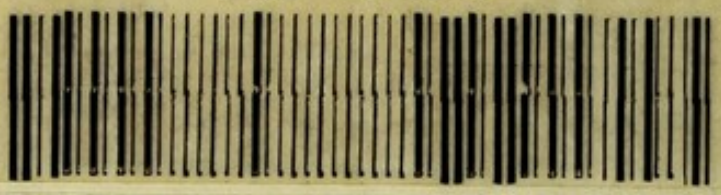
Practical housewifery / by C.F. Picton-Gadsden.



London Borough of Camden

Swiss Cottage Library
88 Avenue Road
LONDON
NW3 3HA

reserve stock.

Tel: 01-278 4444
Extensions:
Book Renewals 3021
Lending Library 3012

This book is due for return on or before the date stamped below. The period of loan can be extended if the book is not reserved (please ask for details of renewal facilities).

Fines are charged on overdue books

Lending Library hours: Mon-Fri 9.30-8 Sat 9.30-5

23. 08. 82			

PRACTICAL HOUSEWIFERY

BY

C. F. PICTON-GADSDEN

(DOMESTIC ECONOMY TEACHER, LONDON COUNTY COUNCIL SCHOOLS)

LONDON

SWAN SONNENSCHEIN & Co., LIM.

25 High Street, Bloomsbury, W.C.

1905

To my
MOTHER and my MOTHER-IN-LAW,
the two best housewives that I have ever met,
I dedicate this book.

C. F. P. G.

PREFACE

In the following pages I have not touched upon the subject of cookery, as there are so many good works published on that subject, ranging in price from one penny to many pounds. Although I have left it out, I would wish my readers to understand that I consider it the duty of every housewife to know something of the art and science of cookery. In my book I have endeavoured as far as possible to follow the lines laid down by the syllabus of the Education Department, for those students who are desirous of training for the "Housewifery Diploma," and I hope that the hints given will be of use, not only to the students training for Domestic Economy Diplomas, but also to any housewife who may care to open its pages.

C. F. PICTON-GADSDEN.

CONTENTS

Practical Housewifery

CHAPTER I

The Choice of a House—Model dwellings—Drainage—Ventilation—The water supply—Cleaning cisterns—Locks and fittings—Cupboard room.

In choosing a house there are many points that must be considered, although no hard and fast rules can be laid down on the subject. The neighbourhood, the size of the house and the rent and taxes, must in a great measure depend on the employment of the father or other bread-winners of the family, also the number in family, as where there are children the question of schools must arise, and the school where they attend is a great matter for consideration. If possible the rent should not exceed an eighth of the total income, but this is quite impossible in London and our other great cities.

Flats and Model Dwellings are in some ways very convenient, and when choosing one, try and get one on the top story, as despite the number of stairs to reach the rooms, once in them, you get the purer air and are away

from the noise and racket of the lower floors. Never be persuaded to take a basement flat, as, except perhaps in one or two cases, they are most certainly unhealthy, as they cannot get enough air and light.

Before taking any house be quite sure that the drains are in perfect order. Two practical tests that there is something wrong with the drains are, first if any rats are seen in the house, and secondly if there are any bad smells arising from them. If there should be any danger that the drains are not in proper order, the landlord should apply the smoke test.

By drainage is meant the actual removal of waste water and refuse from the house, and in large communities the water carriage system, by means of pipes is the best.

To every house there should be four chief pipes. The sink pipe, the soil pipe, leading from the water closet into the house drain, the rain water pipe, and the house drain, which leads directly into the main sewer. All other pipes that may be noticed about the house belong to one or other of these sets of pipes.

The sink pipe, as its name denotes, carries away all the waste water from the sink. The sink itself should be made of glazed earthenware, as that is non-porous, and the best glaze is that which is known as the salt glaze. If not of glazed earthenware let the sink be made of slate, which however has one disadvantage, in that it chips so easily. Stone sinks are sometimes found in old houses, but they are not good as stone is porous. The trap in the sink

should be fixed, and if the sink be made of glazed earthenware the trap will be made at the pottery works. The sink should be placed against an outside wall, and the pipe leading from it should pass through the wall, and open over a gully in the fresh air. The sink pipe should be made of drawn lead, having no joints, and it should have a syphon bend in it with a screw at the bottom of the bend, so that should a block by some mischance occur in pipe, the pipe can be cleaned by undoing the screw. The water contained in the syphon bend will prevent any bad smells or bad gases entering the house. To keep the sink pipe clean twice a day pour a bucket full of boiling water and soda down it.

The soil or water closet pipe must run directly into the house drain. This pipe should be fitted with a ventilating shaft which ought to be carried above the roof of the house on the outside. This ventilating shaft should have a wire netting fixed over the top of it to prevent anything getting into it and so stopping it up. The soil pipe must also be fitted with syphon traps to prevent any bad gases entering the house from the house drain. To clean the soil pipe, pour a good pailful of cold salt and water down it, never pour anything hot down it, as hot water causes bad smells to arise from the drain.

The rain water pipe is outside the house, and its use is to carry the rain water from the roof and gutters. Like the sink pipe, it should open over a gully; it should not be placed near to any of the windows; and to be kept clean,

all leaves or anything else that may collect in the gutters should be cleared away, otherwise there will be a stoppage in the flow of water, and injury to the walls of the house will probably be the result.

The house drain is the drain which connects all the other pipes with the sewer. It should be fitted with a man-hole or inspection chamber, so that if anything goes wrong with the drain it can be seen to. The house drain ought not to run underneath the house, it should be well trapped, and there should be a ventilated intercepting trap between the house drain and the sewer. The householder has to deal with drainage,—sewerage concerns the local authorities.

After being assured that the drainage of the house is perfect, the housewife should satisfy herself as to the water supply, this in towns may be constant or intermittent, in the country the water as a rule has to be stored in cisterns, if not drawn from a well or spring in the vicinity of the house. The constant supply is the most advantageous, as no cistern is necessary, the house is never without water, and the pipes are never empty. When the water supply is intermittent, the pipes are sometimes empty, and then there is the danger of bad gases arising in them, which gases would be a cause of great impurity in the water, when it re-entered the pipes. It is always a good plan if a house has been standing empty for any length of time, to turn on all the water taps so that the rush of water may flush the drains and wash out any stale water that may remain in the traps, and replace it with clean fresh water.

In a hard frost the water taps should be allowed to drip, as this prevents the pipes freezing. If the frost be long continued and very severe all outside pipes should be covered with matting or felt. Never be persuaded to pour boiling water down the pipes during a frost or they will be almost sure to burst.

Cisterns for the storage of water are necessary when the water supply is intermittent, or in the country where one is partially dependent on the rain for one's supply of water. The best cisterns are those made of galvanized iron, as that does not rust and nothing can be dissolved out of it by the water. Galvanised iron, is iron coated with zinc. Lead should never be used for cisterns as it is very susceptible to the action of the water, and might cause lead poisoning. Slate cisterns, provided that the slates are joined with cement, are considered very nearly as good as galvanised iron ones. Slate is apt to chip which is a disadvantage. Cisterns built of brick and then cemented are found in places where water has to be stored in large quantities. Wooden cisterns are not good, as the wood absorbs the water, and if not very carefully looked after, a green slime will come on the wood which will contaminate the water.

A cistern should be so placed that it can be easily reached, it should have a well fitting lid, especially if it be exposed to the air. If the lid be removable it should be cleaned twice a year at least. If the lid be a fixture the landlord's aid will be required, and the cistern ought to be

cleaned once in nine months. To clean a cistern turn on all taps until nearly all the water has run out. With a clean new scrubbing brush and a clean new house flannel wash down the cistern. Rinse it out well and let off all the water. Turn on the water from the main, leaving all the taps turned on to allow the water to pour through the cistern before refilling it.

There should be a separate cistern to supply the water closet with water, otherwise bad gases from the soil pipe might enter the cistern and contaminate the water, making it unfit to be used for household purposes.

The next point to consider about the house is the ventilation. Before signing any lease or agreement it is as well to see that all the bedrooms as well as the sitting-rooms have fire-places, as the chimney plays an important part in the proper ventilation of a room. The windows should all be made to open, and they should also shut securely—all the fastenings being in good order; and the house to be really healthy should be so placed that a current of fresh air can pass right through it. All locks and fittings ought to be seen to, as if they are not put into thorough working order before a tenant enters the house it is often very difficult to get the landlord to attend to them afterwards.

Cupboard room in a house should always be taken into consideration. The modern builder, it is true, rarely thinks that the housewife wants to put away anything, but in most houses there are recesses that can be turned into cupboards. Kitchen cupboards should have plently of nails

for hanging things on, and many shelves in them. The store cupboard should be cool and dry and it too should be fitted with shelves and nails or hooks. The larder should be on an outside wall, and its windows should be made of perforated zinc to admit a draught of fresh air through it. It should not be placed anywhere near a lavatory. The china cupboard should have small hooks at the edge of the shelves on which to hang the cups and jugs; the shelves should have a beading to prevent the plates slipping down. The scullery cupboard is usually placed beneath the drain-board that slopes to the sink. It should contain wooden boxes enamelled in some dark colour, and labelled with their contents. Thus, the box labelled "boots" would contain everything needed for cleaning boots. This cupboard should have a shelf set aside for holding the cleaning stores, and it should be scrubbed out once a week. The brush cupboard is usually found underneath the slope of the stairs, and in it would be kept all the brushes needed for cleaning and sweeping out the rooms.

CHAPTER II

Furnishing the House—General hints for the Kitchen—Sitting-room—Passage or Hall—Bedroom—Beds and Bedding—Bed-Sitting-room—Household Utensils.

It must be borne in mind that the hints contained in this chapter do not strictly apply to those wealthy folk who can send their cheque to any large furnishing firm, saying send me the best of everything and furnish my house for me, but it is to those who on small means wish to make their homes not only comfortable but beautiful, and to make the most of the money at their command, that I trust I may be of some use.

When furnishing, pay ready money, incur no debts, let nothing persuade you to purchase anything without paying for it on the spot, or the debt will grow until it becomes "an old man of the sea" to you. Buy good furniture, do with fewer things but have everything good, it will repay you in the end. Good second-hand furniture, such as wardrobes, chests of drawers and tables, may often be bought for a comparatively small sum, but bedding and upholstered

furniture should always be new, as vermin and infection may be carried in them.

The furniture chosen should be in accordance with the size of the house. Small rooms should have carpets and wall papers with small patterns, or they should be self-coloured. Let all colours harmonize or contrast, and as to ornaments have few and good ones rather than many and poor. For pictures, I would teach rather to have one or two really good prints or reproductions than the cheap and gaudy imitations one so often sees adorning the walls of villadom.

The Kitchen. If a floor covering be needed, the best to use would be linoleum, and it should not be too cheap a one. The best linoleums are those in which the pattern is inlaid, and they cost from 3/- per square yard. Printed linoleums can be bought from 1/6 per square yard. If the kitchen should have a brick or stone floor there ought to be a nice rug to lay down in front of the fire in the evenings after the work is done, and the kitchen cleaned up. The kitchen chairs should be the wooden Windsor chairs which cost from 3/- to 5/- each. The table should have a deal top, and there should be a drawer. The top made in one piece is more durable than having a flap with a leg to draw out underneath it. A 4ft. table with one drawer costs from 12/6 to 13/6, with two drawers the price is 19/6. In nearly all kitchens a dresser is found which is a fixture in the house, it should be fitted with shelves, drawers and cupboards beneath the drawers. Do not have curtains or hangings in

a kitchen, as they are not required and are only dust collectors.

The Sittingroom. Floor covering. For hard wear a five cord Brussels carpet is the best make to have, and it costs from 3/9 to 4/- per yard. Axminster carpets are also good and cost from 3/11 per yard. Wilton pile looks very nice, but it repuires a great deal of care to keep it in good condition. A carpet cut to fit the room exactly is not economical, squares are best in rooms that are much used, as the floor can be stained round them which makes it easier to clean the sides and corners of the room, besides which a square can be turned so that the whole gets evenly worn. If money be a consideration, the best chairs to have are the pretty rush bottomed ones that can be seen at any of the large furnishing shops. There should be at least one upholstered easy chair, if not more; and when choosing upholstered furniture be sure that the wood is well seasoned. Tables are optional, the large parlour table of fifty or sixty years ago on which were arranged the photograph albums of the family and the children's school prizes are not to be seen now-a-days, and in their place we have several little tables which may be of rush work to match the chairs, or inlaid lacquer work, or in fact made of anything the buyer may fancy.

The Passage or Hall. The floor of the entrance passage or hall in a house is sometimes made of tiles, it will then need no covering. If the floor be made of wood, it is best to have it covered with a really good linoleum, as there is

very hard wear on the floor of a passage. Do not fill up the entrance passage with a lot of furniture, as that would be difficult to move for cleaning and will make the whole house feel stuffy. Something in the way of a hat rack and umbrella stand combined, a row of pegs to hang coats on, and a chair, being all that is necessary in a small house. The stairs are as a rule carpeted, but where there are many children it is as well to have a good oilcloth placed over the carpet to protect it. In some houses the stairs are covered with felt or linoleum.

The Bedroom. The best floor covering for a bedroom is a cork carpet as it is so very warm, but it is rather expensive. A rug could be placed by the bed and another by the dressing table. If, however, the room is to be carpeted, a Kidderminster is the best to have as it washes well, and only costs from 1/9 to 3/11 per yard. When furnishing a bedroom it is often more economical to get the articles of furniture separately, and the kind and size of the furniture must depend greatly on the size of the room. For a small room the combined chest of drawers and dressing table is very useful. Marble topped washstands are the nicest to have, and the prices can be obtained from any furnishing firm.

Beds and Bedding. Iron bedsteads are by far the most healthy and the most easily cleaned. A single sized iron cot measuring 6ft. by 3ft. 6in. can be bought for 16/9, double bedsteads of the same pattern from 21/- This price includes the chain mattress. Hair matresses are the most

healthy and therefore the best to have. They are expensive, one for a single bed would cost at least 25/-, in fact the price may be said to vary from 25/- to £5. 5. 0. One about £2. 10. 0. should be a very good one. A straw palliasse for putting under a hair mattress would cost from 3/- to 9/- A spring mattress (box spring) costs from 21/-, these quickly get out of order unless they are good, so when buying one make sure that it is a good one. Mattresses are also made of wool and flock which is cotton waste, these will cost from 7/6. Pillows are stuffed with feathers, down, horsehair, and flock. Feathers are sold by the pound, and cost from 9d to 1/-, it is not an economy to buy cheap feathers as they must be well cured. Down costs 4/6 a pound, and makes delightful pillows. The hair pillows are hard, extremely cool and durable, they can be bought anywhere where barrack room furniture is sold, and cost from 4/6 a pillow.

Bolsters are generally made of hair, and a good one can be bought for 9/-.

Sheets. The housewife if she be at all economical will make her own sheets. Bleached cotton sheeting costs from 1/3 a yard, the bleached linen sheeting costs from 2/3 a yard. For very strong sheets the Bolton twilled sheeting is much used.

Blankets are bought by the pair, the price being according to the size and weight. In choosing blankets one must be greatly guided by the touch. Good blankets will have a soft, full, silky feel, and the more closely the fibres intertwine

the firmer and warmer the blanket. A fibre when pulled should shew a considerable length, short fibres denote a poor quality of blanket, it being woven from short, inferior wool.

A bed-sittingroom should always have a folding bedstead. Unmake the bed, fold up the bedstead, and place it against the wall, and have a curtain to hang over it. These folding bedsteads costs from 25/-, which includes the mattress. A washstand which closes up to look like a table is also a useful item of furniture in a bed-sitting-room.

Household Utensils. In buying household utensils, make out a list of what is wanted, and settle how much money is to be spent on them. For kitchen utensils it is a mistake to buy very cheap ones, saucepans especially, and avoid cheap enamelled saucepans, as the enamel so very soon chips off and the pan is spoilt. For knives and forks try and get good ones, those with black horn handles are suitable for kitchen use and cost from 5/6 a dozen. For dinner knives with white bone handles, the cheapest, to be at all good, would be about 11/6 a dozen. The steel and the handles determine the price of knives, and when buying cutlery buy it from a well known firm. Nickel plated forks can be bought for 10/- a dozen; white metal, which really wears better than the nickel plated, cost from 7/- a dozen.

Kitchen fenders cost from 7/6, sittingroom fenders from 10/6 to almost any price, small bedroom fenders can be bought for 5/6. The fire-irons sold in sets can be bought from 5/6. China and glass can be bought at prices to suit

all purses. Curtains also can be bought practically at all prices. Pryce, Jones, Ltd., The Royal Welsh Warehouse, Newton, North Wales, sells very good plushette for curtains 52 inches wide and the price is from 1/6¾. Jute tapestries are also very cheap costing 1/4¾ a yard the material being 52 inches wide.

In a small house, the curtains and hangings should be few, as they take up the air space and collect dust.

CHAPTER III

Thrift—Savings Banks—Apportioning Incomes—Planning Meals—Marketing—Laying the Table.

THE word thrift is derived from an old Saxon word signifying good husbandry, and it is now applied to the careful management of all affairs touching on the household and income. Being careful, in no way means stinginess or closeness, but economy and turning everything to the best account. Thus the housewife will be thrifty in her household stores. The soap will be cut into blocks and dried before using, as then it will last longer and go further than if it were used quite fresh. Blacklead should be soaked for the same reason. Groceries before it is wanted for use should be kept in covered jars not in paper bags. Time can also be saved by rising early and arranging the work to be done, with method. Shew thrift in clothing by buying the best that can be afforded. Have suitable clothing, keep it in repair, and where there are children, cut down the larger garments when worn, taking the best pieces to make smaller ones for the children. Thrift can

be shown in food by using up the scraps, fuel and lights will be used with care and economy, and the furniture will be kept clean and in repair. The thrifty housewife looks forward, and it will be her great effort to put by money towards a provision, however small, for old age, sickness or bereavement.

As aids to the careful management of money, keep strict accounts. Plan out the sum to be spent and do not exceed the amount planned for each thing. Avoid debt and always pay ready money. Do not lend money, and learn the value of money by finding out the proper prices for different articles.

For those who are only able to put by or save but small sums of money, the best place to deposit them in, is the Post Office Savings Bank. Among its advantages are the following, it is absolutely safe, sums may be deposited in it from 1d to £50 in the year, the money can be invested or withdrawn at any Post Office in the United Kingdom. No outlay is required, and sums up to £10, on an emergency, can be withdrawn by telegram. The disadvantages are the very small rate of interest. No one may deposit more than £50 in one year, and no one may have more than £200 to his account.

The Post Office also gives annuities, the rules for which are to be found in all the Post Office Savings Bank books or in the postal guide. The Post Office insurance does not allow a child between the ages of eight to fourteen to be insured for more than £5.

Other banks give a rate of interest on deposit accounts of

three per cent.; three to six months' notice being required before the money is withdrawn. The Birkbeck Bank is considered one of the safest. (? ?)

Building Societies, of which "The Temperance Permanent" is looked upon as one of the best, take small sums of money and pay from three and a half to four per cent. Besides these Societies there are numerous benefit clubs, notably the Rechabites, the Buffaloes, the Foresters, and the Hearts of Oak, these are for men, who pay on an average 10/- a quarter, and if ill will receive from 12/- to 15/- a week for six months from the club, and if death should ensue the widow of the dead man or his nearest relative will receive from £10 to £15.

One cannot help speaking of the Freemasons, when discussing the questions of clubs. This great community can hardly be called a benefit club, although their generosity towards their poorer brethren, and their care of the aged, widows and orphans are world famous.

A great aid to thrift is to apportion out the income, whether it be paid weekly, monthly or quarterly. For labourers earning weekly wages, it is a good plan to divide the money into twentieths, allowing three twentieths for rent, in large towns this would be impossible out of a small wage, ten twentieths for food, light and fuel, three twentieths for clothing, one twentieth for cleaning and repairs, and for the club and savings bank two twentieths. However small the income, plan it out according to the prices that are common in the neighbourhood, not forgetting that the

club and savings bank are as essential as food and clothing. Once the money is planned out, do not exceed the sum put by for each item, it will be very difficult at first, but habits quickly grow, and after a short time it will become almost easy.

When planning out the meals for a family one must consider the income, the number in family, the ages of the different members of the family, their occupation, the season of the year, and the sex.

Roughly speaking, in the wage-earning classes half the income is spent on food. The ages of the family are of importance when planning meals, as the food must be regulated to a certain extent as to whether the family consists of adults, children and adults, or if there be any very old people to be catered for, as the very young and the very old require different kinds of food to the hale and hearty adult. Occupation must be considered as men working out of doors can digest food that men whose work lies indoors could not. As to sex, women are supposed to require less food than men, but should a woman be of the same weight and do the same amount of work that the man does she would want the same amount of food.

As regards the season of the year, in winter time give plenty of fatty foods, such as oatmeal porridge for breakfast, pea soup, stews and other heat giving dishes for dinner. In the summer time have light meals, with milk puddings and plenty of fresh fruit and salads.

Marketing. When choosing meat, see that the flesh is

firm, and free from all smell. The lean of beef and mutton when raw, should be red, the former being of a richer hue than the latter. The fat should be quite firm, beef fat having a creamy tinge, whilst mutton fat is hard and white. Pork, when choosing pork see that the lean is of a delicate pink, and the fat quite white, if it looks yellow or spotty do not buy it, as the meat has come from a deceased animal. The lean of veal is also of a pinkish colour. Meat should not be kept when it is raw lying on a dish, therefore if there should not be a good larder in which to hang it, it is better to buy it only as it is actually wanted. Fish must always be quite fresh, otherwise it is most dangerous to eat it. To test the freshness of fish, place the finger on it, if no dent be made on the fish, it is quite fresh, if it should be at all flabby, the fish is stale, do not buy it. It must be remembered that what fish is in season, that fish will be the cheapest and the most wholesome.

Where there is no garden, vegetables should be bought daily. Greens can be tested as to their freshness, by pressing the leaves in the hands, if they crackle the greens are fresh. Root vegetables should be firm to the touch and should be free from spade cuts. Potatoes should be chosen with few eyes in them, and they too should be firm to the touch and should not have a shrivelled appearance. Vegetables are always best and cheapest when they are in season. Forced fruit and vegetables as a rule are very expensive and are more or less tasteless.

Dairy produce ought to be bought in small quantities, to ensure it being quite fresh.

Groceries and household stores should always be got in sufficient quantities to last at least a week, it is a wasteful and very bad habit to be running out constantly to buy half a pound of this, then a quarter of a pound of that, and two ounces of something else. Every week make out a list of what is wanted, the quantities of the different items on the list must naturally depend in a great measure on the number and tastes of the family.

Laying the table for meals. Before setting the table for any meal, ascertain what is to be served, and the number who will partake of it. See that everything is clean and bright, the salt cellars should be filled and the mustard freshly made. Let the table linen be the best that can be afforded, and always try to have some flowers on the table. Well served meals are calculated to add greatly to the cultivation of refinement and good manners.

For breakfast, cover the table with a clean white cloth, having the middle crease of the cloth down the centre of the table. Place the cups and saucers in a row at one end of the table, with the handles pointing to the pourer out. Beyond them in a second row place the milk jug, sugar basin, hot water jug, and slop basin. On the right hand, on a stand, put the coffee and tea pots. Place plates for each person round the table, also knives and forks and spoons if they are wanted, arrange the plates and dishes on the table to give it a trim and orderly look.

For the dinner table, spread out a clean white cloth over the table, arrange the flower vases, then put the salt cellars at the corners with their salt spoons. Next lay the silver round the table, table fork, and dessert spoon and fork for each person, and tablespoons should be placed at the corners either side of each salt cellar. A large and a small knife must be placed at the right hand of each place, the carving knife and fork and steel being put at the head of the table. Put bright clean glasses to the right of the knives laid for each person, set the chairs round the table. Put the serviettes if folded in the space between the knives and forks, serviettes in rings are placed at the left hand. If bread be used, cut pieces one inch thick and three inches square, place it inside a folded serviette, and by the side of one in a ring.

When waiting at table, hand all dishes to the left hand. Remove all covers and serve drinks to the right hand.

CHAPTER IV

The Chief Items in the Day's Work—The Daily Tidying of the Kitchen—The Weekly turning out of the Bedroom—Sitting-room—Stairs and passage—Front Door and Steps.

BE the house a palace or a cottage, the chief items of the day's work will practically be the same, although in the former the work will be divided between many pairs of hands, and in the latter, probably the housewife will have to do it entirely by herself. First then, before leaving the bedroom in the morning, open the window top and bottom, strip the beds and carry away the slops. Next draw up the down-stairs blinds and open the windows, unlock and open the front door, after which light the kitchen fire, and put the kettle on. Tidy the kitchen, sweep the passage and doorstep, clean the boots; when they are done wash the hands and prepare the breakfast. After breakfast clear away and wash up the breakfast things, make the beds, and tidy the bedrooms, then prepare the dinner, and whilst that is cooking do any dusting that may be required or any of the hundred and one odds and ends that always want doing

about a house. After dinner wash and put away everything used, tidy the kitchen and after that is done, the housewife should change her dress and get tea ready. After tea, the tea things should be washed and put away, when the housewife can devote herself to needlework or anything else she likes to do. Supper, as a rule, does not need much preparing, but the plates and anything else used should be washed up and put away. On washing day, the housewife would have to get up very early, and for dinner prepare dishes that are only a little trouble to cook. The above sounds a terrible day's work, but it is astonishing how much can be done and how quickly it can be done if only a little forethought and method be used.

When the dinner things are washed up and put away the kitchen should be tidied. First place the chairs and other moveable furniture into the middle of the room, if able to put them outside into a passage do so, cover them with a dust sheet and cover the dresser with one too. Open the window and close the door, sweep the dust towards the hearth. Lay down a Hessian cloth in front of the fire-place, and on it put all that is needed for cleaning the stove. Remove the cinders to be sifted outside, brush and polish up the stove, and clean up the hearth, also the woodwork round it. Take away the dust sheets after putting away the things needed for cleaning the stove. If the table requires it, scrub it, then dust and arrange everything in its place, and the kitchen is bright and tidy for the evening.

All rooms should be given a thorough turn out once a week, and then with the daily tidying and cleaning the house will be kept as bright and clean as the proverbial new pin. When turning out a bedroom, well ventilate the room. Before making the bed, brush the mattress well. not forgetting to brush beneath the little leather buttons, as if the dust collects there it will breed vermin. It is a good plan occasionally to rub a little turpentine on and below the buttons, as this will effectually prevent any vermin. After doing the mattress dust the bedstead and make the bed. Dust any ornaments and any small light furniture, and place them on the bed, cover them over with a dust sheet. Move any furniture that it is possible to move outside the room altogether, and put the rest close up to the bed, and cover it over with a dust sheet. Pin up any curtains, remove the rugs, the fender and fire irons and also the toilet china. Open the windows top and bottom and close the door. Cover the top of a broom with a duster and sweep down the walls, then sweep the floor from the door to the fireplace. Burn the dust that is swept up. Clean the grate and hearth next, if it wants it, clean the window, after which clean the washstand, looking glass, and any paint that may require it. If the floor needs it scrub it, and whilst it is drying the strips of carpet or rugs can be well shaken in the open air. The china should also be washed, the fender and the fire irons cleaned. Then dust the room and replace everything in it, that was taken out of its place.

When scrubbing floors, always scrub with the grain of the wood, use very little soap, rinse well, and rub hard afterwards with a dry rubber. Half a pound of soft soap, half a pound of whiting, and half a pound of silver sand boiled together in a quart of water will make the boards beautifully white, but it should not be used very often. Never scrub a bedroom floor in damp weather, avoid a sloppy mess, use carbolic soap or carbolic acid in the water and rub as dry as possible with a dry cloth.

The Weekly Turning out of a Sitting-room. Shake the rugs, mats, and table covers outside, fold them up and put them out of the way on a table. Dust all the ornaments, and either take them out of the room or pack them on the top of the table. Cover with a dust sheet and remove all the light furniture out into the passage or landing, or if that be not possible put them together and cover them up with a dust sheet. Cover up the piano and any pictures with gilt frames. Open the windows top and bottom, take away the fender and fire irons to the scullery for cleaning. Lay down the hearth cloth which should be of coarse Hessian, and clean the grate. When the grate is cleaned, and if it be winter time, the fire laid, then sprinkle the carpet with some washed and drained tea leaves. They must not be too wet, and if they were not washed the tannin in them would stain a light coloured carpet. The tea leaves are used to prevent the dust rising in clouds. In America pieces of torn paper are often used, and in Australia they sometimes use freshly cut grass for the same purpose.

Damp salt is also sometimes used. Use a carpet broom, and sweep the way of the pile of the carpet, and a carpeted room is usually swept from the fireplace to the door. Sweep carefully not to raise a great dust and burn all the sweepings, do not put them into the dust bin. After sweeping the room, in the scullery, clean the fender and fire irons, this will give the dust time to settle. After they are cleaned, clean the windows if they require it, and anyway they should be carefully dusted all round the woodwork, and the glass polished with soft paper or a chamois leather kept for that purpose. Dust everything on the walls, not forgetting the tops of the pictures, then dust all the furniture and replace it in the room and re-arrange all the ornaments, putting everything in its place. When dusting, use two dusters, using one to hold the article dusted, and the other to dust with. Always begin to dust anything at the top, gather the duster loosely in the hand and do not have any ends flapping about, shake the duster when it wants it out of the window.

The cleaning of the stairs, hall or passage, the front door and the steps. Open all the windows on the staircase, and shut all the doors of the rooms opening on to it, but have the front door open. Take away the stair rods so that the carpet may be swept beneath them. Next take the bannister brush and dustpan and carefully sweep from the top to the bottom of the stairs, not forgetting to sweep the sides and between the rails of the bannisters. If the paint be dirty wash it with lukewarm soapy water, wringing

the flannel almost dry. If the sides of the stairs be stained, after washing and drying them, polish them with the following polish. One ounce of brown wax dissolved in a gill of turpentine. The stair rods should be cleaned and polished before they are replaced, the bannisters must be dusted, also the window sills and frames.

When cleaning a passage or hall, remove all the mats and rugs and beat them outside. If there be a grass plot available turn them right side down on it, and beat them with a carpet beater, pick off any fluff that may be sticking to them and hang them over a line until they have to be replaced. If there be no grass plot but only a yard hang the mats over a line to beat the dust out of them. After taking away the mats, take all the moveable things off the walls and put them into one of the rooms; pull the heavy furniture out from the wall and cover with a dust sheet. Sweep round carefully, do not leave out the corners, and burn all the dust swept up. Next do the floor, which may be of tiles, if so wash them with a flannel wrung out in soapy water, and then dry it well. Once a month tiles should be rubbed over with a rag dipped in linseed oil. If the floor be covered with linoleum, which is a very general covering for halls and passages, wash it with a flannel wrung out in soapy water. Rinse the flannel, soap it again, and again rub the linoleum with it. Rinse the flannel again and rub the linoleum with it until almost dry, a small piece should be done at a time or the result will not be good. After washing and drying it, linoleum may

be polished with bees wax and turpentine, or with equal quantities of linseed oil and vinegar, or with a flannel wrung out in milk or with paraffin. Should bees wax and turpentine cake, rub the spot with a little paraffin and the wax will come away at once. The colour of linoleum can be greatly restored by rubbing it well with pure vaseline. After doing the floor, clean the fan light over the door, and the windows if they require it. Replace the furniture after dusting it, and fetch and replace the mats.

The cleaning of the front door should be done in the early morning. With a soft brush sweep the door down, dust the fan lights and all crevices, especially where the door fits into the frame; clean the knocker by rubbing it over with a paraffin rag. If it should be a brass one use the Globe metal polish to clean it with, also clean the bell handle and letter box. Wash the varnish or paint with a flannel wrung out in warm soapy water, being careful to follow the grain. Use an old flannel that will not leave any fluff behind it, and dry well, or the dust will blow up against the door and stick to it, be careful not to leave any crevice undone.

To clean the front steps, rub the railings with a paraffin rag, then scrub the steps with a hard brush to get out the hearthstone, and again do not forget the sides and crevices, wipe the steps and rub each one with hearthstone. Rub with the flannel first round and round, and then using the same flannel up and down in straight, even lines. Should there be any grease spots on the steps, wash them with a

strong solution of hot water and soda, or make a paste of Fuller's earth, put it on in the evening and let it remain all night. Should there be a ring for a coal cellar anywhere near the front steps it should be blackleaded and polished.

CHAPTER V

Fire Grates—Laying the Fire—The Mixing of Blacklead—Care of Fenders and Fire-irons—The Cleaning of Flues.

THE best modern grate is what is termed the slow combustion grate, and one of its first principles is, that it should be constructed of a material which will not permit the transmission of gases through the wall, this is gained by fire clay linings. The slow combustion stove is set low down, and is closed at the bottom with a piece of iron fitted to the exact size of the grate. All grates should be wider in the front than at the back, and the sides should be of fire brick, the back also being of the same substance, as it throws out the heat, metal will absorb it. The throat of the chimney should be narrow, wide chimneys are wasteful of fuel and heat. It is not wise to have fireplaces on the outside walls, as then so much of the heat is wasted.

The heat from an open grate is by radiation, that is the rays of heat strike the different objects in a room, and is reflected back by them. When the current of heat is passed through pipes it is then described as convection; conduction means heat passing from particle to particle.

Open grates are the most healthy, being an aid to ventilation, as a constant current of cold air is being drawn to the fire and so up the chimney. The open grate is also very cheerful.

The disadvantages of an open grate are, that it is extravagant, as much of the heat passes up the chimney, it is not so clean as a closed stove, and the heat from it is not at all equal, by that is meant a person sitting in front of a fire will often feel his back cold, and not unfrequently his feet will be cold also.

Closed stoves are used largely in America and on the continent, in England they are chiefly found in the kitchen. They are very clean, and very economical as anything can be burnt in them, they have one great disadvantage and that is they make the air very dry.

The fire. Fire is a combination of oxygen and carbon, oxygen supports combustion and the carbon burns, the two combined generate heat and light, therefore the essentials for a good fire are plenty of oxygen and carbon. A simple experiment to shew a class of children the need of oxygen to make a fire burn, is to take a piece of candle, light it and put a lamp glass over it, it will burn but dimly, lift the lamp glass so that a current of air can pass up it and the candle will burn brightly.

When preparing an open grate for laying and lighting a fire, be sure that the register is open—in a closed stove pull out the damper. Lay down the hearthcloth, a piece of Hessian is the best to use, and on it put everything needed

for doing the grate. Take all the cinders out of the grate and remove all dust and ashes, brush and dust out the fire place. Blacklead the sides, register and bars of the grate, blacklead is a pure form of carbon, so will aid in the lighting of the fire.

When laying the fire, replace some of the cinders, and on them rest the paper which is needed to light the fire. The cinders are porous and therefore contain air, the paper should be crumpled up so that the air may get into it and do not be sparing in its use. If the grate be a wide one, pile some cinders at the sides. Place the sticks on the top of the paper, sloping them upwards towards the back of the stove, and place them criss-cross like a child builds a brick castle, to allow a free passage of air between them. Place the coal on the sticks very carefully, using small pieces about the size of a hen's egg, as then the air can get round them easily. When lighting the fire apply the match first to the centre and then to the sides. A fire will light the more easily if the air in the chimney be dry, so if a fire be wanted in a grate that has not been used for some time, it is a good plan to burn two or three newspapers in the grate before laying and lighting the fire.

The Mixing of Blacklead. The best blacklead is the brand known as the Rising Sun—the Zebra grate polish is also good. Never mix blacklead just before it is wanted, or it will not give a good polish. Put a penny packet of blacklead into a jam-jar, cover it with water and let it stand all night, when it will become a smooth paste. If turpentine

be used instead of water it will give a bright and lasting polish, and on iron fenders it will prevent rust. Blacklead should not be mixed very moist, and a small round brush which usually costs 4d is used for applying it.

Care of fenders and fire-irons. Fenders are made of iron, iron and steel, steel, brass, copper and lacquer work. Iron fenders should be blackleaded. A steel fender should be first rubbed in one direction with FF emery paper, afterwards it can be cleaned with finely powdered Bath brick mixed with paraffin or turpentine, after which it should be polished with a leather or a piece of velveteen. For kitchen fenders only the emery paper is used as a rule. Brass fenders can be cleaned with finely powdered brick mixed with turpentine and rubbed on with a flannel, then rub well with a soft duster and finally polish well. The Globe metal polish may be used, it should be used sparingly, rubbed hard and the brass must be well polished afterwards. A lacquer work fender should be cleaned by rubbing the lacquer work with a soft duster, but if it gets very dirty it can be wiped over with a paraffin rag first and then polished. Brass fire-irons would be cleaned in the same way as a brass fender is. Copper fenders can be cleaned with the following mixture, equal quantities of rotten-stone and soft soap, to one ounce of each add half-a-gill of turpentine, melt slowly in an old saucepan until it becomes a smooth paste, pour it into a tin fitted with a lid, and it will keep for weeks. To apply, damp a rag, rub it on the paste and then rub it on the fender to be cleaned. Rub well afterwards

with a duster and polish with a leather or a piece of velveteen.

To blacklead an iron fender, first dust the fender with a duster kept only for that purpose. After dusting it put the blacklead on it with the little round brush, beginning at the top, and doing a small piece at a time, then brush hard with what is called the wet brush, and keep on brushing until the blacklead is quite dry. Then polish with the polishing brush, and give it a final polish when all the fender is done with a piece of velveteen. Do not blacklead the inside of the fender after dusting it, but brush it with the wet brush.

When cleaning fire irons, blacklead the poke part of the poker, all steel parts should be rubbed with emery paper, the rounded knobs being rubbed in a circle and the crevices must not be forgotten. When putting away steel fire irons, rub the steel after cleaning it with a little mutton fat, then wrap them up tightly in brown paper and be sure to store them in a dry place. Brunswick black is a great preservative for fire irons, and in the summer time when fires are done with it can be used for the grates and iron fenders. Fenders and fire irons should always be cleaned in the scullery, not in the rooms to which they belong.

Cleaning the flues of a kitchen range. Once a week it is generally necessary to clean the flues of the stove used in the kitchen, or they wlll get choked with soot and the fire will not burn well. Should the fires be large and used a great deal the flues may want cleaning oftener. They

must be done in the early morning when the grate is cold, and there is no need to make everything in a great mess. Prepare the kitchen by covering up the dresser and tables with dust sheets. Get ready the flue brush which looks like a large bottle brush with a long flexible handle made of wire, the sweep's brush, a bucket, shovel and dust-pan, and everything needed for blackleading the stove after it is cleaned.

Spread a piece of Hessian on the floor, and on it put all the utensils required for cleaning the flues. Remove all cinders and ashes from the fire-place and brush it out clean. Draw out dampers, and if they will come right out brush the soot off them into the bucket, and lay them on the Hessian on the floor, do the same with the flue doors at the back of the stove. Take the sweep's brush and brush out the crevices, shake the soot as far as possible off the brushes before drawing them out of the flues. When the back of the stove is done, replace the flue doors and dampers. Next lift off the rings at the top of stove with their lids, and sweep all the soot off them into the bucket. Sweep across the top of the stove, as the heat goes across and sweep under all ledges. Put the flue brush down the sides of the oven, working it up and down. Take out the flue door at the bottom of the stove and rake out all the soot into the dust-pan. When cleaned replace the rings and lids, also the flue doors, do not forget to brush out the oven. It is advisable to do the stove in halves, following the same method throughout, except that the lid above the

boiler, should there be one, ought not to be removed. When everything is cleaned and replaced, blacklead the stove, being careful to do a small piece at a time. When it is well polished, clean the hearth and lay and light the fire.

When the stove is finished take away the soot outside, also sift the cinders out in the yard, take the Hessian that was used as a hearthcloth and shake it out of doors, and put away all the utensils used.

When cleaning flues or cleaning grates of any description, housemaids gloves should be worn, as blacklead seems to penetrate into the skin, if, however, anyone prefers to work without the gloves rub the hands all over with a little butter, or vaseline, or paraffin before washing them in hot water, do not put soda into the water to try and remove the blacklead marks as that will make the skin very rough and chapped.

CHAPTER VI

The Care of Knives—The Cleaning of Brass, Copper, Pewter—The Care of Silver—The Care of China and Glass—The Cleaning of Marble—The Care of Saucepans—The Cleaning of Zinc and Galvanized Iron Pails.

THERE are many ways of cleaning knives, but before they are cleaned they should, after being used, be placed blades downwards into a jug or jar containing very hot water and soda, this will remove all the grease from the blades. Never put knives into a bowl of hot water as that would destroy the handles, and would probably loosen the fastening of the blade to the handle. For cleaning the blades Ohoes' emery powder, the Wellington knife polish, and bath-brick can be used, this last is very cheap, but unless very finely powdered and carefully used it is apt to scratch fine steel. Bath-brick when used should be rubbed on to the knife board and the knives rubbed in a horizontal direction, this puts an edge on the blades as the grain of the steel in knives is horizontal. Clean the shoulder, that is the part where the blade joins the handle, and the back

of the knife with a duster dipped in powdered brick. Do not bend the blades when cleaning them, and do not forget to dust the whole knife carefully before it is put away.

If there should be no knife board, dip a damp cork into powdered bath-brick, and rub it on the blade of the knife, and polish with the other side of the cork. Knives can also be cleaned by rubbing them on a thick cloth soaked with methylated spirit, this cleans them very quickly, but it is not a method to be encouraged as the spirit so very easily catches fire. If the steel, through neglect, should become very rusty, smear the blade all over with lemon juice and leave it for twenty-four hours, then clean in the ordinary way, or if it be very bad, dip a rag in powdered brick and turpentine and rub well, before cleaning it. If the rust has eaten into the steel nothing will take it away. To remove stains from the blades of knives damp a flannel and rub it on Brookes' soap, then rub on the stained knife, wash it, dry, and clean. A lemon cut in half and dipped in brick dust and rubbed on the steel will also remove stains, and so will a potato treated in the same way. When knives have to be put away for any length of time, be sure that they are quite dry and clean, then smear the blades with a little mutton fat, roll them up in brown paper, and store them in a dry place.

The cleaning of brass. For brass taps, door handles, etc., powdered bath-brick moistened with water, or paraffin, or turpentine can be used. Rub it on with a flannel, and after the dirt is removed, dip a dry rag into some dry brick

dust, rub that on the brass to be cleaned and finally polish with a soft duster, or a piece of velveteen. For fine brass work, like Indian jars and trays, after washing them well in hot water, cut a lemon in half, dip it into some salt and rub it on the brass. Do a small piece at a time and dry it well, when the whole is cleaned and dried, then it should be polished. Pickering's paste and the numerous metal polishes that are sold can be used for cleaning brass. The following recipe is a kind of Pickering's paste and will be found most useful in cleaning almost all metal goods: one ounce of rotten-stone, one ounce of soft soap and a quarter of a teacupful of turpentine. Dissolve these ingredients very slowly over the fire in an old saucepan, then pour the mixture into a jar and it should be kept covered. To apply, damp a rag, rub it on the paste, then on to the article about to be cleaned, rub well afterwards with a soft duster, and polish with a leather or a piece of velveteen.

For brass lacqueur work, clean it by rubbing it with a soft duster, flannelette is excellent for this purpose, afterwards polish with a leather. If it should be very dirty it may be first wiped over with a paraffin rag. Do not use the ordinary methods for cleaning brass, as they would destroy the lacqueur work.

For cleaning copper utensils, wash them first in hot water and if they are greasy use a little soda, dry them, and they can be cleaned with Pickering's paste, or lemon and brick dust, or lemon and salt, or vinegar and salt. Rub whatever is being used on to the copper, doing a small

piece at a time, and drying it well with a soft duster. When the whole is cleaned, dip a clean duster into some dry powdered brick and rub it all over the copper, then polish with a piece of velveteen or a leather.

For cleaning pewter. Wash the pewter in hot water and soda to remove the surface dirt, then dip the fingers into soft soap and a little fine silver sand and rub the pewter with the hand, the soap and sand must not be rubbed on with a flannel or the pewter will be scratched. Wash off the soap and sand in some clean soapy water, dry with a cloth, and polish well and the pewter will shine like well kept silver. After polishing it, stand the pewter for ten minutes in front of the fire and the polish will be more lasting. Another method is to wash the pewter in hot water and soda, dry it and rub either with Wellington knife polish or finely powdered brick dust, finish by giving it a good polish with a leather.

Cleaning Silver. There are many ways of cleaning silver, and perhaps the cheapest is to use whiting mixed with either water, ammonia water, or methylated spirit. For real silver the whiting must be precipitated, that is tie a lump of whiting in some coarse muslin and let it soak in enough water to cover the whiting. A sediment of fine whiting will be found at the bottom of the vessel containing the water, which will make a smooth white paste, and can be used without any fear of it scratching the surface of the silver. Should the silver have been much neglected mix the precipitated whiting with paraffin, rub it all over the

article to be cleaned, and let it dry on, then boil it in soapy water, afterwards dry it and clean by the ordinary methods. Jewellers use ammonia water for cleaning silver. Rouge powder is excellent for that purpose, but it is expensive. Goddard's plate powder, which can be bought in boxes from 4½d. is universally known. Pynka and Pickering's paste can also be used. The best soaps to use for washing silver are Oakey's silver soap, and lux. Soda must never be put into the water when washing silver, as it leaves a dark shade upon it.

The two methods most generally used when using whiting are the dry and the wet methods. The dry method—Mix the whiting to a paste, hold the article to be cleaned in the hand and rub it all over with the whiting paste. Let it get quite dry, and with a soft duster rub it all off, a brush must be used to get the paste out of any crevices, it must never be picked out with a pin as that would scratch the surface of the silver, be very careful not to leave any whiting on the article cleaned as that would quite spoil its appearance. When all the whiting is dusted off polish the silver with a leather.

For the wet method, rub the whiting paste on to the articles to be cleaned as above described. Let it dry on. Have ready a bowl of warm soapy water, wash the silver thoroughly, dry each article separately, and then polish. By drying each article separately is meant, that each article must be dried as it is removed from the water, this should be done whenever silver is washed. The wet method of

cleaning silver gives less trouble than the dry, as there is no mess of whiting to be cleared away after the silver is done, neither is there any fear that the whiting will be left on the article cleaned.

To remove stains from silver. Egg stains can be removed by rubbing the spoons when washing them with a little salt, this must be done after each time that the spoons have been used for eggs. Medicine stains can be removed by rubbing the stain with lemon juice, or with lemon and salt. Ink stains once they are dried on are very obstinate; for real silver a solution of chloride of lime may be used to remove them, after which be careful to boil whatever has been stained in soapy water. Electroplated goods must not be treated with chloride of lime, as that would injure the plating, ammonia could be used instead.

When washing silver, sort out all the spoons and forks and put them into a bowl of not too hot water, use either a little dissolved soap or a spoonful of lux to make a lather. With a soft piece of flannel wash each spoon and fork rinsing them in a bowl of clean warm water. Dry each article as it is washed, do not have a lot of wet spoons and forks lying about, or they will never be brightly polished, but will have a dull streaky appearance. After all the silver is dried give it a good rub with a clean leather kept for that purpose, the polish obtained will more than repay one for the little extra time and trouble it takes to do.

Silver should be kept either in a drawer lined with green baize or in a plate basket lined with the same, having

separate divisions for the forks and the different kinds of spoons. The best possible way of keeping silver is in a canteen case in which each spoon and fork has its own division, but these cases are expensive and are not found in many houses.

To store silver. If silver has to be put away for any length of time, see that it is quite clean, and wrap each article carefully in soft tissue paper, even if there should be a canteen case in which to put it. If no such case, roll it up after wrapping it in the tissue paper, in green baize or some thick soft cloth. If large silver articles, such as presentation plate have to be stored, it is best to pack it in box-wood dust. This is sometimes difficult to get, but if one applies directly to a timber yard it is generally obtainable.

Should silver, through careless handling, get dented it is advisable to send it to a silversmith to have the dent pressed out, as in some cases it will have to be hammered, and in others a certain amount of heat will be required. A very slight dent however can be pressed out by covering something smooth and hard and round with chamois leather, an agate polisher or one of the little lace punchers used in laundry work could be used. Put it inside the dented article and press evenly until the dent disappears. The pressure must be even and steady or it will be of no use.

Washing china and glass. Before china is taken into use, it should be put into a large saucepan of cold water, each article being wrapped in muslin, bring the water up to

the boil and let it afterwards cool gradually. When washing china, never use very hot water and do not use soda unless very greasy plates have to be done, as soda will take away any gilt that may be in the pattern. To wash china have a large bowl of warm water and a little soap l ther or lux, wash each article separately, then there will be no breakages, rinse in clean warm water and dry whilst the china is still warm. Plates after being washed should be rinsed under a tap of running water, after which put them in a plate rack to drain. Do not dry them with a cloth if they are not wanted directly they are washed. Stains can be removed from china by rubbing it with salt and vinegar. Burnt stains on pie dishes can be removed by rubbing them with salt and crushed egg shells or by using Brookes' soap.

Glass should be washed in warm water and soap lather if cut glass a soft brush should be used to get any dirty marks out of the crevices of the pattern. Rinse the glass well in clean warm water and dry it with a linen glass cloth, after which polish it with some soft tissue paper, or with silk or with a leather kept for that purpose only. A little amonia in the rinsing water adds greatly to the polish on glass. To clean glass jugs, bedroom water bottles and wine decanters, wash them well first in the warm water and the soap lather, then to get the inside quite clean use tea leaves and salt, shake them well in the bottle, pour them away and rinse the bottle, afterwards turning it upside down to drain it until it is dry. Potato parings, vinegar and salt,

egg shells, pearl ash, sand and fine shot can all be used for the same purpose, but anything that might scratch the glass must be used with care and caution.

To clean marble wash it with warm soapy water; if light coloured after washing it spread all over it a paste made of whiting and soft soap and leave it on for half an hour. If the marble be very good precipitate the whiting. Scrub off the paste with hot water, rinse well with clean water, rub the marble dry and polish with a soft duster dipped in some powdered whiting. For dark marble turpentine may be added to the paste or it may be polished after being washed with equal quantities of linseed oil and vinegar.

The cleaning of saucepans. Iron saucepans after being used should be washed in hot water and soda, using a dish cloth and a saucepan brush, dry well both inside and out, wash the lids as well and put the saucepan with its lid tilted in a warm place to get quite dry. If a saucepan be put away without being properly dried it will rust. Saucepans that have had milk in them or anything containing starch, should be filled with cold water and allowed to stand for half an hour before being washed. Enamelled saucepans if at all stained may be rubbed with salt or with salt and vinegar, then they should be washed with hot water and dried like any other saucepan. Burnt saucepans should be filled with cold water into which put a good sized piece of soda. Let it stand for an hour or longer, then bring it slowly to the boil, and let it boil for twenty minutes, by that time the little burnt particles should be

floating in the water. Pour away the water and wash and dry the saucepan. If very badly burnt the process may have to be repeated. Do not scrape at a burnt saucepan as that is apt to cause permanent injury. Do not rub enamelled saucepans with egg shells and salt as that will scratch the enamel, if burnt treat the saucepan as above described. Soda should never be put into the water for washing aluminium saucepans as it turns them black, hot water and a little soap will be quite sufficient to remove any grease if the saucepan be washed in two waters. Dry well and polish to keep them looking bright.

Zinc and galvanized iron washing baths and pails can be kept bright and clean by rubbing them with a mixture of soft soap and silver sand, or if they are rubbed over with a paraffin rag then rubbed hard with a duster or cloth kept for that purpose a very good result will be obtained.

It is not only healthy but economical to keep all household utensils as clean and bright as possible as they will last twice as long and are always ready for use.

CHAPTER VII

The Choice and Care of Boots—Boot Polishes—How to Waterproof Boots—The care of Household Linen—The putting away of Blankets, Curtains, and Clothing.

Boots are made of leather, which is more or less waterproof, it is strong, it is pliable, it is a bad conductor of heat, it is protective and is easily cleaned. When choosing boots have some regard as to when or where they are wanted to be worn, thus it would be ridiculous to select a thin pair of smart patent leather shoes for a rough country walk, whilst strong country boots will look out of place in a town. It is advisable to have more than one pair of boots or shoes, especially for those who have to go to business every day, and have to put their boots on early in the morning, and probably do not take them off again until the evening. Men as a rule are more careful to have two or three pairs of boots than women are. In damp and cold weather boots are more protection and are warmer than shoes, as they come up round the ankles. Boots and shoes with very thin soles do not afford sufficient protection to the feet for outside

wear, and are often the cause of corns and swelled feet. In very hot weather or in tropical countries strong heavy boots will cause the feet to ache very much, a medium make of shoe should then be worn. Always try to get well fitting boots, and it is cheaper in the end to pay a good price for them ; cheap boots are a mistake, as they stretch, get out of shape, and look shabby long before they are actually worn out.

Boots may be divided as follows, those made of blacking leather, suitable for hard wear, kid, glace kid, patent leather, calf kid, and brown leather.

To clean blacking leather boots use four brushes. The dirt brush for removing all the mud and dust, the blacking brush which should be a small round brush for putting the blacking on the leather, and which can be bought for 2d, the drying brush for rubbing the blacking into the leather and the soft polishing brush. Blacking can be bought in either tins or jars, and that bought in jars is usually the best. All blacking contains ivory black, treacle, some form of oil, and vinegar, and when an extra fine polish is wanted gum-arabic is added. When using it, it can be moistened with either water, vinegar or stale beer. Day and Martin's blacking still ranks as one of the best makes, and it can be bought in jars costing from 1d to 1/1½d.

To clean glace kid boots and shoes use a cream made of one ounce of white wax, one ounce of brown wax, one ounce of Castille soap, half a pint of turpentine and half a pint of soft water. Shred the soap and wax very

finely and put them into a jar, and pour on to them the water, let the jar stand in a warm place until the wax and soap are dissolved, and let it dissolve very slowly indeed. When quite dissolved add the turpentine. Bottle and cork it tightly, and always give the mixture a good shake before using it. The price of wax varies from 1/4 to 3/- a pound. Castille soap costs from 1/4 to 2/- a pound. This soap claims to be the purest form of soap.

To apply the cream put a little on a rag and rub it all over the boot after having removed all dust and dirt. Rub it well into the kid and then polish with a soft duster or a piece of soft silk. Old silk handkerchiefs should be kept for this purpose.

For kid and calf kid boots and shoes, brush off all the dirt and dust, then rub them all over with a little milk, using a soft piece of flannel to rub the milk on with. When the kid is dry, polish with a soft duster or some silk. Some people clean kid boots by mixing ink with the milk.

For patent leather boots and shoes the best thing to use is a little olive oil as it prevents the patent leather cracking. Wipe off the dust or mud and rub the oil well into the leather, using a very soft rag, polish with a soft duster and give a final polish with some silk. White of egg whipped up to a stiff froth, and put on the leather with a very soft brush, then polishing it with some silk will give a very good result. Some people prefer to add a little lemon juice to the white of egg, as it is supposed to preserve the leather. When

cleaning patent leather always give a final polish to the boot with silk.

Brown leather boots. There are many ways of cleaning the ever popular brown boots, first brush off all dust or mud, then soap a damp flannel and rub the boot all over, dry it thoroughly, and polish well, always using silk for the final polish. The cream given above for glace kid with red lead—saffron or brown ochre added to it according to the shade of the leather is an excellent cleaning medium for brown boots. The inside of a banana skin rubbed on to the leather which must afterwards be polished well gives a good result. The juice from fresh limes and lemon juice can always be used. Cut the lime or lemon, rub it on to boot to be cleaned, then rub it well in the duster and polish. White of egg and lemon juice whipped up together can be used for brown boots as well as for patent leathers, it is a very cleansing medium and preserves the leather. To darken brown boots and shoes sponge them all over with ammonia water.

For boots that are used for very hard wear, such as shooting and football for men and hockey for girls, rub them all over after removing the dirt, with a little castor oil, this will prevent the leather getting hard and cracking. Never dry boots by putting them close to the fire, or they will become hard and stiff and the leather will split, they should always dry very gradually and boots should never be cleaned directly they are taken off the feet.

To waterproof boots use the following mixture, one pint

of drying oil, (boiled linseed oil) two ounces of brown wax, two ounces of turpentine, one ounce of Burgundy pitch. Shred the wax, put all the ingredients into a jar, and stand it in a warm place until all are dissolved; it will take a long time and should be a thick brown liquid. Rub the boots all over with this mixture, be careful to do the soles and all the joins, do this three times allowing each coating to dry before applying the next. When first cleaned after being waterproofed, it will be impossible to get a good polish on the leather, but after the second cleaning the leather will polish quite easily. The waterproofing will last for six weeks, when the boots should be re-done.

This recipe for waterproofing can be used for any kind of leather. Burgundy pitch is difficult to get unless one is near a seafaring population, ordinary pitch may be used but it is not so efficacious.

The care of the household linen. Under this heading comes sheets, pillow cases, the bedroom towels, all the table cloths, serviettes, tea cloths, tray cloths and d'oyleys. Linen is made from flax, it is strong and durable, and at one time all the fine sheets and pillow cases were made of it. Now cotton sheets are very widely used as they are considered more healthy than the linen ones. When choosing linen or cotton goods, see that they are closely woven, free from knots, and that they have very little dressing in them.

Damask is used for table-cloths and serviettes, and in cheap table-cloths damask is made of cotton and linen

threads mixed. Every housewife should keep her household linen in repair, and before sending table linen to the wash remove any stains that there may be on it, as the laundress rarely takes the trouble to do this, and when once a stain has been boiled into the fabric it is very difficult to remove it. Should there be a cut or tear in the tablecloth it should be carefully darned, before sending it to the wash, otherwise when it returns the tear will be found to have increased in size. When a sheet begins to get a little thin in the middle, seam the two sides together evenly, then cut it down the centre and hem it, and the sheet will last for some time longer, and it is not very much trouble to do.

It is better to keep the household linen in a cupboard than in a chest of drawers, as it is more easily got at. The cupboard should if possible be on an inside wall, and could easily be made in a recess. It should be fitted with shelves, and it should be a dry cupboard. On each shelf there should be a sheet of unbleached calico or sheeting, this should be spread out and on it lay the linen; turn up the calico to cover the linen when it is put away, and it will be kept free from dust. All the bed linen should be kept on a shelf to itself, another shelf should have the bedroom towels, a third could hold the table-cloths, whilst a fourth could have the serviettes, fancy tea cloths, sideboard cloths, and d'oyleys. Between the folds of the linen place lavender in muslin bags. Always use the linen in rotation, so that it gets evenly used and worn, placing what comes back from

the laundress at the bottom of the shelf to which it belongs. If a little care be taken of it it is very little trouble to keep the linen cupboard in order, it repays one as the linen will last twice as long a time.

Putting away blankets, curtains and clothing. Before putting away anything, scrub out the cupboard or drawers with turpentine and water. The turpentine will prevent moth and other insects making their appearance. Care must be taken that the cupboard or drawers are quite dry before anything is put away in them. When blankets are to be put away for the summer, they should first be washed and thoroughly dried, then place between the folds some of the well-known moth preventives, such as camphor, napthaline shells, or Russian leather chips, then wrap each blanket in newspaper as the moth has a great dislike to printer's ink. Lay the blankets on the shelf destined for them, covering them all over with some unbleached calico. Should there be a suspicion of dampness in the cupboard, and in some houses one cannot always depend on the cupboards, place a large lump of salt on each shelf, as the salt attracts the dampness to itself.

When the winter curtains are taken down to be put away, shake them well out-of-doors then brush them well, and hang them over a line in the open air and leave for two or three hours. Bring them in, and spread them out on a large table, and with a clean cloth wrung out in salt and water wipe them over. When they are quite dry, fold them carefully the way of the stuff, placing some moth

preventive between the folds, wrap them in newspaper and put them away.

Winter clothing is treated as all woollen goods should be, that is, it should be well shaken, brushed and cleaned, then folded carefully with camphor or napthaline between the folds, wrapped in newspaper and put away.

Furs should not be put away, but should be constantly taken out of the cupboard or drawer in which they are kept and shaken well, this is the only way in which to see that they are free from moth.

All cottons, muslins, baby linen, and body linen should be put away rough dried, if put away starched they will get rotten, and they should be rolled, not folded, as if left for any length of time, the folds will wear thin, and so spoil the garment when it is wanted again for use. Always put away personal clothing of any description with lavender between the folds, putting the lavender into muslin bags.

CHAPTER VIII

The Windows and Blinds—Artificial Light—The Care of Lamps—The Care of Oil Stoves—The Choice and Care of Household Brooms—Toilet Brushes.

THE windows of the house give to it its light in daytime, and to a great extent supply the ventilation, for no room can feel fresh, unless the windows are thrown open top and bottom daily when the occupants have left it. The windows should fit securely into their frames and the glass should be kept clean and bright. When cleaning windows begin at the top, and dust the window, also the frame and sill, both inside and out. The sill outside will require to be swept, to remove any grit and dust blown up against it by the wind. To wash the window panes, use warm soapy water, and use a chamois leather instead of a flannel. Wring the leather out in the water, and wash each pane beginning at the top, and do not forget the corners as it is in them that the dust collects. Then have two dusters, one for removing the dampness and one for polishing, but the housewife who takes a pride in the appearance of her house

will give each pane a final polish with some newspaper or better, some soft tissue paper. If the windows be very dirty a teaspoonful of paraffin in the water used for washing them, has a very good effect. A paste of whiting rubbed on to the glass and allowed to dry on, and then washed off, the glass being dried and polished afterwards, gives a very good result. Blue can be used to remove any fly marks on the glass. To clean the stone sill on the outside, open the window and wash the paint with warm soapy water, drying it afterwards with a soft cloth, then scrub the stone sill, some people like to hearthstone the sill, but a great drawback to doing so, is that the rain will make it splash up in white spots on to the glass.

Exterior and interior blinds. Exterior blinds in England are only needed to windows that are very much exposed to the rays of the sun. The best are expensive and for that reason are usually restricted to the better class houses. The different kinds are the shutter blind made on the same principle as the Louvre ventilator. The helioscene which is formed with a series of hoods, usually made of some strong striped material such as striped ticking or duck, they are as a rule very expensive. The Spanish is a simpler form of blind being made with one hood. The Florentine is a very popular form of blind made of one large hood which allows a good current of air to pass underneath it.

Then there are green rush blinds which are made in a kind of loose matting.

Interior blinds. Venetian blinds are very popular, they

are made with a series of laths attached with tapes or fine cords, if of a good quality these blinds are expensive but they last well, and are very healthy as they allow the air to enter between the laths, they also make a nice soft light in a room. To clean a Venetian blind take out the tapes and wash the laths with warm soapy water, the tapes should also be washed and dried before they are replaced in the blind. Festoon blinds are made by the material being gathered and drawn up by cords running through the gathers. They use a great deal of unnecessary material, and are not healthy owing to the dust which collects in the folds of the gathers. They constantly want re-newing, as the materials fade and the folds get marked. Roller blinds are made either of holland or printed linen. Holland costs from 11d to 1/6 a yard, printed linen from 5d to 1/-

The choice of blinds. In towns all the blinds of the windows facing the street should match, in the country or at the back of a town house the blinds can be chosen to suit the requirements of each room. When buying blinds choose colours that will be restful to the eyes, but they should soften—and if needed—exclude the light. Linen and holland blinds should be rolled without any creases in them, all damages or defects should be seen to at once, and in the house-cleaning, or if any whitewashing has to be done, they should be taken down or covered up.

Lighting the house by artificial light. Electric light is the cleanest and most healthy of all artificial lights, it gives

out little or no heat to speak of, and it can be turned on and off so very easily that it need never be used extravagantly. Coal gas is most generally used in the towns. Great care should be taken to turn it off when not used, as the fumes of escaping gas are most dangerous. Gas is very dirty, quite the dirtiest light in use, and glass shades should be put over the gas jets to prevent the ceilings getting black. It is a good plan where gas is much used to have the ceiling papered with a white paper and then have it varnished, as this will admit of its being washed. Gas is a very convenient light as it is easily lighted and easily turned out, it cannot be counted a healthy light. The quantity of gas used in a house is regulated by the meter, which registers the number of cubic feet burnt. Gas burners can also be bought that will register the amount of cubic feet burnt in a given time.

Candles are principally used in the present time for bedrooms. They can be bought in all qualities, but they do not give a strong enough light for reading or working by unless a large number be used, or unless they are put into a particular kind of candle lamp fitted with a reflector to throw the light in one particular spot.

Perhaps the most economical of all artificial lights are oil lamps. The greatest care must be taken when using them to prevent them being overturned, thereby causing a fire, and every lamp ought to be fitted with an extinguisher. A lamp consists of the glass shade and chimney, the burner which holds the wick, the reservoir which contains

the oil and the stand. The burner is either duplex, that is having two straight wicks, or circular, that is having one round wick, and the latter should always be used with a metal flame spreader. The burner must be perforated to allow the passage of the air, and it should screw tightly on to the reservoir, having a catch as well. To clean the burner, take out the metal flame spreader and wipe it with a duster kept for the lamps: then take the burner to pieces and rub each piece with soft paper. Once a month take out the wick and boil the burner adding soda to the water. When it is quite clean, dry it well, replace the wick in it and put it back on to the lamp. The wick must reach the bottom of the reservoir and it should fit the burner exactly or it will not turn up and down easily. In some lamps a wire guard protects the wicks below the burner. All wicks should be soaked in vinegar and then dried before they are used. This will prevent them smoking when new.

The reservoir. The best reservoirs are made of metal, china or glass breaks easily, but the glass has this advantage, one can see how much oil is in the reservoir. The size of the reservoir will depend on the size of the lamp. The stand of the lamp should be of a larger diameter than the reservoir, which should be securely fastened to it by a pin running down to the bottom of the stand. This will lessen the danger of the lamp being overturned.

The daily cleaning of the lamp. Dust the glass shade and chimney, which should be fire-proof, trim the wick by rubbing off the charred bits with soft paper, and cutting off

any loose threads with a pair of sharp lamp scissors. If a new wick for a duplex burner cut it the shape of the burner, if a circular burner cut it flat. Clean the burner by wiping it with some soft paper, turn down the wick ready for lighting it, then fill the reservoir three parts full of oil, see that the burner is securely fastened to it, then with a soft flannelette duster dry and polish every portion of the lamp, replace the chimney and shade. To light a lamp run a lighted match along the wick, turn it down for a minute, then gradually turn it up to heat the glass slowly. To put out a lamp turn down the wick and use the extinguisher which should be attached to every lamp. Never blow a lamp out, it is a most dangerous thing to do, and many accidents have been caused by people doing so. If there be no extinguisher, turn down the wick and the lamp will soon flicker out. When washing a lamp chimney and shade after drying them with a glass cloth place them in front of the fire for about ten minutes, doing this will prevent them cracking.

Oil stoves, both for heating and for cooking purposes, are much used, Wright and Butler's and Rippingill's are both good makers. These stoves are heated with paraffin, which can be bought at 6d, 8d, and 10d a gallon. To avoid any smell the stove must be kept very clean, the reservoir never being filled more than three parts full. In a cooking stove the oven is heated from the sides, the burners of the lamps being at the sides of the stove, and the heat goes up the side and over the top. To fill the reservoir of the lamps,

draw them from the stove, unscrew the brass nut, and pour the paraffin down the hole until the pin which is placed on another nut rises as a float, then re-screw the first nut. Lift off the top of the burner and remove the perforated lid, which must be kept very clean. Turn up the wick and wipe it with paper to take off any charred pieces, it rarely wants any cutting, rubbing it with paper will keep it clean and straight, never trim the wick with the perforated lid on. When the wick is trimmed replace the perforated lid, shut down the outer lid, having first wiped it with some soft paper, then rub it with a lamp cloth to take off any oil, replace the lamps in the stove, push them half way in, then light them and push them right in. If the oil be good and the wick clean and well trimmed the oven will be heated in ten minutes. To remove the wick, push back the bolt and lift the burner up. If the stove be wanted for boiling, remove the rings at the top, if the oven is to be used keep the rings in their place. The stove must be kept very clean, especially the flues, which must be kept free from soot, and the stove should be blackleaded to keep it looking nice and free from rust. All cooking, except roasting and grilling, can be done on an oil stove, and in the summer they are found to be most useful when the kitchen fire is not needed all day. They cost with certain utensils, such as two saucepans, a frying pan, and a kettle, from £1. 10s.

The household brushes and brooms. The materials chiefly used in the making of household brushes and brooms are:—Bass, obtained from a tree growing in tropical

countries, hair, and vegetable fibre. The price of a carpet broom made of bass ranges from 2/6 to 4/- Bass is also used largely for scrubbing brushes. Hair which is obtained from the manes and tails of animals, is much used for brushes, and the bristles obtained chiefly from the wild hogs of Russia are also in great demand. The vegetable fibres used are chiefly cocoanut, the inside of reeds and hemp. For dusting brushes feathers are used. The best brushes are made by what is called the drawn method. Take a piece of wood for the head of the broom, perforate it, then the material of which the brush is to be made is collected into little bunches and pressed about half an inch into the holes and are drawn tightly together with string. Another method for making brushes is to set them ; the wood for the head of the brush is perforated ; the material of which the brush is being made is gathered up into little bunches, the ends of which are dipped into hot pitch and they are then set into the holes. The brushes made by this method do not last as long as those made by the drawn method. If a brush is to last any time it must not be kept standing on the hair or bristles, all brushes should be kept hanging up, especially hair brushes, and scrubbing ones.

Household brooms require to be washed in order to keep them clean. To wash a hair brush, first scrub the woodwork if it be not polished, in which case it must be washed with a flannel and soapy water. Dip the hair of the broom into warm soapy water, rinse well in clean warm water and finally in cold salt and water to stiffen the hairs. Bass

brooms must be washed very quickly and must be well rinsed. To dry all brooms shake them well and hang them if possible in the sun. Hot water should not be used as that will make the brushes soft. Feather brooms should be washed in warm soapy water, rinsed in clean warm water, shaken well and hung in the open air to dry, being shaken occasionally until they are quite dry. Brooms and brushes should be washed at least four times a year, and one tablespoonful of salt should be added to every quart of the cold rinsing water.

Toilet brushes. There are two methods generally speaking for cleaning the brushes used for the hair, the wet and the dry. For the wet method see that the brush is quite free from any loose hairs, then wash the bristles by dipping them up and down in a large bowl of lukewarm soapy water, to which a little household ammonia has been added, do not wet the back, rinse the bristles in clean cold water, and let the brush dry by standing it on end in a draught. Do not let the brush dry by putting it by the fire, and hot water should not be used when washing a brush as that softens the bristles. Another method is to leave the brushes' bristles downwards in a shallow pan of lukewarm water and household ammonia, after half an hour rinse in clean cold water and dry. Household ammonia can be made as follows:—Mix one ounce of powdered Castille soap, a wineglassful of the strongest ammonia solution and one and a half pints of cold water. Be most careful in handling the ammonia. One tablespoonful of

this mixture is sufficient to put into the water for cleaning the brushes.

For the dry method of cleaning brushes, use either warmed flour, powdered whiting, starch or bran. It is used chiefly for brushes that have ornamented or carved backs. Rub whichever medium is being used on to the bristles, shake it off on to some paper, and repeat the process until the brush is clean.

To clean carved ivory make a paste of bran and lemon juice or sawdust and lemon juice, spread it over the ivory to be cleaned and let it dry on, then brush it all off with a soft brush. For plain ivory there is no better polish than borax and water.

CHAPTER IX

Floor coverings—Linoleum– Care of Carpets—Care of Furniture.

For passages, halls, landings, and kitchens when their floors have to be covered, there is nothing nicer than a good linoleum. It consists chiefly of pulverized cork and oxidised linseed oil, mixed with smaller quantities of common resin and kari resin. (The kari is a pine tree and a native of New Zealand.) These are made to adhere to canvas backed with size and pigment. The chief operations in the making of linoleum are the preparing of the cork and the oxidising of the linseed oil, the mixing of the ingredients and applying them to the canvas. Pulverized cork is obtained from the waste cuttings of cork, these are put into a machine consisting of toothed steel discs, revolving on a shaft and working against steel plates, the end of which have teeth like those of a saw. After passing through this machine the cork is ground between millstones.

Oxidised linseed oil is prepared by pouring the boiled oil in thin films upon long pieces of calico or scrim placed in upright frames. The oil is poured on daily until the films

become half an inch thick. The scrim bearing these films is then called a skin, and after being cut into small pieces these skins are ground between rollers. Four to eight parts of oxidised linseed oil are mixed with one of common resin and one of kari resin, this mixture is put into a pan with a tight-fitting lid, enclosed in a second pan containing steam. The inside pan has a valve at the bottom, and stirrers are placed inside it. First the common resin is put in, then the oxidised linseed oil, and lastly the kari resin, when they are warmed the steam is shut off, as they will then mix. When mixed the valve is opened and the cement, as it is now called, passes down through rollers. This cement is allowed to cool, after which it is heated to 120° Fah. and the cork is then added, the colouring matter is sometimes added to the cement before the addition of the cork, or at the same time as the cork. The mixture is put into yet another revolving machine, upon leaving which one cannot distinguish the cement from the cork. Next it is passed through two rollers one heated by steam, and the other cooled by dripping water, this forms it into sheets, which are broken up by another machine consisting of rollers, one of which is studded with points to break the linoleum up into even sized pellets. Finally the mixture is spread over the canvas by two more rollers heated by steam to a very high temperature. The canvas is sized at the back, and if a pattern is required it is either printed on or inlaid like Mosaic. If the latter, the separate pieces of the pattern are cut out in coloured linoleum, by metal

projections on a pattern block, these are made to adhere to a backing of linoleum fabric by pressure and some adhesive substance.

Cork carpet, which is sometimes confused with linoleum, is made of pulverized cork and oxidised linseed oil ; it has a canvas backing, and is the warmest of all carpets, and for that reason is most suitable for bedrooms and nurseries ; it is expensive but it wears well.

Another floor covering which is much seen in the passages and on the stairs of the poorer houses is oilcloth. The foundation of this is a coarse canvas made of jute or flax tow ; it is woven in pieces of one hundred and fifty yards long, and eight yards wide. This is stretched on frames in sections, and before it is painted it is thickly coated with size to prevent injury to the canvas by the acid products arising from the oxidation of the linseed oil with which the paint is mixed. When the size is quite dry and has been pumiced, the paint is laid on with a plasterer's trowel, yellow ochre being much used. Two coatings are used for the back, five or six for the front. In the cheaper oilcloths the paint is put on by a roller machine. A man pours the prepared paint out of a bucket on to the moving canvas, and a long blunt knife blade almost touching the surface regulates the thickness of the paint. Made by this method the oilcloth receives nine coatings of paint. The more expensive oilcloths have the pattern printed on to them, and their durability depends on the quality of the paint and the length of time given it to dry. Oilcloths can be

bought from all prices according to width and quality. Linoleum costs from 1/6 to 4/- the square yard.

The care of linoleum. When linoleum is laid down it must be absolutely flat, and it should be laid on a floor that is quite dry. It should not be scrubbed with a scrubbing brush, unless it is extremely dirty, when a very soft brush should be used. To clean it, first sweep up all the dust, then wash it with a flannel wrung out in soapy water, rinse the flannel well, soap it again, and again, rub the linoleum with it, rinse the flannel once more, and rub the linoleum until it is almost dry, only do a small piece at a time, as the linoleum should be dried at once to obtain a good result, after it is dried polish it all over, rubbing well with a dry cloth. To obtain a good polish on linoleum, it can be rubbed with bees wax and turpentine, this will make it very slippery, but it looks well. Should the bees wax cake dip a rag in paraffin, rub it on the spot and the paraffin will remove it at once. Equal quantities of linseed oil and vinegar is an excellent polish for linoleum, it should be well rubbed in with a flannel. Linoleum rubbed with a flannel wrung out in milk will have a very fine polish; paraffin will also produce a good effect, and the colour can be renewed in linoleum by rubbing it well two or three times with vaseline. Paraffin is of such use in cleaning, that it is almost indispensable in a house, but the housewife must always remember its extremely inflammable nature.

Carpets. Pile carpets were first made in Persia, and the Persian carpets are much prized for their beautiful designs,

the quiet harmony of their colouring, and their great durability. They are made by knotting tufts of woollen yarn on the warp threads, and these tufts are held in place by the woof yarn. The finest Persian carpets are made in Kurdestan.

Indian carpets are made both of wool and cotton, the cotton carpets being made chiefly in Bengal and Northern India. The woollen carpets of India are made, practically speaking, in the same way as the Persian carpets are. Cashmere, the Punjab the Malabar coast, Agra, Mirzapore, Jubblepore, Hyderabad, and Masulipatam are the chief carpet-making centres of India. These carpets are also made by the prisoners in the jails.

Turkey carpets are made by hand, they contain no green, neither any imitation of any living form. They are made by knotting tufts of woollen yarn on the warp threads, and firmly binding these tufts on the weft. They are made chiefly at Ushak near Smyrna.

Brussels carpet consists of a strong linen web, with an upper surface of fine worsted ridges or tiny loops. These loops are made, as the carpet is woven on a loom which raises the yarn into loops at each throw of the shuttle, by the insertion of wires which are afterwards withdrawn. The loops add to the durability of the carpet as there are no rough ends to be easily worn or torn away. A good Brussels carpet is unsurpassed for wear.

The Wilton carpets resemble the Brussels carpet in the method of weaving, but when the carpet is made the loops

are cut to give it a velvet-like surface, therefore these carpets are spoken of as " velvet pile." Tapestry carpets are made of parti-coloured yarns, they resemble a Brussels in many ways, the surface being composed of loops, the back being frequently made of jute.

Kidderminster carpets are the oldest kind of machine-made carpet, they have no pile, the yarn lying flat upon the surface like an ordinary worsted cloth. In many respects it resembles a worsted damask, and like it, it is reversible, they are suitable for bedrooms as they will wash.

Jute carpets are cheap but as they are not very durable they are not popular.

Axminster carpets are very similar in appearance to Turkey carpets, but they are machine made. The patent Axminster is made of wool chenille. " The surface of the carpet is in fact formed of weft lines of chenille, which, so to speak, has a backbone of thread. By means of catcher warps the chenille is bound to a strong under fabric of cotton, linen, or hemp." In the Royal Axminster the pattern is arranged line by line on a succession of small spools of yarn, from these spools tufts are cut by machinery and are fastened into the carpet by the interlacing of linen or jute warp and weft.

Felt, which is frequently used for bedrooms, is a mixture of hair and wool reduced to a soft pulp and pressed by machinery. Heat, moisture and pressure are applied to render the mixture compact and carpet-like. Felt is soft

and warm but it is not very durable and it is a great dust collector.

Dutch carpets are made of dyed hemp, they are strong and durable, and are usually woven in stripes or plaits, and are sold by the yard.

Cocoanut matting is made from the outside husks of the cocoanut, it is both light and warm, and has one very great advantage in that it harbours no vermin. It is sometimes called coir matting.

The principal centres for carpet making in Great Britain are: Kidderminster, Stourbridge, Durham, Halifax, Kilmarnock and Bannockburn. The patent Axminster carpets are chiefly made in Glasgow.

The care and cleaning of carpets. Carpets are as a rule swept to keep them as free from dust as possible, and when sweeping them care sbould be taken not to sweep against the pile of the carpet, as that helps to wear them out. Sweep round the edges and into the corners with a hard bannister brush into a dustpan, then sweep the whole carpet with the carpet broom. Before sweeping a carpet sprinkle it first with tea leaves that have been washed and are partially dried, so that they are damp and not wet, this prevents the dust rising up in clouds. Americans use torn up paper for this purpose and Australians freshly cut grass.

To clean a carpet it may be sprinkled with some damp salt which removes the dust and renovates the colour. One pint of fresh ox gall to one quart of warm soapy water well mixed in a pail and rubbed into the carpet with a

clean woollen cloth, wrung out in the mixture, has a very cleansing effect; the carpet must be well rinsed afterwards to remove the smell. Ammonia water can be used, vinegar and water, and also Chiver's carpet soap. This soap must be used carefully, and the carpet should be rubbed afterwards with a flannel wrung out in some clean warm water.

Grease spots can be removed from a carpet by placing either brown paper or blotting paper over the spot and ironing it with a hot iron. Turpentine will remove grease marks as will French chalk, or a paste made of Fuller's earth left on for some hours and then brushed up with a hard brush. For whitewash stains use ammonia water. To remove soot from a carpet sprinkle a handful of salt over the soot and then brush it up. If this be not effective, cover the mark left with a paste of Fuller's earth and then brush it up with a hard brush. For ink stains, if freshly made, rub some salt into the stain and then wash the spot with warm water, or take up the carpet; put the stained part over a basin, and pour warmed milk over it, rubbing the stain lightly with the fingers, do this two or three times, and then wash the place with warm water.

Moth in carpets. Soak some cotton wool in turpentine and place it beneath the spot where the moth was discovered, and leave it for twenty-four hours, or make a very hot and very strong solution of cayenne pepper and pour it over the spot, and iron it in with a hot iron, great care being taken not to scald the hands from the steam which will arise from the spot when the hot iron touches it.

Beating carpets. Large and expensive ones should be sent away to the proper firms for beating carpets. In the country this is impossible, and there they should be beaten in a field by two men with carpet beaters. Small ones can be thrown over a line and beaten with a flexible stick or a carpet beater, which can be bought at any oil shop for a trifling sum. After the dust is beaten out of the carpet it should be well brushed, and if any repairs are necessary they should be attended to before the carpet is laid down again. When folding a carpet always fold it to the seams.

Care of furniture. Upholstered furniture should be brushed and beaten with a small carpet beater once a week, and when brushing it use a furniture brush. Lift back all tabs and buttons and brush out any dust that has collected beneath them and see that the pipings and edges are in good order. All the woodwork of upholstered furniture should be dusted every day. To keep the woodwork looking nice the following polishes are good ones. The simplest to make is to put equal quantities of vinegar and linseed oil into a bottle, shake it well and it is ready for use. This is also an excellent polish for stained floors. Another very well known furniture polish is the same mixture that is used for cleaning glacé kid shoes. One ounce of white wax, one ounce of brown wax, one ounce of Castille soap, white if it is possible to get it, half a pint of turpentine and half a pint of soft water. Shred the wax and soap very finely into a jar, boil the water, and when it is boiling pour it over the wax and soap, stand the jar

covered up in a warm place until all the ingredients are melted then add the turpentine, stir it up well, bottle and cork it, and shake it up each time before it is used. To apply as a furniture polish, put a little on a clean flannel, rub well, giving a final polish with a piece of velveteen or some soft silk. For bees wax and turpentine, which is much used as a polish for floors, have one ounce of brown wax to one gill of turpentine, shred the wax into a jar and add the turpentine, stand the jar in a warm place covered up until the wax is dissolved, then keep the mixture in a covered tin.

Marks made by hot dishes on a polished table can be removed by rubbing the place with salt and salad oil, it must be well rubbed in and may require doing more than once to be successful. Scratches on polished furniture can be removed by making a pad of flannel, soaking it in linseed oil and tying it tightly against the scratched spot with some list, leave it on for some hours and the marks will disappear. If furniture be very dirty and neglected rub over the woodwork before attempting to polish it, with a paraffin rag. If moth be discovered in upholstered furniture the treatment above described for moth in carpets should be applied, and for removing stains from upholstered furniture, the same methods as for carpets can be used.

CHAPTER X

SPRING CLEANING

SPRING cleaning has been laughed at, grumbled at, and applauded, but no matter what the house may be, it is a necessity, as places and articles are turned up and cleaned which it would be impossible to do in the weekly cleaning of the different rooms. It is also needed for the putting away of the heavy winter curtains and other things not wanted in warm weather. In these modern times we try to save ourselves as much trouble as possible and why not? There is no need when starting the spring cleaning to make everyone uncomfortable, it is not good management to have the whole house upset at once, neither should the meals be neglected. When possible, as many members of the family as can should go away, as the fewer people in the house, the better it can be cleaned.

In our large towns spring cleaning, with its turned out rooms and scrubbed floors and beaten carpets, will ere long be a thing of the past. Those who have not to study economy, have only to notify to the cleaning company that

they wish their house to be cleaned, and the necessary apparatus will be brought to the front of the house, a hose of large diameter will be hoisted through the window and the vacuum will do the work of scrubbing brush and broom in a very short time, comparatively speaking, and the work will be done most thoroughly. Everything in turn is treated to this scientific method of cleaning. Nothing need be taken from its place that the nozzle of the hose can reach. The floors, ceilings, walls, pictures, carpets, curtains, the bedding and the upholstered furniture all come under its influence, and are well and effectually cleaned. Books should be taken from their shelves in the bookcase, and should be held to the nozzle of the hose. I can only say that the effect of the vacuum cleaner is marvellous, and its only drawbacks at present are, that it is rather an expensive method, and when it is working it makes a whirring noise which much resembles a threshing machine at work, this noise is more annoying to one's neighbours than to oneself.

Painting, varnishing, and paper hanging are necessities and should be put into the hands of skilled mechanics so that the work may be done effectively and expeditiously.

But to return to the still ordinary methods for spring cleaning. Begin at the top of the house and work downwards, if avoidable do not upset all the rooms at once, and if possible keep one room for doing necessary repairs to carpets and furniture in. If the rooms are to have the ceilings whitewashed cover up everything with dust sheets and take all pictures and ornaments from the walls, have the

sweep to do the chimneys before the ceilings are done, and if the rooms are to be re-papered all the old paper should be scraped off the walls and burnt. If the rooms are not to be re-papered, sweep the walls after taking down the pictures, and then clean them with either a ball of dough made of flour and water, or stale bread or India-rubber. This wants very careful doing not to make streaks, and it should be done before cleaning the rest of the room.

Sanitary papers, which are by far the best to have in a house, should be washed and rinsed. Have a pail of warm water, with two teaspoonfuls of Hudson's extract of soap in it, with a soft flannel wash all dust and dirt off the paper, then wipe it over with a leather wrung out in clean cold water, do not attempt to dry the paper as it is not at all necessary. To remove stains from a wall paper make a paste of either whiting or pipe clay and water, smear it over the stain, let it dry on, leave it for two or three hours, then brush it off and the stain will have disappeared. For papers that have a creamy ground use Fuller's earth instead of whiting or pipe-clay.

To wash paint use warm soapy water and a soft piece of flannel; have a second pail with some clean, cold water in it. The paint before being washed should be dusted, then wring out the flannel in the cold water, and wet the surface of the paint all over; for a door or panelled walls begin at the bottom as the wet surface will prevent the soapy water running down into streaks. Rub the paint gently with the soapy flannel, wring the dirty water out of it, go

over the paint with the flannel wrung out in the clean water, and dry it with a soft duster. Alkalies should be avoided, as a rule, when paint is to be washed, but for very dark shades a little ammonia may be used in the water. Light shades of paint can be cleaned by making a moist paste of whiting and water, and putting it on the flannel instead of using soap, afterwards rinse the paint well with clean water before drying it. A little turpentine in the water is permissible for dark coloured paint. All paint after washing must be well dried, and a good polish is obtained on it if a leather is wrung out in cold water and the paint rubbed with it.

In turning out a room, after taking up the carpet and stripping the walls, have the chimney swept, and have it done early in the morning. When the chimney is done, next have the ceiling whitewashed if it requires it. Then clean the walls and wash the paint and windows. Venetian blinds should be taken down, and the tapes and laths washed and dried before the blind is replaced. Any cupboards ought to be turned out, and the shelves scrubbed with turpentine and water. The stove or fire-place should be cleaned, then the floor should be scrubbed, any stained part should be redone, and the furniture of the room should be cleaned and polished, not in the room if possible, but where space is limited it must be done in the room.

Enamelling. Aspinal's enamel is a great boon to the housewife who has to consider her purse, and who wishes to keep her house looking clean and bright, Have the

article that is to be re-enamelled well scrubbed, then rub the surface over with some emery paper to make it quite smooth. A better result is obtained if the enamel is thinned down by the addition of turpentine until one tin of enamel will fill two. Instead of only giving two coatings of the enamel, give the article from four to six coatings of the thinned enamel, letting each coating dry before ayplying the next, it dries very quickly and is not much trouble to do whilst the result more than repays one. If a bath has to be done, use the proper bath enamel, first scrub out the bath, then with a damped flannel rubbed on Brooke's soap scour the bath hard, this will quite remove any surface dirt on the old paint, afterwards rub it all over with emery paper to make the surface smooth, and give the bath from three to four coatings of the enamel, letting each one dry before applying the next. After the bath is finished it should not be used for at least three days, and before hot water is put into it, cold water should be allowed to stand in it for some hours.

The windows can be cleaned by the ordinary method described in Chapter VIII. If the frames have been re-painted and any splashes of paint have dried on to the glass they can be removed by sponging them with hot vinegar.

All cupboards and drawers should be scrubbed out with turpentine and water, this will prevent moth and other insects getting into them. When quite dry line the drawers with clean white paper.

The fire-places and stoves should be cleaned, and if the iron should show any sign of rust rub it all over with turpentine and leave it until the next day, then clean and blacklead the grate. If fires are over for the season, clean the grates well and instead of using blacklead for them, use Brunswick Black, as it saves much trouble and work, preventing rust, and will only need dusting to keep it looking nice for weeks. Any tiles round the grate must of course be washed.

The floors. The carpets must be taken up, and the use of rugs and carpet squares lessen the work to a certain extent, as it is less trouble to remove them than it is to take up and replace a carpet which is fitted to a room. All unpolished parts of the floor must be scrubbed, and it is advisable to add either carbolic or turpentine to the water. There is no need when scrubbing to make a sloppy mess. Do a small portion of the floor at a time and begin at the end away from the door. After rinsing rub the boards with a dry rubber. Polished floors should not be scrubbed, but should be washed with a flannel wrung out in soapy water, then they should be rinsed and rubbed until they are nearly dry, doing a small portion at a time. When quite dry polish with one of the following polishes. Furniture cream, one ounce of white wax, one ounce of brown wax, one ounce of Castille soap, half a pint of soft water, and half a pint of turpentine. Shred the wax and soap into a jar, add the water, and stand in a warm place until soap and wax are dissolved, then add the turpentine, stir up the

mixture, put it into a bottle and keep it corked, shake before using it. Another excellent polish both for floors and furniture is half a pint of sweet oil, one gill of vinegar, one gill of methylated spirit, and half a pint of turpentine. Put these ingredients into a bottle and shake it well, keep it corked. Equal quantities of linseed oil and vinegar, is a mixture that is also much used as a polish. Bees wax and turpentine has a world famous reputation as a floor polish, the proportions being one ounce of brown wax to a gill of turpentine. Shred the wax up finely, add the turpentine and stand in a warm place covered up until the wax is dissolved, keep in a covered tin. For very light polished floors use turpentine in the water when washing them, those that are stained dark, Condy's fluid might be used.

All carpets must be taken up, beaten, cleaned and repaired. For cleaning them Chiver's soap may be used, and may be put on either with a clean scrubbing brush or with a clean flannel. Ammonia water, vinegar and water, ox gall and soapy water, and borax and water, can all be used to clean and renovate carpets. After using ox gall, rinse the carpet well and dry in the open air to get rid of the smell.

Rugs can be cleaned in the same way as carpets, but skin rugs should be washed like flannels in lukewarm water and soap lather, rinsing them well in warm water. They are a great trouble to do as they take a very long time to dry, and whilst drying need continual shaking and combing. Fur rugs can also be cleaned with hot bran,

which is rubbed into the rug, after which it should be well shaken and beaten. Unless there is a yard in which to do the rugs it is better to send them away to a cleaner. The simplest method for cleaning rugs is a dangerous one. It is to dip a sponge into benzine and to rub the rug with it, then hang it over a line in the open air to get rid of the smell. If benzine is used, be very careful, as it so very easily catches fire.

Upholstered furniture should be taken out into a garden or yard, or if this be impossible, when the carpet is taken up from the floor of the room open the windows top and bottom, then beat the cushions and seats with a light carpet beater or a flexible cane. After the dust is beaten out, wash the wood work with warm water to which either Hudson's extract of soap or some dissolved soap has been added. After rinsing and drying it, polish with one of the polishes given above. If any signs of moth appear apply turpentine at once and the maggots will come out and can be brushed off. If the furniture be at all bruised, moisten the spot with warm water, place some brown paper folded to six thicknesses over the bruise and iron it with a hot iron.

Hot or wet dish marks can be removed from polished tables by rubbing the stains with salad oil and salt, rub this well into the grain of the wood. This also makes a good polish for light oak.

The piano. For those who are not afraid to take their instrument to pieces, take out the keys, which are all

numbered so that they can be easily replaced, wash them with a sponge dipped in warm milk and polish with a leather, or rub them with moistened precipitated whiting. Dust the inside and put the keys back again and polish the case with a furniture polish.

Winter curtains should be taken down, well shaken and brushed, then hang them in the open air if possible for two or three hours, after which spread them out on a large clean table and with a cloth wrung out in clean cold water wipe them over, fold them carefully when they are quite dry and put them away wrapped up in newspaper together with some well known moth preventive.

All the vases should be washed and cleaned and any light valuable ones not used for flowers should be half filled with silver sand to prevent them being knocked over easily and broken.

Mirrors in gilt frames, if of English make, may be washed with warm soapy water, dried with a soft duster, and polished with a silk handkerchief. If the gilt frame be of Dutch manufacture it must not be washed. For the glass, wash it as you would a window, and if it should be at all spotted use a blue bag; and, to keep away flies, rub the glass over with a paraffin rag.

All the pictures should be dusted, and some people take them out of their frames to wash the glass, this is not really necessary, and unless handled very carefully the pictures might get damaged.

The bedding must be looked to, and in this respect I

think that we English are not so careful as our foreign neighbours. All blankets and quilts should be washed or cleaned. Feather beds ought to have the feathers taken out of them, then send them to the cleaner to be thoroughly cleaned. The tick must be washed, dried, and carefully aired, so that it is ready to have the feathers emptied straight into it on their return from the cleaner. If the bed be stuffed with flock, clean in the same way. To clean a hair mattress, take out the hair and plunge it into a bath of luke-warm water in which a handful of salt has been dissolved, shake the hair well underneath the water and work it up and down. Repeat the process, changing the water, until it remains clean after the hair has been rinsed in it; three waters should be sufficient. Squeeze out the water, and spread out the hair to dry on a clean sheet, if possible out of doors in the sun, and whilst it is drying shake it occasionally. The tick of the mattress should be washed, dried, and aired before the hair is replaced in it.

Bedsteads if made of wood should be washed with turpentine and soap in the water, and then they must be carefully dried. Iron bedsteads must be rubbed over with a damp cloth and then rubbed quite dry and the chain mattress must be well brushed.

All baths that are not repainted should be cleaned with a little salt, and any zinc baths or pails can be cleaned with salt and turpentine, or brick dust and turpentine, or with paraffin.

Straw matting and wickerwork chairs should be well

brushed, washed with salt and water and dried in the open air.

As I said at the beginning of this chapter, spring cleaning is a necessity, and if it be systematically done it should be finished and the house bright and healthy for the summer months in a week.

CHAPTER XI

HOUSEHOLD RECIPES AND USEFUL HINTS

EVERY housewife has her own pet methods for cleaning her utensils, and as a rule has some recipes which have been handed down to her from her grandmother, or even further back still. The recipes given in this chapter have been culled from far and near, some are ancient, some are modern, but all have been well tested and their powers proved.

Paste for cleaning silver, tins, or brass. One ounce of rotten stone, one ounce of soft soap, and two tablespoonsful of turpentine, stir these ingredients in an old saucepan over a slow fire until they are quite dissolved to a thick paste, pour this paste into a tin and keep it covered. To apply, damp a flannel, rub it on the paste and then on the article to be cleaned, rub it with a soft duster and finally polish with a leather or a piece of velveteen.

For whitening boards, and woollen articles. Half a pound of soft soap, half a pound of whiting, and

half a pound of silver sand boiled together in a quart of water. This should not be used too frequently or the sand will wear the wood into ridges.

To clean marble. Equal quantities of soft soap and whiting made into a paste, spread it on the marble, leave it for half an hour, and then wash it off with warm water. For dark or black marble wash it with warm water and polish with either warm bees wax, or linseed oil and vinegar, or linseed oil and methylated spirit. Stains can be removed from marble by mixing one grain of powdered chalk, one grain of ground pumice stone and two ounces of washing soda, to a paste with cold water. Rub this with a soft flannel over the stain, then wash the spot with warm soapy water. Rust marks can be removed from marble by rubbing them with lemon juice and letting it dry on.

To clean carpets use one pint of fresh ox-gall to one quart of warm soapy water. Borax and water can also be used, as can salt and water and vinegar and water.

To stain a boarded floor, first scrub the floor, let it get quite dry, then size the boards, using two parts of size to one of water. Keep the jar containing the size standing in a pan of very hot water whilst it is being used, and put two coatings of size on the floor letting the first dry before applying the second, then leave for a day for it to get quite dry. For the staining, mix two quarts of turpentine with four quarts of drying oil (boiled linseed oil) then add burnt sienna or Vandyke brown paint until the required shade is obtained. Apply with a large brush and put the stain on

very evenly, and the floor should have three or four coatings for it to look well, and each coating should be allowed to get quite dry before the next is put on. Shut the windows and doors of the room until the stain is dry or the dust will blow on to it and spoil the effect. When quite dry the floor should be polished.

Polishes suitable for floors and furniture. Half a pint of sweet oil, one gill of vinegar, one gill of methylated spirit and half a pint of turpentine, shake these ingredients well together in a bottle and it is ready for use, the bottle should be kept corked. Equal quantities of vinegar and linseed oil is also a very popular polish as it is no trouble to make and gives a very good result. For bees wax and turpentine use the following proportions, one ounce of brown wax to one gill of turpentine. Shred the wax into a jar, add the turpentine and stand the mixture in a warm place covered up until the wax is dissolved, keep the mixture in a covered tin.

Whitewash. Take two cakes of whiting, mix them to a thin paste with warm water. Melt one pound of size in an old saucepan, add this to the whiting. Dissolve one cake of laundry blue in a pint of water, add this also to mixture, stir it up well, strain through canvas. One tablespoonful of ground alum may be added if liked, but it is not really necessary; when added to the other ingredients it will cause the mixture to effervesce and the whitewash must not be strained until it has stopped bubbling.

Cream for cleaning glacé kid boots. One ounce of

white wax, one ounce of brown wax, one ounce of Castille soap, half a pint of turpentine, half a pint of soft water. Shred the wax and soap up very finely into a jar, pour the water over them and let the jar stand in a warm place to let the mixture dissolve very slowly. When the wax and soap are dissolved add the turpentine. Keep it in a corked bottle and shake well before each time of using. If a little saffron or brown ochre be added, this cream can be used for brown boots. It also makes an excellent furniture polish, and was in fact first used for that purpose.

Waterproofing boots. One pint of drying oil (boiled linseed oil) two ounces of brown wax, two ounces of turpentine, one ounce of Burgundy pitch. Shred the wax and put all the ingredients into a jar and stand it in a warm place until they are all dissolved, and when it is dissolved it should be a thick brown liquid. To apply rub the boots all over with this mixture not forgetting the soles and all the seams. This should be done three times, allowing each coating to dry before applying the next. The boots should be waterproofed about every six weeks if it be very wet weather.

To renovate leather, whip up the white of an egg with a teaspoonful of lemon juice, and apply by rubbing it on the leather with a soft flannel.

Cement for mending china. Dissolve half an ounce of gum Arabic in half a gill of boiling water, put this in a basin and stand the basin in a saucepan of boiling water. Stir in enough plaster of Paris to make a stiff paste, apply

with a clean brush to the edges of the broken china, make them fit together and let them dry.

Cement for mending glass. Dissolve half an ounce of isinglass in a small wine-glassful of spirits of wine, melting it very gently.

Paint the edges of the broken glass with this mixture, using a camel's hair brush ; fit the pieces together ; tie with tape and put in a cool place to dry.

To clean carved ivory, make a paste of bran and lemon juice, or sawdust and lemon juice, spread it over the ivory to be cleaned, let it dry on and then brush it off. For smooth ivory there is no better polish than borax and water.

To clean cane chairs and Indian matting, brush them well first, then rub them with salt and water.

To clean silk, cloth, or gloves use petrol. Spread out the material, dip a clean rag in the petrol and rub it on the article to be cleaned, being careful to rub the way of the stuff. It can be used for the most delicate silks without any fear of injury to the fabric, whilst for gloves it is invaluable. The smell goes off very quickly, but when using it, great care must be taken because of its inflammable nature. Black cloth and black silk can be renovated by being sponged with a solution of fig leaves. Take two handfuls of fig leaves and stew them for fifteen minutes, let them cool and strain them through muslin. Do not make the material too wet when sponging it, and when it is nearly dry, press with a cool iron—a hot iron will make black material go brown.

Boiling water starch. One table spoonful of starch, a piece of wax the size of a sixpence, or a quarter of an inch of a tallow candle, and half a teaspoonful of borax previously dissolved in a little boiling water. Mix the starch to a smooth paste with two tablespoonfuls of cold water, using the fingers to press out any lumps. Add the wax and borax, and stir in enough boiling water to render the starch a semi-transparent jelly. This must be thinned down by the addition of water until it will pour when it is wanted for window curtains, prints or muslins.

Cold water starch. One tablespoonful of starch, half a pint of cold water, half a teaspoonful of borax dissolved in a little boiling water, and four drops of turpentine. Mix the starch smoothly with the cold water, and the other ingredients, and strain it through muslin. This starch is used for anything that is wanted very stiff, such as linen collars or shirt fronts.

To remove stains. Ink. On a white material salts of lemon rubbed on the spot and boiling water poured over it will remove it. If a fresh stain use salt and milk, or salt and lemon juice, and expose to the sun and fresh air. Sponge with warm water then with cold. Red ink will take out a black ink stain if put over the black ink at once. The article should be washed directly afterwards. Ink stain on a carpet can be treated as follows, cover the spot with milk, let it turn sour, then sponge with warm water, do this three times. To remove ink stains from the leaves of a book sponge the stain with a solution of tartaric acid, it will not

injure the print, and the leaves should be dried in the open air.

Grease stains can be removed from white articles as a rule by washing them, for white woollen fabrics dissolve a little borax and add it to the water, soda may be used for white cotton goods, but it must be used with caution. A grease mark on a coloured fabric can be removed by putting a piece of blotting paper over the spot and ironing it. Benzine is sometimes used, it should not be rubbed on the stain, but put in a ring round it, it will then draw out the mark.

Paint can be removed by turpentine, or with fresh butter, or with paraffin, sponging the spot afterwards with warm water.

Tar—rub a little butter very lightly on the spot, and then wash the article with warm water, if the tar be very obstinate rub the spot with a little paraffin before it is washed.

Fruit stains on a white cloth can be removed if freshly made by rubbing the stain with salt and pouring boiling water over it; if the stain has dried on to the material rub it with salt and lemon juice, let it remain on the stain for a short time, then pour boiling water over it. Lemon juice rubbed on the spot and then exposing the stain to the air and sun is also efficacious. For a very obstinate stain a very dilute solution of chloride of lime may be used. Rinse the article in warm water, then soak it in the chloride of lime solution, after which wash and boil it. Sanitas will remove fresh fruit stains, but after using it the material should be

washed. Fruit stains on coloured materials are very difficult to remove, the safest method is to make a paste of Fuller's earth, let it dry on, brush it off and sponge with warm water.

Mildew is a very difficult stain to remove, make a paste of Fuller's earth and scraped onions, spread this over the stain, place the article in the open air, and leave it for twenty-four hours, then brush off the paste and repeat the process if necessary. Another method is to rub the stain with either salt and lemon juice, or salt and onion juice, and expose to the air, repeating the process two or three times. The mildew can be damped and rubbed with French chalk, after which expose to the air and sun. Whichever method is used, mildew is rarely removed before it has been tried two or three times.

Stains on a wall paper can be removed by making a paste of either whiting and water or pipe-clay and water; smear this paste over the stain, let it dry on, then brush off carefully and the stain will have disappeared. If the paper have a creamy ground, Fuller's earth should be used to make the paste with, rather than the whiting or pipe-clay.

Soap, tallow candles, black pepper, camphor, napthaline, Russian leather chips, and lavender all help to keep away moth from furs and woollen articles. When put away for any length of time, wrap all woollens up in newspapers as the printer's ink also keeps away moth.

Salt has a great power of attracting dampness to itself, therefore should a cupboard be damp, place a lump of salt

on each shelf, the salt will become damp whilst the rest of the things on the shelf will be dry.

Recipe for household ammonia. One ounce of powdered Castille soap, half a gill of the strongest ammonia solution, mix with these one quart of water, if wanted very strong indeed use less water. Be very careful when adding the ammonia to the soap, also when adding the water to the soap and ammonia. Keep the mixture in a well corked bottle.

It should be borne in mind that milk will extinguish the flames caused by any form of petroleum, never attempt to put out a fire caused by oil with water, it will only increase the flames and cause them to spread.

CHAPTER XII

THE CARE OF INFANTS

In the city of London in the year 1901, 149 infants under the age of one year died in every thousand; in 1902, 141 died in every thousand; in 1903, 131; and in 1904, the numbers rose again to 146 in every thousand.

This awful infant mortality can only be attributed to the gross ignorance and what might be called the criminal carelessness of young mothers concerning their babies, and also to the large proportion of babies who are brought up by hand. Infants nursed by their mothers are rarely ill, that is to say seriously ill, provided that the mother leads a natural healthy life, avoiding rich and indigestible foods. No woman worthy of the name of mother, would bring her child up by hand, unless she were advised to by a medical man.

The most critical period of life is the first six weeks, and the proper food for a baby is its mother's milk, and for the first two months a child should be fed every two hours, the

next two months every two and a half hours, and afterwards from three to four hours until the child is weaned, which should be about the age of eight or nine months. It is absolutely necessary that a baby's food should be regular, to allow it to digest properly. A new born baby's stomach will contain from one to two ounces of milk, that is from two to three tablespoonfuls, and it cannot digest a larger quantity at a time for the first three weeks; if fed too frequently sickness and distress occur.

Fretful babies are often put to the breast to soothe them, this is harmful to the child, and makes the mother's milk become thin and watery. The feeding of an infant should always be a slow process, and a child should never be wakened when asleep for feeding.

The health of the mother who nurses her baby is most important, for if the mother be unhealthy the child must suffer. No woman who is suffering from any disease or who is in ill health should be allowed by her doctor to nurse her child. All indigestible foods should be avoided and for those who can afford it the diet should be supplemented by a plentiful supply of milk. Alcohol is quite unnecessary, and is more likely to do harm than good, and should never be taken except by the doctor's orders. A mother who is nursing her child should do all that she can to keep healthy, have plenty of fresh air, she ought not to over-tire herself, but should plan out the work of the day so that she may get a certain amount of rest to make up for her disturbed nights If the mother's milk cannot supply sufficient

nourishment for the child, it is not always advisable to wean it, but cow's milk should be used to supplement the child's natural food.

Weaning a child. A baby should be weaned when it reaches the age of eight or nine months, the process should be done gradually, beginning at night, and as the new food suits increase the quantity. In towns babies should not be weaned in the months of August and September, or in very hot weather owing to a virulent form of diarrhoea which is prevalent in those months and in hot weather and is fatal to babies that are hand fed, as the bacteria of this form of diarrhoea, are found in milk, and are only in the milk sold in towns. They are rarely if ever found in country milk.

To bring a child up by hand. Children reared artificially should be kept on milk alone until the age of seven or eight months, as up to that time the digestive juices are not in sufficient quantity to digest anything else. Milk is a perfect food in that it contains nitrogenous matter in the casein, which nitrogenous matter supplies the elements of growth. It contains fat, which helps to maintain the body heat, also supplies muscular growth and is essential to the growth of the body, especially for children, and milk contains sugar. An infant's stomach will not digest starch, as there is not enough ptyalin in the saliva nor enough pancreatic juice until the age of eight months to convert the starch into sugar, therefore, until a child reaches that age, no starchy foods should be given to it. At six months old a child should weigh double what it did at birth.

The poor and the ignorant will not believe that starchy foods cannot be digested nor assimilated by the tissues in tiny babies, whilst in fact starchy foods will often act as irritant poisons, the baby ceases to thrive, it gets thinner and thinner, there is a ceaseless and apparently causeless wailing, diarrhoea sets in and the child dies. Some babies, if very strong, will survive being given starchy foods and other improper feeding, but as a rule they will afterwards develop rickets.

Cow's milk is the best substitute for the mother's milk, but it must be prepared to approach the chemical proportions of the human milk. All milk when it reaches the stomach becomes curdled, the casein of human milk when curdled in the child's stomach becomes soft and easy of digestion, the casein of cow's milk when curdled becomes hard and tough, and not easy to digest, therefore for an infant the milk must be diluted with water. In preparing cow's milk as food for an infant under three months old, give one part milk and two parts water. From three to six months old give equal quantities of milk and water, and from six to eight months old give two parts milk and one of water, over eight months old give all milk. Both the milk and the water should be boiled, and a small quantity of cane sugar should be added. Up to three months old the quantity in each bottle should be from three to six tablespoonfuls, up to six months increase the quantity up to twelve tablespoonsful and after that up to sixteen.

All milk is an animal food, and it contains a peculiar

ferment which renders it antiscorbutic, and it is on that account a preventive to skin disease. All prepared foods are of vegetable origin and are not antiscorbutic. The result of giving starchy foods to babies under eight months old is shown in the tissues, which have a peculiar translucent appearance, the child has a peculiar square head, the skin is cold and flabby to the touch, and will almost pit on pressure, having no elasticity nor firmness and there will be a tendency to rickets and skin disease.

Condensed milk is made from separated milk boiled down to one-fourth of its original bulk. Having had the cream taken away it is deficient in fat. There are two kinds of condensed milk, the sweetened and the unsweetened, the latter is the better of the two. To feed a child on condensed milk only is practically to starve it, and if it were forbidden by law to make it the sole food of an infant, the infant mortality would be far less than it is at present. For temporary use it is sometimes useful.

The high temperature necessary in the preparation of condensed milk to make it keep, destroys the antiscorbutic properties of the milk. It has two advantages, it keeps well and the curd is softer, therefore it is more digestible; its disadvantages are that contains too much cane sugar, twice as much as the lactose in human milk, and it is not fresh.

If the food given to a child agrees with it, it will increase in weight.

To prevent milk turning sour or being otherwise con-

taminated, it should be put into stoppered bottles and chilled by plunging it into very cold water, then heat the milk up to 166° Fah. by putting the bottles containing the milk into a pan that has water in it, put the pan over the fire and keep it at 166° Fah. until all the water has evaporated, then chill the milk a second time by pouring cold water over the bottles, and leave them in the water until they are wanted for use. The milk should be well shaken in the bottles before putting it over the steam.

For the poor the municipal authorities should have the milk sterilized, and then sold in stoppered bottles, each bottle containing one prepared meal for the baby, and the day's supply could be issued at a time. In Battersea this has been done. The milk has to be fetched from the dairy, and a leaflet is sent with it stating how the milk has to be treated. Just before it is required the bottle, unopened, should be placed into a jug of hot water to warm the milk. When it is heated the bottle is unstoppered and a teat is fitted over the top converting it into a feeding bottle. No milk left over from one meal should be warmed up a second time for the baby.

Feeding bottles and teats must be washed at least once a day with boiling water to which a little soda has been added, then they should be well rinsed in cold water. They must be washed after every meal and should be kept in a basin of clean cold water, otherwise they will not be healthy.

Bathing and dressing babies. All babies should

be washed all over with soap and warm water once a day. The bathing process should be done in a warm room that is free from draught, and the water should be tested with the point of the elbow before putting the child into it, as a baby should not be put into very hot water. Be careful of the child's head when putting it into the bath, and be sure that its whole body is carefully dried. Dress the child quickly and try not to keep turning it over and over, and care must be taken when the child is turned over on to its face, that its mouth and nostrils are not pressed against the nurse's knee, as that would cause suffocation.

The clothing of babies. Babies lose heat very rapidly, their circulation being poor, therefore they must be kept warm, and all their clothes should be bad conductors of heat. Let the clothing be of wool, have it light and loose and there should be no pins. Binders should be made of flannel, their object being to keep the naval cord in place, after the first week they are not absolutely necessary, but are continued to prevent the child catching a chill. If put on too tight a binder will contract the chest and abdomen, and may cause hernia (rupture).

Teething. When cutting teeth a child's nervous system is in a most irritable condition, and he will probably be very fretful and peevish, and will drivel considerably. During teething give the baby plenty of fresh air, pay attention to the action of the bowels, and above all things keep to the milk diet. Never be persuaded to give a baby teething powders, for they as a rule contain minute

quantities of opium, which would probably make the child really ill.

Thrush sometimes appears when a baby is teething. It is nearly always caused by the food not being properly digested. It is a disease that is contagious to unhealthy children, and consists of small white patches on the back and edge of the tongue, the cheeks and roof of the mouth. It is very painful, and as it is a very exhausting disease the body heat of the patient must be kept up. White wine whey made as follows may be given in small quantities. Bring half a pint of new milk to the boil, then add a wine-glassful of sherry, boil for three minutes and strain. In cases of thrush always consult a doctor.

Diet for babies from eight months old to a year old. At eight months old milk should be supplemented. Thin gruel may be given, the oatmeal being one-third of the quantity of milk, biscuit powder and Benger's food may also be given, and barley water. Up to the ninth month, the child should have six bottles in the twenty-four hours, each containing from six to eight ounces. From nine to twelve months, five bottles in the twenty-four hours each bottle containing eight ounces. Too much milk at this period will cause flatulency—the curd not being digested. Too much farinaceous food will cause rickets, dessicated and condensed milk are apt to cause skin disease. After twelve months the staple food should still be milk varied with porridge, which should be strained, milk puddings, lightly cooked eggs, chicken and mutton broths, and cooked fruit.

Too much food should not be given at a time, and it should not be too thick and solid.

Dr. Ashby's diet for a baby of a year old. First meal, breakfast at 7.30 to 8 o'clock. Breakfast cupful of milk, thin porridge or bread and milk. 10.30, Milk and barley water or lime water. 1.30, Beef tea, chicken broth, mutton broth with crumbs or sago in it; milk puddings, especially rice; baked apples or bananas. 5 p.m., the same food as breakfast, and just before going to bed a cup of warm milk and barley water.

From eighteen months old to three years, fish, fowl, mutton, mashed potatoes with milk, soup, an underdone chop shredded finely and eaten with mashed potatoes, lightly cooked eggs, milk puddings and stewed fruit, make a diet that is not only wholesome, but one that gives variety. No rich nor highly flavoured food should be given to little children, neither should a child under five years old be given tea or coffee, whilst any stimulants should only be given by the doctor's orders.

Children should be taught to masticate their food properly and to eat slowly, and a child should never be forced to eat if it is not hungry. All milk and any other food given to infants should be quite fresh, and all utensils used in the cooking of the food must be spotlessly clean.

CHAPTER XIII

HOME NURSING

The Nurse—The choice of the Invalid's room—Temperature of the sick room—Ventilating a sick room—Cleaning a sick room—The Invalid's bed—Changing the sheets with the patient in bed.

It is to the women of the household that everyone turns when sickness occurs, therefore every woman should have some knowledge of what would be wanted of her if an emergency arises. When an illness happens in the household, it is better for one to do the nursing, and she should be responsible for the case, receiving and carrying out the doctor's orders.

A nurse must be accurate in observation, and every little detail concerning the patient must be told to the doctor; she must be obedient in carrying out his orders; she must be firm, tactful and kind, especially with children, resourceful and prompt, self-possessed, bright and cheerful, although realizing the gravity and danger of the illness. She must be clean and neat in person, quiet in manner, but

never stealthy, and she should not keep worrying the patient with questions as to how he is feeling, nor should she be perpetually shaking up his pillows.

As to the nurse's dress, her underclothing should be clean and changed frequently, her gown should be made of some soft washing material, that will not rustle as she moves, it should clear the ground all round. A large white apron with pockets should be worn, and there should be no jingling ornaments to tease and worry the patient. For a nurse, personal cleanliness is essential, and any cut or sore she may by accident get on her hand, must be carefully dressed and bandaged before she does anything for the patient. Rest, food, and fresh air are necessary to keep the nurse in health and make her fitted for her duties.

The choice of an invalid's room must depend greatly on the case. If a long illness be probable, have the largest, brightest, and best ventilated room in the house, and if possible let it be near the living rooms; for an infectious case, if not able to send the patient to an hospital, let his room be as isolated as possible, and it should be at the top of the house. An invalid's room should be quiet, and it is better to have a southern or south-west aspect, facing north makes it cold; as there would be so little sun, an easterly aspect is not good, as the sick so often fall asleep in the early morning, and to have the sun streaming in then would make the patient restless, even if it did not actually wake him. In the invalid's room the windows should open top and bottom, and there should be a fireplace.

The temperature of a sick room should be kept even, sudden cold or great heat are apt to cause serious results in an illness. 60° Fah. is the correct temperature for ordinary living rooms, 65° Fah. for an invalid's room, whilst for old people and babies the temperature may be raised to 70°. Hang the thermometer over the bed where there will be no draught. Temperature and the vitality of the patient are lowest about 3 a.m., so it is necessary to see that the fire in the sick room is not allowed to get too low. In making up the fire, have each piece of coal wrapped in paper, and put it on with the fingers to avoid making any noise to disturb the patient. To lower the temperature of the room,—in winter do not have such a big fire, in summer, when obtainable, have a block of ice standing in a zinc pan, use dark blinds, or better still have an outside blind, as that does not exclude the air.

In ventilating a sick room, a fireplace is a necessity, as the chimney is a great aid to ventilation. When there is a fire the air is heated by it and passes up the chimney, its place being taken by a current of fresh air which should enter through the window. The window can be opened a little way at the top if the patient can bear it; and it is a good plan to push up the lower sash of the window, and fit a block of wood below it, shut down the sash on the wood, and the fresh air will enter through the opening between the upper and lower sashes of the window without any fear of draught. The door is no use as a ventilator as fresh air is needed to keep a room wholesome. "Doors

are made to shut, windows to open," says Florence Nightingale.

The furniture of an invalid's room should be cheerful and as simple as possible, avoid upholstered furniture and heavy hanging curtains, chintzes or cretonnes are the best to have for window curtains, as they will wash ; the bed should never have curtains as they keep away the air. If a draught be feared a folding screen can be used. Carpets are not wanted at all in a sick room, all that is necessary is a strip of carpet beside the bed, and a hearth rug, these can be rolled up, carried outside and shaken each day. Never choose a room for an invalid with an ugly paper, or one that has a staring pattern, as, when a patient is feverish, and in a dim light, the pattern on the paper may appear to him in all sorts of hideous and terrible forms.

When cleaning an invalid's room, never sweep to make a dust, therefore avoid using a long broom ; if the patient can bear it, use a dust pan and brush, but should the illness be caused by any chest complaint the floor should be well rubbed, first with a damp cloth then with a dry one. All china should be washed outside the room, and every day the flowers should be re-arranged to ensure their being quite fresh and to make a little variety. It is not advisable to leave flowers in the room at night, they should be carried outside. Keep the room as clean and bright as possible, with as little possible noise and worry to the patient.

The best bed for an invalid is an iron cot six feet long by

three and a half feet wide, as that size is long enough to allow the patient being lifted when his bed is made, and being narrow, he can be easily reached, which saves much fatigue to both patient and nurse. A wide bed is a mistake for a sick person, as to reach him in order to lift him or to arrange his pillows the nurse would have to kneel on the bed which would shake the patient, and is a very awkward position for the nurse. A feather bed must not be allowed in sickness, as the patient would sink into it, and it would become lumpy, as it would not be possible to shake it up properly with the patient in bed. A hair mattress is the best to have, and chaff mattresses are sometimes used. They are cheap, and should they get soiled, the chaff can be removed and burnt, the casing washed, dried, and re-filled. All the bed-clothes should be light and warm, cotton sheets are better to use than linen ones, and new blankets are better than those that have been constantly washed. Cotton counterpanes should not be used as they are heavy and keep in perspiration. In cases of sickness the patient as a rule lies between sheets. For rheumatic fever or rheumatic chills do not use sheets, as the warmth of the blankets is needed.

To make the bed get everything ready that will be needed, let the sheets be aired and warmed, and the patient should be given some food a short time before his bed is made. Over the mattress and across the middle third of the bed is placed the mackintosh sheet, this is especially needed for children and paralytics. It must be fastened securely

on either side, and this is usually done with safety pins. No under blanket is used, as it is apt to cause bed-sores, be sure that there is no crease in the under sheet. Over the under sheet and above the mackintosh is placed the draw sheet, it can be either a small sheet the size of the mackintosh, or it may be a large sheet folded in three and rolled loosely at one end, and tucked under the mattress, but it must not cause a lump. The draw sheet like the mackintosh must be securely fastened to prevent any creases.

To change the sheets with the patient lying in bed, take the clean warmed sheet and roll it in half length ways, untuck the clothes all round the bed, fold the bed-spread in three, lift it off the bed and place it across two chairs. If more than one blanket be used, fold the top one in three and place it with the bed-spread. Next put the hand under the remaining blanket and remove the top sheet, leaving the patient covered with the blanket, then remove the bolster, which should be in a case and not tucked into the end of the under sheet, and turn the patient on to his side. Roll up the under sheet to the patient's back and lay the rolled clean sheet against it, tuck it in along the side of the bed, turn the patient carefully on the clean sheet, draw away the soiled one and unroll the clean one, tuck it in, replace the bolster and re-arrange the pillows. Lay the clean upper sheet over the blanket covering the patient, on it lay the second blanket, remove the blanket next the patient and place it on the top, tuck in the clothes all round

the bed and replace the bed-spread. When putting in the under sheet, arrange if necessary the draw sheet and the mackintosh.

For surgical cases it takes two people to make the bed, as in some cases it would be very dangerous to turn the patient from side to side. In these cases the under sheet is rolled from top to bottom, the two nurses lift the patient's shoulders, roll up the under sheet and unroll the clean one until the middle of the back is reached, the patient is then laid down and the hips are raised and the rolling and unrolling of the two sheets is continued; lastly the feet are lifted up, the soiled sheet is taken away, and the clean one is in its place. The bed-clothes covering the patient are arranged as above described.

CHAPTER XIV

Observing a patient—Taking temperature—Washing and dressing a patient—Bed-sores—Bed-rests and cradles—Colds and sore throats—Burns and scalds—Uses of the triangular and roller bandages.

ALL good nurses will watch their patients closely, no symptom is too small not to be taken notice of, the slightest change in the patient's condition may herald a dangerous crisis in his illness, so every change as it occurs should be noted down and told to the doctor. The temperature of the patient is most important and should be taken at least night and morning. The normal temperature is 98.4° Fah. and should it rise or fall ten degrees above or below this point the case may be looked upon as hopeless. To obtain the exact temperature a clinical thermometer is used, which is usually guaged from 95° to 110°. It should be placed beneath the tongue, or with children, in the arm pit. The thermometer should always be kept in Eau de Cologne or carbolic, just a drop or two of either in the

case will be sufficient, and it must always be washed before and after using.

Posture must always be taken notice of by the nurse, in a long illness, such as typhoid fever, the patient will lie quite flat, and any wish to raise the head may be looked upon as a good sign. In cases when breathing is a difficulty, and the patient has to be propped up with pillows, the desire to lie down is good, provided it does not mean a sudden collapse and death. In congestion or inflammation of the lungs, the patient will of his own accord lie on the side that is least affected. Shivering fits must never be neglected. Place hot water bottles at once to the feet, and cover the patient up warmly. Sleep is most important, and when the patient falls into a natural sleep the crisis of an illness is often passed. The nurse must note the exact length of time the patient sleeps and whether he sleeps quietly or is restless. Narcotics must never be given except by the doctor. The tongue, which is looked upon as the index of the digestive organs, should be looked at before the patient is given food. In fever it is often swollen and discoloured, in gastric diseases furred. Any change in its condition should at once be told to the doctor.

Bed-sores are caused by pressure, moisture and heat. "Continual pressure prevents the free passage of blood along the minute blood vessels of the parts pressed on, so that they are deprived of their proper nourishment and consequently die or slough." To prevent these sores, absolute cleanliness of the patient and his bed are

necessary, also to help to harden the parts of the body pressed on by lying in bed, after washing the patient lightly, rub over with Eau de Cologne or methylated spirit those parts that might become sore with continued pressure. Be sure that the bed is well made; have no creases in the sheet. If a bed-sore be neglected it will become permanent. The attention of the doctor attending the case should at once be drawn to any affected part. Zinc ointment, boracic ointment and carbolic oil may be used for bed-sores.

Washing and dressing a patient. It is not advisable if the patient be very weak to attempt to do all the washing and dressing at one time, the face and hands should be washed before breakfast, as this refreshes the patient. Before starting to wash and dress a sick person, give some nourishment, then get everything that can possibly be wanted ready. All clothing should be warmed to prevent chill, the towels also should be warmed. Place a screen round the bed to keep away draught and the room door should be shut, some nurses lock it to prevent interruption. Slip a warmed dry towel beneath the patient to prevent the sheet getting splashed, and wash the patient by doing a small part of him at a time, being careful to dry the spot and to keep the rest of his body covered up. Girls and women who have long hair should have it brushed and plaited in two plaits at least once a day, choosing a time when it will be the least fatiguing to have it done. For cleansing the mouth, unless the patient be very ill indeed, it is better for him to clean his teeth in the

ordinary way with a tooth brush ; if, however, he should be too weak to do this, make a little mop with a sponge, dip this into a very weak solution of Condy's fluid—half a teaspoonful of the fluid to half a pint of water—and gently wash out the mouth. In surgical cases affecting the limbs, all clothing should be removed from the sound side first. In putting on clothing the injured side is always done first. If both sides are injured, the garments should be opened all the way down and fastened together with tapes. For an injured arm the sleeve should be slit from neck to wrist. Rheumatic fever cases are treated as surgical cases when dressing a patient.

Bed-rests are supports used by patients to enable them to sit up in bed, they are of the greatest help and comfort especially when the patient has his meals. Canvas bed-rests with adjustable frames can be bought, these can be placed at the exact angle which gives the most relief and comfort to the patient. An inverted chair makes a very good bed-rest, the slant of the back should be well padded with pillows, and it should be remembered that a sick person's head always needs support.

Cradles are used to remove the weight of the bed clothes from a wounded limb. Bought ones are as a rule made of a series of iron hoops fixed to two bars, thus forming a succession of arches. A good substitute can be made with a strong band box turned upside down, with a hole cut in it sufficiently large to go over the injured part. An excellent plan is to pass a gimlet through the bed clothes, fix the point

firmly in a cork, fasten a stout piece of string to the top of the gimlet and tie it to a nail placed rather high on the wall. Sometimes two gimlets are used to ensure the bed clothes being lifted quite evenly. Never be persuaded to use a three-legged stool as a cradle, as they are apt to fall over and might cause untold harm.

Colds and sore throats. The causes of colds are many. Damp, draughts, and unsuitable clothing are perhaps the most frequent. The symptoms of a cold are usually a roughness at the back of the throat, sneezing, and a heavy headachy feeling in the head. If not obliged to go out the next day, the best remedy for a cold is a hot bath, after which go straight to bed and take something very hot, such as a glass of hot milk, a cup of gruel made with milk, hot lemonade, or hot black currant tea, to cause perspiration. Putting the feet into hot water and mustard is also a good remedy. The patient should have the foot bath in front of a fire, and should be covered with a blanket, and when he is quite hot he should go to bed. When a cough accompanies a cold, care should be taken, as a cough so often leads to bronchitis. For a cough, rub the chest, back and front, night and morning, with either Stokes' liniment, or with Chili paste, or with mustard oil. The greatest preventive to catching cold is to go out in all weathers, provided one is quite well and is suitably clad. Never wear damp boots, and never sit about in damp clothes.

Sore throats. A sore throat may arise from a cold.

The throat may be ulcerated, or it may be relaxed, or it may be tonsilitis, which means inflamed tonsils, and is often accompanied with high temperature and great weakness. For a sore throat caused by a cold, gargle frequently with a little warmed milk. For an ulcerated throat, glycerine and borax. Borax and honey eaten very slowly or an alum gargle will give relief. Medical aid should always be sought in cases of ulceration, as an ulcerated throat is often the beginning of an attack of quinsy. Relaxed throats are as a rule caused by debility; the general health should be attended to, change of air is often necessary, and the following gargles could be used, salt and water, or vinegar and water, or lemon juice and water. Tonsilitis should always be treated by a doctor, but until he comes, hot fomentations, hot flannels, camphorated oil or mustard oil could be applied externally. Cold water or Eau de Cologne compress will often bring relief to a sore throat, and will also often allay hoarseness caused by a cold in the vocal cords. The following is a well tried cough mixture. Dissolve two ounces of gum arabic in a pint of hot water, add a quarter of a pound of crushed sugar candy, bottle and shake well before using. Give the patient a wine glassful of this mixture before breakfast and before going to bed.

Burns and scalds are practically the same thing, the former is caused by dry heat and the latter by moist heat. They may be divided into three classes:—1. The burn or scald which affects only the top layer of the skin, causing

a red mark and a smarting sensation. 2. When the burn causes a blister. 3. When the injuries penetrate through the skin to the tissue below. Never leave a burn exposed to the air but cover it at once. If the skin be not broken, very gently rub the affected spot with carron oil, then cover it with a piece of soft clean linen soaked in carron oil, bandage it to keep the dressing in place, and in a few hours the pain should be gone. If there should be great irritation, make a solution of carbonate of soda, soak some soft linen rag in this and apply. When a blister has been formed by the burn, do not attempt to cut it; leave that for the doctor to do should he think fit. Soak some soft linen in carron oil and cover up the wound. Carron oil is made of equal quantities of linseed oil and lime water. The following is an excellent dressing for burns, and it has never been known to fail in the worst cases. Mix together two tablespoonsful of spirit of wine, two tablespoonsful of Goulad water and one pint of thick cream. Soak some linen in this mixture and apply to the burn. Do not allow the dressing to get dry night or day until the burn has quite healed. Should a person's clothing catch fire, put out the flame by wrapping anything that is thick round him. If nothing thick be handy, roll him on the floor as flames rise upwards. Remember to place the face downwards as the vital organs lie to the front of the body. Nothing gives a greater shock to the nervous system than burning, therefore, before seeing to the injuries of any one who has been burnt, if he should be conscious, give him

something—if only a cup of milk. Send at once for a doctor, and while awaiting his coming, cut away the clothing from the affected parts. Apply carron oil to the burns. If there should be no carron oil, use olive oil, if no oil at all obtainable dredge on flour or powdered whiting—anything to keep the air away from the wound until the doctor comes. Soft linen is best to use for the dressing; and unbleached calico, after it has been washed many times, is also very good. In re-dressing burns, great care is needed, the dressing must never be pulled off, but if it sticks, soak it in oil until it comes off. Doctor Robert Watson strongly advocates dressing burns with a solution of picric acid, and gives the following prescription: "Picric acid 40 grains, alcohol one ounce, distilled water 20 ounces." The alcohol is needed to dissolve the picric acid crystals. "Cloths soaked in this solution and laid upon the burned surface not only hasten healing but lessen the pain, and if scar there must be, give the tissues such aid that the smallest, smoothest, and supplest scar results." (Dr. Robert Watson.)

Burns, as a rule, other things being equal, are more fatal than scalds, but as both cause the same damage to the tissues, the treatment of both is the same.

For a scalded mouth, drink some very cold water, or some iced milk, or suck a piece of ice. For a scalded mouth send at once for a doctor.

Oiled silk should always be placed over the dressing of a burn, and beneath the bandage that keeps the dressing in

place. The bandage may be either a triangular or a roller bandage. The former, as its name denotes, is a three-cornered piece of linen, calico or unbleached calico. It is used as a support and to keep dressings in place. It may be 27 inches, 36 inches or 40 inches across, the smallest size being used as a rule for the hand. Roller bandages may be made of any material giving sufficient strength, lightness and softness. The length is from four and a half yards to six yards, and the width varies from three quarters of an inch to four and a half inches. Like the triangular bandage it is used to keep dressings in place, to give support, to keep on splints, and is sometimes used as a foot sling.

CHAPTER XV

Childish ailments—Convulsions—Rickets—Adenoids—Croup—Whooping cough—Diarrhoea—Constipation.

On the women of the household lies the responsibility of caring for the children, whether in health or in sickness. Therefore every woman, no matter whom she may be, should have some knowledge of what should be done when the occasion arises, and many valuable lives might be saved did the mothers and nurses know what to do whilst waiting for the doctor to arrive.

Convulsions are perhaps the most terrifying of all the childish ailments to the inexperienced. They are caused sometimes by teething, improper feeding, constipation, and worms. The symptoms are a twitching of the muscles, the clenching of the hands, and the gradual stiffening of the whole body. Doctor Macgregor Robertson says, at once loosen the child's clothing and dash cold water on the neck and chest, then put the little patient into a warm bath, testing the water with the point of the elbow, before putting the child into it, for fear of scalding the child's delicate

skin. Keep the child in the warm bath for five minutes, then roll him up in warmed blankets until the doctor comes. If the convulsions are caused by improper feeding, a dose of castor oil is often efficacious, as it will remove what is disagreeing with the child. If caused by constipation, the child's diet must be changed, or if the mother is nursing her baby she should change her diet. Frequent convulsions, with no apparent reason, point to severe brain trouble and must be treated by a medical man. The great thing to remember is, at the first sign of convulsions put the child into a warm bath, and above all things be prompt; do not wait until it is too late.

Rickets are caused by a deficiency of food, improper food, bad air, and general insanitary living. A child that is nursed by its mother until it is a year or fifteen months old is liable to this disease, and among the hand fed children of our poorer neighbourhoods it is alas! very prevalent. Among the minor symptoms of this disease are cutting the teeth late, and being backward in walking and talking. Major symptoms are the following: the child does not thrive, there will be profuse perspiration on head, neck, and chest, the muscles are flabby, there is apparently causeless and almost ceaseless wailing and crying, the wrists and ankles become swollen, and there is great irritability of the nervous system. The effects of rickets can be seen in the many knock-kneed, bandy-legged, and pigeon-breasted children one meets. It also renders the sufferer liable to catch cold and infectious diseases, and it gives a tendency

to diarrhoea, and also to curvature of the spine. The treatment for rickets is to give strict attention to cleanliness and healthy living, and to diet. The child suffering from it should be given plenty of fresh milk, fat and fatty foods. During the winter cod liver oil should be taken daily. Fresh air and sunshine are also indispensable to the cure of rickets. It may be said that this treatment would be impossible for the poorer children in our great cities. I grant that it might be difficult, but it can, and has been done.

Adenoids are a tissue growth which comes at the back of the nasal passage. They will hang down and block the nasal passage, and also the passage to the ear. This stoppage will often set up slow inflammation causing running at the ears. Adenoids are most common under the age of eight years, fairly frequent up to fourteen, and are practically unknown after twenty-four. The cause of the growth is as a rule heredity. Boys suffer more frequently from adenoids than girls do, and the child who has them is more liable to take diptheria, scarlet fever, and measles, because the fact of suffering from them renders the child unhealthy, and the adenoids filter the air catching the germs. The symptoms are defective breathing, as they prevent the air getting into nose and ear, and the child cannot breathe through his nose; he will snore when he is asleep, and sometimes when awake. The mental powers are sluggish and delayed, and very often the sufferer is unable to pronounce "m.th," the conditions being those of a severe cold in the head. If adenoids are not attended to, grave illness

may result and the patient may become quite deaf. Fifty per cent of the children suffering from adenoids also have enlarged tonsils. The consequences of adenoids are a narrow nose, a small upper jaw crowded with teeth, and the patient often becomes pigeon-breasted. They are a source of more discomfort and of minor ailments in childhood than anything else, and to ensure health they should be removed.

Croup, which is inflammation of the larynx, is an ailment to which many children are subject. It usually comes on at night and is very alarming. The symptoms of an attack of croup are those of a bad cold, the child will speak hoarsely, there is a dry and frequent cough which turns to the croup cough, which is a long drawn out breath ending with a catch or crow, and as a rule the sufferer will be very feverish. The treatment for croup is to put hot fomentations to the throat and chest, keep the patient's room at an even temperature, and, especially in winter, keep the fire in night and day. It is a good plan in cases of croup to keep a kettle boiling in the room, as the steam from it will lessen the difficulty in breathing. At the first sign of croup give the child a dose of ipecacuanha wine, as it will make him sick, which gives great relief. In cases of croup a doctor should be sent for, but if he be delayed in coming, acting with knowledge and promptitude will often save the child's life. A child subject to croup should be always clothed in woollen garments; he should not be allowed out in a keen east wind, but otherwise give him as much fresh air as pos-

sible. After the age of seven, croup will disappear, but the child will continue to need great care taken of him.

Whooping cough is very infectious, and is very dangerous to children under two years of age. Three fourths of the deaths of children under that age are attributed to whooping cough, and a large percentage of the deaths of children under five are due to the same cause. The infection is caught by inhaling the patient's breath and it is greatest at the earlier stages of the disease. The symptoms are those of an ordinary feverish cold. The child grows pale, loses his appetite, and then the cough begins with a series of hard, dry coughs, which before long come on in paroxysms of coughing. The treatment for whooping cough should be carried out as follows, insolation, warm clothing, room kept at an even temperature, in fine and warm weather be out in the fresh air and sun as much as possible, give light and nourishing food and pay strict attention to the action of the bowels. Always consult a doctor in a case of whooping cough, and carry out his directions.

Diarrhoea is sometimes caused by teething, improper food, cold, damp and chill. If caused by teething do not try to stop it unless it becomes severe, and then it is safer to send for a doctor. A slight attack during teething is often natural and will do good rather than harm. If caused by improper food, find out what the child has been eating and change his diet. For older children, not babies, rice water will stop or will help to stop persistent diarrhoea.

Use one ounce of rice, wash it well and put it into an enamelled saucepan with one pint of water, boil until the water is reduced to half, then strain off the rice and use the water. Out in India this remedy is used by young and old in cases of bad diarrhoea. Cinnamon boiled in milk is a very good and safe remedy, and arrowroot and corn-flour are constantly used for those who are suffering from diarrhoea. Brandy should be given with great caution, and it is far safer not to give it at all unless by the doctor's orders.

Constipation in children is often caused by their mothers and nurses not teaching them regular habits. Over-feeding will cause it as will improper food. Aperients should not be given constantly in cases of constipation, but give fruit in the morning, and for tiny children baked apples, bananas, and raisins (stoned) put into a pie-dish covered with water and baked until quite soft are excellent. Children who are over five years old can eat almost any vegetable, and stewed figs and prunes in addition to fresh fruit are most wholesome. Oatmeal porridge should be found on the nursery breakfast table at least three times a week, and for the children of the poor it forms an invaluable food. For children under three years old oatmeal porridge should be strained, and it should be taken with plenty of milk and golden syrup or sugar. Children who suffer from constipation should be given wholemeal bread every other day in preference to always having white bread. For very obstinate cases a dessertspoonful of olive oil night and morning will almost always give relief.

CHAPTER XVI

Common ailments— Earache —Toothache— Headache— Corns— Chilblains—The care of the Eyes—Cuts—Bruises—Sprains.

Earache. The causes of this intense pain are draught, cold, foreign substances in the ear, and very often general debility. The remedies that can be used for it are very numerous. Hot flannel laid against the ear and bandaged to keep it in its place and to keep the heat in, is often used. Hot fomentations, and hot fomentations of poppy heads, hot salt put into a bag and placed against the ear, hot bran bag, all bring a certain amount or relief. The old fashioned remedy of the heart of an onion roasted and placed in the ear sometimes does good as does a raisin roasted and placed in the ear whilst it is hot. Laudanum put on cotton wool and placed in the ear will deaden the pain, and warmed salad oil, either dropped into the ear or put on cotton wool and placed in the ear, can also be used. Either of these remedies could be used for earache that is caused by a cold, but if the pain be very persistent the general health should be seen to, and a medical man

consulted. Pay attention to diet and clothing, and let the patient take plenty of open air exercise. To remove a foreign substance from the ear, pull the lower ear forward and upward, this will enlarge the canal of the ear. Never allow anything like a pencil or a hairpin to be pushed into the ear or it may do untold injury to the drum of the ear. If the ear has to be syringed, be very careful to see that it is well dried afterwards.

Toothache in nine cases out of ten arises from decay, which means the breaking away of the enamel which covers and protects the tooth, and therefore all the delicate nerves of the tooth are exposed to every change of temperature. Cold will cause toothache, and an abscess at the root of a tooth is most painful. Toothache also arises from nervous disorder and general debility. To prevent decay, the teeth should be kept scrupulously clean, they ought to be brushed at least night and morning, the night being the most important time as cleaning the teeth then prevents particles of food sticking between them and fermenting during the night and so causing decay. Tooth powder of some kind should be used once a day, and those containing much carbolic are to be avoided, as the carbolic wears away the enamel and is apt to cause decay. If the pain arises from an abscess at the root of a tooth, that tooth as a rule must be extracted. A good remedy for a gum-boil is to split open a fig, make it very hot and place it between the gum and the cheek, it acts as a poultice and should be applied constantly until the gumboil breaks.

Decayed teeth should be stopped directly they begin to go, and the modern dentist, instead of extracting a child's first tooth if it be decayed will stop it, so that the child may have his teeth to masticate his food with. For toothache caused by a cold, iodine painted on the gums is an excellent remedy. The mouth, after a tooth has been pulled out, should be well rinsed with warm water containing some slight disinfectant to cleanse the cavity.

Headaches are caused by the general health being out of order, and by overtaxed nerves. For a bilious headache administer a strong aperient, bathe the temples with vinegar and cold water, or with Eau de Cologne. If that does not bring relief put a mustard leaf or a linseed and mustard poultice at the back of the neck. Darken the room and make the patient lie down. If he can be sick the pain will probably yield to sleep. When he awakes give him a cup of tea without either milk or sugar, but if liked a squeeze of lemon juice may be added and some fingers of dry toast without any butter. A nervous headache is caused by overstrain, either physical or mental and sometimes by both. If caused by want of food a meal will generally take away the pain. If the pain be very bad, make the patient lie down in a darkened room and apply hot sponges to the top of the head and to the back of the neck. Lavender salts to smell and a mustard leaf to the back of the neck will almost always bring relief. Should headaches be continuous, a medical man ought to be consulted.

Children's headaches need special attention, as it is not natural for a child to suffer from headache. When a child first complains, attend to his general health and diet, give plenty of milk and stewed fruit, make him lie down in the middle of the day, and be sure that he leads a regular life, and that he is out in the fresh air and sunshine as much as possible. If the headache be persistent call in a doctor, as it must be remembered that headaches with children so often mean the beginning of an infectious disease.

Corns are caused by wearing misfitting boots and shoes, and by long and continuous standing, they are extremely painful and cause the greatest discomfort. To prevent them, wash the feet daily and rub them if at all tender with either methylated spirit or Eau de Cologne, and be careful to wear boots that fit. If at the end of the day the pain is very bad, and the foot has a burning sensation, soak the foot in hot water and soda, and file away the corn. To prevent the boot pressing on the corn, corn plasters are sold, these are made of small circles of plaster and felt, the hole in the plaster is placed over the corn, thus keeping away all pressure from it. Soft corns come between the toes, and are even more painful than an ordinary corn. When there is a tendency to soft corns great care must be taken to dry between the toes after washing the feet, and a toilet powder, such as prepared oatmeal or Fuller's earth should be used, and during the day put a little piece of cotton wool between the toes to relieve any pressure that there may be.

Chilblains are as a rule constitutional, and it is an almost impossible task to prevent them. The hands and feet should be kept warm, thick soled boots should be worn in damp or cold weather, and plenty of exercise should be taken. Night and morning use friction, do not wait for the chilblains to appear, but rub the feet well to induce circulation. For unbroken chilblains there is no better remedy than the following prescription. A quarter of an ounce of strong ammonia solution, half an ounce of tincture of opium, and one ounce of camphorated oil. Paint this mixture on the chilblains two or three times a day. If the irritation be very great, soak the chilblains in hot water and soda, and afterwards rub any spirit on them. Dry mustard and an ointment of mustard and lard can be rubbed on every night, and painting with iodine can be used for unbroken chilblains. For broken ones, opium and soap and boracic ointment are very safe remedies. A person who suffers from chilblains should take cod liver oil regularly every day from October to April. It may be very nasty but one soon gets accustomed to it, and if taken the last thing before getting into bed it will produce no feeling of sickness.

The care of the eyes.—Although the eyes are of the greatest importance to every human being, yet nine persons out of ten neglect them sadly. They should not be strained by working, reading, or writing in a bad light, nor by the flickering fire light, and if any one suffers from weak or inflamed eyes they should be bathed night and morning with boracic lotion. This lotion is very easily made. Take a

level teaspoonful of boracic powder and dissolve it in half a pint of very hot water. Make it in a bottle and shake it well. At any chemist can be bought an eye glass which will be found most useful when it is necessary to rinse the eye. Neuralgic pains in the eyes should never be neglected, as they are a sign that the nerves of the eyes are over-strained. If any tendency to myopia or defective vision be discovered, consult an oculist at once to obtain the necessary glasses. To remove a foreign substance in the eye, pull down the lower lid, and if anything can be seen, remove it with a soft handkerchief twisted into a fine point. If anything of a gritty nature or lime get into the eyes, bathe with vinegar and water and send at once for a doctor.

Cuts. The chief danger of a cut lies in the bleeding, which is caused by the rupturing of the blood vessels round the wound; it may be capillary, venous, or arterial. Capillary bleeding is caused by grazing the skin. It is not at all dangerous, and to stop the bleeding bathe the spot with cold water, or soak some linen rag in cold water and bind it over the wound. If a vein be cut the blood will flow in a continuous stream, and will be of a dark colour. Put a pad of linen soaked in cold water over the wound, and bind it in place with a roller bandage; if the bleeding still continues, raise the limb and bind it tightly on the side of the wound furthest away from the heart. In arterial bleeding, which is very dangerous, the blood spurts out in bright red jets, with every beat of the heart, and unless quickly stopped the patient will bleed to death. To stop arterial bleeding

pressure must be applied to the wound. This can be done in the first instance by pressing the spot with fingers and thumb. A pad of linen or lint can be tied firmly over the cut, and bind the limb tightly between the wound and the heart. If that be not effective, a tourniquet must be used. This is made by tying a knot in a triangular bandage. Place the knot on the artery and bind the limb with the ends of the bandage. If the knot does not give sufficient pressure, twist a stick in the bandage until it is as tight as it is needed. Then bind the stick to the limb, not tight enough to cause discomfort and pain, but to prevent the pressure being in any way relaxed, or the bleeding will break out again. Guard against shock by giving the patient some stimulant such as coffee or milk, and he should be kept quiet until the arrival of the doctor. It is most dangerous to try and stop bleeding with cobwebs or tobacco, as they might produce blood poisoning. For ordinary cuts, wash the wound in clean, warm water, and if caused by a jagged tin or piece of glass, squeeze the wound to make it bleed freely, and so remove any foreign matter. Draw the edges of the cut together, and fasten then securely with sticking plaster. The size of the strips of plaster must be in accordance with the size of the cut, and snipping the edges makes it stick all the tighter. For a deep cut have several strips of plaster, and arrange them in a star so that they may cross each other where the cut is deepest. Carbolic oil is the best dressing to use for bad cuts, as it is both cleansing and healing. Olive oil can also be used.

Sticking plasters. Diachylon plaster is a lead plaster spread on linen. It is cheap to buy and is much used. Gold beater's skin is prepared from the large intestine of the ox. Court plaster is a paste spread on silk. The cleanest and best of all plasters is isinglass plaster.

Bruises are caused by a fall or a blow. In a slight bruise the capillaries are injured. In severe bruises the injury penetrates to the larger blood vessels. For slight bruises bathe them with cold water, and if bandaged smoothly at once, discoloration and swelling will be much lessened, if not altogether prevented. Children's bruises can be rubbed with a little lard, vaseline or lanoline, which is a preparation of lamb's wool fat. Severe bruises should be treated by applying hot fomentations or cold water bandages. Either will help to lessen the pain and should reduce the swelling. Always after a blow or fall guard against shock, especially with children, and the patient should be kept quiet for some hours.

Sprains are the result of a sudden twisting, stretching, and wrenching of the ligaments between the bones. They are very painful and cause much swelling and discoloration. Give the patient absolute rest with the injured limb in as easy a position as possible. Sponge the sprain with hot water for from ten to twenty minutes, and if the ankle be the place that is hurt, raise the foot by the heel, and sponge carefully round it. If the limb be very much bruised by the sprain, wring out some clean soft linen rag in vinegar and water, and lay it on the bruise, and it will ease the pain.

If the sprain be a bad one send for the doctor, and do not bandage it until he comes, as it may require splints, which he would have to put on. For a sprained knee the patient must be made to lie down and keep still; place a pillow under an injured knee to keep it as comfortable as possible, and do nothing to it but bathe it until the doctor comes, as for a sprained knee it is almost always necessary for it to be put into splints.

CHAPTER XVII

Boils and Gatherings—Poultices, linseed, mustard, yeast, starch, carrots, charcoal—Fomentations—Fits, apopletic, epileptic, fainting—Artificial respiration—Bites and Stings—Poisoning.

Boils and gatherings are caused by the unhealthy state of the blood. A boil is hard in the centre, having a core, and until that core is drawn out the boil will not heal up. It forms under the skin and forces its way up to the surface, a blind boil is one which forms in the lower skin and takes a longer time to develop, and when forming, a ring of inflammation is seen surrounding the hard yellow spot in the centre, which is matter. Gatherings are soft in the centre, and are caused by the blood being poisoned, they can sometimes be dispersed by the application of cold water bandages. Treatment for boils. Good food is absolutely necessary, a tonic is often required and so is rest. For immediate relief use poultices or fomentations. Poultices afford warmth and moisture, and ease the pain by lessening the tension and hardness of the tissues, which cause the pain of inflammation, they also help to draw out the matter

collected in the core of a boil, and directly it breaks the pain is much relieved. For boils use small poultices, or a homely plaster may be made of soap and sugar, spreading it on a piece of linen, and applying it to the affected spot.

By poultices and fomentations are meant that moist heat is applied to lessen pain by reducing the tension of the tissues, they also help to check the spread of inflammation, and by drawing matter to the surface they help to cleanse and heal wounds. When there is inflammation a swelling is caused by the accumulation of fluid and blood corpuscles in the tissues. The pain is caused by the products of inflammation pressing on the nerves in their immediate neighbourhood. The throbbing is caused by the heart, each beat sending more blood into the inflamed part and so increasing the blood pressure on the nerve fibres in that part.

Poultices to be effective must be changed frequently as they will do harm, should they be allowed to become cold, hard and dry. They can be spread on flannel, linen, cotton wool, or tow, and whichever material is used, it should be cut two inches larger all round than the poultice is wanted, this edge is folded over the poultice when it is made, it makes it look tidier and also makes it easier to put on or take off. A jacket poultice is one that has to cover the chest and the back, two poultices are made which are kept in place by triangular bandages, the back poultice and bandage being the first to be put on. To apply a poultice, place it in the palm of the hand, put the lower end against

the patient and quickly turn it up into position. When removing a poultice begin with the upper end, and roll the material on which it is spread over the poultice so that none of it sticks to the patient's skin.

Poultices can be made of linseed, mustard, yeast, bread, starch, oatmeal, carrots, potatoes, onions, bran, and charcoal.

To make a linseed poultice, first scald out a basin with boiling water, stand it in a second basin containing boiling water, warm two plates and a piece of flannel on which the poultice is to be spread. Use the crushed linseed as that contains the most oil, pour some boiling water into the basin and quickly dredge in the linseed, stirring it with a warmed knife. When the knife cuts through the mixture, spread it on the flannel about half-an-inch thick, leaving the margin of flannel to turn down over the linseed, dip the knife into some oil, and very quickly spread it over the poultice, this will prevent it sticking to the skin. Place it between the two hot plates and apply very hot. Be very careful when applying a poultice to a child's skin as it is so very tender. A linseed poultice can be made like porridge in a saucepan, or the meal can be warmed put into a basin, and the boiling water stirred on to it, but the way just described is the best way of doing it.

A mustard poultice is in reality a mustard and a linseed poultice, four times the quantity of linseed being used to the quantity of mustard, it should be made as described above for a linseed poultice, and muslin should be placed

between it and the skin when applying it to the patient. A mustard plaster is mustard and water mixed together and spread on muslin. Mustard leaves are dipped in water, the backs dried, then they should be held a minute or two between the hands to take away the chill. Mustard must be used with caution, never for babies, nor for a person who has to be constantly poulticed unless by the doctor's orders.

For a bread poultice heat a basin, and put a piece of muslin in it, on the muslin place some crumbled bread or a piece of the crumb, pour boiling water over this to cover the bread, put a plate over the top of the basin to keep the steam in, and stand it in the oven for five minutes. Then take the ends of the muslin, and squeeze the water out of the bread, spread the poultice on a piece of warmed flannel and apply.

For a charcoal poultice, it is best to use wood charcoal, and the charcoal powder may be added either to a linseed or to a bread poultice, and half an ounce is sufficient to use each time it is required. Stir half the charcoal into the poultice, and sprinkle the rest over the surface. It is used as a cleansing poultice for wounds and sores.

For a yeast poultice, use equal quantities of yeast, tepid water, and flour; mix these ingredients well together in a warmed basin, and when soft and fermenting, apply. It is used for boils, also to stimulate wounds.

For a starch poultice, take one tablespoonful of starch, one tablespoonful of cold water to mix the starch to a smooth paste, then stir into it enough boiling water to render the

starch a semi-transparent jelly ; then it is better to put it into a saucepan and boil it for three minutes. Spread the starch on to some clean linen, and apply. It is a most useful poultice in all cases of skin irritation.

A carrot poultice is made by boiling the carrots until they are soft, straining off the water and mashing them up a smooth paste; spread on flannel or linen and apply in the usual way. This poultice is used for cleansing unhealthy wounds.

Fomentations have almost the same action as poultices, and are often used alternately with them. They consist of a flannel wrung out in boiling water and applied to the affected part as hot as possible. To prepare a fomentation, take a large basin and have ready a fomentation cloth, which should be two and a half feet long, and about one and a half wide; it is made like a round towel. Place the cloth across the basin, putting the flannel in the centre of it, and running two sticks through the ends of towel. Pour boiling water over the the flannel until it is covered, then wring out the water by twisting the cloth with the two sticks. Give the flannel a shake, fold it, and apply, putting the fomentation next to the skin, covering it, first with a piece of oiled silk, then with cotton wool or another piece of flannel. If the pain be very acute, three or four drops of turpentine may be sprinkled on the flannel, the fomentation is then called a turpentine stupe.

Dry heat is applied when warmth is required without moisture. Hot flannels, bran, sand, or salt put into bags

and heated in the oven are all used for this purpose. Hot bricks or tiles wrapped in flannel and hot water bottles will retain their heat for a great length of time. Camomile flowers are sometimes used; they can be very easily heated and are very light.

Fits are very distressing to witness, and it is to be hoped that many may never come across a person suffering from one, but every one should know something of the symptoms of appoplexy, epilepsy, and fainting, so that should the emergency occur aid could at once be given and perhaps a life saved thereby. In an appopletic fit the sufferer suddenly loses consciousness, the breath comes in laboured gasps, with an exaggerated snore at each expiration. The pupils of the eyes will dilate unevenly, the cheeks are puffed out, and if the arms be lifted they will fall in a helpless manner. At once place the patient in a reclining position with the head slightly raised, loosen all clothing round the neck and chest, also any buckles that might cause pressure. Apply hot water bottles to the feet and never try to force brandy or any other stimulant between the lips, or choking may result. Medical aid should be sent for at once.

A tendency to epilepsy is often shown by an uncontrollable nervous twitching of the hands, which renders them quite incapable of holding anything firmly. The patient is often very depressed and when obliged to move does so in a languid weary manner. A person subject to epileptic fits may have one at any time. He will fall suddenly; some-

times emitting a scream as he loses consciousness, the hands will be clenched and the legs will jerk violently. Never try to stop these movements. The face becomes livid and on the lips there will appear a slight froth. Lay the patient quite flat putting the left arm beneath his head, undo all clothing round the neck and chest, and put something hard such as the handle of a knife between his teeth to prevent any injury being done to the tongue. In a short time the patient will recover consciousness, he will have no idea of what has happened, and will either get up and walk away or will want to go to sleep. If the latter, let him sleep for a short time, but do not leave him by himself. A person who suffers from epilepsy should lead a quiet, regular life, avoiding all excitement and late hours, but should be out in the open air as much as possible.

Fainting fits are caused by the failure of the heart's action, thereby causing an insufficient flow of blood to the brain, this may be the result of a sudden shock or blow, hunger, excessive fatigue, haemorrhage, sudden pain or vitiated air. The symptoms of fainting are sudden palor, a clammy feeling of the hands, parched lips, closed eyes, trembling and giddiness. Should any one faint in church or at a theatre, bend the head forward towards the knees, undo the clothing round the neck and the patient will probably recover consciousness; he may then be given some stimulant, such as sal volatile, should there e any handy. If a long faint lay the patient down with something placed beneath his head, bare the neck and chest, dip a

handkerchief in very cold water and strike him across the chest with it. When he recovers, wrap him up warmly and give him either a cup of coffee or some hot milk. If fainting be caused by heart disease, artificial respiration must be resorted to. Lay the patient on his back with a cushion under his head, stand or kneel behind him, take hold of his arms just by the elbow, draw them up above his head, lower them and press them firmly against the sides of the chest. This action should be continued fifteen times a minute. Drawing the arms up expands the chest, and the air enters the lungs; pressing the arms against the sides of the chest imitates the act of expiration.

If fainting be due to hunger, directly the patient recovers consciousness give him some nourishment in small quantities, such as hot milk or soup by the spoonful, when he can sit up without aid solid food may be given. When fainting is due to haemorrhage, the bleeding must be stopped before anything else can be done.

Bites and Stings. For bee and wasp stings squeeze out the sting then cover the spot with carbonate of soda, or dab it with ammonia, olive oil, or put some earth or the blue bag on it. All of these remedies will bring relief. If the sting irritates very much bathe the spot with cold water and soda. The poison of the sting is acid therefore an alkali should be used to alleviate the pain of it. A sting in the throat is very dangerous, try to remove the sting, let the patient sip and gargle a weak solution of ammonia and if the throat swells at all send at once for a doctor.

Cat and dog bites are not dangerous unless the animal is suffering from rabies. Wash the wound to cleanse it and apply carbolic oil, as that both cleanses and heals. If bitten by a dog or cat suffering from rabies, stop the circulation as much as possible by pressure above and below the wound, wash it well and have it cauterized by a doctor. If there be no doctor near at hand the bite could be seared with a red hot knitting pin, or painted with nitric acid which should be washed off, paint it on and wash it off three times. The pain will be acute. Always, if possible, seek medical aid.

Poisons may be roughly divided into three classes, the corrosive poisons which destroy the mucous membrane of gullet and stomach, and to this class belong the strong mineral acids such as oxalic acid, corrosive sublimate, and chloride of zinc. The irritant poisons, which shew much the same symptoms as the corrosive, but they are not so virulent, vomiting occurs and severe diarrhoea ending in inflammation. Arsenic, copper and the many metallic salts belong to this class of poisons. The third class of poisons are those which act on the general nervous system, such as the narcotic poisons which produce sleep, of which opium is an example, then there are bella donna and alcohol which produce delirium, hemlock which causes paralysis, and prussic acid which kills by the sudden shock it produces on the nervous system. Besides these poisons there are many gases, the fumes of which will cause death by suffocation, such as coal gas, and the fumes from burning charcoal.

It must be remembered that any acid poison can be partially counteracted by an alkali, therefore if any one be poisoned by an acid make him wash out his mouth with soda and water, chalk or whiting and water, and if neither of these is obtainable use soap suds freely. Magnesia and milk is also an excellent remedy, and afterwards give some milk or oil to drink. If absolutely certain that the poison was not corrosive an emetic may be given and one can be made with a teaspoonful of salt, half a teaspoonful of mustard mixed together in a cupful of warm water. An emetic given in the case of a corrosive poison only aggravates the poison. Children will sometimes poison themselves by sucking the tops off matches which contain phosphorous. In this case give an emetic followed by copious draughts of magnesia and water. Never give oil in the case of phosphorous poisoning.

When any one has been poisoned with prussic acid, loosen the clothing, dash cold water on to face and chest, get some one to rub the feet and hands and try artificial respiration.

If poisoned by carbolic acid give an emetic, after which give the patient raw eggs and oil and magnesia. This poison often causes collapse, so if the doctor does not come quickly some stimulant must be given to the patient.

For poisoning by an alkali such as ammonia, or caustic potash, acids must be used as an antidote. Make the patient wash out his mouth with vinegar and water, or lemon juice and water, make him take some oil, white of egg or milk.

For narcotic poisoning give an emetic, and dash cold water on the patient's face, head and chest to rouse him, and to prevent him falling asleep make him walk up and down, do anything to keep him awake, and at intervals administer cups of hot strong coffee without milk or sugar. Should these remedies fail try artificial respiration.

When suffocation is caused by poisonous gases, carry the patient out into the open air, loosen his clothing, and dash cold water over his head. If he does not recover consciousness with these measures, artificial respiration must be resorted to.

CHAPTER XVIII

Infectious diseases—Incubation—Duration—Isolation—Disinfecting.

By infectious diseases are meant those forms of disease which can be caught from one person to another, and as in some cases from animals to man and man to animals. The word contagious at one time used only to denote catching a disease by direct contact with the person suffering from it. It is now synonymous with the word infectious. An infectious disease is sometimes contracted from germs that are floating in the air, and by drinking contaminated water or milk.

By the Infectious Disease Notification Act of 1889, any infectious disease must be notified by the medical man attending the case to the Health Authorities within twenty-four hours, otherwise a fine of 10/- per diem is imposed. By this Act the following diseases must be notified :—small-pox, cholera, diphtheria, membranous croup, erysipelas, typhus fever, scarlet fever, enteric fever, relapsing fever, and puerperal fever. Power is given to the Health

Authorities by this same Act to include any other infectious disease on the notifiable list, and since the outbreak of smallpox in 1901, chickenpox in many parts of London and other big towns was put on the list of diseases to be notified. The great danger of infectious diseases becoming epidemic, lies in the cases that are very slight and when it is not considered necessary to call in a doctor. For these cases no precautions are taken, the sufferers from them being allowed to mingle freely with other people, thus spreading the germs of disease.

All infectious diseases have a certain period of incubation, that is the time that elapses between the catching the disease and the developing of it.

Scarlet Fever. The period of incubation is from two to five days, the rash appears sometimes on the second day. It is bright red, and comes first on the upper part of neck and chest, then spreads all over the body. The symptoms of scarlet fever are a sore throat, a swelling of the gland at the angle of the jaw, and a general feeling of lassitude. It is infectious even before the rash appears and the cause of infection is the breath, the mucous secretions of nose and throat and mouth, and later on by the peeling of the skin. The infection lasts from six to eight weeks.

Measles. Incubation period is from three to twenty-one days. The rash consists of red spots slightly raised which appear first on the forehead, then behind the ears, and from thence rapidly spread all over the body in crescent shapes. The symptoms are running at the eyes and nostrils, soreness

of eyes and mouth, sneezing and a hard dry cough. Measles are very infectious from the earliest stages, and the infection is caused by the discharges from eyes, nose, and mouth, the infection lasts four weeks.

Smallpox is infectious from the very commencement of the disease. The period of incubation is twelve days. The rash first appears on the forehead as red, spotty pimples which become watery and depressed in the centre, where matter collects. The symptoms are sickness, pains in the back and legs, the swelling of the eyelids and face, and a soreness of nostrils and throat. The infection is caused by the breath, the discharges from eyes, nose, and mouth, and from the scales and particles of skin peeling off from the rash. The infection lasts for six weeks.

Chickenpox. The period of incubation is fourteen days. There is rarely any previous illness before the appearance of the rash, which comes in little clear round watery spots on any part of the body. The cause of infection is the dropping off of the scabs of the rash, and the infection lasts for three weeks.

Enteric or Typhoid Fever. The period of incubation is from fourteen to twenty-one days. A rash of tiny rose coloured spots and few in number appears on the abdomen. The symptoms are severe pains in the front of the head, pain and tenderness in the abdomen, aching limbs and diarrhoea.

Typhus Fever. Incubation period from six to fourteen days. The rash, which appears first on the backs of the

wrists and in the armpit, consists of small mulberry coloured spots. The symptoms are severe headache, great prostration, delirium and flushed cheeks. The cause of infection is the breath and also the exhalation from the skin. The infection lasts for four weeks.

Erysipelas. Incubation from one to five days. The rash is small, red, and puffy. It has been defined as "a spreading inflammation of the skin, accompanied with fever." The symptoms are feverishness, smarting and tenderness of the affected parts. The disease does not occur so frequently in the tropics as in the temperate climates. The cause of infection is the peeling off, from the affected parts, of particles of skin.

Diptheria. Incubation from one to eight days, no rash appears. The symptoms are sore throat, difficulty in breathing and swallowing, the formation of a whitish false membrane in the throat, great weakness, and sometimes very high fever. The cause of infection is due to inhaling the patient's breath, and to the discharge from the throat. The infection lasts for six weeks.

Mumps. Incubation from fourteen to twenty-one days. No rash appears, and the symptoms are the painful enlargement of the glands below the ear, and at the angle of the jaw, sometimes accompanied with fever. The cause of infection, inhaling the patient's breath, and the infection lasts for three weeks.

Whooping Cough. Incubation from one to fourteen days. There will be no rash, and the symptoms are those of

a marked cold in the head, a cough that comes in paroxysms, which are followed by one long whoop or crow as the patient tries to recover his breath. The cause of infection is the discharge from the throat, and the phlegm. The infection lasts for eight weeks from the time that the patient ceases to whoop.

The general treatment of infectious diseases. In all infectious cases the patient must be isolated from all the other members of the family, and this to do any good must be thoroughly done, and by far the best plan when it is possible, is to send the patient to a fever or isolation hospital. If the case be nursed at home, select a room at the top of the house, and if possible there should be a second room on the same floor for the nurse. The door of the patient's room should be kept closed, and hanging over it should be a sheet saturated in some disinfectant. A five per cent. solution of carbolic acid is one of the best to use. Condy's fluid is of no real use as it is not a true disinfectant. The room must have a fireplace and the fire should be kept burning and the windows can be kept open. There must be no carpet, and no hangings of any description, and no unnecessary furniture, as heavy furniture takes up floor and air space. A table will be needed, a comfortable chair for the nurse, and something in the shape of a medicine chest. One member of the family should be detailed to act as sick nurse, and no one else except the doctor should be admitted to the room. Anything brought up to the sick room can be left outside the door, and all crockery and

utensils used by the patient must be kept only for him, and should not be allowed to go down into the kitchen to get mixed up with that used by other members of the household. Anyone nursing an infectious case must wear linen dresses, as woollen or any heavy fabric would be almost impossible to render free from infection. The patient's bedstead ought to be of iron, and use the oldest bed linen obtainable, so that it may be burnt. Any clothes that are obliged to be washed, steep in a disinfecting bath; four ounces of izal to one gallon of water makes a good disinfectant. After steeping the clothes roll them up in a mackintosh to prevent anything touching them, and be sure that they are washed by themselves and not with other household linen.

The greatest care is needed in the treatment of the discharges from the patient. All discharges that come from nose and mouth in cases of scarlet fever and diphtheria, and measles, should be wiped away with clean soft pieces of rag, which should be burnt at once; if a handkerchief be used it too should be burnt. The bowel discharges should be received in bed pans containing some disinfectant such as corrosive sublimate (1 in 1000) or carbolic acid (5 per cent) or izal (5 per cent). In smallpox or scarlet fever cases, infection is greatly caused by the particles of skin peeling off, therefore the skin should be washed with warm water, and afterwards the body should be lightly rubbed with the following preparation.—"One drachm carbolic acid, three drachms eucalyptus oil and eight ounces of ether, olive or almond oil." (Notter and Firth.) Carbolic soap

should be used when washing the patient. An infectious case should be isolated directly it is discovered to be infectious, and the isolation must last as long as the doctor who is attending the patient considers it dangerous for him to mingle with other people. The nurse, when attending an infection case, should change all her clothing and take a carbolic bath before going out to take her daily walk.

Disinfecting a sick room. When the patient has recovered, the room which he has used and all that it contains must be disinfected, that is, any germ or micro-organism that might cause infection must be destroyed.

Tear and scrape all the paper from the walls and burn it, then paste up all crevices round the window, after which wash down the walls and wash the floor leaving them damp. In the centre of the room place some bricks and on the bricks put an iron vessel containing sulphur, using three pounds of sulphur for every one thousand cubic feet, on the sulphur place a live coal, go quickly out of the room, shut the door and paste it up on the outside, and do not forget to stuff up the key hole. Leave the room closed up for twenty-four hours, then open both door and windows wide and leave them open for twenty-four hours or longer. Next have the ceiling whitewashed, the walls re-papered, all the paint re-done, the floor and all the woodwork and furniture should be scrubbed, using soft soap and some strong disinfectant in the water. After these measures have been taken there will be no fear of any infection clinging to the room or furniture.

In large towns the disinfection after cases of notifiable illness should be placed into the hands of the sanitary authorities.

CHAPTER XIX

The arrangements for washing at home—The utensils required—The materials used—The washing of woollen articles—Dissolved soap—The drying of clothes.

TUESDAY is the best day of the week to choose for the washing of the household things, as on Monday all the soiled clothes should be collected and sorted into the following groups. The flannels and any other woollen articles such as woven vests as well as the stockings, the fine things, and under this heading come white petticoats, collars and cuffs, pocket handkerchiefs, shirts, lace, children's frocks, petticoats, underwear and pinafores and often table linen, which however when washed should have a separate water. Then we have the bed and under linen, all print garments and the coarse things, such as the kitchen cloths, dusters, coarse aprons, dust sheets, and the hessian hearth cloths.

All the clothes except the stockings should be mended before they are washed, it will make them last twice as long, as a little hole will become a big one in the wash tub.

All stains such as tea or coffee stains on table linen should be removed before being washed, and all the clothes, except the woollen articles and coloured prints should be steeped before being washed, as this loosens the dirt and preserves the colour. For steeping clothes use cold water; the bed and body linen may be put into the same bath to soak; the fine things should be soaked by themselves; pocket handkerchiefs must always be steeped in cold salt and water by themselves, and they should be washed by themselves. Starched things such as men's white shirts ought to be in a bath to themselves and should be steeped for quite twenty-four hours to loosen the old starch. The coarse things are always put by themselves, and soda should be added to the water, soda may also be added to the water in which the body linen is to be steeped, but it should only be a small quantity. Should there be a copper in the house the fire beneath it should be laid on Monday and the copper filled three parts full with clean water.

On Tuesday morning the first thing to be done is to light the copper fire. Everything should be got ready for the washing, and see that there is a plentiful supply of hot water. Whilst the water in the copper is getting hot, wash the woollen garments in tepid water and soap lather made from dissolved soap, and after rinsing hang them out to dry.

Next the garments should be slightly rubbed in the steeping water, which is then wrung out of them, and they are washed in hot water, using soap. Always wash the cleanest gar-

ments first, and wash all garments first on the right side and then on the wrong. Change the water as frequently as the supply of hot water will admit. After washing, all white things should be boiled, rinsed and blued; wring them, and if possible, hang to dry in the open air. Pocket handkerchiefs are always washed by themselves; they should be put into a bag if they are to be boiled in the copper. After the white things are washed, get fresh water and do the coloured things, and finally do the coarse things. When all the washing is finished the laundry must be made tidy, all splashes should be wiped up, the tubs rinsed and dried, and the copper emptied and dried. Wooden tubs should be left with a little clean water standing in them. Zinc baths should be turned upside down on the washing stool.

On Wednesday the linen should be damped and folded. Anything that requires to be starched should be starched, the large things should be mangled, and everything put in readiness for ironing on Thursday.

On Thursday the flannels should be ironed with a cool iron. Linen needs a hot iron, coloured prints a cool iron or the colour will be destroyed. Table linen and pocket handkerchiefs are ironed quite wet, and must be ironed until they are perfectly dry, or they will not look nice when done. Until they are ironed all cotton and linen articles should be kept rolled up tightly to keep them damp. When everything has been ironed and folded, all the garments should be sorted according to their owners, and then put them away.

The utensils required. In all large towns there are public wash-houses or laundries, where those whose house room is but limited can wash, dry, and iron their clothes for a trifling sum. Among the advantages of these public wash-houses may be reckoned the following:—they save the discomfort of the washing-day at home, the expense comparatively speaking is small, ½d per hour; there is plenty of space to work in, an abundance of water, both hot and cold, the free use of tubs, coppers, free mangles, and hot air cupboards for drying. The great disadvantage would be that a woman who took her clothes to the public wash-house to wash them would have to be absent from home for some length of time, and if there were any small children this would be very inconvenient. No clothes are allowed to be washed in a public wash-house that come from a house that has an infectious disease in it.

In the country there are none of these advantages. A copper should be found in every house, however small, but if there be not one, a large saucepan or boiler must be used for boiling the clothes in, and it should be kept only for that purpose. Four tubs will be wanted of different sizes, in which to steep, wash and rinse the clothes; also some bowls, either enamelled or earthenware, in which to mix starch or to steep pocket-handkerchiefs. Lines and pegs, which should be kept in a bag, will be needed when hanging the clothes out to dry. A washing-board, which can be made of either fluted zinc or wood, is wanted to wash heavy articles on, a boiler stick with which to press the

clothes between the water when they are being boiled. At least three flat irons are wanted, and if possible have two polishing irons for finishing off linen collars and cuffs and white shirt fronts. If the men's shirts are done at home it will be necessary to have a shirt board, which is a smooth piece of board, one and a half feet long by one foot wide. It should be covered on one side by a piece of flannel tacked neatly to the edges. The reverse side should be left bare. The covered side is for ironing the shirt front on, and the plain side is for polishing the front when it is ironed. There must be an ironing blanket which should not have a coloured border; a piece of felt is the best to use for this purpose. There must also be two ironing sheets, a clothes horse, iron stands and iron holders, and to finish off lace frills and other trimmings nicely, a pair of goffering irons will be wanted. A wringing machine saves much time and labour, and one with wooden rollers can be bought for 30/- The rollers should be unscrewed when the machine is not in use.

The materials used in laundry-work. Soft water is the best to use for washing clothes, but when it is impossible to collect enough clean rain water, and the only water obtainable is hard, something must be put into it to make it softer. When the water is hard the soap will lie curdled on the top of it, and a large quantity of soap is needed to make a lather. Hard water is caused chiefly by it containing lime salts, and it can be made softer by boiling, as in boiling the heat drives off the carbonic acid gas which hold the

carbonate of lime in solution. When the carbonic acid gas is given off, the carbonate of lime then drops to the bottom and sides of the pan containing the water.

Water is also softened for laundry purposes, by the addition of an alkali, such as soda, or by a substance containing an alkali, such as soap, and by using borax, which should be dissolved in a little boiling water before adding it to the water required for washing the clothes.

Soda must be used with caution, or it will spoil the colour and destroy the fabric of the clothes. Borax does no injury to the fabric; neither will it affect the colour. Soda should always be used when washing coarse things.

Common yellow soap may be looked upon as the best to use in laundry-work. It should be kept before it is used, otherwise it wastes considerably. No soap containing much soda is advisable to use for washing clothes. Soft soap, however, may be used for workmen's coats and trousers, which are nsually greasy as well as very dirty. Yellow soap is made of palm oil, soda, and resin.

To keep white clothes a good colour it is necessary to blue them, and the best blue to use is that sold in cakes, which can be bought at 9d. per dozen, or for a penny each. The cake of blue should be tied in a flannel bag before it is dipped into the water to blue it.

The washing of woollen articles. Tepid water must be used, as hot water dissolves out the natural oil that flannel contains and will cause it to shrink and become hard. Rubbing flannel with soap will make it shrink,

therefore dissolved soap is necessary, and should always be used when washing woollen articles.

To make dissolved soap, shred a quarter of a pound of soap into an enamelled pan, pour over it a quart of water, and then stir over a slow heat until all the soap is dissolved. Stir this with the hand into two baths of tepid water until a permanent lather is produced, then stir a little of it into a third bath of tepid water, just to soften it for rinsing the flannels in. There must not be a lather in the third or rinsing bath.

Shake the flannels well, out of doors if possible, to remove any dust that may have collected in the seams, wash each garment separately. Put the garment to be washed right side out in the first bath of tepid water and soap lather. If the flannel be new, soap it all over to remove the sulphur that all flannel contains and which will prevent it washing soft. Do not rub it at all, but squeeze the lather quickly through it, doing all the small parts first. Never wring flannel but squeeze the dirty water out of it. Shake the garment, turn it to the wrong side and repeat the process in the second bath of tepid water and lather. Squeeze out the water and rinse the garment well in the prepared rinsing water, squeeze out the water once more, and pass the garment two or or three times through the wringer should there be one, as the rollers press out the moisture and do not twist the fibres. After pressing the water out of the flannel, spread the garment out on a clean table, and pull it into

shape, then hang it up to dry by the thickest part. Coarse flannels may be mangled before they are quite dry; fine flannels should be ironed with a rather cool iron. Embroidered flannels should have all the scallops pulled out, then spread a damp rag over the wrong side and iron with a fairly hot iron. Worsted lace may be treated in the same manner, being very careful to pull it out into shape before starting to iron it.

For rinsing white woollen articles, ammonia, one tablespoonful to two gallons, may be used for the rinsing water; for coloured woollens borax can be used to soften the rinsing water.

Stockings should not be washed in the water that many woollen articles have been washed in, or they will become covered with tiny white fluffy particles. They should be washed in tepid water and soap lather, first on the right side then on the wrong and well rinsed. Put the hand into the foot and well soap the sole, then quickly squeeze the lather through the stocking, quickly press the water out of it, never twist a stocking by wringing or it will have the shape quite spoilt. When washed and rinsed spread the stockings out on a table and pull them into shape, having the foot flat and the seam coming straight up the back, let them get almost dry and press out the foot lightly with a cool iron. Blue or ammonia may be added to the rinsing water for black or white stockings, warm weak tea or very weak coffee my be used in the rinsing water for tan ones.

In washing woollens be quick, never steep them, never leave them lying about wet, do not rub them when washing them, do not use hot water, and do not use cold water or they will become hard, and will shrink. Press as much moisture out of them as possible before hanging them to dry, to prevent them shrinking.

When hanging clothes out to dry see that the lines and pegs are clean, and hang the clothes so that they catch the breeze. Night dresses should be hung by the shoulders, pocket handkerchiefs should be hung several together. Large articles like sheets and tablecloths require great care in pegging, not to let them touch the ground. Prints and coloured flannel must not be hung in the sun; white flannels will turn yellow if dried in the sun. Collars and cuffs should be tied up in a muslin bag, or they can be pinned to a towel. Stockings should be pegged by the toes. When taking down the clothes from the line, have a basket to put them in, and be very careful not to drop anything on the ground as that would necessitate re-washing. In taking down the line wind it round the left arm and hand forming a loop, or twist it round a piece of stick. Should the line get dirty boil it in the copper, adding soda. The pegs must also be kept very clean, and should never be left lying about, wooden ones are the best to use.

CHAPTER XX

The washing of fine things—Bed and body linen—Pocket handkerchiefs—Table linens—Linen collars—Recipes for making starch.

THE fine things should be steeped in cold water before they are washed, then prepare two baths of hot water in which to wash them. Rub them slightly in the steeping water, then wring it out of them and put the garments right side out into the first bath of hot water. Begin by washing any trimmings and all the small parts first, soap a small piece at a time, and rub well, being careful to rub the material on itself, when soaped and rubbed all over dip the garment into the water, wring it and give it a good shake, turn it to the wrong side and repeat the process in the second bath of hot water, after which it is ready for boiling. If the articles be small they should be put into a boiling bag, soap them all over before putting them into the bag, tie up the bag before putting it into the copper.

To prepare the copper for boiling shred into it some soap, allowing a quarter of a pound to every two gallons of water, dissolve a tablespoonful of borax in some boiling

water and add that to the water in the copper, do not use soda unless for coarse things. When the clothes are put into the copper, the water should be only lukewarm, bring it up to the boil, and boil from fifteen to twenty minutes, pressing the clothes beneath the water with the copper stick. When the clothes have boiled for twenty minutes lift them out of the copper and put them into a bath of warm water to get rid of the soap, cold water would harden the soap into the material and would destroy the colour. After rinsing in warm water, rinse the clothes well in cold water, placing the bath containing them, if possible, beneath a tap of cold running water.

After rinsing, all white things should be blued to make them a good colour, and to take away any yellow tint. To make the blue water, half fill a bath with clean cold water, and squeeze the blue bag into it until the water looks sky blue when taken up in the hand. The blue water must be stirred just before the clothes are put into it, or the blue will settle at the bottom of the bath and will make the garments have a streaky appearance. Dip the articles into the blue water unfolded to prevent any streaks, and if there be a wringer pass them through it giving each garment a good shake afterwards, insufficient wringing often causes streaky marks. After blueing, hang the garments out to dry, unless they are to be ironed at once, in which case starch anything that may need starching with boiling water starch which is made as follows:—

Put one tablespoonful of starch into a clean basin, with

two tablespoonsful of cold water, mix the starch to a smooth paste, using the fingers to press out any lumps, add half a teaspoonful of borax previously dissolved in a little boiling water and a piece of white wax the size of a sixpence, or a piece of tallow candle a quarter of an inch in length. Stir on to these ingredients enough boiling water to render the starch a semi-transparent jelly. For the bottom of a white petticoat this would be about the right consistency, the top of a white petticoat is better not starched. For Coventry frilling, trimmings, or for lace, thin the starch by the addition of boiling water until it is the consistency of cream.

Fine things, if allowed to get quite dry, should be damped before they are ironed, and a hot iron should be used, care being taken not to singe the material. Begin by doing the trimmings, and lace and embroidery should be ironed on the wrong side over a flannel pad, to raise the pattern. All the other parts should be ironed on the right side, being very careful to press the point of the iron well up into any gathers, and to iron the garment quite dry or it will have a rough, dried appearance when finished.

Bed and body linen are first steeped in cold water for at least twelve hours before they are washed. After rubbing them slightly, wring the water out of them, and wash them first on the right side in hot water, using soap. Large garments and sheets should be folded and soaped, and rubbed on a washing board, being most careful to rub the material on itself. Sheets should be folded in four, and a

small part at a time should be soaped and rubbed, to ensure the whole being well done. In body linen, as with the fine things, all the small parts are done first, then the rest of the garment. When the whole of the right side is done, the articles should be turned to the wrong side, and the process repeated in a second bath of hot water, after which they are ready for boiling, the rinsing and blueing being carried out as described for the fine things. Large garments and big articles like sheets are not put into boiling bags; sheets should be tied in a loose knot, as that makes it easier to lift them out of the copper. Should body linen require starching, a breakfast-cupful of boiling water starch should be added to the blue water. Body linen is ironed on the right side with a hot iron, bed linen should be folded, damped and mangled.

Pocket handkerchiefs are steeped in salt and water, to render them anti-septic, after wringing the steeping water out of them; wash them by themselves in two bowls of hot water, soaping and rubbing them well; then they should be boiled, and, instead of putting them into the copper, keep a large emamelled saucepan for boiling the handkerchiefs in. Prepare the water with shredded soap and dissolved borax, put the handkerchiefs into it when it is nearly cold, bring them up to the boil, and boil for twenty minutes, after which, rinse and blue them. They should be ironed when quite wet; be careful to set the corners and to fold them evenly.

Table linen. If a table-cloth has to be washed, shake

it out to see if it requires any mending, or whether there be any stains on it. If so, put the stained part over a basin, sprinkle some powdered borax over the spot, and pour boiling water slowly on the borax. Borax is chiefly used for tea and coffee stains, for fruit stains salt may be substituted for the borax and treated the same way. Have ready two baths of hot water, and after wringing the steeping water out of the tablecloth, fold it in four and put it, right side out, into the first water. Soap all the dirty creases, and pay special attention to the hems and selvedges, as they are so apt to go a bad colour; turn down the edges and rub well, using a washing-board. Wash a small piece at a time, until all the right side is done; wring out the soapy water, turn and fold the cloth on the wrong side, and repeat the process in the second water. All table linen is washed in this way, and when washed, it should be boiled, rinsed and blued. If it should be necessary to starch table linen, it is best to put a breakfast-cupful of boiling water starch into the blue water, bearing in mind that the better the damask the less starch needed.

After being blued, a tablecloth should be stretched, and it requires two people to do this. Fold the cloth by doubling it selvedge to selvedge, being most careful to get it exactly even, and have the wrong side outside. Let the single sides drop, and pick them up one on each side to the double fold; the tablecloth is then folded in four. Gather the hems in the hand, keeping them quite even, and pull straight and hard; turn up the cloth on either side to get

the corners exactly even, then lay the cloth on the ironing table, and get the sides even. When that is done, iron it with a hot heavy iron on the right side, to get a good gloss on the surface. Be sure to iron the cloth quite dry, or it will not look well when it is finished, and when done, the cloth should be rolled, not folded.

Serviettes are folded in three, folding selvedge to selvedge, and getting the hems quite even; they should be ironed on the right side until quite dry. Should there be an embroidered monogram on the serviette, it should be pressed with a hot iron on the wrong side over a pad of flannel, to give it a raised look.

D'oyleys. If fringed, hold the d'oyley in the centre, and hit the fringe against the edge of the table to separate the threads of the fringe. Then lay it, right side uppermost, on the ironing table, get it into a good shape, and brush or comb out the fringe. Then iron the d'oyleys, beginning in the middle, and working smoothly from side to side, do not iron the fringe. To curl the fringe press it with the back of a rather cool iron, and draw it back to the edge of the damask, drawing the fringe after it. Lace edges to d'oyleys must be ironed on the wrong side, over a pad of flannel, the linen being ironed on the right side.

Linen collars. Rub the collars well in the steeping water to get rid of the old starch, then like all white things they must be well washed in hot water, using soap. Have two baths of hot water so that they may be washed first on the right side and then on the wrong. Use a washing-

board, spread the collar out on it, soap it well aud rub it thoroughly to get out all the starch, rub the matertal on itself; this must be done also in the second water. If not put into a boiling bag and boiled in the copper, take an enamelled pan, put three quarts of water into it, and dissolve a tablespoonful of borax to add to the water, using boiling water to dissolve the borax. Soap the collars and put them into the water when it is cold, and bring them slowly up to the boil, and boil from twenty to thirty minutes. This method of boiling the collars removes perspiration marks very effectually. After boiling, the collars must be rinsed and blued and then dried.

Collars are wanted to be very stiff, therefore after letting them get quite dry, starch them in cold water starch, which is made as follows :—Put one tablespoonful of starch into a clean basin, and half a teaspoonfnl of borax, previously dissolved in a little boiling water, and four drops of turpentine, mixing these ingredients with half a pint of cold water, using the fingers to press out any lump in the starch. The borax is used to give a gloss to the linen. The turpentine to prevent the iron sticking to the surface of the linen. When the starch is made, strain it through muslin into another basin, and keep it covered up until it is wanted. Cold water starch is improved by being allowed to stand, but it must always be stirred up just before it is used.

To starch the collars, place two of them together, right side to right side, and rub them together, dip them into the

starch and rub it well into them, then wring them with the hands as dry as possible, rub them once more, and lay them flat on a clean cloth, wrong side uppermost, leaving a space between each collar. Roll them up and leave them at least one hour before ironing them, a longer time if it can be managed is better. If this be not possible keep them flat in the cloth and pass them twice through the wringer.

To iron a linen collar. Pull it into shape, lay it flat on the ironing table, wrong side uppermost; with a damp flannel rub out the creases and remove the surface starch. Take a hot iron and be sure that it is quite clean, pass it lightly over the wrong side, then turn the collar to the right side, rub it over with the flannel, then press heavily, pushing any fulness to the top and bottom. Turn the collar and press heavily on the wrong side, turn it once more and finish ironing it on the right side. When it is dry it should balance across the finger. To make the collar look better and keep clean a longer time it should be polished. If there be no polishing board, turn back the ironing blanket and use the surface of the table. Place the collar flat on the board, right side uppermost, wipe the surface evenly with a damp flannel, and then polish it, using a bevelled polishing iron, working it up and down the collar in straight even lines. Polishing is very difficult to do and requires much practise. The iron must be very clean. Dust it two or three times all over, it must also be hot or a good gloss will not be obtained. When polished, the

collar should be curled, that is, place it with the wrong side upon the table, place a cool iron on it, hold it steady with one hand and with the other draw the collar sharply from beneath it.

CHAPTER XXI

The washing of prints—Muslin—Chintz—Cretonne—Worked articles—Silks—Lace—Removal of stains.

PRINTS should be sorted by their colours when many have to be washed. Red ones and those which have a dark ground ought to be washed by themselves, for fear of the dye coming out in the water, which would quite spoil a light one if washed in the same water. For an untried print, that is one which has not been washed before, steep it for twenty minutes in salt and water before washing it, to set the colour, and use bran water when washing it. To make bran water use the following proportions: Take a breakfastcupful of bran to every quart of water to be used, tie it in a muslin bag, and put it into the water, bring it slowly up to the boil and let it simmer for fifteen or twenty minutes. Remove the bran, and if taken out of the bag and dried it can be used three times. Stir the bran water into two baths of lukewarm water prepared for washing the prints. Tried prints may be soaped, but any with delicate colouring should be washed in soap lather as flannels are.

Rinse all prints after they are washed in clean warm water, to get rid of the soap, then in cold water, and if the colour be at all delicate add salt to the cold rinsing water. Should the colour look at all faded, rinse the print in vinegar and water, as the acid in the vinegar will counteract the alkali in the soap. After rinsing in vinegar and water dip the garment into some clean cold water.

If prints are to be starched, use thin boiling water starch. It ought to be allowed to cool before the prints are put into it as hot starch will destroy the colour. Prints washed with bran water will not need to be starched as the bran will impart a certain amount of stiffness to the material.

Prints need not be dried before they are ironed, but if it be not convenient to iron them at once, and they are allowed to get quite dry, they must be damped before being ironed. They should be ironed on the right side, with a moderately hot iron,—a very hot one would destroy the colour. Be careful to iron every part of the garment dry, or it will not look well when finished.

Muslins. White muslins are washed in two baths of hot water and soap lather. If soap be rubbed on to muslins they will have a thick cloudy look. White muslins should be steeped before washing like any other fine white things, and after washing first on the right side then on the wrong in the two baths of hot water, the muslin can be either boiled or scalded. If the latter, put it into a clean basin, and pour a kettle full of boiling water over it, and then rinse well, blue and starch. All muslins should be

starched when they are quiet wet, in thin boiling water starch. Squeeze out the starch and give the muslin a good shake or it will not look clear,—never twist a muslin to wring it, as that will give it a drawn appearance, it can be passed through the wringer as the rollers will press out the moisture without injury to the fabric. White and blue muslins should always be dipped in blue water to make them a good colour.

Coloured muslins should be steeped in salt and water before they are washed, to set the colour. Then wash them in lukewarm water and soap lather, having two baths, one for washing the right side, the other for washing the wrong. For very dainty colours use bran water, and it is always advisable to use bran water for red muslin of any shade. Rinse in clean, warm water, then in cold salt and water, or if the colour be at all faded, in vinegar and water. After starching and shaking the muslin roll it up in a clean cloth, and leave it rolled up for half an hour before ironing it. When ironing muslins, do not use too hot irons or they will scorch the delicate fabric, and destroy the colour. If the muslin have a raised pattern or a spot on it, it should be ironed on the wrong side over a flannel pad to raise the pattern, all plain muslins should be ironed on the right side, and great care must be taken not to make any creases whilst ironing.

Chintz should be washed in lukewarm water and soap lather in exactly the same way as flannels are done. After washing rinse well in warm water, then in cold salt and

water, as that will set the pattern of the chintz. If the colours of the pattern be at all delicate or very bright, use bran water when washing it. After washing and rinsing, all chintz should be starched in rather stiff boiling water starch to which half an ounce of white wax is added, instead of the usual quantity, a piece the size of a sixpence. The wax must be very finely shredded, before it is put into the starch. Do not use the starch too hot. Always iron chintz entirely on the right side, and after it is ironed quite dry, it should be polished with a bevelled polishing iron. If no polishing iron be obtainable, a very good result can be procured by using the back of a flat iron to do the polishing. Care must be taken to keep the material quite straight when it is being polished, do a small piece at a time, and move the iron in straight even lines, pressing it well the whole time.

Cretonne, if washed for the first time, should be dipped into cold salt and water two or three times; do not let it be steeped, then proceed to wash it as if it were a delicate print or muslin, using bran water if the colours of the pattern be very bright or very dainty. Be careful not to use too hot water or the colour will be destroyed, and never rub cretonne, squeeze the lather quickly through it, and after wringing the first water out of it, give it a shake before starting to wash it on the wrong side in the second bath of warm water and soap lather. Rinse it well first in clean warm water then in cold water. Pass it through the wringer if there be one and iron it when it is wet. Iron it

quite dry on the wrong side using only a moderately hot iron, be sure to iron the cretonne dry, or it will have no stiffness. Cretonne, if not washed with bran water, should be starched in thin boiling water starch.

Woollen embroideries such as crewel-work chair-backs should be washed in the same manner as cretonne is, and after rinsing they should be ironed on the wrong side over a piece of thick flannel, to raise the pattern of the embroidery. Piqué, cotton crépons, cretonne and any print with a raised pattern should be ironed entirely on the wrong side, the three first because they do not need a glazed surface, the last to raise the patern and make it stand out well.

Silk. When washing many silk garments they should be sorted out by their colours, all the white being put together, any with a dark ground by themselves, whilst red silk should always be washed by itself as the red dye will come out into the water, and would quite spoil anything else washed in that water. For washing silk two baths of luke-warm water softened with dissolved soap until a slight lather is obtained, are needed, also two rinsing waters, one lukewarm and one cold, and for coloured silks as for coloured prints and muslins, salt should be added to the cold rinsing water. To give silk a good gloss, after it is washed and rinsed, dip it into methylated spirit and water, the proportions being one tablespoonful of methylated spirit to a pint of water. All silk, except tussore silk, should be ironed when it is wet, as the heat of the iron

will stiffen as well as dry it. If tussore silk be ironed when wet, it will have a thin, papery, shrivelled look. If the silk be wanted extra stiff, do not attempt to starch it or it will be completely spoilt, gum water used carefully will give the desired effect. Make the gum water by dissolving one ounce of light coloured gum-arabic in half a pint of boiling water, stir until all the gum is dissolved, then strain it through muslin and it is ready for use, the usual proportions being one teaspoonful of the gum water to a teacupful of water. Gum water will keep for some time if the bottle containing it be kept well corked.

Black silk can be renovated by being washed in weak lukewarm tea and soap lather, or by being sponged with a solution of fig leaves.

Take two handfuls of fig leaves, the dried ones can be bought at most chemists, cover them with cold water, simmer for twenty minutes then let them cool, and strain the solution through muslin. Stretch the black silk out on a table, dip a sponge into the fig leaf solution and sponge the silk the way of the selvedge if possible. Afterwards press it out with a cool iron.

When washing silk it must never be rubbed, give the garment a shake and put it right side out into the first bath of lukewarm water and soap lather, do not use too much soap, squeeze the lather quickly through it, paying particular attention to the dirtiest parts. Press the dirty water out of the garment, do not twist it any way or its appearance when finished will be quite spoilt. Shake the

garment and turn it to the wrong side, put it into the second bath of warm water and repeat the process of washing it. Squeeze out the soapy water and rinse the silk well.

Should white silk look a bad colour after it has been washed, soak it in warmed milk for ten minutes, and repeat the process of washing from the very beginning.

After rinsing, roll the silk up in a clean cloth, and if there be no wringer, hit it against the edge of the table to get some of the moisture out of it, if there be a wringer lay the silk flat in a cloth and pass it twice beneath the rollers.

Iron the silk wet on the right side, placing a piece of muslin between the silk and the iron until the first dampness is removed, otherwise the hot iron will stick to the wet silk and will make it look shrivelled and papery. When ironing black silk always put some tissue paper between it and the ironing cloth, as the aniline dye used for black silk will make blue stains on the white cloth. Silk is ironed on the right side to give it a good gloss, but if a blouse is being ironed that has a lining, the lining should be ironed first to slightly dry it, then finish ironing the silk on the right side. To obtain a good result all silk must be ironed quite dry, and great care must be taken not to make any creases, as a damping flannel should not be used for silk.

Lace. Real lace, by which is meant fine hand made lace, should never be rubbed at all by the hands when washing it. Make a lather of the finest curd soap and to it add a teaspoonful of borax previously dissolved in a little boiling water. Put the lace in a wide necked bottle, half

fill the bottle with warm water and the prepared soap lather, put a piece of clean linen over the cork, fix it into the bottle and shake well. Change the water frequently and when the lace is clean, take it out of the bottle, and rinse it well in a bowl of clean warm water, then rinse it in cold water. Squeeze the water out of the lace and spread it out on a clean sheet of white blotting paper, place another sheet ot white blotting paper over it, and press well with the hands to get as much of the moisture out of it as is possible. Then spread the lace out on a board covered with flannel, and pin it into exact shape with baby pins, every loop of the pattern must be pinned out without being stretched, and the best pins must be used, as the cheap ones will make little rust marks on the lace. Leave it pinned out until it is quite dry then carefully remove the pins.

Another method is to tack the lace on to a clean piece of flannel, having each point of the pattern securely sewn then tack the flannel round a bottle or a piece of wood, and wash it in two baths of lukewarm water and soap lather. Take the lace off the bottle still keeping it sewn to the flannel, and rinse well first in warm water then in cold. Leave the lace on the flannel, until it is nearly dry, then remove it most carefully, and place it between two sheets of blotting paper which should be white and quite clean, lay the blotting paper containing the lace on some flannel and press it out very carefully with a cool iron.

Silk Maltese handkerchiefs are treated just as any other silk would be, and the lace edge is ironed on the wrong side

with a piece of muslin between the lace and the iron. Good lace should not have the iron actually put on it as the lace should never look at all glossy. Lace should not be boiled as that would take away the yellow look which adds so much to the charm of good and old lace.

The ordinary lace used so much for ties and trimmings is washed in warm water and soap lather, it should never be rubbed with soap, and if wanted a little stiff, after rinsing it can be dipped into some thin boiling water starch, or in what is called lace starch, which is made by mixing one teaspoonful of starch smoothly in a pint of cold water. The lace should be ironed wet on the wrong side over some flannel to raise any pattern there may be on it.

Black lace like black silk can be washed in weak tea and soap lather, and after rinsing it in warm water rinse it in blue water to keep it a good colour. Ammonia can also be used in the cold rinsing water for black lace and it aids greatly in restoring the colour to rusty black.

Sugar is sometimes used for stiffening lace, but it is not to be recommended as it so often causes discolouration.

The removal of stains. Iron mould.—Sprinkle the stain with lemon juice and expose to the air and sun, repeat this several times. Or dip a rag into salts of lemon, or salts of sorrel, hold the stain over a basin, pour boiling water over it and rub it with the salts of lemon or sorrel, once more pour boiling water over the stain, rinse and wash the article at once or a hole will be burnt in the material. This method must not be used for anything that is coloured.

Ink.—If on linen rub the spot with glycerine and wash the article. If the stain be freshly made soak it in buttermilk or in warmed milk, change the milk frequently, and then wash the article. Salts of lemon can also be used.

Wine and fruit stains.—Rub with salt and lemon juice, let it lie on the stain a short time, then pour boiling water over it. These stains should always be removed before the article is sent to the laundry, washing sets them in the material. Chloride of lime can be used but it must be used with the greatest caution. Sanitas will remove a fresh fruit stain. The article should be washed after using it in warm water.

Tea and coffee stains.—At once pour boiling water over them, stretching the article over a basin. If the stains have been allowed to harden into the material, steep them in cold water to which borax has been added and if necessary boil them in water to which borax has been added. They can also be removed by stretching the stain over a basin sprinkling borax on it and pouring boiling water over it.

Paint stains.—Water colours can be washed out. Oil paint must be rubbed with a little turpentine or paraffin, then wash the article.

Grease marks can be removed by putting borax into the water in which the articles are to be washed; soda can also be used. Glycerine will remove candle grease from linen, washing it afterwards.

CHAPTER XXII

Patching—Flannel—Calico—Print—Darning—Re-footing a stocking—Darning cloth and table linen—Hedge tear—To patch table linen—To re-face a skirt—To mend lace or net curtains—Marking in cross stitch—How to make a mattress—To make curtains.

By patching is meant that method by which any worn out part of a garment can be renovated and restored by means of a fresh piece of material being put into the place of the old. There are two kinds of patching, first by cutting away the worn or torn part and replacing it by new, and secondly taking away the worn part altogether, and putting new in its place, such as taking off an old collar or wrist band and putting new ones on the garment. When patching a garment use material which matches it in colour texture and quality, fix the patch carefully, finish it off neatly and firmly, having no puckers.

A flannel patch.—Find the selvedge way of the garment to be patched, mark it with a pin, place the garment right side downwards on the table. In flannel the woolly

side is the right side, and the fluff or nap should run from left to right. Treat the patch in the same way as the garment, place it over the hole and worn part, and see that the threads of both patch and garment are parallel. Tack the patch all round close to the edge, beginning at the selvedge side and allowing no turnings. Next herring-bone the edge of the patch on to the wrong side of the garment, being careful that the upper stitches go through the material of both patch and garment, begin herring-boning at the left hand lower corner and work from left to right. To turn the corner stop at the lower cross stitch, turn the work round towards the left hand and start at the lower cross of the next stitch. When the patch is herring-boned all round on the wrong side, turn the garment to the right side and cut away the worn part round the hole, leaving three-eights of an inch below the margin of the patch, cut the material very straight and even. Herring-bone the edge of the garment to the patch, and to turn the corner, stop at the upper part of the stitch, turn the work round and start the next side with the upper cross of the stitch. Herring-bone stitches should be four threads of the material in length.

Calico patch. If new material be used for the patch, it should be first washed and then torn or cut by the thread. Mark the selvedge side with a pin, place the garment right side downwards on a table with the selvedge to the left hand. Turn down a narrow fold on the right side of the patch, doing the selvedge side first, and pressing the corners

well. Place the patch on the garment, pin it to get it into place, then tack it all round, seeing that the threads of both materials are even. Hem all round the wrong side very neatly, turn the garment over, and cut away the worn-out part, leaving a margin of three quarters of an inch. Mitre the corners, that is slit up the corner to turn the edge in. Turn up the raw edges to the patch, tack all round to keep the edges straight and even, and seam the two edges together. When finished, flatten the sewing with the nail, or by pressing it with the scissors.

Print patch. Print is always patched on the right side, and the piece of material used for making the patch should be washed until it becomes the colour of the garment. The garment must be kept the right side uppermost. The patch also must be kept right side up. Mark the selvedge side on the patch, and turn down a fold three-eighths of an inch on the wrong side of the patch. On the selvedge side, match the pattern by laying the patch on the garment, then fold down the other sides as near three-eighths of an inch as is possible. Tack the patch firmly all the way round on the right side, and seam it neatly on to the garment, holding the patch towards the worker, and using cotton to match the material exactly. When seamed all round, flatten out the sewing, turn the garment over and cut away the worn part to meet the turned down edge of the patch, then blanket stitch the two edges together, commencing at the left hand top corner and always holding the cotton under the left

thumb. Do not allow the stitches to shew through on the right side.

Darning is the method by which new threads are supplied in the place of thin or worn out ones, and the following rules should be remembered. 1. If possible prevent a hole by darning a thin place. 2. Begin at the left hand side of the darn, as the hand holding the needle is then out of the way. 3. Never make a straight edge to a darn, as that makes the strain borne by one row of threads—a diamond shape is the best and the strongest. 4. Always leave loops at each end of the thread. 5. Choose the mending thread or darning cotton to match the material of the garment to be mended in texture and colour. 6. Keep the darn quite flat. 7. In darning take up one stitch and miss one until a sufficient number are on the needle to form a side. The first row should be an up stitch, the down stitch should form the second row. 8. A thin part need not be crossed, the hole must be. 9. The edge of the cross darn must be straight and even.

To re-foot a stocking. From the centre seam at the back at the top of the heel, cut a straight line each side to the instep join, then cut out the sole of the foot round the seam. Take the leg of the stocking to be used for the new foot and cut it down by the back seam. Open out the worn out sole and spread it out flat on the leg of the stocking being used for the new foot. Allow very small turnings, and cut out the new sole. Stitch up the heel of the new sole, press out the seam, and herring-bone the edges on each side.

Place the seam of the stocking to the seam of the heel, tack the new sole in place, then stitch it all round, press out the seam with the thumb nail, and herring bone the edges on each side of the seam. Press out all the seams with an iron and the re-foot is finished. The turnings should not be more than a quarter of an inch.

Darning cloth and table linen. A cross cut is usually found on table linen, by it being cut with a knife. To mend such cuts, the rent must be enclosed in a geometrical figure in the form of two triangles or two rhomboids. The darning should be done on the wrong side, and across the threads, except in the case of a lined skirt, when it should be darned on the right side. To plan the shape of the darn, draw a square surrounding the cut. Extend the lines of the square at the points nearest to the ends of the cut to the same length as the sides of the square, then join the ends of the extended lines with the corners farthest away from the cut. This will form two triangles and two rhomboids. The darn may be made in the shape of the two triangles or in the shape of the two rhomboids. The latter is better, as the cut is farther away from the looped edges, and the looped edges are farther away from each other, and this makes the darn stronger. The number of stitches taken up on the needle for the first row regulates the number for the whole darn.

Rules for darning a cross cut.--1. Begin at the left hand corner. 2. Before commencing to darn, draw the edges of the cut together with fine cotton, using the fish bone stitch,

made by inserting the needle about a quarter of an inch from the raw edge, and keeping the raw edge on the wrong side. 3. Darn on the wrong side except for a lined skirt. 4. When darning the second rhomboid take up the material as well as the stitches. 5. Mark out the rhomboids with coloured cotton.

Hedge tear. Caused by catching material on a sharp surface or nail, usually forms two sides of a square, the corner as a rule being very ravelled. To mend a hedge tear, darn it in two oblongs, each oblong being twice as long as the tear. Darn on the wrong side, and begin darning at the left hand of the narrow side of the oblong, only cross the square surrounding the corner of the tear. Before beginning to darn draw the edges of the tear together with the fish-bone stitch. Always leave loops, and when possible use the ravellings of the material for mending the tear.

Patching table linen. To patch table linen for hard wear, cut a square of damask large enough to cover the hole and weak thin parts. Put the patch on the wrong side, matching the pattern of the damask exactly. Tack the patch in place, and darn it on to the table cloth, taking about three stitches on and three stitches off the patch. Use flax thread to darn with. Turn the cloth to the right side, cut away the worn part, leaving a margin of one-third of an inch, then darn the right side in the same way as the wrong side was done.

The German method is to cut the hole and thin part into a square, match the pattern and cut the patch to fit

the square exactly. Fix the patch into place by fastening it at the four corners. Secure the patch by using the German stitch on the right side, put the needle through on the wrong side, and bring it between the two raw edges, then through the under part, and up through the raw edges and so on, the corners being done as in darning, by only coming to the middle and then turning the patch.

To re-face a skirt. Tack round the bottom of the skirt just above the braid, to keep the material and lining together, and make another row of tacking about nine inches above the bottom of the skirt. Take off the old braid and undo the stitching. Cut the bottom even. Cut the new lining nine inches wide. Some prefer it to be on the cross, some on the straight. Place the right side of the lining to the right side of the skirt. Have it quite even and stitch it firmly together, turn it over, having a small hem of the material on the wrong side, tack it all round, and press the bottom with an iron. Make a nine-inch hem, pleating the lining when necessary, but no stitches should show on the right side.

To mend lace or net curtains. Cut a piece of material to match the pattern of the curtain; have it large enough to cover the hole well, starch it and iron it on to the torn part. Another and more difficult method is to copy the pattern with cotton, using button-hole stitch, and darning in any thick parts of the pattern.

Making in cross stitch. Each letter should be seven stitches in height, and each stitch should be crossed the

same way, that is, all the upper parts of the stitches should be crossed from left to right or vice versa. No knots must be allowed, and each letter must be finished off, there must be no connecting threads. Between the letters there should be a space of two stitches, and if capital letters or initials, there should be a cross stitch between each to indicate a full stop.

How to make a mattress. The materials required are—Ticking, which costs from 4½d. to 2/6 per yard. It can be bought single or double width, a fair price being from 1/- per yard double width. Binding at one penny a yard. For stuffing, horse hair, costing 9d. to 3/- per lb. White wool top and bottom, with horse hair in between ; white wool costs from 6d. to 9d. per lb. Brown wool 3d. per lb. Vegetable wool 1/- per lb, but it is very light, and a quarter of a pound will go as far as one pound of flock, which costs 3d. per lb. Cocoanut fibre is used for common mattresses as is prepared seaweed. Shoddy, which is made of rags reduced to a pulp, should never be used as a stuffing for mattresses, as it is most unhealthy. The tufts cost 2½d. a gross, and a mattress needle and string will be wanted. For a full sized bed, five feet wide, allow nine pounds of stuffing for every foot in length. To measure the length of the ticking, allow the length and width of the bedstead, plus three quarters of an inch for every square foot, for fulness and tufting, and five inches for the sides.

Begin to make the mattress by pleating two sides of the piece of ticking to be used for the top of the mattress, one

long side and one short side. Do the same for the under piece of ticking, pleating the reverse sides to the top piece, also cut the corners at the reverse sides. Tack the corners together, then tack the mattress cover, all round the top edge, after which do the bottom, leaving a space for putting in the stuffing. Next bind the corners, and, after they are done, begin binding the edges on one of the short sides, holding the face of the mattress and not the border towards you. When the mattress cover is bound all round, fill it with the stuffing, sew up the space, and beat it well with the fists to get the stuffing evenly distributed, then quilt and tuft.

Curtains. For winter curtains, have thick soft heavy material, for summer ones have muslin, lace or net or cretonne. When measuring curtains allow five inches more than the length required.

Thick, heavy curtains should be stitched into cup-like pleats at the top, or formed into double box pleats. A hook should be sewn on the inside part of each pleat, and webbing placed across to cover the lower part of the hook. Each side of this webbing should be sewn to the curtain.

Washable curtains should be gathered at the top into a double row, taking up one-eight of an inch and leaving a quarter of an inch, the top of the gathers should be hemmed on to a piece of webbing, and stitch the gathers as well on to the webbing, about half an inch from the top. The rings are sewn on to the webbing, and the turning at the top of the curtain should not be less than two inches.

Should a seam be necessary in the material and lining, flatten it out and run both edges together on the inside, so that it will not be visible on the right side.

complete

THE END

5-6-06

W. JOLLY & SONS, ALBANY PRESS, BRIDGE STREET, ABERDEEN.