CLEANING.—HOW TO SWEEP THE HOME.

"A servant with this clause
Makes drudgery divine;
Who sweeps a room, as for Thy laws,
Makes that and the action fine."

GEORGE HERBERT.

IT is not always easy to *see* if one's house is perfectly clean, but there is another organ which is willing to help us in learning the truth about cleanliness—I mean our nose. Miss Nose is always ready to tell Mrs. Two-Eyes if she has overlooked anything in the daily clean. Sometimes, though, long use will have accustomed our own would-be helpful nose to the smell of any particular dirt in our own room, and we must, therefore, ask our neighbours' friendly noses for the needful news. "Does my room smell close?" ought to command a truthful and kindly response, and should be oftener asked and answered than my nose tells me can now be the case.

There are two ways of *cleaning*—little and daily cleaning, or big and weekly cleaning. Some people prefer one, some the other, and I agree with both, because I think both are necessary; but, as the object of cleaning is to *keep* things clean and not to *make* them clean, I think if one or the other plan has to be adopted it is better to adopt the plan of little and daily cleaning.

Moreover, *people* are more important than *things*, and a general cleaning day, if good for the things in the house, is usually bad for the people in the home. All day the home is made uncomfortable, and often the home-maker is so unduly fatigued that she totters on her throne, and is only prevented by the love, faith, and patience of her family, from falling down to the level of house-cleaner.

When we spent our thoughts on furnishing, we considered what articles were necessary for cleaning. It needs, then, but a few words to point out the right use of the utensils, and what result we may expect when we join them to industry and thoroughness.

Sweeping.—Floors are swept to get rid of the dirt and dust which have been brought in by the feet, or blown in by the wind.

Before we begin to sweep we must pin up curtains, bed vallances, or anything that hangs on to the floor. We must then put all the movable things, such as ornaments, looking-glasses, or small furniture together in the middle of the room, and over them all we must drape a cloth or dusting-sheet, so as to keep out the dust, which is necessarily raised in sweeping. We must then remove the carpet (if it is laid in strips, or in such manner that it can be moved), and after shaking or beating it well, we shall be ready to begin the sweeping.

For the daily sweeping we must go on our knees

with the dustpan and short-handled broom, being careful to go into every corner, as well as under the bed and other furniture. For the weekly, or periodical cleaning, if the room is carpeted all over, we shall want the long-handled broom, which must be worked in a quick jerky way, with short strokes, so as not to raise the dust and make it fly about the room.

Some folk allow their brooms to have a train of little brown pages in the shape of wet tea-leaves, which they scatter over the floor, just in front of the broom's path. The dust clings to these brown pages, and is carried away in their arms, instead of mounting upwards to poison the air we breathe, and to dirty the furniture, hangings, or pictures, which have cost both money and thought.

The dust, or "flue" as we often call it, must be gathered into the dustpan and be burned with the dirty tea-leaves. Why should it be thrown outside, to be scattered by the wind and make dirt and trouble for other home-makers? Thought for others would, you see, make less trouble for us all.

Besides the floor there is another part of the room which wants sweeping, and this part, though it is often four times as big as the floor, very seldom gets properly swept. I mean the walls, and yet the dust which is raised by sweeping, or blown in by the wind, clings to them as much as to the floor. The walls should not be neglected, but should be swept as regularly and as carefully as the floor, though in rather a different manner. For them we must cover the long-handled broom with a clean duster, and then pass it up and down lightly until all the walls have been well brushed, taking care to change the duster whenever it becomes dirty, otherwise the dirt will be put upon and rubbed into the wall instead of being taken off. If you realise that dirt, wherever it is,

is an enemy and must be turned out, you will not be so foolish as to remove it with much trouble from your floor, and then let it find an undisturbed home on your walls.

CHAPTER XXIII.

ON CLEANING.—HOW TO DUST, SCRUB, AND CLEAN THE FURNITURE, AND THE POTS AND PANS OF THE HOUSE.

"*Cleanliness is an excellent preservation of health.*"—JOHN ADDISON.

Dusting.—For *dusting,* which must be done daily, and often twice a day, we shall want our *feather-broom* and two *dusters.* One may be a little damp, but if this is used, it must immediately be followed by a brisk rubbing with the dry duster, and both must be frequently shaken in the open air. The duty of the feather-broom is to find out little holes, dainty crevices and dust-resting ledges, such as the duster can hardly reach or is too coarse and heavy to touch. The feather-broom must, as it were, be the woman of the two and put the fairy touches, while the duster must do the man's share, or the rougher, harder work, and both must unite to turn out the uninvited visitors of dirt and dust. Dirty dust consists of little bits of decaying matter. We do not want decaying matter to make our air, and consequently ourselves, foul.

Scrubbing.—For *scouring* (for the frequency of which no rule can be made, as it must depend entirely on circumstances) we shall want our *pail,* the *scrubbing-brush,* and a cloth or square of *house-flannel.* Clean sand is better than either soap or soda for cleaning boards, for the former makes them blackish and the latter yellow. The water should be

changed as soon as it is too dirty to clearly see the cloth or hand in it, and care should be taken that the scrubbing-brush travels up and down in the direction of the grain of the wood. After the actual scrubbing is done, the floor should be washed with the flannel wrung out until it is nearly dry, and some hours afterwards finally swept to remove all traces of the sand.

It were wise to begin the scrubbing on the part of the floor farthest from the door, and as it were, to scrub towards yourself. This will prevent your kneeling on damp boards, but in any case a thickly-folded cloth or a kneeling-mat should be knelt on.

The joint of the knee is very delicately made. The big bone of the upper leg fits on to the big bone of the lower leg in the same way as the knuckles of our two hands fit into each other when we make our hands into fists and join them together. In order to prevent these bones rubbing together and scratching each other every time the leg is moved, there is placed in between the two bones a little bag of liquid, or "joint oil," as it is sometimes called. This enables the two bones to move about without injury to each other.

But they are so delicate that there is something more wanted to protect them from injury; and this something is a little cap or shield, which is placed in front of them, immediately over the place where they join. You would have thought that this shield was sufficient protection for the two bones, but even this is not enough; for during the position of kneeling the joint is left partly uncovered by the shield, and in order to protect it then there is placed another little bag of liquid under the skin. If this little bag is pressed too much by hard bodies it inflames and becomes painful, and the joint may get injured. Now

you will see why it is unwise to kneel on the hard floor or steps without a mat or rug.

Furniture, if it be made of plain deal or painted wood, should be merely washed with soap, flannel, and water, but if it has a polished surface it must be rubbed either with beeswax (which is the walls of the house in which the bees live), and turpentine (which, as you probably know, is the sap or blood of the fir-tree); or with linseed oil, which is got from the seeds of the same plant which gives us our table linen, namely, flax.

Beeswax should be cut into fine shavings, put into a jam pot, covered with turpentine, and allowed to stand some hours before it is used. It must then be well stirred, and laid on to the furniture with a piece of coarse flannel, and rubbed with a perfectly dry cloth.

Whichever we choose, whether it be the beeswax and turpentine, or the linseed oil, there must be added a considerable quantity of "elbow-grease," but I know no shop where this last article can be bought. It can be given only, and is given by the home-makers who care to make things so bright that they are able to reflect the happy faces of the family circle.

Pots and *pans* must be cleaned *inside* by boiling water, to which soda must be added, and *outside* by polishing. One of the best helps for cleaning the *inside* of a saucepan is a bunch of birch twigs, about twelve inches long, and tied round the middle. The twigs vigorously worked like a brush will find their way round all the edges, and carry off the little bits of grease and food, which, if allowed to remain and become stale, will not only spoil the flavour of any food that is subsequently put into the pot, but will sometimes (especially in the case of young children) cause serious bodily harm.

The choice of aids for the polishing of the *out-*

side must depend on the materials of which the pots and pans are made. It is of the utmost importance to keep cooking utensils perfectly clean, and they should always stand on the hob for a moment or two before they are put away, to insure their complete dryness.

If soot is allowed to collect on the outside of a saucepan, it will require more fuel and heat to make it boil. Thus you see that dirt may make us extravagant, and soon cost us in fuel many times more than the value of the labour of cleaning.

CHAPTER XXIV.

ON CLEANING.—HOW TO CLEAN THE UTENSILS, AND MAKE THE BEDS IN THE HOME.

"Sloth makes all things difficult, but industry all easy. He that riseth late must trot all day, and shall scarce overtake his business at night; while laziness travels so slowly that poverty soon overtakes him."—FRANKLIN.

ALL *tin* utensils are best cleaned with whitening, which is refined chalk. The whitening must be wetted with water until it is of the consistency of paste, then put on with a bit of rag. The tin must be polished finally with a little dry whitening and a dry cloth.

All *brass* and *copper utensils* are best cleaned with rotten-stone and oil. The *rotten-stone* (which is a soft kind of stone found in Bakewell and also in Wales), should be treated with the oil as we treated the whitening with water; but instead of giving the final polish with dry rotten-stone, it is better to rub with a soft leather only, for rotten-stone, however finely ground, is sometimes apt to scratch the smooth bright surface.

All *bright steel things* are best never cleaned, only kept clean by daily rubbing with a soft leather. Should they, however, by accident have become rusty, a good coating of sweet oil or lard should be laid on and allowed to remain for two or three days. At the end of this time some unslaked lime may be laid thickly over the steel, and "elbow-grease" must do the rest.

If steel things, such as knives or fire-irons, have to be put away, they should be covered first with some grease—mutton-fat will do—and then carefully wrapped in paper, so as to exclude all air.

All *iron things*, including the grates, must be cleaned with blacklead, which comes from mines in Cumberland; and for this we shall want the brushes and the jam-pot about which we talked in furnishing.

After mixing and stirring the blacklead with water until it looks and feels soft like cream, it must be put with a short brush on to the stove, which must then be polished vigorously until the polisher can see herself reflected, in the black looking-glass, and be able to tell if, by mistake, any of the black cream has got on her face; for blacking grates is of all house-work the dirtiest operation, and the hands are best guarded against the dirt by old gloves.

You have now been told how to clean the house and most of the things in it, and it is to be hoped that you will bear in mind what you have learnt, and make the things under your charge clean both inside and out.

If, however, you work hard, you will like that you and your dear ones should see and enjoy the result of your work; and in order to see well we must have *light*. Light, besides being pleasant, is very good—nay, almost necessary—for the health. One great doctor writes:—"Light is essential to the per-

fect formation of the red cells of the blood, its most vital constituents"; while another learned man writes: "Man is dependent on light for the full development of health and strength." It has been also proved that germs of disease grow more rapidly in dark chambers than in light rooms; so you see for all these reasons it is important to admit as much light as possible into our homes. In most rooms the light is admitted through the windows; it is, therefore, necessary that they should be clean, and that no dirt should bar the health-giving, germ-killing, light from coming in. Window-cleaning is not difficult; it requires but two things, a cloth, to be dipped in the water and to wash the panes; and another cloth or leather to polish them with, after they have been carefully washed and rinsed with the wet cloth. To windows, as so many other things, we must try the effect of "elbow-grease," and it will be found to be as valuable on them as on all other things.

There is one other thing that must be spoken of before this chapter on housework closes, and that is *bed-making*. There may seem but little to say. Most girls know that to make a bed, the mattress must first be turned or well shaken, and then the under-blanket must be laid smooth and covered with the sheet, in which the bolster (after having in its turn received the salutary shaking), must be rolled. That done, the pillows must be made to take their places, while above them must rest the sheet, and (if it is winter) one blanket, then the paper blanket, followed by a third covering, either another blanket or the coverlid. Most girls know all this, and most girls know that sheets should be changed at least at the end of every fortnight. And to most girls will naturally occur a wish to make the coverlid pretty by needle-

work, or bright by colour. Either can be easily done, as scraps for patchwork are to be bought at almost any draper's ; and pretty cretonnes are now to be got at 3¾d. a yard.

But though I feel that the comfort, and perhaps the prettiness of the bed, can be safely left in the lassie's hands, I am not so sure that the healthiness of the matter does not require a few words, for health has something to say to bed-making as well as to most other things. Out of the thousands of little mouths or pores, which are all over our bodies, there comes, during the night, a great deal of carbonic acid gas, which is, as you know, poisonous to us, and which must not be allowed to go back into our bodies. This gas gets taken up by the bed-clothes, and only a good and daily airing can free them from it. Thus, the first thing to do after one is dressed (or even before), is to open the window, and to throw the clothes over the bottom of the bed, taking care that they do not get soiled by falling on the floor. The fresh air will, as you learnt in the chapter on ventilation, soon hunt out the carbonic acid gas, and if we daily give it the chance of doing its sweetening work, we need, as we tuck the little loved one between the the sheets, or gladly lie down to take the hardly-earned rest, have no fear ; the many small mouths all over the body will not be poisoned by the bad gas entangled in the sheets, for the fresh air has been admitted and will be there ready, instead of the poisonous carbonic acid gas, to be swallowed by the hungry pores.

CHAPTER XXV.

ON WASHING.—THE DISSOLVING POWERS, AND THEIR UNAIDED LABOUR.

"Life has been given you by God in order that you might employ it for the good of your brother man."—JOSEPH MAZZINI.

IN *washing*, there are two things to be done:—1st, to get out the dirt; 2nd, to make the things look nice.

This sounds most simple, but good washing is not accomplished unless we unite a good deal of hard work with knowledge and skill.

The first thing to be done, after sorting the clothes—by which I mean putting the body-linen apart from the flannels, and the coarser and dirtier house-cloths apart from the chamber and table-linen—is to put the things to soak in water.

Water is composed of two gases—oxygen gas and hydrogen gas. You will remember that one of the gases of which the air is made is oxygen gas. This same gas, when mixed with hydrogen in certain proportions, produces water. When we talked about air, we imagined a box, measuring a yard each way, and containing air. Let us imagine that we have a similar box only instead of being full of air we will suppose that it is full of water. If we could divide the two gases of which water is composed and then measure the box, we should find that twelve inches were taken up by the oxygen gas, and that twenty-four inches were occupied by the hydrogen gas.

These gases, when in these proportions, have a power of dissolving substances (such as dirt, grease, or ink), when brought into contact with them, and it is because of this dissolvent power that we use water to cleanse our bodies, our floors, and our clothes.

There are other substances besides water which have a dissolving power, and these are soda, soap, quicklime, and borax.

Soda is composed of (and prepared by the chemists' knowledge out of) sea-salt and certain acids. It is indispensable in washing; but it should not be used when coloured things are washed, for few dyes, not even black, nor what are called "fast colours," will be able to resist the dissolving-power of soda.

Soap is manufactured from some sort of fat, and a preparation of soda. It can be bought at almost any price; but the wise washer will not be tempted by cheap soap, for it contains a large proportion of water, and will, therefore, quickly "run away" to its relatives the gases when once in the tub. Soap goes farther if it is dry. It is, therefore, better to buy as much at one time as the purse will allow, cut it up into pieces, and put it in the cupboard or near the fire, to slowly dry.

Quicklime, which you know is obtained from burning limestone in great furnaces or kilns, is very helpful when added to soda, in removing dirt or grease, but it is destructive to the material of the clothes. It were foolish to make washing-days shorter by making sewing-days longer and our clothes' cupboards emptier.

Borax is a kind of saline crust, and is found on the shores of some of the lakes in Asia and South America. It is also manufactured from an acid and a preparation of soda. It is used a great deal by the French, whose linen is, as you may have heard, the whitest of the white, and most beautifully got up. It is strange that it should be so, for the French wash entirely in cold water. They stand out of doors, and wash in stone pools, or, if there is one, in the river running through the town. They use

their tubs for a different purpose from what we do, for they often stand in the tubs, which float about, and wash their clothes in the cold running stream.

Hot water has a greater dissolving-power than cold water, but for soaking purposes it is better to have the water neither hot nor cold, but lukewarm. The length of time that things are allowed to remain in soak must largely depend on how dirty they are; only we must remember that flannels, or woollen things, however soiled, must never be left in the water. Water enlarges the little hairy points with which the fibre is covered, and they running together, become entangled, and often do not come apart in drying. This is why flannels, when carelessly washed, look thick, and are not flexible and soft as they are when new.

Of the four washing or solvent substances of which we have spoken, we must ask aid of two, namely, soap and soda, to help the water to do all it should through the hours of soaking.

On the dirtiest parts of the clothes, say the feet of the socks and stockings, or the cuffs and collars of the shirts, soap should be rubbed and left; and if the water is hard some soda should be added. By "hard water" is meant water which has flowed over or through the earth, and in which the soap will not lather. It is the power which water has of taking up and absorbing substances which makes it so useful for washing, and this same power enables it to take up and absorb the various mineral substances which it meets on its path. Thus if the spring passes through a chalk bed it gets impregnated with chalk, or if it flows by a vein of iron it catches up and takes into itself some portion of the iron. Water, like other things, must not be over-worked, or asked to do more than it can. If it has already absorbed

chalk it has become what is called "hard" water; we must help it to get rid of this chalk before we can expect it to absorb the dirt of the clothes. This can be done by boiling the water or adding soda.

And now, for to-day, we will leave the things in soak, and let us hope the knowledge of the five solvent substances in your head.

CHAPTER XXVI.

ON WASHING.—HOW TO WASH, BOIL, RINSE, BLUE, AND DRY THE CLOTHES.

"Let thy mind's sweetness have its operation upon thy body, clothes, and habitation."—GEORGE HERBERT.

In the last chapter we left the clothes in soak. If they are very dirty things, such as kitchen cloths or rubbers, we have, I hope, changed the water more than once. You cannot hold in your two hands more than a certain quantity of anything, and you must not expect water to do more than you can, for it has no more hands than you have, only two, named oxygen and hydrogen. Water can only take up and hold a limited quantity of any substance (dirt included), so when it has taken up all the dirt it can hold from the clothes, it should be thrown away, and fresh water substituted, which will, in its turn, go through the clothes and gather up the substances it seeks.

In changing the water it is a good plan to give the clothes a brisk rubbing, or anyhow to change their position, so as to allow the fresh water free passage to all parts of the garments.

But now we must light the copper fire, and having allowed the things a good soaking, we must remove

them into a tub of warm water (not too hot) and soda, and commence to rub. It is impossible to explain by words the right way of rubbing; but you must know that there is *one* right way and *many* wrong ways, and you had better watch and copy some experienced laundry woman. After the things have been well washed—on the right side—in this tub they must be removed into another, with perhaps the water a little hotter, and washed on the wrong side. More brisk rubbing, more active jumping, and some steady brushing (if the stains won't come out without, but the brush often damages the material, and must not be used unless necessary) must go on in this tub, and then the things, once more wrung, are ready for their hottest bath, or boiling in the copper. Fine things must not be allowed more than fifteen minutes in which to enjoy their hot bath, and enjoy it they almost seem to do as they gambol and romp in among the bubbles; but very dirty garments may be permitted to stay in half an hour. A fit reward, for have they not done the roughest work?

The boiling bath over, all must be plunged into clean water, washed through, carefully wrung out and dropped into the rinsing-tub, which must contain fresh cold water, through which the blue-bag has had one or two leisurely walks. From there, after a little quiet rest, they must again be taken, carefully wrung out twice, once to the right hand, once to the left hand—so as to leave no grey paths to remind us of the blue-bag's walk—and then put into the basket ready to be hung out to dry.

If the washer lives in the country, drying and whitening can go on in the open air on the hedges, or on lines, but if it all has to be done in the town it is much more difficult. The screen, or clothes-horse, can bear a certain number of the wet things; but the

best plan, if the landlord will put it up, is to have a hanging pole from the ceiling. The pole should be about ten or twelve feet long, and should be hung across the room in front of the fire. Two rings, or small windlasses, fastened into the ceiling to serve as pulleys, and a strong and long cord will complete the arrangement.

The pole can be strung up against the ceiling when it is empty, and let down in front of the fire when the clothes need its heat for drying or airing purposes. It is often convenient at meal-times, or when the children come in glad and gay from school, to be able to hastily get the wet and unsightly clothes out of the way; and for this the "pulley pole," will be found very useful. The clothes need not stop drying because they are hoisted up, for, as you have learnt, hot air always ascends, so they will get into a warmer atmosphere as they approach the ceiling.

Still, however useful and ingenious our contrivances, home washing must always (particularly if the family have to live in one room) be very inconvenient and distasteful; but it need not often be done. In most large towns there are public baths and wash-houses to which the washer can go, paying three halfpence an hour, and getting for that all the hot water she needs, the use of tubs and coppers, and what is perhaps even more valuable, the opportunity of drying the garments in the hot-air closet. The washing for most families, such as we are now considering, can be done, if well soaked beforehand, in three or four hours, and the sixpence is well worth expending. Certainly half of it will be saved in fuel and mangling, for the use of the mangle is included in the three halfpence; and is not the other threepence well spent in keeping the home a *home* for that one day? The best home-

maker will find it difficult to keep the house home-like when it is full of steam, wet clothes, and puddles, and such it almost must be on washing-days. These things are trying alike to husband and children, as well as to herself; and often washing-day ends in bad temper, or what is still worse. One of the first lessons a home-maker must learn is that *things* are meant to serve the good of *people*. Even to get clean clothes she must not run the chance of getting soiled tempers.

CHAPTER XXVII.

ON WASHING.—HOW TO MANGLE, IRON, AND GET UP WASHED THINGS.

"Beauty commonly produces love, but cleanliness preserves it."—
JOHN ADDISON.

HAVING been helped by our "pulley-pole," or hot-air closet in the public wash-houses, we can imagine that the clothes are washed and dried and only remain to be folded and mangled, or starched and ironed.

Before they are folded the things must be damped, by gentle sprinkling with clean water, and rolled tightly together, so that the damp may be absorbed by every thread. In folding, only two things need to be borne in mind. One is, that every selvage must be laid on the top of its neighbour selvage; and the other is, that the things have to go through the mangle, and thus must be kept, as nearly as possible, of an equal thickness, and all creases carefully excluded. You will see that if the things put together into the mangle are not of equal thickness, some will get but lightly pressed, while others will get unduly squeezed. If things are well mangled

they should come out, not only very smooth, but glossy. Table-linen, bed-linen, and most body-linen, if well mangled, do not require ironing.

And now that we have got rid of the simpler, if more cumbrous articles, we can turn our whole attention to the things which need starching and ironing.

Starch is a kind of flour, and you will remember that when we talked of food we often spoke of starch, and I told you how valuable it was as food. We are now going to feed the linen with it to enable it to stand up straight. The same food that feeds us will give the linen strength to resist creasing and crumpling. The quantity of starch must depend on how many things we wish to stiffen, but it is better to first make starch thick enough for shirts, cuffs, and collars, and then make it thin with water for those things which do not need so much stiffening food, such as babies' dresses or petticoats. To make a quart of starch we must mix two table-spoonfuls of starch with two table-spoonfuls of water, and after this has been rubbed into a smooth paste, a quart of boiling water must be added.

Clothes, like children, are often brightened, and kept out of mischief, by a lump of sugar. The mischief clothes are apt to get into is that of sticking to the iron and getting to look dull, but the lump of sugar dropped into the starch-bowl will remedy both these defects, and sweetened starch will bring out the linen white and glossy. If very thick starch is needed, a tea-spoonful of borax can be added to one quart of the mixture, which must again be well stirred.

The starch-bowl ready, and cool enough to allow us to use our hands freely in it, we must take the fronts of shirts, collars, and cuffs, and give them each a head-over-ears dip ; then squeeze them out, pull them level, and wrap them in a cloth until we and

the irons are ready to finish them. The starch can be thinned for the use of other things, which must, in their turn, have their one or two dips, and go to join their stiffer friends in the towel.

The *irons*, of which there should always be two, if not three, must be heated with a clear fire, and after a brisk rub on something gritty (the hearth-brick will do if it is as clean as it should be), and a final polish with a cloth, they will be ready for their work.

On the table must be laid a blanket and sheet, as pretty things such as the baby's embroidered gown will not come out in all their beauty if ironed on a hard substance. All things must be first ironed on the wrong side lightly, and then on the right side heavily, so as to give them a gloss. The ironing over, they must at once go before the fire to get a good warm, which will help to fix the stiffness, which would go off sooner if all the heat were at once removed.

CHAPTER XXVIII.

ON WASHING.—HOW TO WASH OTHER THAN LINEN GARMENTS.

"*Do not hide dirt, but hate it.*"—Dr. Richardson.

We have hitherto spoken only of white clothes or linen things belonging to our family. There still remain to be talked of—(1) flannels; (2) coloured cottons; (3) men's cloth clothes; and (4) women's woollen dresses.

You have already been told that *flannels* must not be soaked, and the reason why; now I must add that they must not be boiled. You will, perhaps, wonder how they are to be cleansed, for flannels are often as

much soiled as any other clothes, particularly the shirts, if the father's work is in any way dirt-removing work. The best way to wash flannels is by shaking. I have sometimes heard silly nurses or unwise teachers say to a child, "I will shake the temper out of you." This is a foolish saying, for only good can turn out evil, and it is impossible to shake temper out of a child; but it is not impossible to shake dirt out of a flannel. The water, in which there should be plenty of soda or soap-suds, should be hot enough to be comfortable to the hand, and in it the flannels should be shaken—shaken till they hardly know where they are, and lose hold of their dirt in their dizziness.

The dirt out, they should be squeezed (not wrung) till they are nearly dry, and then again shaken in clean and cooler water. After which they must get another squeeze and be once more shaken; but this time in the air, not in the water; and then hung out to dry, and left to recover themselves.

For finer *woollen things*, such as the little baby's head-flannel or pretty knitted shawls, it is better to make the lather of bran, for any form of soda (and soap is but a form of soda) is apt to take out dainty colours. A handful (or two) of bran, if well stirred and rubbed, will make a good lather for an ordinary-sized washing-tub.

You will find it useful to remember what we have said about the bran lather when you come to wash your prettier *coloured cottons*, dresses, and aprons. It is not necessary to make a bran lather for the usual coloured cottons, for though they must not go into the boiling dance with the white things, they can be treated in all other ways exactly the same; with the exception that to their rinsing-bath a salt-packet instead of a blue-bag must have paid a

visit. To coloured cottons we can allow no loitering. They must be made to go quickly through all the processes, including drying, which must take place as soon after the salt-bath as possible.

It is often a source of wonder to me why people do not oftener wash *cloth clothes*, such as trousers, coats, and waistcoats. They are woollen as flannel is woollen. Careful housewives would be shocked if their girls wore their flannel petticoats for two years without washing, and yet they let their boys wear what answers to their flannel petticoats—the trousers, for two and even more years without washing. People say "black clothes do not get dirty like white ones," but they do; and it is only because we do not see the dirt that we forget its presence. Here, though, is again work for our other would-be-helpful member, the nose; and it would be well if we let the nose decide when those things want washing, about which the eyes are not able to give an opinion. It is not difficult to wash cloth clothes, and if carefully done it will repay the trouble, not only in the sense of greater cleanliness and consequent dignity, but in their improved appearance. Stained coats and trousers sometimes come out from washing and pressing with a new and almost unrecognisable appearance.

Instead of soda half a pint of *ox-gall* can be added to every two gallons of water; but for the rest cloth clothes can be washed like ordinary flannels, remembering always that they must be done *quickly*, and kept in shape by frequent and judicious pulls. The smell of ox-gall is often unpleasant, but it can be got out of the clothes by putting them through cold water, and hanging them in the open air and sunshine.

To wash *woollen dresses*, a different process must be observed. If the dress is made with many flounces and furbelows, these must come off; but if

it is simply made, the skirt only need be taken out of its gathers, and the buttons removed from the body.

These little things done, the dress must be put into lukewarm soft water, without soda, and washed in the hand without soap. There will, of course, be no lather; but as you rub you will see the water take up the dirt, leaving your dress clean and sweet. Wash it in two waters, but do not wring it; hang it dripping on the line and not in the sun, and leave it there until it is nearly dry, not quite; then fold it carefully, and have it mangled at once. All must be quickly and thoughtfully done, and you must give your whole mind to the matter; but after it is finished you will be able to welcome your old dress, with a new face, and confidently set it to serve you for another year or two.

CHAPTER XXIX.

THE USES OF CLOTHES.

"Three of the most dangerous enemies to health are, excess of heat, damp, and cold."—DR. BABER.

THERE are two uses for clothes—the first is to keep the body at the right heat; and the second is to make us look nice. Clothing is, then, both useful and ornamental, and we will consider it from these two points of view.

You will remember that when we talked of strength-giving food, which is largely composed of carbon, I told you that when it met the oxygen, which is taken into the body by the breath, they burned together, and that in burning they gave us heat. The normal heat of the body should be

ninety-eight and a half degrees of the Fahrenheit thermometer, and it is of the utmost importance that this heat should be kept up evenly. If it is allowed to go down even two degrees, we catch cold, and are ill; while if it goes up six or eight degrees, and keeps up, we must certainly die.

If the outside air is colder than ninety-eight degrees and a half (and it generally is forty degrees lower than this in England), it will try and steal heat from our bodies, and if it can get at them it will take away the warmth faster than the carbon and oxygen can burn to make it. Thus, on a cold day, when it is freezing, and the thermometer is standing only at thirty-two degrees, we feel much more hungry than on a warm day. The cold air has stolen our heat, and our bodies cry out for more carbonaceous food to mix with the oxygen and make the inside fire to warm us. You may, perhaps, have heard it said that people living in hot countries do not require so much food as we do, and that we do not require so much as the Russians and Laplanders. Now you see the reason. It is because the cold air is a thief and steals the heat from our bodies, which then need more food to burn to keep them warm.

To guard ourselves against this artful thief, we must wear clothes, and our clothes must be first arranged and considered with reference to the warming work that they have to do, and then we must give a great deal of thought to making them beautiful. Let us notice how much the Author of all beautiful things has done simply to make things pretty, and then the home-maker will not grudge the time expended on making the clothes which cover her dear ones fair and becoming.

There are certain clothing materials which are called "good conductors of heat," and certain materials

which are called "bad conductors of heat." They are called good conductors if they allow the thief cold to get in and conduct the heat away from our bodies. In other words, they are "good conductors" to the thief, but bad door-keepers to us. They are called "bad conductors" if they keep out the cold and prevent the heat leaving our bodies. They, you see, are "bad conductors" to the thief, but good guardians of our necessary heat.

You often hear the words "warm" or "cold" applied to clothing. People speak of their "warm jacket" or "cool dress." It would sound strangely for you to talk about your bad-conducting woollen jacket or good-conducting muslin dress, but it would be more accurate. Clothing does not make warmth; it only *keeps* warmth. You can prove this easily by wrapping up a bottle, or book, or anything, in your warmest jacket; when you unfold it, even after it has been there some hours, it will be no warmer than it was before, although it has had on your warmest garment. This is because it had no warmth of its own for the jacket to keep in. But fill the bottle with hot water, wrap it up in the same jacket, and return in a few hours. You will find the bottle almost as warm as when you left it, for the warm jacket has been a bad conductor of the heat, and has not allowed the thieving cold to run away with the warmth which you gave it to guard for you in your absence.

But bad conductors have another work to perform. They are able, by the same power, to keep *out* the heat. Thus, in very hot climates, where the thermometer is rather more than ninety-eight degrees, warm or non-conducting clothing is worn. The aim there is to prevent the hot air getting in to the body, and for this purpose the materials which do not allow the heat to pass through (*i.e.*, bad conductors) are the best.

This is why the men who work in very hot workshops or foundries wear, if they are wise, flannel shirts, for they, as bad conductors, keep out both the hot external air, and also the cold air, if they should happen to go out suddenly, or if a cold blast blows in.

CHAPTER XXX.

ON CLOTHES.—HOW TO DRESS BOYS AND MEN.

"*Dress has a moral effect upon the conduct of mankind.*"—SIR JONAH BARRINGTON.

HAVING now learnt the scientific use of clothes, we will, in this lesson, think more particularly of *men's and boys' clothes*, and first as to their under-clothing.

I do not think that, as a rule, men and boys wear sufficient *under-clothing*, and by under-clothing I specially mean those garments which can be frequently washed. Men and boys should be as careful to wear drawers as they now are to wear shirts. Every part of the body should be covered with washable clothing, and you must learn why.

The whole of the body is covered with little mouths, or "pores of the skin" as they are called. They are very small, so small that 2,800 would only cover one square inch; but they are so many that it is said that if those which belong to one person, and the little pipes attached to them, could be pulled out and fastened together, they would reach no less a distance than twenty-eight miles.

Through these little pipes, and out of these little mouths, there come, every day, if a man is in good health, and if his skin is clean, no less than two pints of perspiration. If the man's work is hard and

laborious, he sweats a great deal more than two pints, and all this perspiration naturally goes into the clothes which are next to his skin.

The sweat does not consist only of pure water; mixed up with it is some of the poisonous gas of which we have before spoken—carbonic acid gas, which is taken up and held by the clothes, making, as it were, a poisonous wall around the body. This gas is one of the best soils in which fever-germs can grow; and thus you see by letting it settle and live in clothes, we lay ourselves open to catch fevers, which, alas! do not often stop with one alone. If linen drawers are worn, they will, like the shirt, take up the perspiration, and the frequent washing will cleanse them from the harmful carbonic acid gas.

If possible the clothing next the skin should be made of flannel, for flannel being a bad conductor of heat helps to keep the body at an even temperature. Besides which it absorbs the perspiration better than linen. Should, however, flannel be beyond the reach of the purse, the next best substitute is coarse unbleached calico.

We often see small boys running about with bare legs. It is a foolish practice to leave the little legs thus exposed to the thief—cold air; and it is the cause of many of the "pains in my limbs" of which we hear so much, and for which we feel so sorry as we help the old man to hobble across the room.

All parts of the body should be protected from the cold air, but particularly the parts where the most active organs lie. By active organs I mean those portions of the body which internally do the most work for its growth and sustenance, and which if allowed to get out of order cause the most serious illnesses. Among these organs we may count the

heart, the lungs, the liver, the kidneys, and the stomach; and the four last are most seriously affected by chills or cold.

The lungs lie on either side of the chest; the stomach exactly in the middle of the body; and the kidneys at the back of, and a little below, the waist. Sometimes men leave off their waistcoats, but you will see that this garment covers the lungs and stomach, and therefore cannot safely be put aside.

The dress of boys and men is not well arranged, and it cannot be said to be beautiful. The coat, which is the thickest garment, covers only the back part of the body, where there are the fewest active organs, leaving exposed the front of the body and its most sensitive parts. The waistcoat is, as a rule, cut down in front, leaving the chest with but two, and often if the man does not wear flannel, with only one covering to protect it.

For people of all ages this system of clothing is a mistake, but particularly for boys, for when the body is growing it is still more important to keep it at an even heat. For this reason tunics and knitted jerseys are better for boys than waistcoats and jackets, and as they are easily made at home out of winsey or linsey, or can be knitted, they are also more economical.

The head-covering should be made of something soft which will admit the air. The socks should be hand-knitted and of wool, and of the boots little need be said, excepting that "the best are the cheapest," and that they last much longer if they can be kept some months before they are worn. The night-dresses of boys and men should be made of calico, and should reach to their ankles. If the home-maker has but limited room, she will gladly welcome

any such little aid as will help to teach her lads that the virtue of modesty is as beautiful in them as it is in their sisters or mother.

CHAPTER XXXI.

ON CLOTHES.—HOW TO DRESS GIRLS AND WOMEN.

"Beauty gains little and homeliness loses much by gaudy attire."
ZIMMERMAN.

We must still bear in mind that the chief use of clothes is to keep the body at the right heat, and that this is specially necessary for those parts of the body which are most actively employed in sustaining our life.

In the arrangement of men's clothes we noticed that their chief danger consisted in leaving exposed the vital organs, but in the arrangement of women's clothes there is another danger, and that is of compressing the vital organs. When we spoke of food, and the importance of not eating too much, you were told that the organs must have room in which to do their work, and for this reason we must be careful not to squeeze them by tight or stiff garments, such as stays; nor compress nor push them downwards by weight, as is done if all the petticoats are fastened round the waist.

You will remember that you were told that one of the vital organs—namely, the kidneys—was placed a little below the waist; but besides the kidneys, girls and women have other vital organs, which lie in the same neighbourhood. All these organs are delicate and sensitive to pressure in the same way as the lungs and stomach are delicate and sensitive to cold.

These physiological facts must be borne in mind as the home-maker plans the clothes of the little girls and growing women of her home circle. Girls, as well as boys, and for the same reason, should have (if it can be afforded) their body clothes—namely, shirt and drawers—of flannel; but if not of flannel, both drawers and chemise can be made of coarse unbleached calico. Over these must come a flannel petticoat fastened, not by a band round the waist, but on to a calico or flannel bodice. Above this should be worn another petticoat, which need not be of woollen stuff; a dark-coloured cotton is useful for summer, while for winter a plain linsey serves the purpose. This petticoat must also hang from the shoulders, which will easily and willingly bear its weight if it is supported by straps; or it may be fastened to another bodice, or joined to that which belongs to the flannel petticoat.

Neither of these petticoats must be too wide; one yard and a half, or a yard and three-quarters, is ample width for most petticoats, for if they are wider than this they will stick out, and so let the thief, cold air, get in underneath them.

Until a girl is fourteen she need wear no stays, though some people like to have a bodice made of a stiff material, and separate from the petticoats. To this there is no objection, if care is taken to see that by its help the shoulders are made to support the petticoats, and thus relieve the organs below the waist from their injurious pressure. At fourteen it is generally better to wear some form of stays—first to support and gently aid the growing figure to keep in its right position; and, secondly, to enable the dress to fit better, and thus give the girl what no expensive stuffs nor gorgeous colours can make her look nice without—namely, a neat and spruce appearance.

This spruce and dainty appearance is rightly valued highly, and I believe that much of a woman's influence for good depends on her capacity for *looking* (as she *ought to be*) lovely; but she cannot be lovely without health, and just as "the body is more than raiment," so its health must never be sacrificed to its appearance.

Stays should not be allowed to press on any part of the body, and for this reason should never be laced when put on, nor need unlacing when taken off. They should be merely garments stiff enough to give a slight support to the frame, and shaped according to the figure. Unusual care should, however, be taken to keep these garments in good repair. Bones must be kept in their places, and steels not allowed to poke out, otherwise they will defeat the purpose for which they are worn. Stays, if they become mis-shapen, will neither allow the body the desired support, nor will they help to make the dress look dapper by sitting well.

Over the stays a bodice should be put, and if flannel is not worn next to the skin, it is a good plan to make this bodice of flannel. It can be made of scarlet or coloured flannel, and as its duty, in this position, will not be to absorb the perspiration or carbonic acid gas (as it would have to do if it were placed next the skin), it will not require such frequent washing. Of stockings there is little to say, excepting, perhaps, that hand-knit ones last the longest, and that on their neatness depends much of the appearance of the wearer.

CHAPTER XXXII.

ON CLOTHES.—HOW TO DRESS GIRLS AND WOMEN (*cont.*).

"You are always to dress yourselves beautifully—not finely, unless on occasion; but then very finely, and beautifully too. Also, you are to dress as many other people as you can, and to teach them how to dress, if they don't know; and to consider every ill-dressed woman or child whom you see anywhere as a personal disgrace."—JOHN RUSKIN, LL.D.

You will, perhaps, be surprised to learn that the *colours* of our clothes have a great deal to do with their warmth.

Dark colours (among which, for this purpose, we will call black, though black is not properly a colour), have the power of attracting the heat and holding it; but light colours, and white, have not this power. Indeed, white has another and exactly opposite capacity, for when heat approaches it, it can repel it, throw it off, and keep it at a little distance from itself. Thus you see, that dark clothes keep us warmer than light clothes.

In the Holy Land and in Egypt, the men, whose work takes them into the open air and hot sunshine, wear white or very light blue clothes; while the women, who mostly stay in the houses, wear darker blues and often black. This is because the men wish to keep cool. But in England and the northern countries, where we suffer more from cold than from heat, the men, whose work takes them out to brave all weathers, wear the dark or black colours; while the women, who mostly stay in the house, wear the livelier hues.

We have got so used to this, without perhaps knowing the scientific reason of it, that we unthinkingly speak of a dark-coloured dress as looking "nice and warm," or of a white one as "cool and refreshing."

For working dresses, some cotton or washable material is the best, but it need not be of a light colour. Many washable stuffs are now made with dark or well-covered patterns, and these both look better and also wear longer, for frequent washing damages even the best material. It is a good plan to make working dresses with full-gathered bodies, so as to give plenty of room for the movement of the arms in working. A little frill round the neck and wrists looks neat, when it is not always possible or advisable to wear collars or cuffs.

For a best dress a light woollen is the most economical, as, if of neither too light nor too dark a colour, it will do for both winter and summer, and will, if it is all wool, wash and do up again and again. The greatest care must be taken in the making, for a dress will last twice as long if it really fits and hangs well. It is better never to be in the fashion, and then you will be never out of it. The lady who dresses so as to look nicer than any one I know, wears her clothes for years, and they never look old-fashioned because they have never been new-fashioned. They are made in the style which suits her best, and so they are always becoming.

Each girl must learn for herself which style is most becoming to her, and then her dresses can be made again and again in the same way. In choosing her style, the girl should remember that clothes are dumb tell-tales, and their tales often tell of the wearer's character, of her aim, and ideals. By ideal is meant the standard which a girl wishes to reach. You all know what reaching a standard in lessons and needlework is. Every woman should have before her a standard or ideal of womanly excellence and loveliness, after which she should strive; and her dress should be as a sign-post, show-

ing the direction of her ideal. If I see a young woman dressed in many colours, and her clothes cut in a *fast* fashion, I am at once able to tell what she admires, and something about her ideal. But if I see her dressed thoughtfully and daintily, and with sweet womanly modesty clinging in every fold, I am taught something, not only about her ideal, but also about the nobility of womanhood, of which the poet has given us a beautiful picture in the lines—

> "A being breathing thoughtful breath—
> A traveller 'twixt life and death
> With reason firm and temperate will,
> Endurance, foresight, strength, and skill."

Sometimes, though, we see girls who have given no thought of any sort to their dress. The stockings are down; stray strings hang out; hooks have no friendly eyes to embrace and hold them; and the flounce, which was meant to be trimming, hangs in a most untrimlike festoon. This is a sad and ugly sight, and tells, not only of untidy clothes, but also of a slovenly and careless mind. The home-maker must take care and even enforce punishment on herself or dear ones if she sees the seeds of slatternness growing, for no home can be a home when King Untidy is allowed to reign.

In the making of a dress, some thought should be given to its trimming; for instance, one often sees a dress with bows stuck all over it, under the idea that they make the dress look nice. But if we think for a minute or two on what a bow is, we shall see that it is the natural and prettily-arranged ending of two strings after they have fastened something together. Thus, a bow round the neck or round the waist, or in the armlets of the little baby, is quite legitimate, being the endings of strings which fasten some things

together; but bows stuck about the dress, on places where there is nothing to fasten, are neither legitimate nor pretty.

It is well in choosing a best dress to choose such a one as will do for week-days when it is too much worn for Sundays; and this is true of both summer and winter gowns. It is, of course, nicer to have a best summer as well as a best winter dress, but if this cannot be afforded, the material chosen had better be neither a thick nor thin one; and when extra warmth is wanted it can be obtained by changing the cotton over-petticoat for the linsey one, and the calico over-bodice for one made of flannel.

CHAPTER XXXIII.

ON CLOTHES.—HOW TO DRESS GIRLS AND WOMEN (*cont.*).

"Taste and elegance, though they are reckoned only among the smaller and secondary morals, yet are of no mean importance in the regulation of life."—E. BURKE.

Hats and *bonnets* will, to most girls, be a subject of interest, and they are quite right to be interested in the clothing which specially affects the face.

We can see most of the landscape through the largest window, and the face is the largest window through which the character can be seen. Through it, truth and gentleness, or selfishness and brutality, are visible; and this is why we often speak of a person with a lovely character as having a "beautiful face," even though every feature may be ill-shapen, or disease have made cruel ravages.

The clothing surrounding the face must, like all the rest, be the result of thought. If a summer hat, as well as a winter bonnet, is obtainable, it is well

that the one be light and the other dark, because of the heat-repelling and heat-attracting powers of these hues; but each had better be trimmed with only one colour, and it is a sign of good taste to make that colour correspond with the colour of the dress.

A beautiful colour is a gladdening sight, and one of God's most liberally-bestowed blessings; but too many worn at the same time attract attention to the wearer, and the secret of good dressing is to be appropriately but unobservantly dressed.

Hats and bonnets are the only articles which I can recommend to be bought cheap; but in their case the price does not depend on the durable qualities, but on the fineness or coarseness of the plaiting of the straw. Coarse straw coarsely plaited will last as long or even longer than fine straw finely plaited; and if the hat or bonnet is cheap, it can be the more easily replaced when it has got discoloured by the sun, or greasy from the hair; while the trimming can be used again and again, with the help of the wash-tub, the iron, and the needle.

This implies a knowledge of sewing and mending—both of them arts which I earnestly hope all you girls will spare no pains to acquire. A cleverly-handled needle will save far more than a woman can usually earn, not only in money, but in the comfort and the sense of dignity of each member of the family. Everybody should be able to respect themselves, and command the respect of others; but none of us can feel so respectful to ourselves if we are conscious of a torn dress, a ragged petticoat, or a hole in the stocking. The stocking hole may be hidden in the boot, and the torn petticoat may be underneath a smart dress, but the knowledge that it is there must (and ought to) take away some of our respect for our-

selves, without which it is impossible to command or truthfully to accept the respect of others.

Clothes should never have to wait to be mended. The needle and thread should offer to help them even before they really need it. Thus, stockings should be darned when they look thin and before they come to a hole. Braid should be stitched on when it is only loose; and hooks and eyes must be made to cling to the gowns directly they show any sign of shirking their work by leaving their places.

Perhaps in the game of proverbs we have all played "A stitch in time saves nine," and this proverb is one which serves a bigger purpose than that of making a game, for if borne in mind and practised, it will serve to create two great things, time and self-respect.

And the home-maker who has really mastered the art of needlework can do more than mend: she can cut and contrive, using the scissors, yard-measure, and thread until they become veritable Aladdin's Lamps; and from her skilful fingers will arise new-looking boys' suits out of "father's old coat;" or another pelisse for "Baby" from the elder girl's long-worn brown frock.

The sewing afternoons may sometimes seem to you very dull, but you must look forward and imagine the many uses to which, when love or duty calls you to be a home-maker, you may put the sewing knowledge you are now learning.

And now one word on the *qualities* of materials, and what is best to buy. There are already so many different materials, and every season so many new ones are brought out, that it would be impossible to speak of them all; and, indeed, but one rule is necessary, and that is a simple one, and easy to remember—Let your stuff be honest and truthful; or, in other words (for perhaps you will wonder how stuff can have moral

qualities), be what it pretends to be, and only look what it really is. If you would buy a woollen dress, let it be all wool. You can easily see if it is so, for if it is, on fraying out a little bit of the edge, the threads going both ways will be alike. If you would buy a cotton dress, see that the threads lie evenly together, and that the weight and thickness are in the stuff itself and not caused by the dressing—a kind of glossy gum which, alas! dishonest manufacturers often shame England's good name by mixing with their materials.

CHAPTER XXXIV.

ARE TALLYMEN AND PAWNBROKERS FRIENDS OR FOES?

"We have our own part in the present; the future rests with God alone."—T. CARTER.

I HAVE not told you what I think about *shopping*, and yet on that subject there is more than one golden rule to learn. First, never buy what you cannot at the time pay for; and, secondly, always *buy* the useful things before you begin to *look* at the ornamental ones. Remember that the first use of clothes is to keep the body at the right heat; the second is to make us look nice.

Sometimes men called tallymen call at the house and offer to sell things, saying that they will call every week for the money. People are tempted to accept these offers, which look so kind, and seem at the time so accommodating; but a little thought will tell us that if things are bought in this way they must cost more money. The man does not call every week for the pleasure of so doing, he must be paid for his trouble; and he gets paid by charging more

for the thing he has sold than it is really worth. Besides these disadvantages there is another objection to this system of purchasing. In a family where the means are straitened, the purchase of a new garment for any member of the family is naturally, and should be, a matter of congratulation and pleasure to all. But anything which has been taken, used, and not yet paid for, can hardly be looked upon in this light, and the sense of disapproval with which right-minded people look upon the tallyman sometimes causes, alas! his visits to be kept secret, and thus the sin of deceit gets added to the fault of improvidence.

Moreover, this system of dealing with tallymen causes disobedience to the first golden rule for shopping. Only the present, not the future, is our own; we cannot tell when the Angel Death may be sent to summon us into the larger world; we cannot tell if we shall keep our health, or if the wage-earning employment may not stop. We can only be sure of the present, and so it is foolish to bind ourselves for the future. Besides, nothing is ours (unless it be given to us) until we have paid for it; and it is contrary to a right spirit of independence to wear or use a garment which does not belong to us.

This right spirit of independence is also a matter on which I must speak, for it has something to do with clothes. Every one of us, the greatest as well as the lowest, must depend on God the Almighty One; and we can also depend on love, which is but a part of God; but with these two exceptions we should depend only on ourselves. Having been given four limbs, health and wits, we should be able and glad to stand alone, depending on no one.

Too often people depend on the *pawnbroker*. At every emergency something is taken to the pawnshop,

and money is raised not only on goods and furniture, but on personal body clothes. Does it not strike you as somewhat nasty and indelicate to allow our garments to mix with the ugly company of dirt and disease which they must often meet at the pawnshop? By so doing, constant risks are run of catching disorders. Wise men have discovered that most fevers are caused by little plant-animals (or germs as they are called) which live in dirty clothes, soiled air, or impure water. If brought into contact with the body they often find a home in the blood, and by breeding within it cause fevers and illnesses.

The clothes which go to the pawnshop, even if they themselves are quite clean and look just as unsoiled when they return, lie by the side of other garments which have been put there, perhaps, because their loved, if improvident, wearer is very sick, and the clothes which cannot be worn can bring the food which is necessary. The little germs themselves, so small as to be invisible, have passed in the air to the neighbouring parcel, which returns to the family circle with sorrow, and sometimes with death, wrapped up in its folds. This is a serious risk to run for the questionable advantage of raising a temporary loan; but besides this, I think and hope that almost every girl with right and delicate feeling will shrink from the idea of the clothes that she has worn next her body being seen and handled by stranger-people, and that this feeling alone will be strong enough to keep her and her clothes away from the pawnshop.

Some people defend pawning by saying that it is only another method of saving, but even its defenders cannot deny that those who pawn *give* interest instead of *getting* it. If we save our money and put it in the Savings Bank, Her Majesty's Government will give us every year £2 10s. for the use of every

£100, or sixpence for the use of every £1 which we have put there. But if we put £100 worth of things into the pawnshop, the pawnbroker gives us nothing; it is we who give him, every year, £25 for every £100, or we pay him 5s. for every pound's worth of goods we leave with him.

You must note these figures carefully, and, if you have not already done so, begin at once to save, so that you may never have to come to the disgraceful practice of using the pawnshop, but, on the contrary, *get* interest instead of *giving* it for your money.

CHAPTER XXXV.

BAKING.—HOW TO MAKE BREAD AND CAKES.

"*While still our Lord went on, teaching how fair*
This earth were if all living things be linked
In friendliness and common use of foods
. . . the golden grain, bright fruits,
Sweet herbs, which grow for all." . . .—EDWIN ARNOLD.

THE main object of *cooking* is to make food wholesome and digestible, and therefore more nourishing; but the home-maker has to consider other things besides this when she cooks. She has to think how to make the food pleasant to look at, and nice to taste, and she must, especially if her means are limited, plan her cooking so as to get the most nutriment out of the smallest quantity of the least expensive food. For all and each of these four things she must have not only a good will, but also knowledge and skill.

In these chapters I will try and give her the two last. The first will only be gotten from a feeling of love or a sense of duty.

We will first talk about *bread*, for it is the food most generally used. You will not have forgotten, I hope, that when we learnt about foods you were told how valuable a one bread is, for it contains both carbonaceous, or strength-giving, and nitrogenous, or flesh-repairing foods. It can be made from most sorts of corn, but that made of wheaten flour, without the husks, is usually considered the best. It is not, however, so nourishing as brown or whole-meal bread, which also contains the husks of the wheat. It is in the husks of the wheat that we find gluten, which is a flesh-repairing food; but the inside of the wheat is chiefly starch, which is a strength-giving food. When, therefore, the husks are mixed with the inside of the wheat, we get the combination in the right proportions for physical nutriment. Thus brown bread is the best to eat when, as is the case with those who are very poor, bread only forms the largest part of the daily food.

More than once in the course of our lessons there has been occasion to talk of germs, which you have heard are little invisible plant-animals. Some of these germs are the enemies of man: such as those which are bred in dirty air, or soiled water, or are taken from some one already ill of the diseases which spring from dirt; but some of these germs, invisible though they are, man has made his servants, and compelled them to help him to do what he wishes, and one of these is yeast.

Yeast is composed of germs, or plant-animals, each one so small that if 2,500 of them stood one on the top of the other, they would only make a pile an inch high. They grow and breed so rapidly that in five minutes there will be 50,000 where at first there were only five. After they have been mixed with the flour and water they still grow,

and, in growing, they make a good deal of that gas which so many living things breathe out, namely, carbonic acid gas; this gas causes the dough to rise, and makes the familiar holes we all know so well in the quartern loaf. They make room for themselves through the flour by pushing about and causing it to, what bread-makers call, "rise nicely." The great heat of the oven kills the little germ, or plant-animal, which thus dies after doing its work of making our bread light and wholesome. Flour, water, and salt, would neither be wholesome nor digestible if mixed and left uncooked, but with the aid of the little yeast plant-animal and a good fire, the home-maker can make them not only wholesome and digestible, but pleasant to look at and nice to taste.

If bread-making can possibly be done at home it is well to do it, for home-made bread is not only more economical, more satisfying and wholesome than baker's bread; but by baking at home little differences can be made which please the children and make a desirable variety. In one loaf, sugar and powdered ginger can be introduced, and there is a ginger cake for tea, to the saving of butter or jam. In another, currants or sultanas may find a home; while the queer shape of a third may serve to give (what is of immense importance to digestion) interest to the meal.

To make a four-pound loaf we must do twelve things:—

1. Give the plant-animals or germs contained in one ounce of yeast a good mixing bath in one pint and a half of lukewarm water.

2. Put two and three-quarters pounds of flour, and a large tea-spoonful of salt, into a bowl.

3. Make a hollow in the middle of the flour.

4. Pour into the hollow the bath of yeast, letting the flour fall into the bath.

5. Begin kneading (and by kneading I mean hitting with the closed fists of both your hands), and go on kneading or mixing the flour until every bit of it comes into contact with the yeast in the bath, which is waiting to do its work on it.

6. Cover the pan with a thick cloth and let all rest for two hours before the fire or in the sunshine. During these two hours you can go about some other duty, for you can no longer help the germs or plant-animals, whose turn it now is to do their work. They are still growing at the rate you know of, making, in their growth, holes through the flour, scattering and lightening it.

7. Spread out three-quarters of a pound of flour on to a board.

8. Put the flour-water and yeast, which we will now call dough, on to the board with the flour, and knead or mix it altogether until it no longer shows any wish to stick to your hands or to the board.

9. Transfer the dough into tins, filling each but half full—for the yeast and plant-animals have not yet finished their labour of growing, and they must, like all else, have space to work—and let it rest again for fifteen minutes, which it will be glad to do after all the pommelling it has had to go through.

10. Prick the dough, so as to make little passages through which the carbonic acid that is not wanted can escape.

11. Pop it into the oven, which should be so hot that the thermometer inside should stand at 400 degrees.

12. Open the door or the ventilator of the oven and watch, for the heat should go down gradually until it reaches 280 or 300 degrees, and after two hours your loaf will be ready cooked.

Ready cooked, but not ready to be eaten. New bread is for most people indigestible; for all people extravagant. It should not be eaten until it has been cooked for two days; and home-made bread will not get distastefully dry under six or seven days.

In baking, I have spoken only of bread; but all sorts of cakes can be made in the same way; and if the home-maker learns well the art of baking, the sight of her tea-table will be not only appetising but daintily attractive. Her skill, with the addition of but little money, will provide one day's meal with milk rolls; another with seed cake or rice buns; while rock cakes or gingerbread will, on a third day, do something to gather cheerful faces round the table.

CHAPTER XXXVI.

COOKING.—WHAT ELSE THE OVEN CAN DO.

"One of the most hallowed and lovely and most beautiful sights in our world is—woman at home."—J. A. JAMES.

IN the last chapter we talked only about bread and such cakes or rolls as are cooked by baking. In this chapter we will consider other foods and dishes which can also be cooked by the help of the oven, and first we will turn our attention to *meat*.

In the section on food you will remember that I told you that meat was valuable as food to a large extent because it contains much albumen, which is a nitrogenous and flesh-repairing food. The cook must try to save this albumen as well as the other nutritive juices, and for this great heat is required. Albumen hardens with heat, so the first thing to be

done is to ask the fire to make for the meat a little coat with which to keep in the juices. This it will do by giving heat enough to harden the albumen.

If the heat is only gradually applied, the fibres and pores in the meat will remain open and will thus let out the nutritive qualities of the meat. To prevent them escaping the albumen coat is wanted, but it can only be made rapidly by the help of considerable heat. For this reason the oven must be very hot before the meat is put in, or if it is not advisable to use the fuel necessary to make the oven very hot the meat can be held for a few minutes quite close to the fire, and then when the coat has been formed, subjected to the quieter and steadier heat of the oven.

In cooking by baking, one pound of meat loses about five ounces of its weight. You can understand this if you remember that every pound of meat contains ten ounces of water, and water, as you know, when subjected to heat, goes off in steam. The best way of baking meat is in a pie, and for this purpose the meat need not be uncooked; meat pies made of cold meat are almost, if not quite, as nice as those made of fresh meat.

Potato pie, about which we spoke when we were planning our family dinners, is easily made. The ingredients and the quantities you have, I hope, remembered; if not, you can turn back to page 62 and refresh your memory.

First pare the potatoes, cut them in slices, and with them thickly line the pie-dish. Next add the meat, also cut in little pieces or slices, and mix it with the chopped or sliced onions, and some salt and pepper. If the home-maker has been as wise as my ideal home-maker is, she will be able to add some gravy from the stock stew-jar, instead of, or as well as

the water which must now all but fill the dish. The whole must go into the oven, and if it is safely in by eleven o'clock, it will be quite ready, with a savoury smell, and wearing a pleasant brown face, to attract the long morning workers, at the one o'clock dinner. Such a pie will fulfil the four essentials, for it will be —(i.)wholesome to eat; (ii.) pleasant to look at; (iii.) nice to taste; (iv.) cheap to buy.

The oven will also help us to make grain foods both nourishing and tasty. Without heat these foods are difficult to digest. They contain a great deal of starch, which must be softened to become digestible.

Have you ever tasted *Rice Pie?* It is very good, and both wholesome and cheap. The broken rice and the coarse oatmeal must be mixed together, put into a saucepan with water, or (if the stock stew-jar can spare it) with stock enough to cover them. Then cut up a little bit of bacon, and when the rice has become tender, put the bacon, one or two chopped onions, and some pepper and salt into the saucepan for a few minutes while you are getting and greasing the pie-dish. Into the pie-dish all must go, and after an hour's steady baking dinner will be ready.

Sago and Apple Pudding is also very good, and very simply made. The sago must first go into the pie-dish, and the apples, peeled and cut up, must lie on the top of the sago. All must be sprinkled with sugar, the pie-dish filled with water, and the oven will do the rest; and better too, if it is not hurried in its work.

Bread Pudding, the thrifty cook's best stand-by, is simply made, and is as good, if not better, if it is made savoury instead of sweet. Any bread, crusts or crumb, no matter how old and dry, will do, so long as all are soaked in cold water until quite soft, and then

squeezed until nearly dry. Some chopped onions and half an ounce of dried herbs, together with a little suet, must be mixed with the bread, and then all spread out on a flat dish and baked for an hour; but we must not forget to leave some few bits of dripping on the top to prevent the pie burning.

It is true that in many of the houses or rooms in which people live there is no oven, but this need not banish all the good things which can be made by baking from the family table. In all towns, and most villages, there are bakers willing to bake ready-made dishes for a few pence—an expense which is easily saved in the cost of fuel; and in summer bakers' baking has the additional advantage of keeping the room cool, and, sometimes, because of that, all tempers sweeter.

CHAPTER XXXVII.

COOKING.—HOW TO STEW, AND THE USES OF THE STOCK STEW-JAR.

"Economy no more means saving money than spending money. It means spending and saving, whether money or time, or anything else, to the best possible advantage."—JOHN RUSKIN.

OF all methods of cooking, *stewing* is perhaps the best. A stewed dish not only fulfils our four requirements, namely, wholesome to eat, pleasant to look at, nice to taste, and cheap to buy, but it has three other good qualities of its own. In the preparation of stewed food, fuel is saved, labour is lessened, and waste is prevented. Thus, you see, stewed food has three additional recommendations.

1. *Fuel is saved.*—A very little fire is wanted for stewing, for the stew-pan, or the glazed earthenware

jar—which we were particular to get when we furnished—can stand by the side of the open fire on the hob, and it does not matter if the food within it is sometimes a little hotter or a little colder than it is at other times. The object of stewing is to get the nutriment *out* of the food and *into* the water in which we have put it. For this purpose it must never boil, for the heat of boiling water has the same effect on food as the heat of a strong fire. It hardens the albumen and makes a little coat, through which the juices and nutriment cannot get out. But when we stew we want the juices and nutriment to leave the food and go into the water, and, therefore, we must be careful that the stew-pan never becomes the boiling-pot.

2. *Labour is lessened.*—Of all methods stewing involves the least trouble; and this is a great recommendation when the home-maker is very busy, or has her hands full and her heart heavy with the sickness of some dear one. If we bake, boil, fry, broil, or roast, we have all the time to keep an eye on the dinner, but we can safely leave the stew-jar for hours together. Our neglect will make but little difference to the day's dinner, providing always that the fire is not fierce enough to allow it to boil or burn. If, however, the fire is somewhat large, and yet we wish to leave and forget the stew-jar, we can do it quite safely, by putting it into a saucepan into which some water must be poured. The water can boil away merrily, and its heat outside the jar will keep the food stewing and yet prevent it, itself, boiling. This is, perhaps, the best way of stewing fruit, which, if put into an ordinary saucepan, is sometimes apt to cling to the sides, and suffer from burning. Stewed fruit is most wholesome, and, even the cheapest gooseberries or windfall apples, will, when

stewed, make a wholesome dish, and go a long way towards satisfying the natural love of fruit and sweet things, which in all children should be satisfied.

3. *Waste is prevented.*—By stewing, every bit and scrap of food can be utilised, and this is perhaps its greatest recommendation. The coarser bits of meat contain as much nutriment as the finest morsels, though they are often tough and unsightly. Give them to the stew-jar, which will turn them out as tender and attractive as their more costly neighbours. Bones, which seem only fit for the dog or the dust-bin, will, when persuaded by the stew-jar, give out all their nutriment; and from three pennyworth of bones will come enough meaty nutriment to make (if joined to vegetables) soup enough for twelve or fourteen people's dinners.

The stock-making stew-jar.—Every good home-maker should have a stock stew-jar or stock-pot constantly standing by the fire, and into this *every scrap* of un-wanted food should go, excepting bread or milky substances. Bread does not stand long cooking, and milk will not keep beyond a day or two, and, by curding or going sour, it is apt to spoil the other contents of the stock-pot. But, with these exceptions, every drop of gravy that is over, each bit that is left, all scraps that are unused, can find a home and a useful life in the stock stew-jar.

Many accomplished cooks are very ignorant of the nutritive qualities of food, and throw away things from which much nutriment could be abstracted; but even such things as the peelings of turnips, or the trimmings of carrots and onions, are valuable, when submitted to the gentle persuasive heat of the stock stew-jar; while bones and even the heads of fish should never reach the back of the fire, or dust-bin, until after they have had a day or two in the stock-pot.

The cook who made the best soups, gravies, and stews that I ever tasted used to spend the least money on them. One day I asked her how she managed. "I put everything in," she said, "every scrap of bone, and even the bacon-parings and egg-shells. They are all food, and all help to make the soup good." That home-maker had learnt from experience what science does not fail to teach us, and what you are now learning.

CHAPTER XXXVIII.

COOKING.—HOW TO STEW (*continued*).

"*Cooking means carefulness, and inventiveness, and watchfulness, and willingness, and readiness of appliance; it means the economy of your great-grandmothers and the science of modern chemists. It means much tasting and no wasting.*"—JOHN RUSKIN.

IN all things which are good for food there is a nutriment. By *stewing* we get it out with less waste than by any other form of cooking.

Meat which has been stewed is also more tender than when cooked in other ways, and is, therefore, often useful for invalids. But sometimes, when people are sick or weak, rich gravy is unwholesome for them, and they need that the meat should not only be tender and soft, but that it should have all the juices and nutriment left in it. If this is the case, the thick slice of mutton, or the bit of rump steak must be plunged into a boiling bath before going into the stew-pan. After this bath the meat will come out with a glazed coat of albumen, with which to keep in all the nutriment. Into the stew-pan can then be put about a table-spoonful of water, and the meat must then be gently, but briskly

stewed, and not allowed to dawdle over, and near the fire, as we have imagined the stew-jar doing. Salt must not be added until the meat is nearly done—for salt is apt to call out the juices, and in this instance our object is to keep them in.

This is rapid stewing, but for the ordinary stewing, of which we have talked, there is no hurry; indeed, the two things necessary for stewing are time and gentle heat. "Cook long, and cook slowly," is the motto for a good stew. No meat can be properly stewed under eight hours, and bones, gristle, and such things as the old home-maker whom I have quoted pressed into service through her stock stew-jar, require from sixteen to twenty hours' kindly acquaintance with the fire before they will give up all they contain.

In one sense, the stew in the stock-jar is never finished, for "bits of things" can be added every day, and after every meal; but it is as well to finish up any particular stew, strain it, empty the stock-jar, and throw away the refuse at the end of every two or three days. Thus, suppose we put the materials into the stock stew-jar on Monday we can safely add to them the Tuesday remnants, including those of the evening meal; but Wednesday's substances had better be kept and put aside, and on Thursday morning, the stew-jar having been emptied and cleaned, will be ready to start again with a fresh supply. In winter, the stock in the stew-jar can go on for three days, daily taking in fresh work; but in summer, or if the cooking-room is close or crowded, additional care must be taken.

All fat or grease should be carefully removed from the stock, but this can either be done when it is on the fire, or still more easily after it has been allowed to cool, when the fat will form a crust on the top.

The fat or grease which has been taken from the stock must be melted, and when hot dropped into a pan of cold water. This will purify or clarify it, and make it fit to be used as dripping for frying, or eaten instead of butter with bread or potatoes.

And now we will go on and learn more about particular stew dishes and soups. I shall be content if you have learnt and understood the great value of a stock stew-jar, and if you are determined to start and keep one constantly going if ever you are in the powerful position of a home-maker. By so doing you will save waste, which we have already recognised and spoken of as a sin; and you will always have some stock by you which will serve, not only to make soups, but to turn into a savoury dish the wholesome, but often unpalatable, grain foods. In our talks on food we have several times had occasion to speak of stock. Now you know how to make it, and, moreover, how to make it out of nothing! Is not this like the fairy wand power of the childish dreams and imaginations?

Having learnt the great value of the stew-jar, you must now hear of some of the many delicious dishes which, by its help, we could make, and of all of which it would be helpful to speak; but we will limit ourselves to those which can be purchased cheaply, and begin with *tripe stew*.

The tripe must first be put into a saucepan of cold water, and left until it boils (but removed directly it does), when it must be scraped with a knife and cut into square pieces. After cutting up some onions, fry them in dripping, and mix the flour with a pint of cold water, which, with the onions, a dessert-spoonful of vinegar, pepper, salt, and a few vegetables must now go back into the empty saucepan and stew for two hours.

Stewed cow-heel needs also a few guiding words. The cow-heel must first be well washed, then stewed in a quart of water for two, three, or even more hours, until it feels tender to the fork. It must then be divided into little bits, and vegetables to be eaten with it must also be cut up. If we decide to add rice to the dish, the meat, vegetables, and rice must go all together into the pot for an hour's more cooking by gentle boiling. It will make the stew more tasty if one of the onions is kept back and fried in a little dripping. The fried onion can be served either as a garnish round the dish, which will do something to secure our third requirement of well-cooked food, "nice to look at," or it can be added to the stew when the other vegetables join it. In any case it will make the dish smell savoury, and so be more "gladdening to the heart of man."

Irish stew, which, you will remember, composed one day's dinner for our family, is made much like other stews. The onions and potatoes, after being peeled, must be put at the bottom of the saucepan, and the meat laid over them. Then a layer of vegetables and meat alternately must be added until all the materials, including the rice, are in the pot. Water can then be added, and all must simmer together for two or three hours, an occasional stir being given to prevent burning.

On page 54 you will see that we have only allowed one pound of mutton for this dish, but if *Australian* or *tinned meat* is used, more mutton can be got for the same money. There is, in many people's minds, a prejudice against tinned meat, for they think it must be bad or it would not be so cheap; but the foolishness of this idea will be recognised if it is remembered that Australian meat is cheap because, out there, there is more land on

which the sheep and oxen can feed, and fewer people to eat them than in England. The only objection to Australian meat is that it is already cooked, and will not bear much more cooking, but this is no drawback to its use in stews, for in their preparation it is easy to cook the vegetables first and add the meat only for such a short time as is required to make it hot.

CHAPTER XXXIX.

COOKING.—HOW TO MAKE SOUP; AND HOW TO BOIL.

"Without frugality none can become rich, and with it few would become poor."—DR. JOHNSON.

WHEN we talked about food, mention was more than once made of *soups*. There is no food so easy to prepare as soup, and, although it is difficult to exactly estimate its nutritive qualities, there is little doubt that it is very valuable as an article of food. In cold weather it serves to warm as well as to feed us, besides which it is generally believed to arouse and call into action the organs which turn food into blood and strength. It is for this reason that rich people always begin their principal meal with soup.

In order to make soup, we must imagine that the cook has (as every true home-maker will) her stock stew-jar always going, and so she is never without "stock" (as the liquid is called) which contains the nutriment drawn out by the gentle heat from the many and varied materials which have from time to time been given it to work on. It is not *necessary* to have stock to make soup. For many soups plain water will do, but all soups are better and more strengthening if made with stock instead of water.

To make *potato broth*, you must first cut the vegetables into pieces and let them, with one table-spoonful of dripping, gently boil for an hour. Then take them out, and after mashing them add one pint of skimmed milk and three tea-spoonfuls of either semolina, rice, or oatmeal, according to the taste to be consulted. All must boil together for ten minutes, and if it be gently stirred you will have soup fit to "place before the Queen."

Haricot bean soup, *lentil soup*, and *pea soup* are all most nourishing and as simply made as the potato broth, but in each case the home-maker must decide to make them twenty-four hours before they will be eaten, for lentils, as well as beans and peas, require to be soaked all night in cold water.

I will tell you about *haricot bean soup*, and if the same receipt is followed when lentils or peas are used, excellent lentil or pea soups will be the result. For our family of six, the beans must be put into two quarts of water or stock, to which must be added one ounce of dripping, and, if you like, either turnips or onions. All must boil (or simmer) for three hours (being occasionally stirred to prevent the soup sticking to the pot), or until the beans are quite soft. The whole must then be strained and mashed, or pressed through a colander, put back into the saucepan, and boiled briskly again for five or ten minutes. To all these soups salt and pepper must be added according to taste, and many people like them better if they are flavoured with a pinch of celery-seed. Half an ounce of celery-seed can be bought for a penny, and as that contains something like twelve pinches I have not added it to the cost of the soup.

In the same way soups can be made from any vegetables; sometimes people like *turnip*, *carrot*, *onion*, *or artichoke soup*. If so these vegetables

must be treated like the haricot beans (with the exception of the all-night soaking); and it can be borne in mind that all *white* vegetable soups are nicer if milk or cream can be added, but in towns the addition of these luxuries of course makes the soup much more expensive.

If you want to turn the soup brown, you can do it by burning a little moist sugar in an old spoon and adding it to the soup. When it is nearly done, if you find it too thin, you can either thicken it by adding a little flour, or by letting it boil fast for a quarter of an hour with the lid of the saucepan off; and if you find it too thick, you can add either water, stock, or milk until it is of the right consistency; but in any case you must be careful that the soup really boils for the last few minutes, otherwise the vegetables and the water, or milk, will not properly mix.

After stewing, *boiling* is the most economical form of cooking, indeed it is in many ways similar to stewing. It is, however, done more rapidly, and during the process continued attention must be given to the pot, to remove the scum which will begin to rise to the surface as soon as the water bubbles. For meat, if it is fresh, fifteen minutes must be allowed for every pound; if it is salted, five minutes more must be given; while fish will only require ten minutes to every pound, and ten minutes "for the good of the pot," as old fisher cooks like to say.

Water boils when the thermometer has reached 212 degrees Fahrenheit, and for the proper boiling of meat it must really boil for the first few minutes after the joint is put in. Then the saucepan can be drawn a little from the fire, so that the meat may simmer. Simmering is best done when the thermometer stands at 180 degrees. You will understand why the meat

should boil first and then only simmer later, if you remember what we have already spoken of more than once, namely, the coat of hardened albumen which meat takes upon itself when exposed to great heat, either of water or fire. If we allowed meat to boil the great heat would have the same effect on the inside of the meat as on the outside—it would harden it, and if the joint were small, none of it would be tender. But if the joint were large, perhaps a small part in the middle, which the heat has not had time to reach and to harden, might still remain soft and juicy, though all the rest would become tough and dry.

But however carefully we boil meat, there is sure to be some of its nutriment which will escape into the water, and for this reason it must never be thrown away, for with the addition of vegetables, rice, flavouring, or oatmeal it will make a good and wholesome soup. The water in which meat has been boiled can be used exactly like ordinary stock.

I must not forget to tell you that *salt meat* must be put into cold water, and never allowed to really boil. If it were put into hot water and boiled, it would come out even more tough than fresh meat would be if it were left to boil. The salt water in which the meat has been soaked has so acted upon it that it does not require the albumen coat, so that it need not have even a brief plunge into the boiling bath.

It is difficult to give any one rule about the boiling of *fish;* but there are three rules which may, perhaps, help you:—1. All fish, excepting salmon, must go into warm but not hot water; 2. Have enough water in the saucepan or fish-kettle to entirely cover the fish; 3. Do not let the fish boil fast.

CHAPTER XL.

COOKING.—HOW TO FRY, ROAST, AND BROIL.

"*A want of care often does more damage than a want of knowledge.*"—DR. FRANKLAND.

IN the last chapter we learnt only how to boil meat and fish, in to-day's lesson we will turn our attention to the other articles of food which are best cooked by boiling. We will begin with *oatmeal porridge*, which is simply made; for all that there is to do is to mix the oatmeal with water until it is smooth, then boil the milk, and when it is boiling pour in the oatmeal, and stir both together over the fire for twenty minutes or until it is of the thickness that you wish. Sugar can be added either when the meal is boiling or on the breakfast-table.

Boiled Rice requires careful cooking; it should first be soaked, and then loosely tied in a cloth, so that it has room to swell, and boiled three-quarters of an hour if ½ lb.; half an hour if ¼ lb. When it is done some salt must be added.

Savoury rice is, perhaps, nicer than plain rice; and when we learn that it is only the addition of one or two chopped onions, a little dripping, and pepper and salt which turns it from plain into savoury rice, we shall see again that it is not money, but what is far more valuable—skill and forethought—that is needed to turn dull insipid food into appetising dishes.

Frying is but boiling, only it is boiling in fat or oil instead of in water. It is an extravagant method of cooking, and so it is not to be recommended for those who wish to be saving, but if it is done at all it is less wasteful to use a saucepan full of fat than a frying-pan. Care must be taken that the fat really

boils, and you must not expect it to tell you that it is boiling in the same way that water does, namely, by bubbling. Fat does not bubble when it is boiling, it only bubbles when it has water in it. When it boils it is quite still, and a thin blue smoke rises from it. Fat has to be much hotter than water before it boils. Water, you will remember, boils when the thermometer stands at 212 degrees, but fat does not boil until the thermometer reaches 400 degrees. Because the heat is so much greater, less time is wanted; and this is one of the reasons why thriftless housekeepers, who are behindhand, run to the frying-pan, and with it waste, and often spoil good food, in their efforts to catch up the wasted time.

But frying is not a good method of cooking, and except for fish, onions, and such little dainty morsels as cannot well stand other forms of treatment, it cannot be advised. The fat in which food has been fried can be used again and again, though it must be clarified if it gets to look brown, and a lump of soda put in the cold water through which it is purified will do much to bring it back to its proper colour.

I have not many more good words for *Roasting* than I had for frying, in so far as economy is concerned; but most people prefer roasted meat, and so we must learn the proper way to do it. The joint must first be wiped dry, for wet meat will not brown. Then, for a few minutes, it must be held close to the fire, while it puts on its hard albumen coat; and, after that, it must be hung on the bottle-jack, or the little contrivance of wire and worsted; and allowing fifteen minutes for every pound of meat, we must let it slowly turn before the fire until it is finished; taking care to baste or sluice it with the fat or gravy which drops from it into the dish beneath.

When the joint is finished the gravy has to be made. As this is very seldom done properly, you are not likely to learn how to do it by watching, and so you can give special attention to these next few lines. Take some of the melted fat, or dripping, which has fallen from the meat, put it in the frying-pan and add a table-spoonful or two of flour, and brown it over the fire. Then put in a little cold water, mix it well with the flour, and add boiling water (or, better still, some stock from the stock stew-jar) and stir till it is all of the same consistency. In this manner, excellent and nutritious gravy is obtained, and again, at no greater cost than the sickly greasy water which is often sent to table under the name of gravy.

Broiling is but another name for roasting; only very often the meat is put over the fire instead of in front of it. In either case there are but two rules to observe in order to do it properly. 1st, see that the juice-imprisoning coat is formed, and do not break it by sticking a fork into the meat; 2nd, turn the meat every two minutes, and let nose and eyes be on the alert to prevent it burning.

Some people broil before the fire in what is called a Dutch oven, and this is a good plan, as the little pan below the meat catches the drops of fat or escaped juice, and from them gravy can be made in the same way as you have already been taught.

There is much more to learn about cooking, but if you now know the principles or simple science of cooking you will have learnt the most important lessons towards the making of a cook.

I have not, however, spoken on the subject of cleanliness in cooking, but on this matter I cannot do better than quote the words of a lady who has given much attention to cooking, as well as to other

matters, which concern health. Mrs. Buckton tells us that "It is quite impossible to cook well unless all the saucepans and utensils you use are perfectly clean. Every saucepan ought to be washed out with boiling water. . . . Spoons, forks, basins, dripping-pans, gridirons, must also be as carefully washed." . . . "The two last," she adds, "ought to be washed directly they have been used, or the dripping will be very bad and unwholesome. A little bit of dead organic matter left in a saucepan will spoil the flavour of any food that is put into it. Grease is organic matter."

This is good advice, and every girl who reads it must lay it up in her mind, so that it may bear the fruit of cleanliness when love or duty asks her to be a cooking home-maker, and to take into her hands the welfare of the family.

CHAPTER XLI.

THE SEVEN GOLDEN RULES OF HEALTH.—RULE I.: ABOUT FOOD.

"Man's use and function are to be the witness of the glory of God, and to advance that glory by his reasonable obedience and resultant happiness."—JOHN RUSKIN.

IT is almost, if not quite, impossible to live our true life without health. Many people have done their work, noble and good work too, in pain and suffering; but it requires not only rare fortitude, but qualities of mind which few possess. In order to live the best life, good health is essential.

It is the custom of some people to speak slightingly of the body—to think of it as unholy, and

to talk about it as "sinful flesh," or as "this vile body." Such talk is both foolish and wrong, for our bodies are worthy of all reverence. Not only are they "fearfully and wonderfully made," but as we are elsewhere told in the Bible, they are the "temples of the Holy Spirit," the instruments through which we gain and give all good. Having to do such great work, and being such delicate instruments, is it not of the utmost importance that they should be treated wisely and well?

Our bodies do not require us to be constantly thinking about them. It is one of the delicate arrangements of Providence (so delicate that it often escapes attention and gratitude) that the mind can be left free to think great thoughts, and occupy itself with love and hope, while the body takes up the food, and uses what it wants for blood and strength, rejecting and refusing the waste material. How wearying it would be if we had to consciously follow every morsel of food, if we had to exercise our will on where each particle was to go, or how it was to be utilised. But though all this is not required of us, obedience to certain rules is required of us.

Moses gave ten commandments to help to keep us good and loving, and he told us that if these were broken our moral natures would suffer. He gave us many more commands to help to keep us healthy; and he told us that if they were broken our health would suffer. In both cases we have learnt from experience the truth of his great and inspired words. I will not ask you to learn all the commandments about health, for they are mostly summed up in seven shorter commands. They are called "Seven golden rules;" and we shall have good cause to call them so if, in obedience to them, we preserve our own health, or that of our loved ones.

The first rule is: *Wholesome and regular food is necessary for good health.* So much has already been said about food that there is little left to add. We have already talked about its quantity, its quality, and its cooking; and you have learnt why it must be taken regularly, and how it is important not to think too much about it. There is, however, another matter concerning food about which you must learn, and that is its *mastication.*

You know that the meat, pudding, bread, or whatever food we eat, has to undergo many changes before it can be taken up and used by the body to make blood, bone, or strength. Some of the changes are made by the fire in cooking, while others begin directly the food gets into the mouth, where it meets the teeth, the tongue, and the saliva or spittle. The teeth cut it up into small pieces; the tongue rolls it round and round; while, in the meantime, the saliva by mixing with it, making it soft, and changing it, is getting it ready for the stomach to work on. If the food is eaten greedily, or swallowed hastily, the saliva will not have been able to do its work, and thus the stomach will get more than its share of labour; and so overworked must, in time, get ill.

"Every mouthful of food should be chewed thirty-two times," a statesman, of our own day, whose name you all know, has said; and he felt this so important, that, encumbered as he was by many things, and carrying the care of the State on his shoulders, he yet found time to see that his children were not only properly taught, but practised this health-saving habit. A little saliva is always in the mouth, but a great deal more is kept in little bottles or glands; and these little bottles only open and pour it out when the food is in the mouth and calling for its help.

CHAPTER XLII.

THE SEVEN GOLDEN RULES OF HEALTH.—RULE II.: ABOUT HEAT.

"Our life hangs by a single thread, but that thread is in the Father's Hand."—J. R. Evans.

The second of the golden rules about health is *Regular heat is necessary for good health;* and this regular heat must be kept up by (1) food, (2) clothing, (3) fire, and (4) exercise. No. 1 and No. 4 have golden rules to themselves, it leaves us only clothing and fire to be spoken of as heat-giving agencies.

The right heat of the body should be 98½ degrees Fahrenheit. If we take the thermometer in our hands it should go up until it reaches the figure 98, and then stop. If it does not reach, or if it goes up higher than this figure, we are either ill, or too hot or too cold to be healthy. The whole of the body should be as warm as this; and though we cannot expect fire or clothing to do all this necessary warming, we can expect them to contribute something considerable towards it.

A great deal of attention should be given to the amount of clothing generally worn. One of the wisest men I ever knew had a thermometer hung outside his bedroom window, which he consulted each morning, while he was dressing. He used, humorously, to say "The thermometer made up his mind for him, and settled every day which coat and trousers should be worn." Now, not every one has so large a stock of clothes that they can wear a different suit if the thermometer stands at 55°, or if it stands at 75°; but it is possible to leave off, or put on

more clothes in accordance with the state of the weather.

On the very hottest days one sometimes sees little children with the winter scarves round their necks; or the bonnet shaped to protect the ears from the icy blast tightly tied down under the chin; and the little person so wrapped up is captious, troublesome, and difficult to manage. Can we wonder when the unnecessary clothes have not only irritated the skin, but probably sent up the temperature one or two degrees. On cold days more clothes should be worn, and it must be borne in mind that it is not always cold in winter nor hot in summer.

In the same way the home-maker must, in tending her fire, give thought to this golden rule of health. In summer the use of the bake-house, or the public laundry, will save, in increased health alone, far more than the few pence which are spent on them; while in the winter the fire should be banked up with damp fuel, and not be allowed at one time to roar wastefully, or at another to dwindle until it has lost all heat-producing powers.

Every one should give thoughtful consideration to maintaining the heat of the body at the right temperature, but it is especially wise of those of us who are poor, to do so. The body, as we know, is to a large extent warmed by the carbonaceous food burning with the oxygen of the air. If by absence of proper clothing or firing the heat is allowed to escape, more must be created, and to do this more food is necessary.

Over and above all the other reasons for obeying this golden rule, we have another. It costs less money because less food to *keep* warm, than it does to be constantly *getting* warm. It is as extravagant and wasteful to let the warmth of the body decrease, as it is to let the hearth fire get low or go out.

CHAPTER XLIII.

THE SEVEN GOLDEN RULES OF HEALTH.—RULE III.: ABOUT CLEANLINESS.

"Cleanliness is next to godliness."

THE next rule is *Cleanliness is necessary for good health;* and cleanliness includes, 1, *clean air;* 2, *clean clothes;* 3, *clean homes;* 4, *clean water;* 5, *clean skins.*

You have already learnt why it is important to have *clean air.* You know that the body is not only nourished, but as it were washed out by air; and also how necessary it is that the air which is to wash or make clean, should itself be clean. And this is not the only reason why air should be clean. Impure air, or air from which the oxygen gas has been used up or taken, is the best soil in which the germs which cause fevers can live and breed. Thus you see that breathing impure air is very dangerous, and it does not matter how it has been made dirty; whether it has become dirty from our breath; or a badly-trapped drain: or a dirty dust-bin; or a water-closet; or soiled clothes. In any case it is dangerous; it is therefore one of the first and chief duties of the home-maker to see that all her household has clean fresh air, and plenty of it. Clean air is also a very good friend to the housekeeper, for it helps to clean everything. She may think that in opening the windows she admits dust to "dirty her things," but, though the outside air might bring in with it a little dust, it is, if it itself is clean, best to admit it, for when let in it will prove itself a clean *cleaning agent.*

It is almost, if not quite as important to have

clean clothes as clean air. When we talked of clothes you were told that the sweat which comes from the skin contains some of the carbonic acid gas, which is poisonous to us. This gas naturally goes into the clothes, and some of it, if left to hang about them, returns by the same holes through which it got out, into the body. This fact shows the importance of clean underclothing.

Our upper clothing must be kept clean for another reason. There are in the air millions of the germs (or little plant-animals) which cause illnesses and fevers, and these get into or settle on our clothes. If the garments are allowed to get dirty, the dirt makes a soil in which these germs can grow; and then some day, unexpectedly we feel ill and get sick, or the sore hand of disease is laid on our brightest and best. We sorrow and wonder why. To many it would be news to learn that the cause lay no farther off than the unused clothes-brush or the neglected wash-tub.

All that has been said of clothes is equally true about *clean homes*. In our ideal home dust should have no resting-place. Furniture, curtains, carpets, blankets, utensils, all must be kept clean and so free of dust that the wandering germs should not have a chance of settling, or of establishing themselves in our midst. They do not come alone; with them they often bring pain, and make us acquainted with disease and death.

Clean water is more difficult to get than any of the other three clean necessaries; and yet it is of equal importance. The wise doctors have not yet discovered all the wonderful ways of Providence, and they are not quite sure how all the fevers come; but it is generally believed that two of the most dreadful complaints, namely typhoid fever and cholera, come

through dirty water. Or, in other words, that these diseases are caused by germs which can only live and breed in some liquid, like water or milk.

These tiny invisible fishes (as we may unscientifically perhaps call these germs) go into the body when water is drunk, and if they find soil there they grow and multiply, drinking up our blood with their wee mouths more effectively than the cruel giant of our childish books, who, anyhow, gave Jack the Giant Killer warning of his dreadful advent. *If* they find soil there, I have said; and you must call to mind that you have also learnt that dirty air makes their best soil. Do you not now see an additional reason why we should open the windows or ventilate our home in such a way, that we never breathe dirty air to help make soil for the disease-bringing germs?

It is, however, very difficult always to get clean water, and still more difficult to know if it is clean or not, for sometimes the presence of the little germs makes the water look bright, clear, and sparkling. Yet water is certainly the best thing to drink, and it is very essential that it should be pure and free from living organisms. "What, then, can be done to make it safe?" "Boil it," we receive as an answer, for the great heat of boiling (212 degrees) is too much for the little mischief-making fishes. It kills them, and their dead bodies are harmless to us. It is better always to boil all water that is used for drinking, but this is particularly important when there is an epidemic of illness around us.

When a terrible sickness is in our midst, we cannot but be fearful that it will lay low some one of the people for whom we care; and sometimes folk get helpless before the danger, and think and speak of the sickness as a cruel monster which they can do nothing to hinder. But now that you have learned

the cause of some of these dreadful fevers (and perhaps cholera too) is not a great monster, but tiny invisible fishes, which will be killed by boiling the water, we can banish this foolish and unfaithful fear; and while boiling the drinking-water, and actively attending to every detail of cleanliness, we must try to peacefully rest in the "hollow of the large Hand" which guides all things well.

And, lastly, we must have *clean skins*. A great deal of the food we eat and the air we breathe, even if it be wholesome food and clean air, has to be got rid of. It does its work in the body, and in so doing becomes changed and soiled. It must be cast out, and there are in the body various instruments for so doing, one of the most important of which is the skin. Every day two pints of perspiration should pass through the skin, carrying with it some of this waste material; but if the little holes through which it should travel are choked by dust and dirt, neither it nor the waste material can get out.

Dirt on the skin will injure the health; for every thing (like every body) is given some duty to perform; and if a duty is neglected, other things or people have to work unduly hard to make up for the neglect. This is the case with the skin; if it cannot do its work because it has been allowed to get dirty, the other organs must do it instead; but by so doing they will be over-worked; over-work will cause them to get out of order, and illness must follow.

And besides the work of getting rid of used-up materials, the skin has another and pleasanter duty; one of its functions is to take in health-giving substances. Thus if it is kept clean its millions of little mouths will open and swallow oxygen gas, which is both gladdening and life-giving; and we must never forget that the same power enables the little mouths

to swallow the poisonous carbonic acid gas, if we allow it to linger about them in unremoved sweat, soiled clothes, or bad air.

Now that you see how active the skin should be, and what a doubly important part it plays in casting out waste substances and admitting building-up ones, you will realise how necessary it is to keep it clean. Every day it should be washed all over with soap and water, and then rubbed with a hard towel. Soap must be added to the water in order to ensure perfect cleanliness, because a great deal of oily matter comes out with the perspiration; and as you learnt when we talked of washing, grease cannot be got rid of until it is mixed with soda.

In advising you to wash all over every day, you may think I am advising an impossibility; and I know that when the home is small it will be difficult to carry out the advice with due womanly modesty. But let me remind you that the screen is in this matter ready to help; and that in most large towns there are public baths, where the luxury of a hot bath can be obtained for a penny, and this can be indulged in once a week, if the daily ablutions are beyond attainment.

CHAPTER XLIV.

THE SEVEN GOLDEN RULES OF HEALTH.—RULES IV. AND V.: LIGHT AND EXERCISE.

"Wash the window, rub it dry,
Make the ray-door clean and bright;
He who lords it in the sky
Will on cottage floors alight."

GEORGE MACDONALD.

"Where light cannot come the doctor must."—MRS. ED. PEASE.

THE fourth of our golden rules is, *Light is necessary for good health.* It has not yet been discovered why this is so, but the fact is undoubted. Again and again it has been proved that plants and animals droop, lose their health, and die, when deprived of light, even when they have had the air which is most beneficial to them.

Light, the sun's light, seems to be a necessity of health, and it is gladly welcomed by the young and healthy. Besides the pleasure and health-giving power of light it is also a disease-preventer. Our invisible oft-spoken of enemies, the germs, hate the light; they enjoy most the dark of a dirty corner. By clean windows and open door the home-maker will gladly admit this cheap doctor and effective sanitary officer.

Exercise is necessary for good health, so runs our fifth golden rule, and it is a very important one. Exercise would be to us as a fairy godmother, ready to help us to all sorts of good things, but we often indolently refuse to recognise her existence, and stay at home too idle to take the walk which would do so much to preserve health.

In many ways exercise helps the body, making it warm on the bitterest day, and getting even the

fingers and toes up to, and sometimes keeping them at the right heat (98½ degrees). Then it enables the body to take in more oxygen. When we sit still we breathe about fifteen or sixteen times in a minute; and during that time we inhale about 480 cubic inches of air. When we go out and walk slowly or dawdle about, we breathe nearly double this quantity of air (namely 912 cubic inches), while if we walk a little faster we take in nearly three times as much, or 1,320 cubic inches; but if we run, and walk as quickly as we can, we inhale five times as much, or 2,400 cubic inches.

TABLE.

Sitting still	480	cubic inches.
Walking at the rate of—		
1 mile an hour . . .	912	„
2 miles „ . . .	1,320	„
4 miles „ . . .	2,400	„

A clever doctor put this fact in a different way when he said that he found that a man took in eight and a half ounces more oxygen on a "work-day" than on a "rest-day."

You learnt in the last chapter the important part that the skin plays in the preservation of health; and how essential cleanliness is to keep it in good condition. To this end exercise also helps, for when a person walks or runs, perspiration flows more freely, and does something not only to make the pores active and clean, but also on a hot day to keep the body at the right heat.

And the last thing that exercise does for us is to help to make us happy and cheerful. The health of the body is largely dependent on the state of the spirits. The fresh air, the active motion, the view of the "far-reaching sky," and the lovely sights of the country, or the no less interesting, if less beautiful,

scenes of the town streets, interest the mind, and in its interest the body gains good.

The daily work of many people seems to leave them neither time nor strength to spend on taking outdoor walking exercise. Those who earn their bread with the labour of their bodies, or whose daily work is one which employs all the muscles, will say that *they* "don't need to take exercise, for that they get enough in doing the usual work;" but this is a mistake. We have seen how exercise helps the body by (1) warming it, (2) feeding it with oxygen, (3) stimulating the skin, (4) cheering the spirits. None of these helps are insignificant, and they can be all got at the cheap rate of an hour's daily walk.

CHAPTER XLV.

THE SEVEN GOLDEN RULES OF HEALTH.—RULE VI.: ABOUT REST.

"Prayer in the morning is a golden key to open the heart for God's service; and in the evening it is an iron lock to guard the heart against sin."—W. SECKER.

THE sixth of our golden rules is *Rest is necessary for good health*, and perhaps we can get the most perfect rest in sleep. A wise man has said that the day should be equally divided into three parts. Eight hours should be given to work, eight to rest, and the other eight apportioned between eating, washing, learning, pleasure, and exercise.

It is difficult to tell you what sleep is. One man has tried to explain it by saying that it is "a temporary suspension of several bodily faculties—not a total suspension of any faculty—that would be death," of which sleep has been called the "brother." But

though we find it difficult to say exactly what "this beautiful brother of death" is, we can more easily tell what it does. Its work is that of a cobbler. It does not make new things, it only repairs; but such a good mender is it, that often, if time and the materials are given it, it repairs so that no one can tell the difference between the repaired and the original work. And what are the materials it needs? These we have already mentioned: clean air, beds that have been cleansed by both air and water, suitable warmth, and a peaceful mind; and this last is perhaps got best by those who, before they sleep, re-live again their day in thought, submitting their every action to the standard of "What would have been *right* to do," and their future to the will of Him whose good pleasure it is that His children should be glad and well.

But sleep is not the only form of rest which can be taken. It has been wisely said that "the best rest is a change of work," and the experience of those who have tried it testifies to the truth of these words. If all day long you have worked with your head, the best way to take rest is to use or work your body, to take a run or a walk, or to have a game. But, if all day long you have worked with your arms and legs, then the best way of taking rest will be to work your brain: namely, to read, to learn, or to get something new to think about by joining in the interests of other people's lives, by conversation or by books.

How often when the bread-winners return home weary and worn, do they find the room untidy, the babes still out of bed, and consequently fractious and noisy; the signs of the day's washing about; and nothing ready to encourage rest. And yet rest is so necessary to both the *good* as well as the *health* of every one, that it is a subject to which the loving home-maker must give considerable thought. Her

own work must be so arranged that rest is possible both for herself and her dear ones; and it must be made not only possible, but attractive enough to be desirable. If she bear in mind the wise sentence that has been already quoted, she will provide one kind of re-creative rest by change of work; and after providing all the materials for the other kind of re-creative rest, she will confidently summon Cobbler Sleep to do his work, assured that no one will so readily and effectively aid her to carry out this golden precept.

CHAPTER XLVI.

THE SEVEN GOLDEN RULES OF HEALTH.—RULE VII.: ABOUT SELF-CONTROL.

"So near to glory in our dust,
So nigh to God is man;
When duty whispers low 'Thou must,'
The soul replies 'I can.'"

W. R. Emerson.

The seventh golden rule is of all the most important. Without it the observance of all the others is impossible; and unless it is carried out, the other six are futile. And yet it is a rule which has more to do with the mind than with the body; a rule which no one can keep for another, but which every person must keep for himself. It is a rule which strengthens as well as preserves the body, gaining for it not only the brute strength of the animal, but the higher strength of the God-imaged man; and yet it reads as simply and is as short as the other six. It is *Self-control is necessary for good health.*

One of the reasons why we value good health is because without it we cannot live our highest life.

The body is, as it were, the wings by which we mount into the higher existence. If the wings are crumpled, soiled, and broken, they cannot raise us above the "dull flats of earth." They must be so kept in order that, beating in rhythm, they raise us upward and onward. The larger, higher life is always there, but, if because the wings are so weak that we cannot mount, we oft-times lose consciousness of its existence; all life seems to be limited by the senses, and the world soon becomes a drear, unlovely place, unsatisfying to our true being, inconsistent with all our hopes. If these wings make so much difference, shall we not be wise to keep them in repair? If bodily ill-health hinders us from living the truest, highest, and best life, is it not our *duty* to make all effort to keep the seven golden rules for its preservation? and of all the last needs most obedience.

Food, be it ever so wholesome, will only do us harm unless mingled with the self-control which commands us to stop when enough has been taken; which orders us to masticate it the proper number of times; and to refuse those things which experience has taught us are injurious. Drink, even if it appear harmless, becomes, as we must all have seen, crueller than the deadliest enemy could be, to the man or woman who has not the self-control to reply with the "I can" to the duty whisper "Thou must."

Sleep, "Nature's glad restorer," which, when taken in right quantities, is such a blessing to us all, can become as great a curse. It requires self-control to take it regularly, at the same right hour, no matter how interesting is the pursuit, or how enjoyable the company; self-control to limit it; and self-control to regulate the posture in which it is taken. Children and young persons should sleep with the body flat

and the arms kept outside the clothes; and grown folk should be careful never to sleep on their backs or stomachs. If sleep is prolonged longer than the body needs it becomes a source of weakness. Many people like dozing, and idle folk sometimes remain in bed after they have had enough sleep, because they enjoy the condition of half-awake half-asleep. But this is bad for the health, and here must be employed our seventh golden rule.

Some time ago there was a book written which caused a great deal of talk, for the book told of a country where illness was looked upon as wrong and wicked. In this country (and I can't tell you its name, for no one exactly knew where it was, and the author could not enlighten them!), if people got ill they were heartily ashamed of themselves. No one pitied them and every one blamed them. Even the little children got a good scolding if they caught a cold, and were punished if they had the measles. It was a funny book and amused everybody who read it; but besides a great deal of fun it contained a great deal of truth, for it often is people's own fault that they get ill, and so they ought to be blamed and not petted.

They forget the seventh golden rule, or, if they do not forget it, they do not care to practise it; and as it must be learnt sooner or later, illness is sent to remind them of it. In this way illness is like nasty smells, and we must not grumble at it, if it teaches us, even through pain. The King, in the parable, was *sure* that his guests would enjoy themselves at his feast, and so when they would not obey the courteous invitation, he sent the strong messengers to compel them to come in. Illness is like one of the messengers. We should all enjoy ourselves more if we obeyed the summons which are sent to bring

us to happiness; and the rules which are given to guide us to health; but if we will not do so, then the strong messengers, of which one is called illness, is sent to remind us of the King's wishes; and we must not complain, for had it not come we might be going on still in ignorance of, or indifference to, the things which would make us better.

The funny book I mentioned told a truth when it said that people should often be blamed for getting ill, for frequently the sickness comes from the neglect of this seventh golden rule. Sometimes though, it is not those who break the rules who suffer the punishment; and this is perhaps sadder even than if the penalty always fell on those who disobeyed the rule or neglected their duty.

If you do not exercise self-control, and in carelessness break the window; if you in your hurry lose your manners and forget to shut the door, it is not perhaps you who catch cold, but the aged granny, or the weakly new baby. If you stamp about and make a noise, it is not your head which afterwards cruelly aches; or if you leave the little one sitting on the stones or grass, it is not you who suffers from the laming hip-disease, or who cough your night away with croup.

It was because of this that in this "Nowhere Land," all the family tried to hide it if one of the members was ill. They explained and made excuses for the sick one's absence, but no one hardly dared speak of his illness, for by so doing, they thought, they would have told others of his neglect or violation of one of the rules; or if *he* had kept them all, it would have implied that *they* had broken them.

It sometimes seems hard that one person should suffer when another does wrong; but perhaps this fact is another messenger who has to tell us the mes-

sage that nothing will go right in the world until we obey the grand but short command, "Love your neighbour as yourself."

"Self-control is necessary for good health," and control includes the control of the thoughts. "How can I help what I think?" you will ask, "my thoughts come if I like it or not;" and this is true. One's thoughts often come without invitation, but they do not stay unless asked or encouraged to do so. The mind has a great and a hitherto undiscoverable influence on the body; and what goes on in the mind often decides what goes on in the body. There are certain thoughts which ought not to be permitted to dwell in the mind, and if they are allowed to stay there they cause bodily harm. You have all heard how poorly and weak some people get who have had a great anxiety, or suffered a crushing sorrow; that is because the painful thoughts have acted on the body. And in the same way you have read stories in which a great joy has helped to make an ill person well.

It is because the mind has power to act on the body that this seventh rule must include even the control of the thoughts. Every girl will know the kind of thoughts she ought to drive away, and the sort of ideas on which her mind should dwell, and she will set herself bravely to the difficult and never-ending task of regulating her thoughts. It will, perhaps, help her to know that every conquest won will make the next fight easier; and that later in life involuntary actions will come because they had roots in those forgotten, unnamed, but glorious battle-fields, when the fight was fought against unholy thoughts. "He that ruleth his spirit is better than he who taketh a city."

CHAPTER XLVII.

PRECAUTIONS AGAINST DISEASE.—SCARLET FEVER.

"Out of suffering comes the serious mind; out of salvation the grateful heart; out of endurance fortitude; out of deliverance faith."
—JOHN RUSKIN, LL.D.

IN the last few chapters you learnt the rules that must be obeyed in order to be healthy, and there is no question but that obedience to these rules is the greatest safeguard against illness; but besides these there are other and extra precautions which must be taken and used, if certain kinds of illness should attack one member of the family, so that the other members may not fall victims to it.

People often speak of diseases as if they were sent to them by a far-off Power, and as though they entirely came from misfortune, and had no connection with the fault or neglect of anybody, but this opinion is not borne out by facts. The doctors tell us that there are some illnesses which would entirely die out and disappear (as the plague has), if those people in whose family the disease had broken out would be more thoughtful in taking care to prevent its spreading. I think this is a dreadful and at the same time a beautiful thought—dreadful when we think that much of the pain and sorrow which people have suffered from this class of disease has been, to a large extent, caused by somebody's faults, by the sins of neglect or ignorance; but the dreadful thought is at the same time beautiful, because when tired by all the little wearying details which have to be so closely attended to in sickness, we may think that it is not only for one invalid that

they are being done, but in order to save other people from the same pain as our dear sick one is enduring, and from the same sickening anxiety that those who love him have had to pass through. The harassing dull actions may become ennobled and lightened by the hope, that, faithfully performed, they will prevent others suffering, and save unknown sorrow. Just imagine! each one of you may in this way become a saviour.

But now I must tell you some of the little ways in which this saving work is to be done; and we will begin with *scarlet fever*, for of all fevers that is perhaps the most infectious. Scarlet fever begins with headache and sore throat, and on the second or third day a bright scarlet rash comes out under the skin, the patient becomes very hot, and for a time is often seriously, if not dangerously, ill. As the rash begins to fade away, the skin commences to peel off, and this is the time when the complaint is most easily carried about; for every tiny atom of the skin, even those bits which are too small to be seen, has the power of giving the fever to somebody else. One sometimes hears people say, "Oh no! she has not got the scarlet fever, it is only scarlatina; so there is not so much need to be careful"; but this is a mistake. Scarlatina and scarlet fever are exactly the same disease, only scarlet fever is called scarlatina when the patient has a mild attack. People must not, therefore, be any the less cautious because their dear one has only had the disease slightly. They must preserve the same precautions as if the illness had been of the worst type, because a little bit of the skin of a person who has had the mildest attack of scarlatina is able to give to another person the most severe form of scarlet fever. Besides the peeling skin, which is the most direct means of

carrying the complaint, everything that comes from the patient during the illness is also capable of conveying infection, including even the perspiration.

Now let us imagine that I have six children under my charge, and that I am very far from being rich. For the sake of the lesson we will also suppose that one of the six children has had a headache for some few days past, and has complained of a sore throat; and as there has been scarlet fever in the neighbourhood, I am beginning to fear that perhaps some mother has not been so careful as she should be, and that the little one is "sickening for the fever." What, then, shall I do? If I live in only one room, I shall, if I am wise, go and see the relieving-officer (who is generally to be found in an office near to the workhouse), and I shall tell him my fears, my circumstances, and how impossible it is, on account of the smallness of the home, for me to take the necessary precautions against the spread of the disease. I shall then ask him to remove the ailing child to the fever-hospital, where I know every attention will be given, and where perhaps better food and better nursing is to be got than I can possibly manage to provide. I shall conclude my conversation by telling him that as I do not wish to be a pauper, and for the little sick one to live on money taken from ratepayers, I shall be glad to pay something every week until I have repaid the cost of the child's stay in the hospital.

All this I shall do, if I live only in one room; and though it will make me very very sad to part with the small Mary or Freddy, when of all times they will, perhaps, want me most, still I shall, I hope, be able to feel that my sadness does not matter so much as the good of the rest of the family, the

proper nursing of the invalid, and the safety of the neighbours.

But if I live in two or three rooms, I shall not have to go through the pain of parting with the scarlet-fever sufferer; but then I shall have to do a great many other things to make the members of the family safe from infection.

First I shall have to put the patient in a room alone, and from the room I must remove the carpet, the curtains, and all the hangings; and outside the door I must hang a wet sheet, after having wrung it out in water into which a disinfectant has been put. The object of a disinfectant is to render harmless the germs of scarlet fever which, as I have told you, come from the skin or exhalations of the patient, and float about in the air of the room. These germs are killed by disinfectants, which can be bought at the chemist's, and of which there are several to choose from; but perhaps the best and cheapest is either *carbolic acid* or *permanganate of potash*. Carbolic acid costs about 1s. a pint, and a pint will make about three gallons of disinfecting fluid. Permanganate of potash is even cheaper, and one teaspoonful, if carefully mixed until it is wholly dissolved, will make as much as two gallons of cleansing water.

After I have isolated the patient, I shall have to go and ask my best friend among the neighbours to come in and keep an eye on the other children, and look to the household management; for if I am to nurse a scarlet-fever patient, I must not go about my usual duties, lest I carry some of the little germs about with me.

I shall then place two tubs full of water in the room. To them both I shall add a disinfectant, and into them I shall plunge everything that the patient

has used, even the glasses and tea-cups as well as the sheets and bed-gowns.

On that which comes from the patient I shall pour a little of the water from these tubs; and on the fourth day after the rash begins I shall rub *olive-oil* all over the body of the red sufferer. I shall not hear complaints about this treatment, for the oil soothes the skin and allays the irritation; but apart from that it does something else. It prevents the peeling and infection-giving skin going off in dust, and it does instead—and indeed better than washing. When all the old skin has entirely peeled, and when the doctor says that the patient may take a bath, I shall scrub him well with disinfecting soap, and at the end of a week, after four baths have been taken, he can be dressed in new clothes, and once more join the family group at meals, work, and play.

The patient must not, however, go back at once to sleep in the old sick-room. No! that must be shut up, and the next day the disinfecting officer must be sent for. He will come from the office of the medical officer of the district, and he will bring a disinfecting instrument with him. Then I shall have to spread out and scatter about the room the bedclothes, the mattresses, and all the clothes, or toys and picture-books, or whatever the patient has touched or I have used for him. The chimney and window must both be closed, and half a pound of sulphur burnt in the room, either in the instrument which the officer has brought, or else on hot cinders in an earthenware pan, which must be placed on a brick in another and larger pan which has to be partly filled with water. Before this sulphur is burnt, I shall have to take off all the clothes that I have worn while nursing, and put them in the room to be disinfected with the other things; and then wearing other clothes which have not been near the sick-room,

I shall be able to again take up my old life, and in gratitude resume the duties which had been so sadly interrupted. I shall perhaps have had a hard and painful three or four weeks, and the precautions will have given additional work and worry, but have they not been worth while if no one else falls sick, and if the best has been done to prevent suffering and sorrow?

CHAPTER XLVIII.

PRECAUTIONS AGAINST DISEASE.—SMALL POX.

"Life has been given you by God in order that you might employ it for the good of your brother man."—JOSEPH MAZZINI.

BESIDES scarlet fever, there is another terrible complaint which people catch from each other, and that is *small pox*. This is a loathsome and often fatal disease, and in the olden days it was so prevalent that every year 40,000 people used to die of it. But since those days there has lived a wise man called William Jenner who worked and studied, and finally discovered that it was possible to do something to prevent people catching this cruel disease, and that something was called *vaccination*. A great deal is said against this remedy, and many people "hold" as they say "opinions about vaccination," although they are often quite ignorant of the science of it. It is always important to understand the truth about things before we give an opinion on them, and you must try and learn the simple facts about vaccination. I have often spoken to you about germs, and you know that many illnesses come because these germs find a home and breed in the human body. Now

Jenner was both a doctor and a wise man, and one who used both his eyes and mind in order to discover those truths which would help and benefit mankind.

While he was pursuing his calling he noticed that in one village where the small-pox was raging sadly, the cows seemed to take a similar complaint. He also noticed that the girls who milked these cows got upon their hands small sores or pustules; but the most curious of all his observations was, that the girls who got these sores on their hands were kept quite free from small pox, even though it was raging all around them. These facts set him thinking, and after studying and thinking a great deal, he was led to believe that if the germs or living matter which caused the small pox could be made to grow in an animal other than the human being, that then their products (or grandchildren, so to speak) would lose some of their strength and ability to work mischief to men and women.

Accordingly he took some of the small-pox germs from some one who was sick of the small pox, and he put them just under the skin of the cow. These germs bred and multiplied and gave the cow the small pox. When it was ill Mr. Jenner took from one of its pustules some of the products, or as we may call them the grandchildren, of the germs which he had originally put into the cow, and these he then put into the arm of a man. The result was what he had anticipated. The man's arm into which he had put the germs had a complaint which closely resembled small pox; but only the spots into which the germs from the pustules on the cow had been put, suffered, and after they had got well the man was able to go among small-pox patients in perfect safety, because the sham small pox or vaccination, as it was soon

called, had effectually prevented him catching the original small pox.

This was a great discovery, and it was soon followed by another. For after a time it was found that it was not necessary to use the first growths, or the grandchildren, of the germ which had caused the small pox, but that the great-great-grandchildren of the germs, so to say, would serve the same purpose. Accordingly some of the germs (or virus, as it is called) were taken from the people into whom they had been put direct from the cow, and these germs were in their turn introduced into other people, and again with the same result. All those who had been "vaccinated," as this operation is called, did not catch the small pox. It was thus proved that the descendants of the original small-pox germ, if compelled to breed in another body, were weakened, and not so able to work harmful purposes as their original parent.

But weak as these germs are, they seem to have the power of keeping away the stronger and elder branch of their class; for it is a fact if a person has been vaccinated, he rarely gets the small pox, or if he does by chance, he only gets it slightly. Of unvaccinated people who catch the small pox, one out of every three die, while of those who have been vaccinated, only one out of every two hundred die.

The nurses and doctors who give up their lives to attend to the poor folk who are attacked by this sad disease never catch the small pox, because in the hospitals set apart for the cure of small pox there is a rule which compels all the attendants to be *re-vaccinated* before they enter on their work, and this good rule has so far kept them quite safe. The same rule is now made into a law, and everybody

who is blessed with a little child is, in England, legally compelled to take it to be vaccinated.

Being vaccinated does not hurt; indeed, most people hardly suffer inconvenience, and even little babies only appear to be distressed by the irritation and soreness of the wounds. Besides, being vaccinated in babyhood, it is necessary to be re-vaccinated after the age of seven years; and again when the girl or boy is growing into womanhood or manhood; and even again should there be an outbreak of small pox in the neighbourhood, or an epidemic in the town in which we live. It must, too, be remembered that vaccination only protects from small pox if it "takes" and leaves three plainly "pitted" marks on the arm, and that unless and until it takes it is useless.

It does not cost any money to be vaccinated. The only thing to do is to go to the chemist and ask him to kindly tell you where the Public Vaccinator lives. On learning the address from him you can soon ascertain the hours and days when he will attend to you.

And now that you know the true meaning of vaccination, you will perhaps be yourselves wiser about this little operation. Instead of repeating foolish hearsays concerning what it does or does not do, you will be able to explain that vaccination is but a method of voluntarily taking into ourselves the weakened descendants of a germ, and that these descendants are able to prevent us taking into ourselves a parent germ who causes the most virulent and loathsome disease. Being vaccinated is like inviting a strong man to come and pay a visit in our house. We should perhaps rather not have a guest staying with us, but if he by his presence keeps out a strong and cruel band of robbers, we must surely not be so foolish as to make a fuss about his coming, or try to prevent him entering.

If it is our painful duty to send any one dear to us to the hospital should scarlet fever show itself, it is even more our duty to do so should the affliction of small-pox touch our family circle, for the small-pox patient requires the most careful and skilled nursing, and that can hardly be given by one who has not had the special training of a sick nurse.

CHAPTER XLIX.

PRECAUTIONS AGAINST DISEASES—TYPHOID OR DRAIN FEVER.—FUNERALS.

"Many look upon death as the end, and do not look beyond; they see a great veil hanging before them, and do not see the other side."—THE BISHOP OF BEDFORD.

TYPHOID, or "drain fever," as it is often called, is not so infectious as either small pox or scarlet fever, but it can be conveyed from one person to another, and therefore every precaution must be taken both to prevent taking it or giving it. It is perhaps easier to prevent the spread of typhoid fever than any other sort of fever, for the poison which causes it is to a great extent limited to that which comes from the patient. Therefore if those who tend the invalid are careful to disinfect all the bed and body linen, as well as everything which leaves the patient or which has been used, there is good reason to hope that the sad wearying sickness will spread no farther. If, however, this simple duty is neglected, it is impossible to tell where the typhoid poison will stop spreading, or who will be the next victim to its attack. It may not be any one who is near or whom we know; it may be some one far away and with whom the patient has had no connection.

If the fever-germs are not killed by a disinfectant, they will go on growing and breeding in the drain, and one fine day rise up above the ground through the little openings in the road, and entering into some passer-by with the air which is breathed, they will bring trouble, weakness, and pain into another happy family. So you see how important it is to take away their poisonous power before these fever-germs leave the sick-room.

This can be done by buying some green *copperas,* which is very cheap and used by all shoemakers. A pound and a half of green copperas to a gallon of water makes a disinfectant of the right strength; a tea-cupful of this should be added to all that comes from the patient. Besides this precaution, every single thing that has been used in the sick-room should be washed either in a solution of *Condy's fluid* or some other disinfecting fluid. Plenty of fresh clean air should be invited into the room, and all the milk and drinking-water should be carefully boiled before any member of the family is allowed to drink it.

If the loving nurse is rewarded by seeing her patient recover, she must not, in her joy, relax her efforts to prevent the disease from spreading, because even some time after the illness is apparently over, the poison-germs cling about the sick one, and if they are allowed to go out undisinfected, go out only to carry the same sorrow to other families.

But if, after the most careful nursing, the strong Angel Death still knocks to summon the sick one, those who sorrow must not let their pain blind them to the calls of duty to their neighbour. The loved if silent body must at once be put into a coffin, closed up, and as soon as possible given into the keeping of "brown and tender Mother Earth."

The relations and friends must be asked to deny themselves the pleasure—if a sad one—of looking at all that is left them of their friend, and the funeral must be conducted as quickly and as simply as reverence will allow. What I have said is equally true if the dear one has died of any infectious or contagious complaint, even of measles or chicken-pox —and, indeed, in any case the funeral should take place as quickly as possible.

It is the common practice to make much fuss, and to spend large sums of money on funerals, and on buying ugly black clothes. Relations who have not cared to see or to tend the one who has just left the earth, are invited to mourn at the burial; and money which was not forthcoming to provide sick-room comforts or nursing luxuries, is now freely given to secure the inanimate body a "decent burial."

Does not a little thought teach us that this exaggerated mourning and ostentation is both unlovely and untrue to what the highest and best have taught us about life and death? Grief we must and should feel, when the voice we love is for ever silenced on this earth, but is grief best shown by wasting money on the dead? Is that sorrow the truest which thinks most of the poor sick body, now dead, and not of the spirit which our religion tells us is yet alive? It is the life and the character which is lovable in our friends, and if that has left us to enter into the "larger life where the Father reigns," should we not in thought try to follow it, and not let our minds linger around the mortal remains, which must in truth be treated with respectful reverence, but not with morbid attention and consideration?

In the olden days the mourners used to try to wake their dead by cries and screams and much noisy sorrow, but now we are taught, and we must try and

believe, that death is an Angel sent from the Most High to bring those he summons nearer to Himself, and if this is so, even if we could, we would not surely call them back away from Him.

Sometimes the great Angel Death seems to be sent to give us a message about "the things which are above" and eternal; and when he comes, we should see that there is a hush around our lives, for fear that we lose anything of what He would wish us to know; but if we let the hush be disturbed with fussy preparations about "black and crape," or undue thoughts about coffins, hearses, and horses, we shall lose the sound of His sacred message. God's messengers rarely shout (as a rule they only whisper), and we must keep still and quiet in case we miss the meaning of their words.

All that I have said about the necessity of quiet and simple funerals may seem to have but little to do with you now, while you are girls, because if death enters your households your elders arrange all matters connected with it; but you girls will soon be women, having in your hands the guiding reins of household management, and then perhaps you will practise what I advise. And even now you can do something to get the Angel heard: by keeping away from a house of mourning; by refusing to go and see the dead bodies of your neighbours; and by bearing in your own mind what by degrees you may teach some others, that as the body is more than raiment, so the spirit is more than the flesh.

CHAPTER L.

HOW TO MIND THE BABY.—AIR AND FOOD.

"I love these little people; and it is not a slight thing when they, who are so fresh from God, love us."—CHARLES DICKENS.

To most girls, during some part of their lifetime, comes the duty of "minding the baby." Sometimes it is their own little brothers or sisters who are committed to their care; sometimes it is the child of a busy neighbour who wants looking after, while to those girls who choose domestic service as their work in life, the charge of the mistress's little one is a duty which often falls to their share.

In any case it is an important and responsible duty, and in to-day's lesson I am going to tell you about little babies and their tiny but wonderfully created bodies, so that you may in the future not only mind them lovingly and gladly—as I am sure you all do already—but intelligently, and with wisdom born of knowledge. Every year many little babies die, not from any terrible disease or unpreventible cause, but simply from the ignorance of those who mind them. One doctor* says that "there is indisputable evidence that between one third and one half of the children born, die within the first five years of their life," and "that *preventible* diseases destroy in England 72,000 children annually," and he goes on to say that the "causes that operate in producing such a sacrifice of life are impure air, improper food, defective clothing, uncleanliness and injurious physicing."

Now we will take these causes one by one and

* Dr. Benson Baker.

see how they specially affect the sweet body of the little helpless baby.

First, *impure air*. The tiny infant breathes much more quickly than we do; indeed it takes in as many as thirty-five to forty breaths a minute, being rather more than double the number that a grown-up person inhales. You will remember that you learnt that by breathing we took in oxygen, which, joining with the carbon within us, makes the heat which is turned into strength. In order to help it to grow the little baby wants a great deal of this oxygen, and this (besides other reasons) is why it breathes so often. Its lungs, moreover, are so small and it is so frail, that it has not got the strength to make much effort to obtain all the oxygen it wants. Do not these facts point to 1. Keeping the baby out of doors a great deal? 2. Letting plenty of fresh air come into the room where it lives. 3. Not burying it under the bedclothes at night; nor, 4. covering its face with a handkerchief or thick veil when it is asleep or out of doors. If you will remember that the infant wants double the air that an adult does, and has not even half the strength with which to get it, you will, I am sure, in "minding the baby" notice that nothing should keep fresh clean air from it.

Secondly, *improper food*. The best food, and indeed the only food that a little baby should have is its mother's milk. The All-wise Creator has so arranged that the woman, whose great privilege it is to become a mother, should also have the power of feeding and nourishing the little life that she has called into being; and the food she has to give it is the best possible food for it. If the mother dies, or if from sad sorrow or illness she is unable to feed her little one, then the baby must have the food which most nearly resembles the milk which the mother

could give, and this food is cows' milk mixed with an equal portion of water, to which can be added a little sugar and sometimes a little lime-water.

But you may ask, "How much am I to give the wee mortal? When am I to know it has had enough or too much?" All this has been made a matter of study by those people whose hearts have been full of love for the frail little creatures committed to our care; and it has been found that until an infant is six weeks old, it will require four table-spoonfuls of milk and water every two or three hours, day and night, unless it is asleep. If it is asleep it had better not be aroused to take food. Some people seem to think that "it does not matter when you feed a baby—that it is always ready for its meals, and the oftener it is fed the better it will grow." No mistake could be more fatal to the baby's health than this plan. The organs which turn the food into flesh and blood are, in the little child, so feeble and so delicate, that they require constant rest and care. If they are always getting fresh work to do they must get tired, and then the babe falls ill.

As the child gets older it can take more food, and so does not require to have it so often. After six weeks it may be fed five or six times a day, and twice in the night—and by the time it is three months old, food four or five times a day, and late at night and early in the morning gives it ample nourishment. These rules about feeding apply equally whether the baby is fed from its mother or by the bottle. *Regular* feeding at stated hours is necessary for the health and growth of the little frame, and if the mother or nurse break this rule and feed the child whenever it cries or is cross, she is but laying up fresh trouble both for herself and the infant.

The child should be kept entirely on milk and water until the eye teeth begin to come, and then the little one can have gravy and bread-crumbs, broth and milk puddings; and after the eye teeth have quite made their appearance, the diet may be advanced to that of ordinary people; only care must be taken that *all* the food is chopped very fine, and that four or five hours are allowed to elapse between each meal.

On no account should a baby be fed with the food that its parents take. "She is fed just like we feed ourselves. Whatever we have she has a bit of, and yet she don't thrive," I was told one day by a kindly woman who showed me her poor, pale, sickly baby; "and no wonder," I thought, as I began to tell her what to-day you have learnt, and what I hope you will remember and put into practice next time you "mind a baby."

CHAPTER LI.

HOW TO MIND THE BABY.—CLOTHING, CLEANLINESS, SLEEPING, AND PHYSIC.

"Let us work, sacrifice, suffer, that God's Kingdom may come on earth as it is in Heaven."—JOSEPH MAZZINI.

I SHOULD like to meet the girl who is not interested in little baby's clothes: the tiny skirt, the long soft flannel, the funny little bodice with the doll-like arm-holes, have for every girl a charm and an attraction.

On the baby's *clothes* its health largely depends. They must be both warm and light, and made so as to cover up all the little limbs, so that our

old enemy Thief Cold shall not get in and steal the warmth.

When the baby is still but an infant, it is best for it to be in long clothes, which wrap round and keep its whole body at the same heat, but then care should be taken that they do not drag at, or hang heavily from, the little neck, and also that they are made so as not to irritate or annoy the small and irresponsible being, who often objects in loud and indisputable accents to the process of being dressed or undressed.

All that has been said in Chapter XXX. about the necessity of clothing those parts of the body where the vital organs are placed, is even more true when applied to little babies. For this reason it is foolish to leave their arms, legs, and little soft necks uncovered. They should be clothed all over with soft woollen garments, made so simply that they can easily and painlessly be put on and off, and are not always requiring to be put straight.

The *cleanliness* of the baby is another very important matter, and not only its little body, but everything that it uses must be kept spotlessly and faultlessly clean. The baby should be washed all over, including its head, with soap and warm water twice every day. The cold water should always be put into the bath first, and then the warm water added until it is of the right heat. You will know that the water is the right heat, neither too hot nor too cold, if it feels comfortable when you put your elbow into it. Do not trust to your hand to help you to judge if the water is too hot, for the skin of your hand will have become hardened by time and hard work, and will be able to bear much greater heat than the soft skin of the baby; but the skin of your elbow is more tender, and what it feels will enable

you to decide better as to what the little baby can safely endure.

Besides the baby itself, there is the bottle to be kept clean, and to the neglect of this can often be traced the ailments and pains from which the poor innocent suffers so much.

If a baby is brought up by hand, two bottles should always be in use—and used alternately. Directly one bottle is empty, it should be placed in scalding water, and after being thoroughly washed, it should be kept lying in clean cold water until it is again wanted. Milk soon turns sour, and if little bits of sour milk are left sticking to the bottle, they will cause the new milk to disagree with the child, even if it is quite fresh when it is put to its mouth.

It is very difficult to keep a baby quite sweet and clean, and especially so when the mother or baby-minder has many household duties to perform; but it *can* be done, and all the more easily if the baby is early taught clean and decent habits. It is hardly ever too soon to begin to teach a child to be regular in its little ways, and those who have the privilege of bringing it up must remember to remind and encourage it in their performance.

At certain intervals during the day—say, soon after taking its bottle—a little baby can be taught its lesson, and the lesson learnt, the advantage will not only be that greater cleanliness is insured, but that the health of the little one will be improved and maintained.

As to *sleeping*, a baby can hardly sleep too much, providing that it is kept warm while it sleeps.

A celebrated man called Hunter, said, "If you would have strong children, remember there are three requisites: plenty of milk, plenty of sleep, and

plenty of flannel." And now let us see what this word "plenty" means.

Until the babe is ten weeks old, it should pass most of its time asleep, waking only to be fed and made clean and comfortable; as the child grows it will require less sleep, but what it does want should be taken at regular times. A child who sleeps more or less all day, and is then wakeful and fractious at night, becomes wearisome both to itself and its caretaker; but unless the little one is ill, this is only a bad habit, and bad habits must be broken by the help of good ones. A regular mid-day sleep, lasting one, two, or three hours according to the age of the babe, should be patiently encouraged; and, for the rest of the day, wakefulness ensured until the angel sleep claims its little votary for the long nine or ten hours' spell.

Babies often seem to fall ill, and because they cannot tell what is the matter with them, those who mind them must use all their patience and sympathy to try and find out, so as to treat them wisely and fairly. As a rule if a baby is ill it is because it has not had enough fresh air, or because it has been given too much or too little nourishment, or else some sort of improper food; or it has not been clothed as it ought to have been, or maybe its soft skin has been neglected, or else the bottle has been allowed to get dusty, or perhaps its sleep has been broken by loud noises of thoughtless and unloving people.

To one or the other of these causes can generally be traced most babies' illnesses, and in order to cure the illness we must think carefully so as to find out, and then remove, the cause. But, instead of doing this, many peeple buy the baby physic, and give it some cruel lulling drug, which, in hushing it, silences the only way the small mite has of pointing

out its troubles, and guiding us to their cure. Let me tell you some grave wise words, written by the same doctor whom I quoted some few pages back. Dr. Benson Baker says: "The first step is to discover the *cause* of restlessness, and not to regard it simply as a condition to be relieved by some 'soothing-syrup.' The enormous quantities of quack soothing-syrups, cordials, &c., given to infants in order to produce quietness and sleep is the cause of thousands of deaths, and many thousands of debilitated and burdensome lives." Are not these sad thoughts? But I have told them to you as a warning; and you must remember, first, to "mind the baby" conscientiously in all these little ways; and then, if it falls ill, treat its wondrously-made little body with all reverence, and ask the aid of a wiser head than yours to make it well.

There is, however, one thing which must be often done for the little one, whether it is well or sick, namely, to *amuse* it, and this is a part of the duty of bringing up a baby which often falls to the girl's share. All people have their own ways of playing with a baby, but I think that sometimes grown people forget that the play is intended to amuse the baby and not themselves. The careful elder playmate has to bear in mind the ignorance of the baby, who has been so short a time on the earth that it has not had time yet to learn all about things, and to know what is alarming and which harmless. She must not frighten it in her play, neither does it amuse the child to be shouted at. Little babies are not deaf because they do not answer; and because their organs for hearing, as all the rest of their bodies, are very fragile, they must not be subjected to shrill or startling noises. A soft voice is one of a woman's chief charms, and a charm that is within reach of every one, however poor.

Bright colours seem to be a source of great pleasure to the new vision; a coloured ball of wool is to the smallest child a much-appreciated toy. Music, too, has its joys for the dumb baby, and if the girl can sing, she will perhaps find the cooing of the happy baby to be the sweetest thanks that she can receive.

CHAPTER LII.

HOW TO TAKE PLEASURE.

"To live is nothing, unless to live is to know Him by whom we live. He is not to be known by marring His fair works, and blotting out the evidence of His influence upon His creatures."—JOHN RUSKIN.

THE subject of this section is recreation. Did you ever notice the spelling and meaning of this word? *Re-creation.* It is commonly used as another term for pleasure, and I do not want to object to the usual use of the word, for it will serve to help you to remember that no pleasure is good and worthy pleasure unless it is re-creative pleasure—unless, that is, it helps you to do your work better, or be in yourself something more than you were before you took it.

Now let us take this principle as a guiding-star to show us light concerning pleasure, and enable us to find out what pleasures can be fairly enjoyed under it. First, though, let me tell you how important it is for *every one* to play or be re-created. Play is not only good for boys and girls and babies, but play is necessary for young men and maidens, as well as for their fathers and mothers; and even the grey-haired grandparents must not be left out. Every one must have some play or get re-creation, only all the play need not always be of

quite the same sort. It must, though, have some things in common.

First, it must *leave the player better able to do his work*, or *more what he wants to be.*

Secondly, all pleasure *should leave good memories.* Sometimes pleasure is taken, and when it is over there is nothing left except perhaps a headache, and the remembrance of a noise and an empty purse. Such pleasure does not come under our principle; it has not been re-creative, neither has it left a good memory. Pleasure days should be red-letter days in the memories of all who take them, and to plan them our home-maker must give careful thought. They had better be free from excitement, and for this reason I would not advise any one to join monster treats or share in large outings with parties of strangers. Excitement is not recreative, and things are often done under its influence which leave bad memories for the next day and many days to come. Pleasure should be such that it can be enjoyed again and again in memory, and each time it is so enjoyed have something of its old power of helping us to do our work better, or be more what we want to be.

But besides leaving no bad memories, our principle guides us to a third rule to assist in choosing pleasures rightly. Pleasure *should be re-creative to all parts of our natures.* People are not only bodies—they have minds and spirits or souls—and the best pleasure is that which touches and re-creates the whole of the nature. For instance, how much more enjoyable it is to run when a game is being played than it is to run for running's sake. This is because the mind is being exercised as well as the body; and to right-minded affectionate girls the game will be even more enjoyable if it serves to amuse the little ones or makes granny laugh.

People do not often enjoy a walk if they are only thinking of the pleasure of putting one leg before the other; but if they have an object in the walk, something to do, some plant to hunt for, some way to find, or a beautiful sky to look at, they come home much refreshed: the walk has re-created their bodies; thinking of its object has refreshed their minds; and if they have been observant, reverence cannot fail to have revived their souls.

Our third rule, then, about pleasure is that it must touch to re-create all parts of our natures; but this, though it sounds a big rule, need not make you feel that all the agreeable nice things are hopelessly banished. There are many pleasures which fall within its scope. *Books*, for instance. Does not all reading (excepting perhaps silly tale-books which your conscience will keep shut) give rest to your body, thought to your mind, and perhaps hope or comfort to the highest part of your being? And many physical exercises, such as *swimming*, *jumping*, *running*, if engaged in intelligently and without thought of selfish gain, will be found to meet all the requirements of this our third rule.

Of *singing* this is especially true, and it would be well if every girl and boy, as soon as they left school, could join a singing-class. "Music is an angel of holy thought inspiring to noble deeds," writes the great Italian writer Mazzini, while another truth-speaker tells us that "Music leads us to the edge of the Infinite, and for a moment lets us gaze therein."

And music, like the quality of mercy, is twice blessed, blessing both the singer who enjoys making the music and the hearer who enjoys its sweet sounds. There are several ways of learning music, and all are good; though, perhaps, if a choice can be made, it

is better to learn the sounds according to the old notation, for then the singer can join any band of musicians, and be able to read, from the same signs, the musical language of the writer of a simple air, or study the thoughts of the composer of the grandest oratorio that has yet been written.

CHAPTER LIII.

HOW TO TAKE PLEASURE.

"The most delicate, the most sensible of all pleasures, consists in promoting the pleasures of others."—La Bruyère.

There are many other ways of getting pleasure besides those we have already spoken of; but, perhaps, we must put first—*family picnics*. A family picnic, a whole day or half a day spent out of doors, the meal carried by the various members of the family, who all eat together under the shady tree or by the side of the running stream, meets every requirement of recreation. It leaves nought but bright, glad memories, and it feeds and recreates all parts of the nature. The long walk, the fresh air, the change of scene, serves to strengthen and refresh the body; while the town-liver finds in the many strange sights of the country, and in the interest awakened at every turn, food for the mind; while the deeper side of human life is not neglected by those who are glad to take the opportunities which such an unusual day gives of loving and being loved.

So to the top of the class of recreating pleasures must advance the family picnic party; but alas! as it is not always summer weather in our rough island home, we cannot always enjoy the king of pleasures;

so we must look about and think of others which can be delighted in when the wind is bleak and the rain comes down, or the sky is grey and cold.

Whatever the weather is, in London, at least the *museums* and *picture galleries* are always open, and from them a great deal of pleasure can be taken. But this pleasure, like a great many other good things in the world, does not come without some effort, and in order to enjoy museums or art galleries we must know something about the things that are in them.

It can be no pleasure to any one—and it certainly is not re-creation—to wander aimlessly between rows of stuffed animals or past lines of gilt-framed pictures, just looking at them carelessly and thoughtlessly, and then passing on to something else. Each one of these stuffed animals must have meant something, or why was it created? What does it mean? Why was its neck made so long, and its feet shaped so queerly? Where did it live? and what did it eat? And this big picture must mean something, or why did the learned men hang it up, ask the nation to pay rent and taxes to give it house-room, and caretakers to see that it does not get damaged? What did the artist mean to tell us by his picture? What idea did he want to express in those figures? or by that man's look? These are the questions you must ask yourself when you go to see a museum or a picture-gallery. It is foolish to *see* it at all, if you *understand* none of it. It will give you greater pleasure, leave better memories, and serve more truly to recreate all parts of your nature if you understand *one* thing or *one* picture only, than if you see a whole collection and get no new idea from any of it.

And now we will talk of the fourth rule to be remembered when we are seeking enjoyment, and that is, that *our pleasure should cause no one else*

pain. As you read this you will at once agree to it, but after you have given truthful thought to it, you will be surprised to find how often in daily life you are tempted to break it.

For instance, all *gambling* and *betting,* which, to some boys and men is a source of great pleasure, or about which many people "see no harm," is entirely based on the reverse of this. Some one's loss or pain is the cause of the gambler's pleasure.

The *teasing,* which seems to give to some girls great pleasure, has its source in some one else's pain. If the person who is scared "did not mind"—*i.e.* was not pained by it—it would be no fun teasing her.

The foolish silly way that thoughtless girls "carry on" with boys often, ultimately, causes some one pain; and the pain is none the less real because the girls who took their pleasure in this senseless way do not see it. The fun that some children find in frightening a cat or hunting a dog, or even in driving the cattle who are going through the streets to meet their death for our service, is fun got out of pain; and the pain of the poor beasts is perhaps heightened and not lessened because of their dumb incapacity to ask for sympathy.

The animals are capable of giving us much pleasure, a pleasure which will accord with all our rules, but it must come from intimate acquaintance and friendship with the beasts, not ignorance of and antagonism to them. To get to know an animal we must think about it, learn its ways, habits, and character, and then help it to know us. It is not difficult to imagine what hurts animals, for all those of the class mammalia—*i.e.*, those that are born, not hatched like chickens, or brought into life from spawn like fish—have organs closely resembling our

own, and therefore feel physically much the same as we do. Thus you have only got to imagine yourself a cat or a cow, or a horse, and you will soon learn to feel what they like, and then be able to make their lives easier, and get pleasure from their friendship.

This plan of putting yourself in imagination in other things' and other peoples' places will soon show you what pleasures you must refuse in obedience to this rule that "our pleasure should cause nothing else pain." Many of the shows at fairs, or in booths, should be avoided, for it must be pain to the fat woman to be kept so fat; and to the thin man to be half-starved, or to the poor crippled dwarf to have his deformity shown and criticised. Under this rule, also, some theatres and music-halls must be shunned, for it is pain of the worst sort for any one to live a less noble life than they could do; and if any one does that to give us pleasure, we must not take the pleasure offered at the cost of such sad and degrading pain.

You will find, if you think about it, that this last rule will be a true guide about pleasure, and you will be astonished to find how often it has to be considered even in little daily matters. The pleasure of staying out later than was expected may give "Mother" the pain of anxiety. The pleasure of a longer dance round the organ-man may give Baby pain by long sitting in one position alone. The pleasure of eating oranges in the street, regardless of where the peel goes, may cause accidents and pain to the next passer-by. The pleasure of loud singing or noisy play may awake the sick woman, or give pain to the dying.

In many little ways the rule will interfere; but if it is obeyed, pleasure will be more truly pleasure because painless to others.

Pleasure is good, and the home-maker must get and give it in plentiful abundance, but it must, 1, always be of that sort which is re-creative; 2, it must leave only good memories; 3, it must refresh all parts of our being; and, 4, it must cause nothing else pain.

CHAPTER LIV.

THE SIX R'S.—WHAT THE HOME-MAKER SHOULD LOOK FOR IN A SCHOOL.

"*Intellectual education consists in giving the creature the faculties of admiration, hope, and love. These are to be sought by the study of beautiful nature, the sight and hearing of noble persons, and the setting forth of noble objects of action.*"—JOHN RUSKIN.

IF I were a home-maker, and if there were children in the house to be thought and planned for, it would be my duty to give a great deal of consideration to the choice of the school to which they should go, for there are a great many things that they would have to learn. I should want them taught not only the usual three R's, namely, "reading, 'riting, and 'rithmetic," but I should want them taught three other R's besides, and those would be, *Regularity*, *Reasonableness*, and *Reverence*.

It is of the utmost importance that children should learn to read, write, and add up intelligently; for if they cannot do these things when they are young, they are not likely to be so useful in the world when they are grown up. It is a sad thing to see good and worthy men and women lose their places, and be unable to fill posts for which in all other ways they are fit, because they did not "mind their books" in their youth, or because their parents did not give them the opportunities of learning.

And besides the loss of place or money, those who cannot read lose more—they lose the knowledge of beautiful thoughts and high and elevating hopes. However poor we are, there is one thing that we have inherited, something which we can each have and hold, and no one can take from us; and that is the knowledge of the noble ideas and great beliefs of those holy men who have lived and given the world their best. This is a great inheritance, but it can hardly be ours unless we learn to read intelligently.

It were foolish to miss so great a good for want of the trivial effort that it takes to learn to read; and so in the school to which children are sent, the teacher should, I think, be very strict and stern in seeing that her pupils not only read, but understand what they read; and are able to speak out their words so clearly and mind their stops so carefully that it is a pleasure to listen to them. *Reading aloud* is a valuable accomplishment, and one which might well have been added to the list of pleasures when we talked of the best ways of getting recreation.

Before I decidedly fixed on any school, I should, I think, go and see the teacher, and if she would kindly spare me ten minutes I should tell her all I knew about the pupil I was going to ask her to teach. I should explain how good she was, and how naughty she could be, and I should ask the teacher to help me to break her of her faults and to guide her towards higher and truer goodness. Then, when I had so talked to the teacher, I should entirely trust her. I would not listen to the tales of unkindness or unfairness, which so often travel between the school and the home. Of course, if there were things which I could not understand, I should step round to the school and again ask for five minutes of the teacher's useful time, but I should not do this every

time that the child was kept in, or on each occasion that a punishment lesson was given. No! if I knew the teacher well enough to trust her to teach the child, I should, I hope, trust her enough to punish the child. It is hardly fair to the teacher to be constantly taking up her valuable time in asking explanations; nor is it good for the child to see her teacher's authority questioned.

And here comes in the part of the lesson, which each girl among you can practise now, without waiting till time gives you the responsibilities of which I have been speaking: you can and should tell your mothers everything that goes on at school, even such a thing as this one lesson; but be careful that you tell it quite truthfully and *accurately*, even if you have to say, "It was my fault, mother."

On the occasion when I paid my first visit to the school, I should keep both my eyes and ears wide open to try and find out if the second batch of the three R's, Regularity, Reasonableness, and Reverence, were taught in it, and if I felt *sure* they were, to that school should the child go, even if it cost 2d. a week more than any other. Having sent the child and paid the extra money, do you not think that I should be a foolish and unworthy home-maker, if I did not carry on the same education at home which I felt so anxious the child should get at school?

First, then, *Regularity*, which includes *Punctuality*, *Accuracy*, and *Tidiness*. These must be daily striven after, and they are matters which are in the hands of each child, even more than in the management of her mother. It is both unkind and unfair to the teacher for a child to be irregular or unpunctual, for if absent the lesson is missed, and then the work has either to be done over again; or else the

child allowed to fall behind the rest of the class, and no conscientious teacher likes to allow this. Sometimes the school managers, in despair at the irregularity of the scholars, have offered rewards for punctual attendance, and when this has been the case, I have always felt ashamed for the children, if the early marks have at once increased, and if the school average has quickly risen. Punctual regularity in the performance of duty is a necessity for wholesome life, and it is best begun and practised in the school-days, and you must each do all that in you lies to become yourselves and help the other children to become both punctual and regular, until these two virtues have become to you habits of mind.

Second, *Reasonableness* must prevail in the school to which my charges are sent, and whether or not this is taught, it is more difficult to learn. Whether it is taught or not will, however, soon come out from the home lessons, and from the way in which the children answer questions about their studies.

It helps children very much if elder people will kindly interest themselves in what they are trying to do, and often home questions can turn school-learnt facts into living realities; but, girls! whether your elders are interested or not, you must strive unceasingly to be reasonable in your thoughts and about what you learn. You must use your *reason* on everything that you are taught; you must *think* about all you are told, accepting it in all humility, but not in credulity. You must store knowledge in your mind, not only by the help of your memory, but by the help of a higher faculty of mind, your reason. "Do you think," as Mazzini says, "that the faculty of reason would be given to you unless it was to be used for the benefit of mankind and for the advancement of the glory of God?" and these fine words

naturally lead us to thinking about the sixth R, the last and the greatest of all the R's, without which the other five have lost their crown. Reverence! What does it mean?

Reverence is the habit of looking up. People have now learnt so much and got so many things by their own wits that they are often proud, high-minded, and disdainful. They make themselves very disagreeable, and, what is worse, make it impossible for the best things to reach them. The beautiful object is never pushing, and the wise man is humble. Most necessary, therefore, is it to learn Reverence, to learn to look up at what is better, wiser, and more wonderful than ourselves. Whoever, then, looks up, acquires the simple, modest manner which turns a woman into a lady, and the self-forgetfulness which opens the door to wisdom.

Reverence is taught by various means, by lessons about what is really great, by rules of quiet and order. You may not be able to judge of the means, but you will soon see the result. If the scholars are modest and gentle, if they look down on nothing that God has made, you may be sure that Reverence, the sixth and best of the R's, is taught in the school.

CHAPTER LV.

HOW TO PUNISH SO AS TO CURE.

"Man's use and function are to be the witness of the glory of God, and to advance that glory by his reasonable obedience and resultant happiness."—JOHN RUSKIN.

VERY often when children are punished they think they are being treated unfairly, and "It was not fair, it wasn't," is often heard in bitterer tones than "It

hurt so much." Now all through this chapter I want you girls to use your sweet reasonableness of which we talked in the last lesson, and to consider with me the best ways of *taking punishment, receiving punishment,* and *giving punishment.*

Deep down in the heart of every one, even of the naughtiest of us, is a desire to be good. Everybody feels that some*how* and some*where* and some*when* they will become like the little picture that they have made of themselves in their own minds; and in their calmer and higher moments they feel that they would be quite willing to be punished, if they felt that punishment would help them to be more like what they want and mean to be. They feel something like a sick boy felt. He had been ill, and lying down for a long time, and once as he saw a group of noisy happy boys going for a day's outing, he said, "Oh, I don't mind what's done, or how nasty the physic is, if I could only get well!" Now, punishment is like the physic, and we must bear in mind, when we have either to give or to receive it, that its object is to cure the fault.

The best punishment is perhaps that which is self-inflicted. It is better, and more likely to effect a cure, if, after having sinned, we give ourselves a punishment, than if we wait till the fault is found out, and the punishment given to us.

There are numbers of little ways in which girls can punish themselves, only no one must imagine that a punishment wipes out a fault. Punishment does not repair a wrong committed, but if it is taken humbly and conscientiously it may serve as a reminder to the person who has committed the fault, and the reminder may mean preparation and strength. "Fore-warned is fore-armed." These little self-inflicted punishments must not, though, be talked of or

made public. Each girl having determined to try and cure her fault by punishing herself, must keep silence about it, and then the little self-sacrifice made, the daily indulgence curtailed, the self-imposed task accomplished, will to her become steps up the steep and difficult hill of righteousness.

If girls looked upon punishments as a means of curing the wrong which is in them, and which they hate, they would not, perhaps, be so ready to declare the punishment "unfair," or to commiserate the one with the other, when it has fallen on the whole class or school.

Do you not know the story of the rough-and-ready schoolmaster who said he always "beat all his boys every Monday morning, because if they had not deserved it then, they were quite sure to do so before the week was out." You will perhaps think this is a queer sort of schoolmaster to be commended, and I do not mean to commend him, but there is a great deal of truth in what he said. We all commit more sins than we ever get punished for, and maybe if a girl were fully conscious of her own shortcomings she would hardly feel that any punishment that came to her was "unfair." If, for instance, she had on one occasion got punished for a fault that she had not committed, she would know in her humility (if she had true humility) that there was much wrong in her yet to be cured; and feel that she deserved for other things, if not for that particular thing, the pain that had befallen her.

It is, however, not by any means always easy to feel like this, and in giving punishment we must be very careful and watch so as to see that it always has some relation to the offence committed. For example, if a child has been idle she should be punished in some way which will help her to over-

come the fault of indolence, and be more industrious in the future. For such a fault she might be made to learn an extra lesson, or be kept longer at work to compensate for what she has lost by laziness. Or if a child took what did not belong to her she should be punished by being made to "restore fourfold," and as few children possess anything of their own which would enable them to restore, the punishment might take the form of some daily deprivation until the value of the thing stolen is saved or gained.

And supposing a child committed (what I feel to be the worst of faults) the sin of lying, trouble must then be taken to find out why the falsehood was told, and for what reason the little one's gift of speech was put in opposition to the power that makes for righteousness, whose name is Truth. The punishment must depend on the motive the child had for speaking falsely; but if it was found to be cowardice, the best correction would be to induce it to do some brave act, such as voluntary confession, or acceptance of consequence; but if the lie were told to escape some possible pain, annoyance, or distasteful occupation, then it would be the duty of those who lovingly punish, to see that the lie did not fulfil its object, but to let the child suffer the same pain which the lie was told to avoid, or to perform the distasteful occupation from which the falsehood was the effort to escape.

Lying is a disgraceful sin; but I think, perhaps, fewer girls would tell untruths if they understood that by so doing they hindered and spoiled the work of the many noble men and women who have given and are giving their lives to finding out and spreading the Truth, which is eternal, and must live, and by its life destroy all falsehood.

If a child is *cruel*, either to another child or to a

helpless animal, I should conclude that he had but little sympathy, and the best way of creating that sort of sympathy is by practically making him feel what he has made another feel. Accordingly he should be treated, so far as it is possible, in the same way as he treated the creature to whom he gave pain; but if that were impossible, he should be beaten, or in some way made to suffer. The pain he feels may awaken in him sympathy and show him the sin of cruelty.

Many other examples could be given to show the carrying out of this principle of punishment; but if you have read these last two pages *thoughtfully*, you will have learnt enough to help you to punish wisely.

But as in your hands the management and punishment of the little ones is often left, there is another principle which you must learn if you want to be just in punishing; and that is, children must be punished for the fault that they have committed, and not because of the consequence of the fault. For instance, I have seen a child scolded, indeed even shaken and beaten, for breaking an ornament or bit of crockery on which its mother laid great value, while the offence of breaking a common basin or a daily-used plate was passed over with only a remonstrance. But the carelessness in both cases was the same, and it was because of the fault carelessness that the child should receive punishment, not because the consequence was serious. "I felt so cross about it I was bound to give him a whipping," is a sentence that you must have heard or perhaps suffered for. If you think about the principle you will see where this sentence was wrong. Punishment should be given only to help to cure the person who has done wrong, not because the result of the wrong was vexing or the consequence irritating.

Sometimes much of the usefulness of punishment is taken away because it is often threatened without being carried out. "I'll beat you soundly if you do it again," is said to a tiny wee baby by a loving mother or devoted sister who have not, even as they say it, the least intention of carrying out their awful threat; or, "If you're naughty, I'll fetch the policeman, or call the bogey, or give you to the black man, I will," is told to a little child, who thereby first suffers the pain of fear, and then grows indifferent to the threat on finding that nothing follows it. Are not these vain threats but a sad and foolish way of lying? and will not the would-be home-maker thoughtfully abstain from using them if she has learnt the use of punishment and her responsibility in wielding it.

CHAPTER LVI.

HOW TO CHOOSE THE WORK OF LIFE.

"All vices are indeed summed, and all their forces consummated, in that simple acceptancy of the authority of gold, instead of the authority of God; and preference of gain or the increase of gold, to godliness or the peace of God."—JOHN RUSKIN.

To everybody at a certain time of their lives comes the question of choosing their work. School having been regularly attended, the required standard of knowledge having been reached, the body having grown tall and strong enough for work, then arise the questions, "What work shall I do? How shall I earn my bread?" This is a matter which every one must decide and answer alone; but in order to help it to be decided wisely and well, the home-maker must give careful thought and unselfish consideration.

First there will arise questions concerning the

work itself. Is it good work? Does it serve a useful end? Is it work which the world wants? and for which people will be better and happier because I have done it? Mrs. Browning, a sweet and great woman-poet, in writing to girls about a girl, tells them to

"Get work, get work, 'tis better far than what you work to get."

So in the consideration of the choice of labour we must think, not only of the money and advantages to be gained by it, but also of the good and value of it itself. It were better to earn half the money, and do a work which would help on the world and make people holier and gladder, than to earn double the money, and hinder or harm them. This may read as if it were quite simple and easy to follow, but in life it is not so easy to carry out, and we have witnessed few harder fights than those struggles which go on within a man or a woman, who knows that the nobler and worse-paid work ought to be taken, while the lower, easier, and better-remunerated labour is being offered for acceptance. These are painful conflicts, but it is something to know that every one who conquers for the right makes it easier for the next fighter to win, and some may care to be reminded of the words, "To him that overcometh will I give a crown of life."

Having ascertained the good and value of the work itself, the next inquiries to make are not as to the immediate advantages to be gained by it, but as to its permanency and possibilities of growth and development.

Too often the ultimate good of the young worker is sacrificed to the immediate benefits which result from his work. We see stunted and ignorant men, and learn from them that the cause of their small

stature or illiterate minds is because, "My mother wanted what I could earn, and put me to work too hard for me before I ought to have left school." We know that there are many men and women wasting their days in the workhouse, or suffering from poverty which saddens their lives; and the reason too often is, that they had learnt no trade nor handicraft in their youth, and depended only on their strength and health. When these failed they had no knowledge or skill to fall back on, and so younger and stronger people took their work. These instances are very sad, and their sadness must teach us to consider, in choosing the life's work, whether it will last for the whole life-time.

It is not wise to choose a work which must of necessity be abandoned after the first few years are past. It may take a long time to learn a trade or a handicraft, and at first the wages may be very small, but the extra expenditure of time as well as money is, in the long run, amply repaid by the increased wages and the regular work which the artisan or skilled worker is able to command. In making, then, a choice of life's work, the first point which has to be settled is, whether or not it is a good work in itself, and secondly whether it is likely to support the worker when he is on the downward road of life, as well as when he is in the heyday of his youth and strength; and, thirdly, whether the labour is such as will become more remunerative as the worker advances in years.

The choice of an occupation having been settled on these grounds it is well, if possible, for the worker to join the body of workers engaged in the same pursuit. From association comes strength, and the friendship and acquaintance of those who are engaged in the same calling does something to keep

up the standard or ideal of excellence after which all should strive; and at the same time provides help for the weak, and gives the opportunity of aiding should sickness or sorrow be the portion of a friend.

To girls there is not so wide a choice of means of earning their livelihood as is offered to boys. Indeed, generally speaking there are but four. Women can earn money by (1) working in a factory, (2) serving in a shop, (3) sewing with the needle, or (4) by domestic service.

There is something to be said in support of each one of them; but after having listened to all the arguments in favour of each of them, I should, if I were in the responsible position of a home-maker, recommend a girl to take the last for her life's work. If a girl, on leaving school, gets a good situation, it is but another way of continuing her education. She learns there, under the eye of her mistress, those lessons in domestic economy and practical cooking which no book can teach her, and which even her own mother cannot impart so well, because she has not always all the appliances and opportunities in her small home that the richer mistress has in her larger one. And not only does the girl learn these useful lessons, but she gets good food and physical exercise, both of which help her to grow and become vigorous and strong. If the mother has a large family she often cannot, without unduly depriving the younger children, give to the elder members of the family all the food that their youth and growing strength make it necessary for them to have. When this is the case, does it not become the duty of the girl to sacrifice her own inclinations? and if it costs her an effort to leave home, she will at least have the joy of feeling that her loss is, to the rest of the family, some slight gain.

Whatever be the work which is chosen, let each girl determine that she will excel in it. How difficult it is nowadays to get a skilled and economical cook, or an accomplished parlourmaid, or a thorough housemaid. There are plenty of servants who can do things "pretty well," but few who *excel* in the work of their choice. All work to be well done must be done righteously, and have for its object not the money to be gained by the work, but the work itself.

But sometimes even after a worker has made honest efforts, there seems to be no special demand for his work, and we hear complaints of the "market being over-stocked," or "too little work for so many hands." This is sometimes the case, but when it is so, the worker must not sit down in dismayed, if enforced, indolence. The world is bigger than England, and if England does not want the work of his honest hands or steady brain, some other country may take it and make better use of it. Emigration to English-speaking countries is always open to those who will go; and at every church or at every school there is some one who will point out the way to the would-be traveller. There are fair and lovely countries, soft and balmy climates, and kindly and friendly people waiting across the sea to receive and welcome the English emigrants; and sometimes the best choice that a lad or a girl can make is to determine to give his work to the new country. There will be nothing to fear, especially if the great words at the head of this chapter have been so sown in the mind as to bring forth the fruit of pure action.

CHAPTER LVII.

HOW TO CHOOSE OUR FRIENDS.

"Those seem to take the sun out of the world who remove friendships from the pleasures of life."—CICERO.

I HAVE often been puzzled why girls choose their friends. If a girl is asked, "Why do you make a friend of Jane So-and-so?" she often answers, "I don't know;" or she says, "Oh, she makes me laugh so much," or she replies, "Only because I don't know any one else." Or if some one inquires, "Well, and how is your friend Louisa So-and-so?" I am sometimes surprised by such an answer as: "I've not seen her this long time! I'm sure I don't know where she has gone to."

Now, I don't think the girls who choose their friends for either of these reasons, or who forget them so easily, quite know what real friendship is. One author says, "Friendship should be a kind of marriage: we should take our friends for better or worse, for richer for poorer, in sickness and in health, until death us do part." But we cannot feel like this to a friend whom we choose only because she amuses us, can we?

Then another great writer gives us a warning. He says, "Never say, even to your friend, what you would be ashamed for other people to know." I will tell you a little story to explain this wise sentence to you. Once I took my maid, who was a very pretty girl, into the country with me on a visit. While she was there she met a young man, who talked to her as he would have done to any one else. Soon after this girl wrote to her friend, and told her a great deal about this young man; what *he* said and what *she*

said, how she looked, and what she meant to put on the next time she saw him. It was a foolish letter, full of vanity.

It would take too long to tell you how the letter came to be seen, but the writer was very much (and rightly so) ashamed when what she said to her friend was known by other people. It will help us to guard our tongues if we remember the wise man's warning, "Never say, even to your friend, what you would be ashamed for other people to know."

Then we sometimes hear low, selfish reasons given for choosing friends. People say, "Well, I don't know that I care much for her *herself*, but I can always go to her place, and she don't mind how often I am there." Or now and then one girl has been heard say to another, "What is the good of your going there? She does not give you anything, does she?"

Give you anything! As if the gift of friendship were not a greater gift than any sixpences or shillings! As if to love you, to *care* for you, were not worth far more than an invitation to tea! No girl can love the friend whom she has chosen, only because she can or will give her something. Such friendship will end if poverty comes and no gifts are possible; and I think it is true what Mrs. Browning says in one of her pieces of poetry—

"They never loved truly who can say I loved *once*."

But besides our girl-friends we have sometimes boy-friends. Now, there is no harm in that. It is right and natural that we should like men, as it is right and natural that they should like women. One can have as strong and good friendship with men as with women, and there is no reason why you should not have friendship with men. But here again

comes in the question of choosing friends. Girls often choose their men-friends for as silly reasons as they do their girl-friends. They make a friend of a man because he is "some one to walk out with." What a foolish reason! If there is no better one, she had far better walk out with the dog or by herself.

A lady once asked a girl why she walked out so much with a man, and she said, "Because he was a dark man." Was not that a strange reason for choosing a friend? She was then asked if she would walk out with him when he was grey, or when he got bald; and then she saw how foolishly she had been thinking, and she laughed at herself too. Many girls, also, choose their men-friends for no reason at all, merely because "he asked me to go out with him."

No! no! dear girls, all this is not *real* friendship. Such silly reasons are but poor sad beginnings to friendships, which, when the friends are men, might end in marriage, which ought to be fit to last right on through this life, even to the beautiful far-off life beyond the grave.

Perhaps, though, you will wonder as all these are silly (if not wrong), reasons for friendship, what rule we can have to know when our friendships are good and right? The answer is very simple, very easy to remember: *Let all our friends love goodness.*

I know a lady who has a great many friends, friends of all sorts, rich grand friends, poor humble friends. She is able to call lords and ladies, servant-girls and working men, her friends. They all meet in her house. Some think one way, some think another, but they all think alike about one thing, *they all love goodness.*

Now this example is one to be followed. Choose for your friends, whether they be tall or short, rich

or poor, men or women, or whatever they are, choose for your friends only those people who love goodness, or are God-fearing people.

Friends, like other good things, must be chosen wisely and thoughtfully. Let us so choose them that we may walk hand-in-hand with them through life, until we stand before the awful throne, on which is sitting the Friend of all friends; the Friend, girls, who loves far more than any earthly friend can love; the Friend who, though greater than all things, yet cares for you and me; who notices all our ways, and will not forget to watch how and why we, in the future, choose our friends.

CHAPTER LVIII.

ACCOUNT-KEEPING—THE USES OF MONEY—HOW TO SAVE IT BY CLUBS.

"*Lord, thou deliveredst unto me five talents: behold, I have gained besides them five talents more.*"—MATT. XXV. 20.

TO-DAY'S lesson is to be about money, and from it you will learn how money is best saved. I wish it were possible to teach you also how money is best spent, but that must vary so much with how much is earned, and how many there are to spend it on, that it is not advisable to lay down rules concerning it. Whatever the income is, there are, however, one or two broad principles which, if remembered, may help the home-maker to spend whatever she has wisely and well.

It is very important that she should keep an account of the money she spends, and on what she spends it. Money has a great habit of rolling away, "slipping through one's fingers," as you may hear

people complain, but the practice of keeping accounts is the best check to this bad habit. If you write down all you spend, you will often be able to see where the money has been wasted, and why the purse is empty before all the necessaries are bought.

Then in planning the laying-out of the wage or income, the home-maker must not forget that those for whom she provides are not only bodies, but that every one has other parts of their natures which want food as much as the body. The mind must be fed with books, sights of pictures, and thoughts of other people's noble lives. The soul or spirit must be fed with worship, communion with nature, and social intercourse. For these purposes money is often needed, and in calculating the expenditure, some money must be spent to get food for the mind and soul, with as much care as the money is now laid out to get food for the body. It is unwise and wicked to starve the higher even to satisfy the lower nature.

There are many ways of saving money, and each has its advantages. Some people like to save their money by the help of clubs, such as the Foresters, Hearts of Oak, and Odd Fellows, and the rule of most of these clubs is that the members pay into the club an entrance fee (varying according to the age at which they enter), and 6d., 7d., or 8d. every week; and that in the case of illness the club pays them from 2s. 6d. to £1 a week, according to the rate of their weekly payments. Besides this, the member gets the benefit of the attendance of the club doctor. The club also affords opportunities by which a man can save money to be paid to his relations on the event of his death. Sometimes this money is paid out in a lump sum, and sometimes it is given out in small sums weekly to his wife and those dependent on him. But these are matters of arrangement, and

each man can carry out what plan he likes best, when he chooses the club to which he will belong.

It is of considerable importance that every man should belong to a club, and as such matters largely depend on the influence which girls and women exert on their brothers and friends, you must try to understand the principle on which these clubs work, and their differences. In the table below it is all put out quite clearly.

If a man joins the

Foresters	Hearts of Oak	Odd Fellows
he must be between 18 and 40. Of good health and character.	*he must be* earning above 24s. a week at a healthy trade. Of good health and character.	*he must be* between 18 and 36. Of good health and character.
He must pay Entrance Fee (according to age), 5s. to 12s. 6d. Subscriptions, 7d. a week.	*He must pay* Entrance Fee, 2s. 6d. Subscription, 6½d. a week and a proportion of the Calls.	*He must pay* Entrance Fee (according to age), 5s. to £1. Subscription, 5d. to 7d. per week.
He will get, after he has been a member for 1 year, 14s. per week in sickness; £12 at death; £6 at his Wife's death.	*He will get,* after he has been a member for 3 months, 2s. 6d. to 18s. per week in sickness; 2s. to 4s. per week as superannuation; £6 to £20 at death; £1 10s. each time a child is born; £15 (up to) in case of fire.	*He will get,* after he has been a member for 1 year, 8s. to £1 per week in sickness; 2s. to 5s. per week in case of permanent illness; £8 to £20 at death; £4 to £10 at his Wife's death.
In order to join this Club *a man must apply* to the Secretary of any of the many Courts meeting in his neighbourhood.	In order to join this Club *a man must apply* to the Secretary, "Hearts of Oak," Euston Road, N.W.	In order to join this Club *a man must apply* to the Secretary of any of the Lodges in his neighbourhood.

At present none of these clubs admit women, and until lately working girls have had no opportunity of joining a club of their fellow-workers; but now there are certain trade clubs to which they can belong, but as they are not yet sufficiently formed for me to tell you their differences and rules, the best plan, perhaps, is to tell you the name and address of Mrs. Paterson, 36, Great Queen Street, Bloomsbury; for she is the lady who has nobly given up her time and energies to help women to those advantages which are to be found in combination and union.

Any girl by visiting or writing to her can learn about clubs for women, and she will besides get advice as to which one she had better join.

CHAPTER LIX.

ON SAVING MONEY BY MEANS OF THE GOVERNMENT HELP AND CO-OPERATIVE SOCIETIES.

"The habit of providence and the habit of association may be said to be two pillars of civilization."—DR. LIGHTFOOT, *Bishop of Durham.*

The Government of our country has felt *saving* to be so important a matter, that it has established agencies all over the country in order to help people to save, and now, in every town, as well as in every village, however small, there is a savings-bank attached to the post-office. Into this bank any one may put their money, beginning with one shilling, and, as soon as they have saved £1, the Government adds to the money (or "gives interest on it," as it is called) at the rate of 6d. a year to every complete £1, and so on in proportion, until the saved sum

reaches £200, without counting the money which the Government has added.

Anybody may put in as much money as they like, and when they like, so long as it does not exceed £50 in one year; but, if the savings in one year should exceed that sum, the money can be removed from the Post-Office Savings-Bank and put into Government stock. Thus it will still be in the care of the Government, who will continue to add to it (or pay interest for its use), and the saver has the advantage of being able to draw it, or part of it, out at any moment should trouble or dire necessity fall upon him or his friends.

The Government, however, knows that some people are very poor, and, besides being poor in money, there are some who are so poor in self-control that they cannot keep their pennies safe until they become shillings, and fit to go into the savings-bank. To help these folk, the Government has arranged to give out at every post-office slips of paper on which can be stuck penny postage-stamps. Thus each girl can go, and for the asking, get one of these paper slips, and with every penny she gets she can buy a postage-stamp and stick it on the slip, until the paper is full of twelve postage-stamps. She can then take the paper to the post-office, and the Government will give her a savings-bank book with which to open an account in her own name. After that, little sums and big sums can be added until she feels herself safe against those bad times of slack work, or ill health, which occur in everybody's life; until, too, she feels herself lifted, by the aid of her self-control and thriftiness, above the fear of having to accept the degradation of help from the workhouse, or of depending on those who are unwillingly obliged to give money for her support.

Besides saving for oneself, it is the duty of every one to save for those who are in any way dependent on them. In this way parents should save for their children; and when the children are grown up and able to work and earn, they, in their turn, should save for their parents. How sad it is when, at the father's death, homes are broken up, and the mother and children separated and scattered, sometimes even accepting rate food and workhouse shelter!

People are apt to say that it is "Cruel Death" which has broken up the home; but often it is not the fault of death, but the fault of people who have been careless and improvident, negligent of economy, and indifferent about the duty of saving.

In order to help people to save for those dependent on them, the Government has made a plan by which a person, after he (or she) is fourteen, and until he is sixty-five, can put a small sum into the Savings Bank, in order that at his death a sum of money may be paid to his relations, or to those friends whom he may wish to receive it.

We will suppose a girl has an old or weakly mother, for whom she is doing her best to provide. She saves what she can, but sometimes the thought occurs that, in case of her death, the money in the savings-bank will not go far, and that the old lady would be in want before she had time to recover from the pain of parting. To meet this sad possibility, the Government plan comes in, and, if the girl is under fifteen, she can, by paying 1s. 8d. a year, ensure that her mother should have £5 at any time that death took her daughter. If the girl is over fifteen, but under twenty, she would have to pay from 1s. 9d. to 1s. 11d. a year in order to get the same benefit. In the same way the sums vary according to the age of the person when she

(or he) first begins to "insure" (as this act is called) their lives. If a person is under thirty and over twenty-five, from 2s. 2d. to 2s. 5d. a year has to be paid, and so on, till the sum increases to 4s. 4d., which is the amount which has to be paid every year, if the person is fifty years old before he or she begins to insure their life.

Besides this advantage, Government offers another to those people who wish to ensure that they shall have a little something to help to support them when they reach the age, when, in all probability, they will be too infirm to earn their own bread. By this system the Government takes charge of people's money at any time of their lives that they may wish to begin to put it by; and then, when they are old, it returns to them a regular sum every year, according to certain rules which any one can get by applying to the post-office.

But besides these methods of saving money, there is another way, which is perhaps the easiest way of all, and that is by belonging to a Co-operative store. Co-operation means working together, and the motto of the co-operators is one that we shall do well to bear in mind, "Each for all and all for each." The whole of what is now a large and important movement was begun by a few working men living in Rochdale, in Yorkshire, who, in the year 1844, banded themselves together for the purpose of helping each other and their fellows. These few brave men started with unselfish aims and lofty hopes, and those who still live are not disappointed, for their members now number as many as 1,800,000. Their one little Society has now got over 1,800 brothers and sisters; they have paid into the Society as shares £31,500,000, and every year there is passed in their shops as much as £77,000,000. Has not the little seed sown honestly, grown into a big and useful tree?

Every one who wishes can belong to one of the Societies belonging to these Co-operators, and after they have fully joined, they get all the help and strength which union with so strong a body of people can give. The first thing to be done is to make quite sure that the Co-operative-store-shop at which we propose to deal is a real Co-operative society—not one of those false co-operative stores which call themselves by this name in order to get custom. This can be ascertained by asking in the shop itself for the rules and balance-sheet of the Association, or else by sending a post-card to the Co-operative Wholesale Society, Leman Street, London, E., asking for an answer to say if such and such a shop is an honest Society, worked by genuine co-operators. When this fact is learnt, the only thing to do is to buy such ordinary things as may be required, and get in return for the money paid, not only the goods bought, but also metal or paper checks on which is stated the sum spent. These checks must be carefully saved, and at the end of the quarter they must be returned to the shop. If the buyer has paid £1 and bought "a share" the first day that purchases were made, *all* the interest on *all* the money she has laid out will be handed over to her (and sometimes it amounts to as much as 3s. in every £1); but if she has not paid £1 and bought a share, not quite *all* the interest will be returned to her—that is to say, 3d. a week, at least, will be kept back and saved for her until it amounts to £1. When the 3ds. have grown into £1, then she is a shareholder, having a stake and a voice in the management of this vast society; and not only will she get the full interest on all the money that she *spends* at the shop, but she will also have a share in the libraries, social entertainments, and means of education, which

the best Co-operative Societies arrange for their members.

To most people's minds, *spending* their money and *saving* their money seem to be exactly opposite things, but the co-operative system has made it the same, for by their plan the more people spend at their store, the more checks they get, and the more money they have on which to get interest. Is not this an easy way of saving?

CHAPTER LX.

CONCLUSION.

"*More important than what we do is what we are.*"—EMERSON.

AND now, dear girls, we have come to the last chapter of our lesson-book. We have talked of many things, as many or even more than I told you we should talk of in the opening chapter. You have, I hope, learnt a little about the *Home*—its *lighting, cleaning, furnishing, warming, draining,* and *beautifying*—and how all these things are important, not only in themselves, but in their influence on the welfare and the character of the people who live in them. Then we have talked about *Food* and the work it has to do, and you have heard how food must be arranged with care and mixed with thought before it can be wholesome and pleasing. Connected with this subject we have naturally thought of *Drink,* and you have learnt, perhaps with surprise, but I hope with a good memory, how spirits and beer are poisonous, and must, sooner or later, injure those who take them. In relation to food we have spoken about

Cooking, how frying is extravagant, and stewing economical; also how to bake, boil, broil, and roast properly. And we have also given a considerable amount of time to the planning of the meals in order that they should be varied and composed of the needful elements, and that there should be times of happiness and joy.

Washing, too, has occupied our thoughts, and you have been told not only how to do it thoroughly, but also how influential a work it is on the health and well-being of people. On *Clothes* we have had much to say, and it is my hope that each one of you will be more neatly, more scientifically, and more beautifully clothed after our lessons than has hitherto been the case.

To help you to keep the *Health* which may have been given to you and your dear ones, we have made seven golden rules, and you have been told how Wholesome and Regular Food, Regular Heat, Cleanliness, Light, Exercise, Rest, and Self-Control are all necessary in order to keep well; and also how learning and practising these golden rules become a sacred duty, because it is difficult to live the higher life with a weakened body.

About *Precautions* against fever and those sad diseases which bring sorrow into our midst we have also talked; as well as all the tender thought and care that has to be taken to protect the wondrous body of the *Baby*, so that it may grow and thrive and be fit to be a true servant in the large kingdom of the Father.

How to *amuse* ourselves and others so that we grow in gladness and goodness, and harm no one else by our pleasure; how to *choose the school* at which those for whom we are responsible should learn the usual three Rs, as well as the no less important, if rarer,

three Rs—Regularity, Reasonableness, and Reverence; how to *punish* so as to make the wrong-doer hate sin and long with an up-lifting longing to be good; all this we have talked of, I hope not without learning something.

We have also not forgotten to discuss what to think of when we have to face the question of the *Life's Work;* how to choose it, so that the larger world of others, as well as the little world of ourselves, should be the wiser and richer for our work; and we have also had a talk on *Friendship,* and what should be, and indeed must be, the basis of all true and abiding friendship.

Money, too, its spending and saving, by means of Clubs, Savings-Banks, and Co-operative societies has claimed some of our attention, and now we find ourselves at the end of our task, and about to bid good-bye each to the other. Perhaps you will be glad to bid good-bye to me, and get rid of this little book, but I am sorry to bid good-bye to you girls, about whom I have thought long and lovingly while this little book has been growing. All the time I have been writing it, I have had two pictures in my mind—one picture of a good friend of mine, a working woman, who, on her husband's low and sometimes irregular wages, makes and keeps a home; she is in very truth my ideal home-maker; and another picture of the many sad houses I know, where ignorance, indolence, and indifference have made a home impossible.

With these two pictures ever before me, I have spoken—hoping prayerfully that you girls may so learn and understand these lessons, and so take them into your hearts, that the households under your care may become real homes, and you yourselves true home-makers.

To be a home-maker is not an easy task. It requires much patience, bravery, foresight, and endurance. It calls for some knowledge, thought, and skill. It demands great hopefulness, tenderness, and above all unselfishness; but, though it is so difficult, it is none the less a grand privilege—a privilege which none dare think slightingly of, for is not the position of home-maker one which, nobly performed, will bring to every good woman the promise spoken of in the Bible, that "her children will arise and call her blessed?"

THE END.

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