

THIS BOOK CAN BE YOUR BEST FRIEND

This is a book for women everywhere. It talks about the everyday problem of all women—housecleaning.

It will guide you to the easiest, simplest, quickest methods to lighten your daily or special cleaning and it will be invaluable when Junior spills the ink, Dad tracks in road tar, Sister stains her best dress.

The Betty Bissell Book of Home Cleaning
can be your best and most useful friend. Read it, try its tips and hints, keep it handy for emergencies.

**MAKE YOUR LIFE PLEASANTER
AND MORE LEISURELY WITH
THIS BOOK OF APPROVED,
TESTED CLEANING METHODS.**

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EMERGENCY CHART FOR

STAIN	Wool (washable)	Wool (non-washable)	SILK (washable)
Add	cool water ammonia	cool water ammonia	cool water ammonia
Alcoholic beverage and soft drinks	water and alcohol	water and alcohol	water and alcohol
Alkalies	cool water add	cool water add	cool water add
Hood	cool water laundry	cool water hydrogen peroxide	cool water laundry
Candy and syrup	laundry	warm water	laundry
Cocoa and chocolate	laundry	cleaning fluid	laundry
Fruit and berry	cool water detergent	cool water detergent	cool water detergent
Glue and muclago	warm water add	warm water add	warm water add
Gravy	cool water laundry	cool water cleaning fluid	cool water laundry
Ink	cool water ammonia	cool water ammonia	cool water ammonia
Iodine	alcohol	water and alcohol	water and alcohol
Mercurochrome and merthiolate	water and alcohol glycerin	water and alcohol glycerin	water and alcohol glycerin
Milk and ice cream	cool water laundry	cleaning fluid cool water	cool water laundry
Mustard	glycerin laundry	alcohol	glycerin laundry
Oil and grease	cleaning fluid laundry	cleaning fluid	cleaning fluid laundry
Paint, varnish, and lacquer	solvent	solvent	solvent
Salad dressing	laundry	warm water cleaning fluid	laundry
Sauce and cream Map	laundry	warm water cleaning fluid	laundry
Scorch	(white) hydrogen peroxide		(white) hydrogen peroxide
Tar and pitch	softener laundry	softener cleaning fluid	softener laundry
Tarnish	add	add	add
Tea and coffee	boiling water	glycerin	boiling water
Tomato juice and catsup	cool water glycerin	cool water glycerin	cool water glycerin
Wine	salt boiling water	salt boiling water	salt boiling water

STAINS (See Chapter 13 for Details)

SILK (non-washables)	COITON & LINEN	SYNTHETICS (washables)	SYNTHETICS (non-washable)
cool water ammonia	cool water ammonia	cool water ammonia	cool water ammonia
water and alcohol	water and alcohol	water and alcohol	water and alcohol
cool water add	cool water add	cool water add	cool water acid
cool water hydrogen peroxide	cool water laundry	cool water laundry	cool water hydrogen peroxide
warm water	laundry	laundry	warm water
cleaning fluid	laundry	laundry	cleaning fluid
cool water detergent	cool water detergent	cool water detergent	cool water detergent
warm water add	warm water add	warm water add	warm water add
cool water cleaning fluid	cool water laundry	cool water laundry	cool water cleaning fluid
cool water Ammonia	cool water laundry, bleach	cool water laundry, bleach	cool water ammonia
water and alcohol	alcohol	water and alcohol	water and alcohol
water and alcohol glycerin	water and alcohol glycerin	water and alcohol glycerin	water and alcohol glycerin
cleaning fluid cool water	cool water laundry	cool water laundry	cleaning fluid cool water
alcohol	glycerin laundry	glycerin laundry	alcohol
cleaning fluid	cleaning fluid laundry	cleaning fluid laundry	cleaning fluid
solvent	solvent	solvent	solvent
warm water cleaning fluid	laundry	laundry	warm water cleaning fluid
warm water cleaning fluid	laundry	laundry	warm water cleaning fluid
	rewash bleach	rewash bleach	
softener cleaning fluid	softener laundry	softener laundry	softener cleaning fluid
add	add	add	add
glycerin	boiling water	boiling water	glycerin
cool water glycerin	cool water glycerin	cool water glycerin	cool water glycerin
salt boiling water	salt boiling water	salt boiling water	salt boiling water

ESSENTIAL CLEANING TOOLS FOR EVERY HOME

Vacuum cleaner with attachments
Carpet sweeper
Applicator for shampooing rugs and carpets
Applicator for wax
(With or without container for liquid
and self-polishing waxes)
Floor polisher (weighted or electric)
Soft bristle or hair broom
Dust mop (synthetic for easy washing)
Wet mop (cellulose sponge or string)
Scrubbing brush (long handled)
Dust pan and brush (long handled)
Pail
Radiator brush
Toilet brush or johnny mop
Dust cloths
Polishing cloths (flannel or chamois)
Whisk broom
Bathtub brush with long handle
Brushes for chased silver
Small brush for laundry
Cellulose sponges

betty bissell
book of
home cleaning

Bantam Books
New York

THE BETTY BISSELL BOOK OF HOME CLEANING
A Bantam Book / published March 1959

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I. EQUIPMENT AND MATERIALS

We hope you won't find it disconcerting to open this book and find that you have landed spang in the cleaning closet. **But** what better place is there to begin a discussion of easier and more effective home cleaning methods? The easy cleaning methods advocated today, the improved cleaning agents that are available and the efficient streamlined equipment we have are based on long scientific investigation in the nation's laboratories and the workshops of engineers. We have electric equipment that operates with push buttons and switches, and mechanical gadgets that are increasingly efficient and easy to manipulate. New materials for upholstery, floors, and counters can be cleaned with the swish of a damp cloth; minimum-care clothing textiles simplify the problem of laundering. Cleaning agents for specific tasks are offered in bewildering variety. But to take full advantage of the easy maintenance of modern materials women have to become a little scientific too. They must know what to use and what not to use in cleaning the many different materials in the home, and they must have a little mechanical knowledge if they are to use the new tools to best advantage.

GOOD BASIC HOUSECLEANING EQUIPMENT is not expensive and no one can do a really good job—whatever his profession—without the proper tools. If you have been struggling along with beaten-up brooms and brushes and old-fashioned mops and pails, take inventory. Then investigate the prospects of new streamlined models. On the page facing this you will find a checklist of cleaning equipment which map help you make your selections.

STORAGE. Good equipment deserves proper care and storage. If you have a wide shallow closet with a shelf, where you can keep these things, you are lucky. If you haven't it might not be as difficult as you think to provide one* or to

* *Closets and Storage Space.* Farmer's Bulletin No. 1865, United States Department of Agriculture. Government Printing Office, Washington 24, D. C. Ten cents.

Booklets /Plain Water

adapt a corner somewhere for storage space. On the shelf store your mothproofing materials, insecticides, cleaning and polishing waxes, metal cleaners, and (in a special box) stain-removing supplies as you accumulate them. You will never have to hunt for the things you need if you have a well organized cleaning closet or special corner for your equipment. And if you duplicate essential equipment upstairs you won't wear yourself out dashing up and down to get something you need and have forgotten.

READ AND FILE YOUR INSTRUCTION BOOKLETS

as you purchase equipment. The average woman cannot be expected to know exactly how her electrical gadgets work, but she must know a few basic rules for their care. The fundamental care of electrical equipment is outlined in a separate chapter. No housekeeper needs to know the composition of the soaps and synthetic detergents she uses, but to make the best use of them she should know how they differ and which job each one does best.

CARE OF EQUIPMENT. Cleaning equipment includes those elusive hand tools that are always disappearing; also dust mops and wet mops, brooms, and a score of accessories. When you have finished using them put them away properly. Vacuum cleaners and carpet sweepers should be emptied and their brushes freed of hair and tangled bits of string. Dust mops, vacuumed clean, and wet mops, rinsed and dried, should be suspended from hooks. Brooms will do a better job and last longer if they are given a thorough wetting now and then, or washed in suds and rinsed. If you use oiled mops on your floors, store the heads in a tin can with a tight cover (oiled dusters, too) as a precaution against fire. Cleaning pails should be washed before they are put away, upside down on the floor. (Have you seen the gaily colored ones with pouring spouts, or the two-compartment type for cleaning solutions and rinse water?) Dust brushes and dust pans should be hung up too, the edge of the dust pan facing the wall as a precaution against denting. Scrubbing brushes should be washed, dried, and aired before being stored.

THE DIFFERENT CATEGORIES OF CLEANING AGENTS which writers in this field refer to so blithely as solvents, absorbents, abrasives and bleaches should be understood. Such basic knowledge will enable a woman to make full use of her cleaning equipment and the great assortment of cleaners available today, and at the same time will forestall the

Booklets /Plain Water

errors that bring ruin to expensive equipment and materials. At this point we will consider some of the materials used for cleaning. First of all—solvents.

SOLVENTS are agents which dissolve the materials that cause soil and stains. Foremost of these and the most generally useful is water, which dissolves a little of almost any material it contacts long enough—even metals and minerals. When water is pure, like rain water, it is called soft. When its mineral content is high it is known as hard water, and more soap is needed to make it work well. Very hard water, used with soap, forms small curds or soap scum; its cleaning ability is low unless a softener is added.

SOFTENERS are of two types. One precipitates, or settles, the minerals that make water hard; the other keeps the minerals in solution but in a form that cannot form soap scum. In the first category are washing soda (sal soda), trisodium phosphate, borax, ammonia, and commercial products such as Raindrops and Climele. Type two softeners are often long, unpronounceable soda-and-phosphate compounds, which are available under such trade names as Calgon, Hexaphos, NoctQ, New Oalrite, Phosphotex, Quadraf os, and Tex. These are more expensive than type one softeners, but are very effective and better in the laundry.

A TEST SUGGESTED BY GOVERNMENT EXPERTS
to determine how much softener is needed for the water you use with a particular kind of soap—especially in laundering: put a gallon of hot water (140°F.) into a pan and add a half teaspoon of softener; stir until it has dissolved. Fill a quart jar half full of this water, add half a teaspoon of soap and shake it hard for ten seconds. If a good suds forms and holds for five minutes, the water is softened. Try again using less than half a teaspoon of softener to see if you can get a good suds with a smaller amount of softener.

If the half teaspoon of softener does not produce good suds with soap, repeat the test with fresh hot water, using one teaspoon of softener to one gallon of water. Continue until you have found the amount of softener needed to make good suds, and multiply it by the number of gallons your washing machine holds. If you change to a different soap or a different softener you will have to repeat the test.

PLAIN COOL WATER will clean windows and many other surfaces. It will also remove many stains on washable materials if the stains are fresh. Warm and hot water extend the clean-

Soaps, Detergents / Absorbents

ing range; boiling water and steam also have their uses in removing certain stains from cloth. Water plus a softener will accomplish efficiently many cleaning tasks around the house, without the use of either soap or detergent, and you won't have to rinse if you keep changing the water as it gets dirty. Solvents other than water, useful in house cleaning, include cleaning fluids and spot removers, alcohol, and other materials which are listed and discussed in the chapter **Spots and Stains**.

SOAPS AND DETERGENTS. For washing clothes and cleaning surfaces the grocery stores offer soaps and detergents in a bewildering array, and the label seldom gives complete details about what each type does best. To assemble this very greatly needed information, home economics research experts of the United States Department of Agriculture recently made long and exhaustive tests, upon which the information that follows is based. First we must note that soaps and detergents are entirely different in composition and in the way they work. Soaps are most effective with a soft water; detergents will work in either hard or soft water.

SOAPS are made from fat and lye. When they are dissolved in water the solution produced is alkaline, ranging from weak to strong. Any acid present in the material washed reacts with the alkali in the soap to make the soap less effective. To counteract the effect of the acids and minerals found in hard water, alkaline products are often added to soap, which is then referred to as **built** or heavy duty soap. Soap products without these added materials are mild and are intended for laundering fine fabrics and lightly soiled garments (lingerie, blouses, stockings). They are recommended for delicate cottons, linens and synthetics. White soap flakes are almost pure soap. The heavy duty or "built soaps" on the retail shelves contain alkaline softeners that increase their sudsing ability. These are for the family wash and for laundering heavily soiled clothing. They are not good for washing wool and silk.

SOME MILD AND HEAVY DUTY SOAPS, compiled by government textile experts are listed below. Since new trade names appear constantly, the list is not complete.

Mild	Heavy Duty
Chiffon Flakes	Duz
Ivory Flakes	Fels Naptha
Ivory Snow	Rinso (soap)
Kirkman Flakes	Super Suds (soap)
Lux Flakes	

Soaps, Detergents/Absorbents

SYNTHETIC DETERGENTS are made by complex chemical processes from materials such as petroleum, and animal and vegetable fats and oils. They do not depend for their cleaning ability upon alkaline softeners. Synthetic detergents dissolve easily in either hot or cold water, regardless of its hardness or softness, and they do not form scum. They are especially effective in removing oil and grease stains from washable materials. Some synthetic detergents form suds and others accomplish their cleaning with little or no suds. Some are powders, others liquids. Like the soaps, synthetic detergents are of two main types, unbuilt (mild) and built (heavy duty). Mild detergents are intended for washing fine and lightly soiled fabrics. They are better for wool and silk than the mildest of soaps. Heavy duty detergents contain alkaline softeners that increase their cleaning ability, but disqualify them for silk and wool. They are general purpose detergents for washing heavily-soiled clothes and surfaces.

SOME MILD AND HEAVY DUTY DETERGENTS appear in the following government-compiled list. Since new brands are constantly appearing, the list cannot be considered complete.

Mild	Heavy-Duty	
	High-sudsing	Low-sudsing
Dreft	Breeze	Ad
Joy	Cheer	All
Liquid Lux	Fab	Dash
Liquid Trend	Felso	Giant
Swerl	Hum	Spin
Vel	Oxydol	
	Rinso (detergent)	
	Supersuds (detergent)	
	Tide	
	Trend	

To this list we might add some of the detergents made especially for fine woolens, such as Woolfoam and Tern. There are also detergents made especially for heavy cleaning jobs.

Less synthetic detergent is required in hot water than in cold. Read the directions on the brand you select for the proper amount to use since you cannot always tell by the amount of suds.

ABSORBENTS are powders such as talc, fuller's earth, magnesium carbonate, and French chalk—all to be had at

Abrasives / Oils

drugstores—and also cornstarch and cornmeal, available on grocery shelves. They are often very effective for light stains and are easy to use and completely harmless to all materials. Absorbents are either sprinkled onto stains and allowed to remain overnight, or worked gently into certain stains, shaken out, and the process repeated. Sometimes they are mixed with a cleaning fluid to form a paste which is allowed to dry on the stain, then brushed off. Uses for absorbents will be discussed later.

ABRASIVES are materials that clean by scouring off accumulated grime and stains. Care must be taken that they do not damage the surface being cleaned. Rottenstone, whiting, powdered pumice, volcanic ash, powdered tin oxide, and jeweler's rouge are some of the abrasives. They can sometimes be obtained at paint and hardware stores, but you may have to get them from a wholesale chemical house yourself or have your druggist order them for you. All of these abrasives have valuable and time-saving uses. Some are good for cleaning furniture, others for polishing metals, and many of them are available in varying degrees of fineness. Scouring powders sold under trade names are abrasives too, differing in what they contain and in their degree of harshness. Many contain strong alkalis which are effective for some purposes but damaging for others. Whiting (powdered chalk) is a fine mild abrasive. It can be bought at paint stores in various degrees of fineness and has many uses around the home. A fine grade (gilder's whiting) is used as a silver polish.

FURNITURE AND FLOOR POLISHES are presented to the homemaker in great variety. Some are waxes and some are oils. Make a point of reading the label so that you will know what you are buying and how it is meant to be used.

OIL POLISHES contain Unseed oil or paraffin oil, with other ingredients.

WAX POLISHES may contain a variety of waxes, some, like camauba, very hard. The wax polishes that require buffing contain naphtha or a similar dry cleaning agent. Self-polishing waxes contain water instead of naphtha and do not require buffing. Other waxes are made for specific cleaning purposes.

TURPENTINE AND LINSEED OIL, ingredients of many polishes, have uses in their own right in cleaning furniture and treating blemishes. They can be bought in paint and hardware stores. Boiled linseed oil is ordinary linseed oil that has gone through a complicated industrial heating process.

Abrasives / Oils

You buy linseed oil either "raw" or "boiled," depending upon the use for which it is intended. You cannot boil it yourself.

OILS FOR LEATHER. Linseed oil and paraffin oil are fine for wood, but bad for leather. If you want an oil to protect leather from the damage that results from excessive drying, select neat's foot oil (shoe repair shop), castor oil, white vaseline, or saddle soap.

This will give you a general picture of some of the materials that aid in cleaning. Their proper use is given in the chapters which follow. We hope the information will greatly simplify your cleaning problems.

2. WALLS AND CEILINGS

We are not going to make a room by room tour of the house, since many of the problems presented in one would be found in all, but some rooms do require special techniques which we will cover adequately. Walls and ceilings, obviously, are to be found in every room, so let's begin there.

WALLS ACCUMULATE MORE DUST than you might imagine, no matter what the finish. Take down the pictures, move the furniture out from the walls, and dust walls and ceilings carefully from the baseboard up. Use the wall or floor brush of your vacuum cleaner, or a soft hair wall brush, paying particular attention to corners, moldings, and baseboards. Cloths are not satisfactory for this job. If the wall is papered and in good condition, dusting is all that will be necessary.

DINGY AND SOILED WALLPAPER can be freshened if you use the proper method. Some can be washed. Even if you have been told that the paper is washable and it is so labeled in a spare roll, make this test before you start work on it: squeeze a clean cellulose sponge, or a very soft cloth, in clear lukewarm water and cautiously test the paper by rubbing it in an inconspicuous place. Use as little water as possible and a very light touch. If the colors do not blur and the spot dries satisfactorily, you can go ahead safely.

FOR THIN DELICATE WALLPAPERS use clear warm water without soap or detergent. Work always from the bottom upward. This is important because any water that dribbles down a soiled wall leaves a streak that is very difficult to remove. Use a light stroke and overlap each cleaned area. Gently pat the cleaned part dry as you proceed. Change the water as it becomes soiled.

Wallpaper / Tile Walls

HEAVY WASHABLE PAPERS can be cleaned with suds made with mild white soap flakes or a mild detergent. Proceed as before, being careful not to rub hard. Rinse as you go with a sponge squeezed out of clear water and pat the wall dry. Great care is required in washing wallpapers; too much water will soak them off the wall.

PAPERS THAT WILL NOT STAND WASHING can be cleaned with several preparations that are sold in hardware and paint stores. One kind looks like a lump of dough. If you use a commercial cleaner, follow carefully the directions given on the container. Also useful are art gum, the inside of a loaf of stale bread, preferably rye, or wheat bran sewed in a bag. Before using any of these, remove grease spots from the paper in the following manner: mix fuller's earth or French chalk (obtainable at a drugstore) with enough dry cleaning fluid to make a paste. Test the mixture on the paper in an inconspicuous place to make certain that the colors will not be affected. Cover the spot with the paste, and when it has dried completely, brush the powder off. If the stain is bad, several applications of the paste may be necessary to remove it. Follow stain removal with the overall cleaning, again being sure to use overlapping strokes so that the wall will not be streaked when you finish it.

DAY TO DAY CARE OF PAPERED WALLS includes prompt removal of stains and marks. Use art gum for pencil marks and light smudges. Sponge crayon marks lightly with cleaning fluid on a soft cloth. (Test first.) Repeat applications may be necessary. Soap and water cleaning may follow removal of the stain if the paper is washable.

INK SPATTERS should be blotted up immediately but carefully with cleansing tissue. After that, apply fuller's earth or French chalk, brushing it off as it takes up the ink. If the stain is not removed completely by these methods, ink eradicator from the drugstore can be used, but it is likely to take out the color too. (Follow the directions on the package.)

STAINS MADE BY FOOD (have you a teen-ager?) should be brushed off as promptly as possible to remove any solid particles. If a grease spot remains, use the cleaning fluid plus the absorbent mixture described in the preceding paragraph.

LACQUERED WALLPAPERS can be washed easily with warm suds made of soap or detergent. Papers coated with wall wax (sold at wallpaper stores) usually can be wiped clean

Wallpaper / Tile Walls

with a damp cloth. Special cleaners are made for fabric-coated walls, but if the manufacturer of the covering has supplied directions, follow those.

IF YOUR WALLPAPER IS UTTERLY IMPOSSIBLE, how are you on hanging it? Hundreds of women do their rooms over and some of the papers available today are ready-pasted.

WOOD-PANELED WALLS, finished with wax, seldom need more than dusting. If they begin to look dry and grimy, clean them with liquid wax on a soft cloth, buff them and then apply a fresh coating of wax. Rub the panels with another soft cloth until a dry fingertip will not leave a mark.

PANELS FINISHED WITH VARNISH OR SHELLAC, that are not waxed, should be dusted and, if desired, freshened by applying the following mixture: combine one half cup of pure gum turpentine, one cup of boiled linseed oil, and about a tablespoon of vinegar. (Note that one buys linseed oil either "boiled" or "raw." Do **not** boil it yourself!) With a clean cloth apply a very thin coating. Let it stand for fifteen minutes, then rub it until it will meet the finger-smudge test.

KITCHEN AND BATHROOM WALLS, finished with high gloss enamel paints, lose their finish and soil resistance if the wrong type of cleaner is used. Sometimes plain hot water will clean these surfaces. Washing soda (sal soda) is ideal for soiled enamel paint. Use a couple of tablespoonfuls in a pail of hot water and add more if the walls are very soiled. If you keep changing the water, rinsing will not be imperative. Again, begin washing at the bottom of the wall and work upward. With a sponge squeezed out of your cleaning mixture, wash a small area of the wall at a time, using a circular motion. Rinse with a sponge squeezed out of clear water before moving to the adjoining area, being careful to overlap the edges of the part just cleaned. Continue until the walls are clean, then do the ceiling. Detergents also are safe for glossy enamels and do a nice job on other paints too.

DO NOT USE SOAP ON ENAMEL PAINTS because it nearly always leaves a film.

GLAZED CERAMIC TILE WALLS often can be cleaned with a damp cloth or sponge. If filmed with soap, grease or soil, use trisodium phosphate, borax, or some other water softener. A teaspoonful or so in a pail of hot water may do, but add more if it seems necessary. For heavily soiled areas,

Plastic Tiles / Painted Walls

sprinkle a little of your softener on a damp cloth and rub the tiles clean. Rinse the surface and wipe it dry with a soft cloth. Mild scouring powders may also be used to clean glazed tile but must be rinsed off carefully afterwards. Harsh abrasives and acid solutions should be avoided.

PLASTIC TILES may need only to be wiped with a damp cloth, or you can use warm water with soap or a detergent. Rinse and wipe dry. No scouring powders or any other abrasive should ever be used on plastics. These tiles are usually made of polystyrene or vinyl plastics, sold under many trade names. Polystyrene plastics (Bakelite polystyrene, Catalin Luxtred, Plexon M, Styron) are not damaged by water, oil, alcohol, vinegar, or the usual household acids. Cleaning fluids, gasoline, nail polish and polish remover, and oil from lemon and orange peels damage them. Vinyl plastics (Vinylite, Saran, Geon, Marvinol, Ultron, and Monsanto vinyl butryol) are very tough. Ordinary household chemicals will not harm them and they resist damage from acids, alcohol, food, ink, and dirt; but be careful not to spatter them with moth preparations. Too much heat softens most plastics so be careful in placing electric heaters.

PAINTED WOODWORK AND PAINTED FURNITURE can be cleaned by the methods described for walls, or you can use a cleaning wax. If you wax them when they are clean and dry, they will resist stains and dust.

COMMERCIAL PAINT CLEANERS are often excellent for surfaces finished with flat paint. These may be powders, liquids, or pastes. The liquid cleaners are soap solutions, some with softeners added, or non-soap solutions containing washing soda, sodium silicate, or trisodium phosphate—the painter's TSP. The pastes are similar to the liquid cleaners but contain more soap. Other cleaners are wax emulsions, plus soap and an abrasive. Powders for paint cleaning consist of the dry ingredients used in the pastes and liquids. Use prepared paint cleaners exactly as directed on the container. If too much is used, some of these cleaners will remove the paint along with the grime. Trisodium phosphate, which you should be able to find in a paint or hardware store, is tops for cleaning flat paints. Use a teaspoon (or more) to a gallon of water. Trademarked cleaners such as Wyandotte Cleaner, Soilax, and Oakite are more or less in this same category. Do not use scouring powders on a fine painted surface unless it is absolutely necessary

Plastic Tiles/Painted Walls

(scuff marks, etc.), and then select the mildest you can find. Whiting is good or you can use a little silver polish.

CALCIMINED WALLS and walls finished with similar water paints cannot be washed. They must be refinished.

3. THE CARE OF FLOORS

To look its best a room must have a clean, softly lustrous floor whatever the finish or covering may be. Such floors are not difficult to achieve with the equipment and materials available at small cost to today's housekeeper.

For waxed wooden floors and resilient coverings there are long handled buffers and applicators of modest price, while electric polishers can be rented inexpensively from hardware and grocery stores. Self-polishing waxes make the care of many floorings easier and to apply them there are applicators with containers for the wax, controlled by a trigger.

WAXED WOODEN FLOORS predominate in all but the kitchens and bathrooms of most homes so we shall discuss them first. Wax is sometimes applied directly to softwood floors, but for these as well as for hardwoods a finish for the wood is highly desirable for appearance and ease of maintenance. If the finish on your floors is badly worn away in traffic areas, or if the wood has never been finished properly, save yourself a headache by having it sanded down to clean wood and refinished. Electric sanders can be rented: sealers are especially easy to apply. So the job **could** be done without outside help.

FOR WOODEN FLOORS in good condition, whatever the finish, the routine care is the same if they are waxed. They should be dusted regularly with a vacuum cleaner, soft brush, or untreated mop. Once a month, or as needed, they should be polished with a weighted buffer or electrical polisher. At this time fresh wax should be applied to areas that look worn. About twice a year the entire floor should be rewaxed. A paste wax is the most durable and is recommended generally, though liquid and even some self-polishing waxes can be used if you prefer them.

Paste Wax/Woodwork

BEFORE PASTE WAX IS APPLIED the floor should be cleaned thoroughly. For this purpose use a liquid wax, or one of the special cleaners made for removing embedded soil from waxed floors. In this category are Bruce's Floor Cleaner, Preen, and Beautiflor. Like liquid wax these special cleaners contain a dry cleaning agent such as naphtha, plus wax and other efficient dirt removers; they loosen the soil and remove old wax, yet leave a film of clean wax on the floor. Directions for using these products are given on the container. Read them carefully to obtain the best results. The general instructions are as follows:

First vacuum the floor carefully to remove surface dust and dirt. Shake the container to be sure the contents are thoroughly mixed before applying the cleaner. If it has been stored in a cold place and become thickened, stand the can in hot water for a while, or hold it under a hot water faucet, and then shake it. (Never heat any wax preparation over an open flame.)

YOU CAN STAND UP FOR WAXING. You do not need to get down on your hands and knees to apply cleaning wax to a floor. Use one of the inexpensive, long handled applicators that are made especially for this purpose. One kind makes use of steel wool pads that greatly aid the cleaning action. Pour a little of your cleaner onto the floor, and using the applicator, rub with the grain of the wood to loosen the dirt which will be picked up by the cloth pad, or by a cloth placed under the applicator pad. Change cloths as they become soiled and work until the floor has been completely cleaned.

IF YOU PREFER HAND CLEANING, use essentially the same method. Pour a little cleaner onto the floor, spread it with a clean cloth, and rub it in to loosen the dirt which will be removed by the cloth. Turn the cloth as it becomes soiled and apply more cleaner where it is needed. Use fine steel wool dipped in cleaner for difficult spots. A thin layer of wax will be left on the floor when you finish and this should be buffed.

IF YOU ARE USING AN ELECTRIC BUFFER let the wax dry for twenty or thirty minutes before polishing the floor. If you polish by hand or with a fresh pad on your applicator, wait only a minute or so and then buff while the wax is still moist. It will be much easier.

FOR ADDED LUSTER and a long-lasting finish follow the cleaning wax treatment with a coating of paste wax.

Paste Wax/Woodwork

Dampen the pad on your long handled applicator with water. With a knife or spatula spread paste wax on the pad. Rub it over the floor in the direction of the grain so that the wood is coated with a thin even layer. It is important for good results that the layer be thin. If too much wax is used, the floor will be left gummy and difficult to polish.

FOR HAND WAXING use a dampened cloth, folded in a pad. Wipe the pad across the wax then spread it in a thin coating over the wood. Follow the instructions given for liquid wax cleaners in polishing the floor.

WASHING A WAXED WOODEN FLOOR is seldom necessary, if it is well kept and if sticky materials spilled on it are wiped up promptly with a moist cloth. However, it can be washed without damage if you use a cloth well wrung out of mild suds. Wash a small section at a time and rinse each area before moving on to the next. The important thing is not to get the floor too wet. Buff the floor afterwards, when it has dried thoroughly. Rewax it if this seems necessary.

LACQUERED WOODEN FLOORS with a glossy finish do not have to be waxed. They can be washed with a mop wrung out of mild lukewarm suds and rinsed with clear water. A treated mop can be used in dusting them if they are not waxed. If they are waxed, follow the directions given for waxed wooden floors.

VARNISHED FLOORS are also sometimes waxed, but this is not necessary. If not waxed, they can be dusted with a treated floor mop. A floor finished with waterproof varnish can be washed by the method described for lacquered floors. If the varnish is not waterproof, avoid washing unless it is absolutely necessary. If wash you must, use a cloth tightly wrung out of a mild soap or detergent solution and do a small area at a time, rinsing carefully with another cloth wrung as dry as possible out of clear water. Use a thick pad of newspaper under your pail as a precaution against spills, and do not let water dribble or stand on the floor.

SHELLACKED FLOORS must be kept scrupulously waxed, or spilled water will leave white spots and blotches. Wipe up immediately any water spilled on a shellacked floor. If it is soiled, clean the floor with a cloth moistened with alcohol or with a mixture of turpentine and alcohol (equal parts). Rub lightly or you may take up the shellac.

OILED FLOORS AND WOODWORK should be dusted with oil-treated cloths or floor mops. They can be washed if

Wooden Floors / Ceramic Tiles

necessary with warm suds made with a mild soap or detergent. Rinse as you clean, using as little water as possible. Dry with a soft cloth. When thoroughly dry, apply a fresh coating of oil polish, being careful to remove all excess oil before polishing the wood to a soft luster. Too much oil is as unsatisfactory as too much wax. It leaves a dust-catching, slippery surface. Oil polishes with a paraffin or linseed oil base are best.

PAINTED WOODEN FLOORS look better and are easier to keep in good condition if they are waxed. Wash them with warm water and a mild soap or with any of the cleaners described for painted walls and woodwork. Use fine steel wool dipped in liquid or paste wax or a mild scouring powder to remove stubborn spots and marks made by rubber heels.

UNFINISHED WOODEN FLOORS are almost impossible to keep clean. Sweep them with a broom or with your vacuum cleaner brush and wash them with suds made with soap or a detergent. Again, use as little water as possible to avoid raising the grain of the wood. Use a brush and scouring powder on bad spots. A little household bleach in the washing water will lighten the wood and perhaps improve its appearance.

THE ROUTINE CARE OF MARBLE FLOORS, sometimes found in hallways, is not difficult. Sweep them with a soft floor brush, your vacuum cleaner brush, or dust them with an **untreated** mop. Before discussing a more thorough treatment for marble that is dirty and stained, we hasten to set down two important "don'ts": don't use acid cleaners on marble because they etch the surface of the stone and leave an ugly yellow stain that attracts dirt; don't use soap (especially with hard water) because it leaves an unsightly film on marble.

MARBLE THAT IS IN GOOD CONDITION often needs only to be wiped with a soft cloth wrung out of plain water, or water that has been softened with washing soda, Calgon, or Noctil. Detergents such as Wyandotte Neo-Suds, Dreft, and Vel, are admirably suited for ordinary cleaning. If the marble requires an abrasive to remove heavy soil, the powder selected should be mild and alkaline, otherwise the surface will be scratched. Powders containing silicas are too harsh and should be avoided. Whiting, a calcite, is also harsh, especially for polished marble. Bon Ami, base feldspar, can be used on unpolished marble but is not recommended for prolonged or repeated use on polished surfaces.

Wooden Floors / Ceramic Tiles

Marble experts recommend Wyandotte detergent* as the ideal agent for scrubbing marble. It is a mildly abrasive soapless cleaner, in appearance a gray powder.

TO CLEAN MARBLE WITH AN ABRASIVE first wipe the surface with a soft cloth that has been wrung out of plain clear water. Then dust the surface with the cleaning powder, or dip a moist cloth into it, and rub the marble until it is clean. With a fresh cloth rinse the cleaned surface carefully so that every trace of the powder is removed. If a large area is being cleaned it is best to do a small part at a time, rinsing and drying each section before going on to the next. Should the surface look dusty or streaked after drying, too much powder has been used or it has not been well rinsed. Go over it again with clean water. Last of all, buff the marble with a clean soft cloth or better yet, a piece of chamois leather. Waxing is optional.

THE FINER POINTS OF MARBLE CARE, including the removal of stains and the use of an all-over poultice to restore the beauty of badly stained or yellowed marble, are discussed in the chapter on furniture care.

SLATE AND TERRAZZO FLOORS can be dusted with a soft brush or vacuum cleaner and washed with warm suds made from soap flakes or a detergent. Rinse and wipe them dry. If your floor is new, wait at least a week before washing it to allow the cement to set. Spills can be wiped up with a damp cloth. A wax finish (any type) can be used to make slate floors dark and glossy. Terrazzo floors should not be waxed unless they are "sealed." If sealed, they can be waxed if desired. If your floor has not been sealed, the S. C. Johnson Company recommends its product, Cong-u-dust, sold through janitor supply outlets.

UNGLAZED CERAMIC TELES, usually found on bathroom floors, are easy to keep clean, but always immediately wipe up spilled medicines, paint or any other substance that might make a stain. Then scour the spot with an abrasive powder. Unglazed tiles are highly absorbent and such stains may penetrate deeply and be very difficult to remove. Tiled floors usually can be kept clean simply by wiping them with a damp cloth or sponge, or water to which a softener has been added. Scouring powder does not harm unglazed tiles, but it should be thoroughly rinsed away or it will dry in the cement between the tiles; it can be applied with steel wool if the floor

*Wyandotte Chemicals Corporation, Wyandotte, Ohio.

Paint Stains/Tile Floors

is very soiled. A cellulose sponge mop will do an effective job on these floors, with a touch-up by hand in odd corners. Unglazed tile floors are never waxed.

OLD PAINT STAINS on unglazed ceramic tile can sometimes be removed with a standard paint remover, or with "Tile Bleach," sold at paint and hardware stores. Follow the directions given with these products, and test the effect of the paint remover first in some inconspicuous place. Another method is to soak a thick pad of cotton cloth with hydrogen peroxide and place it on the stain, then cover the first cloth with a second that has been saturated with ammonia water. This is a good bleach. Repeat it several times if necessary. Another treatment for paint stains, which is good for ink too, is to combine one part of trisodium phosphate, one part of sodium perborate, and three parts of powdered talc. Mix these chemicals with strong hot soapsuds to form a paste. Apply the paste to the stain, let it dry, then brush it off. You may have to repeat this treatment at least once. Simply remoisten the mixture and leave it on the stain. Applications of hydrogen peroxide between the paste treatments sometimes helps.

FLOORS OF COMPOSITION TELE (made of resinous binders and fibers) are non-absorbent and resistant to moisture and stains. Use an untreated mop to dust them and a wet mop, wrung out of clear cold water, for a routine cleanup. For a more thorough cleaning use lukewarm water and a mild soap or detergent. Rinse with a mop wrung out of clear water. Self-polishing waxes may be used on these floors, or finishes recommended by the manufacturer. Do **not** use oil polishes, liquid polishing wax, or paste wax, strong soaps, chemicals, or sweeping compounds. Do **not** coat them with varnish, lacquer, or shellac.

VINYL PLASTIC FLOORING is becoming increasingly popular, due to its attractive appearance and easy-care features. There are a number of varieties such as rotogravure print, vinyl-asbestos tile, calendared vinyl, and flexible homogeneous tile. All are highly resistant to abrasion and to grease, bleaches, acids, and alkalies—more so than any other hard-surfaced flooring. They can be washed with soap or detergent and water, and waxing is optional. Either self-polishing or polishing waxes can be applied.

LINOLEUM may be found today in almost any room in the house. It is attractive, practical, and can be used as a rug, or as wall-to-wall covering. Printed felt-base linoleum comes

Paint Stains/Tile Floors

in attractive designs. It must be kept well waxed or the print will wear away, since it is applied to the surface. Inlaid or tile linoleum patterns extend through the material, but waxing is desirable to provide a high gloss finish.

CARE OF LINOLEUM. Whatever the type, linoleums should be guarded against too much water and against harshly alkaline soaps and detergents that damage them. Wash them with a cellulose sponge or string mop, wrung out of suds made with a mild soap or detergent. Avoid scouring powders that break their sealed surface. Or wash them with one of the special cleaners recommended for them (Armstrong Linoleum Cleaner, Kleen Floor, etc.). Sweep them with your vacuum cleaner or a soft brush. For dusting use an untreated mop.

ANY TYPE OF FLOOR WAX can be used on linoleum, but a water base (self-polishing) wax is recommended. It is easier to apply and can be removed with a concentrated solution of the cleaning mixture. Stubborn spots can be removed with No. 00 steel wool, dipped in the cleaning mixture.

TO PROTECT LINOLEUM AGAINST DENTS the Armstrong Cork Company recommends putting a four inch block of wood under each leg of heavy equipment such as a refrigerator, and furniture rests (which it manufactures) on the legs of chairs and tables.

LINOLEUM THAT HAS BECOME WORN and discolored through misuse can be finished with a good deck or floor paint but beware of other finishes. Lacquers, varnishes, etc. cause damage and should never be applied.

RUBBER TILE, resilient and sound-absorbing, should be guarded against grease, oil, and strong cleaners. However, types which are highly grease-resistant have been developed for kitchens. Sweep rubber tile floors with your vacuum cleaner or a soft brush; dust them with an untreated mop. For washing rubber tile floors use lukewarm suds made with a mild soap or detergent. Rinse carefully. Steel wool and scouring powders can be used safely to remove stubborn stains or soil from these floors.

WAX FOR RUBBER TILE FLOORS. In the past, self-polishing waxes have been the rule for rubber tile. However, the S. C. Johnson Company now states that extensive tests have shown that rubber tile is not damaged by solvents in liquid and paste polishing waxes and that they can be used. For kitchens, self-polishing waxes are best because they are easy to apply and to remove. Like linoleum, waxed rubber tile often needs only to be damp-mopped.

Asphalt Tile/Cement Floors

ASPHALT TILE can be dusted with a damp mop or an untreated dust mop. For washing it, use suds made with a mild soap or a detergent and cool water. Special finishes are made for asphalt tile or you can use a self-polishing wax. Such finishes however are not essential. Oil polishes and ordinary waxes should **not** be used. Asphalt tile is often used in basements and laundries because of its superior resistance to water.

CORK TILES are given a steel-disc polish at the factory, a process that seals them, or a thick coating of vinyl plastic. They should be kept well waxed and any type of wax can be used, but polishing waxes are best for them. Cork tile floors can be washed with soap or detergent and warm water, and spots can be scoured with steel wool. No other finish than wax is recommended.

OTHER FLOORINGS that are becoming popular, especially for entry halls and enclosed porches, are colored ceramic tiles (glazed and unglazed); quarry tiles, made of a variety of stone cut in tile shapes and polished smooth; terra cotta, which is made of glazed hard-baked clay tiles; flagstone and bluestone, polished; floor brick (glazed); and paving brick (unglazed).

A SEALER IS RECOMMENDED for all such floors. The S. C. Johnson Company suggest its product, Terra-New, for white or very light floors in this group, whether factory-sealed or not. For sealed floors of glazed brick or tile (except white or very light ones) either polishing or self-polishing waxes are recommended. For these floors a cleaning wax such as Jubilee or Maid of Honor is suggested because soap-type cleaners tend to combine with cement in the joints to leave an unsightly scum.

UNPAVED CEMENT FLOORS should be swept with a vacuum cleaner, a broom, or a push brush, using a sweeping compound if desired, to keep down the dust. For washing them use a wet mop or long handled scrubbing brush and plain water. If the cement is very dirty, add two to four tablespoons of washing soda or trisodium phosphate to the washing water. Rinse the floor thoroughly with clear water and let it dry. If grease stains remain, sprinkle them with washing soda or trisodium phosphate and let it stand for about half an hour, then rinse.

WATERPROOF AND DUSTPROOF CEMENT FLOORS can be had by coating them with a solution made by adding a pint of water glass, obtained from a hardware store, to four

Asphalt Tile/Cement Floors

pints of cool water. Apply this to a thoroughly clean dry floor, using a mop or brush, and let it dry for twenty-four hours. Then rinse with cool water and apply another coat. Three or four coats are sometimes given to provide a good hard surface.

CEMENT FLOORS CAN BE PAINTED with a good deck paint. If *painted, follow the directions given for* a painted wooden floor. They can be waxed, if desired, with either polishing or self-polishing wax.

4. RUGS AND CARPETS

Now, presumably, we have the floors finished and looking spic and span. What about the rugs and carpets? No matter what material they are made of or how much they cost, they will look faded and dull if they are not kept fresh and clean.

DAILY CARE is the same for all types. A quick brushup with a carpet sweeper, especially in areas of heavy traffic, will remove dust, dirt, ashes, and crumbs, and fluffs up the nap so that it is kept soft and attractive. Dirt found on rugs includes sharp-edged particles of grit which rub against the fibers and weaken them. Modern carpet sweepers remove with efficiency most of this dirt before it is ground into the rug.

AT LEAST ONCE A WEEK rugs and carpets should be thoroughly vacuumed. This will take care of most of the dirt particles that the sweeper has missed and will fluff up the pile. A thorough cleaning with a vacuum cleaner means at least seven strokes over every foot of the surface.

AT LONGER INTERVALS a rug requires additional beauty treatment. It needs to be shampooed to remove the grime that adheres to the fibers making the colors look gray, and the cutting particles of embedded grit not reached by a vacuum cleaner.

Surveys show that carpets last much longer if they are shampooed every three months. In the past this was practically impossible because of the expense and inconvenience of sending them to a professional cleaner, for the alternative was a hands-and-knees affair with rug shampoo and a hand brush. Most carpets went gray as the task was postponed from month to month, and became worn-looking before their time due to cutting ground-in dirt.

A NEW TYPE OF CLEANER makes it possible today for rugs and carpets to be shampooed frequently with little more

Rug Shampoo / Rippling

trouble than carpet sweeping involves. Long handled applicators of the roller brush type (the best), are equipped with built-in dispensers for a liquid shampoo. Fingertip action spreads the cleaner as a foam over the rug (which of course has been vacuumed first) and as it dries, solidified dirt rises to the surface and stains are loosened. After the rug has dried thoroughly—usually from three to four hours but sometimes overnight—this dirt is simply vacuumed away, leaving the nap clean and fluffy and the colors bright.

LIQUID SHAMPOOS for rugs do a better, more thorough deep cleaning job than the dry types, which are difficult to remove after cleaning. In applying them the best method is to criss-cross your strokes, using a light foam to avoid soaking the carpet through to the mat. The directions you receive with your applicator will tell you how to operate it so that too much foam is avoided, and it will provide detailed information on other points. This includes a warning to slip waxed paper discs under the legs of chairs and tables, to be left on the carpet while it is damp, to avoid stains from slides and castors. If the rug or carpet **must** be walked on before it has dried completely, make a pathway for traffic by spreading uncolored wrapping paper on the floor. Another precaution is not to get the rug too wet. The shampoo won't hurt the carpet but it is uneconomical to use more than you need and more time will be required for drying.

AND NOW FOR SOME GENERAL ADVICE about the care of rugs and carpets. Small rugs should not be flapped out of windows or doors to rid them of dust. Such treatment is likely to break the yarns in the backing. Beating rugs is definitely *passé*. If bits of yarn sprout from a rug snip them off with sharp scissors; don't pull them out. Similarly, clip the ends of charred fibers from cigarette burns, then clean the area with a detergent solution and rinse. Once or twice a year turn your rugs around to distribute wear and, when you move heavy furniture to do this, lift, don't shove. Rubber or plastic slides under castors are a good idea; they prevent damage to the pile.

SPECIAL PROBLEMS INVOLVING RUGS include insect damage, shrinkage, "bleeding," and rippling.

INSECT DAMAGE. Spraying woolen and part woolen rugs with 5 per cent DDT spray once a year will safeguard them against moths and carpet beetles. All-nylon or rayon rugs are not attacked by insects.

SHRINKAGE. Few rugs, if any, are guaranteed against shrinkage if they contact excessive amounts of liquids, includ-

Rug Shampoo / Rippling

ing plain water. This is because they are stretched on the loom when they are woven. When they are wet, the weave simply returns to its natural state, the amount of shrinkage being determined by the type of fiber and the looseness of the weave. Where dimensions are not important, shrinkage actually improves the quality of a rug; the weave becomes tighter and more luxurious and the rug lasts longer. Where dimensions **are** important, as in wall-to-wall carpeting, remember to be careful not to get it too wet when shampooing it. There is less hazard from the shampoo or foam-type rug cleaner since its use involves the least possible amount of water.

Sometimes a rug that has shrunk can be resoaked, stretched, and the backing resized to correct shrinkage. However, this treatment is seldom satisfactory. Ordinarily it is better simply to cut down the size of the mat under the rug and not to try any restretching.

"BLEEDING" more often results from spilled liquids than stains from the liquids themselves. Bleeding can result from any of three situations.

WHEN A RUG IS SOAKED in any area, the liquid may go through it to the mat which is often made of a jute-like material in which cheap dyes are used. The liquid in the mat causes the dyes in the mat itself to bleed up through the carpet. Certain types of rug backings also are tinted with low quality dyes that have the same tendency to bleed up through the carpet when it is soaked. The remedy for this is quite simple. Reclean the soiled area lightly, using your rug shampoo. This will remove the dye.

WATER-SOLUBLE DYES also cause bleeding. In some carpeting low cost water-soluble dyes are used, but fortunately this situation is not common, and occurs usually only in the least expensive carpeting. A water-soluble dye will bleed on contact with any liquid and is difficult to deal with because a light spot is left on the carpet when the dye is picked up. The only sure protection against this type of bleeding is to make sure that water-soluble dyes have not been used in the carpet you buy. If you are uncertain of the dyes, test the colors in an inconspicuous place before using any cleaning preparation. Even in this case you cannot be sure because a carpet of this type will often bleed in one area and not in another.

RIPPLING is caused by uneven shrinkage due to soaking one area more than another. It may occur after cleaning and generally results from a double action: the backing and the fibers shrink at different rates, causing an unevenness in the

Rug Stains / Hooked Rugs

carpet. This rippled effect usually disappears after a week or so of normal use. If it does not, try recleaning the rippled section, then stretch it flat and place heavy furniture on it to hold it taut. In this way it may be possible to eliminate or at least reduce the ripples.

SPOTS AND STAINS ON RUGS should be given prompt attention because they are easier to remove when they are fresh. Sponging with plain cool or lukewarm water will often do the job. Always use clean water and a white or colorfast cloth, without starch. Blot up spilled fluids immediately with paper kitchen towels, which are highly absorbent. In treating a stain always begin at the outer edge and work toward the center; this avoids spreading it. Wipe or pat the rug lightly; hard rubbing or brushing might disturb the pile. Special cleaning solutions recommended for particular stains should be applied to them directly with a medicine dropper

Some spots set within a few hours and are then difficult, if not impossible, to remove. If a stain has set, the only method of dealing with it may be reweaving. You should give all stains prompt attention.

FOR FOODS SPILLED ON RUGS and for all stains of unknown composition, first remove any solid portions with a dull knife or spatula, then blot up all the liquid possible with a paper towel or a slightly dampened cloth. Sponge the spot with a cloth wrung out of clear water. If a stain remains after the water has dried completely, sponge it again with a solution made by adding a teaspoon of detergent to a cup of water. Rinse by sponging with a cloth dampened with clear water. Raise the rug if you can so that it will dry quickly. An electric fan, or a stream of air from your vacuum cleaner or hair dryer will help. Any trace remaining after this treatment is probably grease; wait until the spot is dry then sponge it carefully with cleaning fluid.

INSTRUCTIONS FOR REMOVING SPECIFIC STAINS such as ink, iodine, etc. from rugs, are included in the chapter **Spots and Stains**. Consult the index to locate the stain and follow carefully the special directions given, after reviewing the general instructions in this chapter.

SMALL COTTON RUGS, even those with latex backing, can be washed safely by home methods in tub or automatic washer. Use warm water and a mild soap with a softener, or a detergent. Rinse the rugs thoroughly in generous amounts of water and drip dry them on the line in the shade. Do not

Rag Stains / Hooked Rugs

wring, rub, or twist them if you do them by hand. Shake fluffy chenille rugs lightly as they dry and give them a good fluffing up when they are completely dry. Round and oval rugs are often dried flat, to preserve their shape, on the lawn or on newspapers.

If you send cotton rugs to your laundry be sure to mark them for special attention, or they may be faded by strong soaps and bleaches.

GRASS, FIBER, AND SISAL RUGS—often used as summer floor coverings—are easy to keep clean with broom, brush, or vacuum cleaner. Turn them over occasionally and brush the other side. Dirt sifts through these rugs to the floor, so roll them up now and then and clean the floor underneath. An occasional dampening with a moist cloth is beneficial, but be careful not to get a fiber rug too wet or to rub it hard when removing a spot. Any kind of mechanical action damages a fiber rug and the damage is worse if it is wet. If they are badly soiled, use your roller brush type cleaning equipment

PAINTING FIBER RUGS with worn or faded patterns, can make them look almost new. Use awning, or canvas dye, paint; this is a hardwearing waterproof paint that penetrates the fibers and dries to a flat finish. Also available is a special paint made for such rugs. Put plenty of newspapers under the rug so that you will not stain the floor underneath and apply the paint with a stiff brush. Cover a small area at a time, being careful to get the paint into all the crevices. Paint both sides if you wish, but be sure the first coat is thoroughly dry before you turn the rug over.

MATTING can be swept with a soft brush or cleaned with a vacuum cleaner. It is important to roll it up for a weekly cleaning of the floor underneath because dirt goes through it with the greatest of ease. Wipe it occasionally with a cloth dampened with plain water or water containing a couple of teaspoons of ammonia. But don't get it too wet or it will develop odors.

HOKED RUGS AND NUMDAH RUGS can be cleaned with a carpet sweeper. We have already warned against the damage that can be done to a small rug by shaking it vigorously outdoors to rid it of dust. Such techniques are especially damaging to hooked rugs and Numdah rugs from India. The burlap backing of hooked rugs is easily broken. You can snip the sprouting ends of closely hooked rugs with scissors, but never pull on them or you'll be sorry. Numdah

For Rugs/Pads

rags are made of matted goat's hair and come apart under rough treatment. They cannot be washed; have them dry cleaned.

FUR RUGS are also in a special category, and the method used to clean them depends upon the backing. If the backing is wool, they can be cleaned with cornmeal which acts as an absorbent. Sprinkle the cornmeal generously into the fur, then brush it out. Several applications of fresh meal, followed by careful brushing, may be necessary to get the rug really clean. For rugs that are mounted in any other way, or unmounted, wipe the fur with a cloth wrung out of suds made with pure white soap flakes or a mild detergent, being careful not to get the backing, or pelt, wet. Rinse several times with a cloth wrung out of clear lukewarm water. Add a little bluing to the last water if the fur is white.

PILE RUGS made of rayon, nylon, and other synthetic fibers, either alone or mixed with wool, are cared for by the methods given for wool pile rugs.

PADS UNDERNEATH RUGS make them pleasantly springy and prolong their life. They are usually made of fibers such as jute and do not have to be mothproofed in this case. Rubber sheeting underlays, used as an accident precaution under small scatter rugs, lose some of their ability to hug the floor through picking up wax and soil. They need to be washed now and then to restore them. Use warm water and mild soap flakes or detergents; rinse and dry.

UNDERLAYS OF PRESSED FIBERS require gentle handling but they are so open and porous that the dirt sifts through them to the floor. So roll the pad up now and then and clean underneath it. If you feel that you must do more than that, run your vacuum cleaner over it, using the floor brush attachment, not the rug cleaner. Manipulate it with long slow strokes, avoiding undue pressure.

LATEX RUBBER BACKED PADS can be wiped with a damp cloth but be sure the pad is perfectly dry before replacing it.

5. SPECIAL UPSTAIRS PROBLEMS

With the vogue for ranch and other one-floor houses—not to mention apartments—you may not have an upstairs, but that doesn't mean that you can sidestep second-floor problems. Bedrooms and bathrooms will be somewhere about.

BEDSTEADS AND MATTRESSES are of top importance because your proper rest depends upon them. Lumps and depressions in your mattress, inner springs that emit musical notes when you turn, soiled ticking, and lack of bounce are warnings that your bed is no longer what it used to be, but a new mattress may not be necessary. Available almost everywhere are firms that specialize in renovation. They will repair springs and clean, sterilize, or completely remake your mattress at a nominal cost; they can even change its size.

ROUTINE CARE OF A MATTRESS includes periodic dusting with a stiff brush or the upholstery attachment of your vacuum cleaner. Do both sides, the edges, and the springs underneath. Then, if possible, freshen it with sun and air. While you have the bedding off, dust the bedstead too, getting into all the corners and crannies, and then give it a beauty treatment. (See Furniture Care for various materials.) If your mattress shows soil, you can clean it with a good upholstery shampoo, following the directions on the container, or with the dry suds from a rich solution of mild soap or detergent, and lukewarm water. Be very careful not to get the mattress too wet. Rinse with a sponge wrung out of clear water and let one side dry thoroughly before cleaning the other. Quilted pads or envelope-style covers protect mattresses from dust and stains and make beds more comfortable too.

HAIR MATTRESSES should be kept free of dust and about once a week they should be turned over and the top and bottom reversed. This gives them a chance to recover from pres-

ures and stains. At this time a thorough airing (windows wide open even if only for a little while) will help rejuvenate mattresses, and pillows too. It's surprising how those pillows fluff when freshened near an open window or outdoors.

FOAM RUBBER MATTRESSES AND PILLOWS keep fairly clean and dust free. Their makers say "they breathe out the dust"; however, they can be dusted with a brush or wiped with a cloth wrung out of mild soapsuds if you feel you really must. They do not need turning.

KAPOK MATTRESSES AND PILLOWS should be sunned and aired often to keep them in good condition. You can dust the ticking, but the pillows cannot be washed.

GLASS FIBER PILLOWS and crib mattresses stuffed with glass fibers are light in weight, fireproof, don't wad up, and can be washed unless covered with a non-washable material. Do them by hand though, using cool to lukewarm suds made with mild soap or detergent. Squeeze the suds through the material gently, rinse thoroughly, but do not rub or twist them.

FOR STAINS ON MATTRESSES see instructions for the various types in the chapter on Spots and Stains.

FEATHER PILLOWS have been called the most neglected of household furnishings. Many women who are careful about other matters never seem to think of having their pillows laundered or of washing them at home, yet good modern laundries will do them nicely for you and renovate them too if you want this done. In renovating a pillow, as opposed to simple washing, the feathers are taken out of the ticking and washed themselves. New feathers or down are then added if they are needed. Pillows that have lost their spring, that sag, or lump in one end when shaken, need renovating.

TO LAUNDRER YOUR PILLOWS AT HOME you can use your electric washer, but wait for weather that is sunny and clear. Don't try to do more than one or two a day because they take quite a long time to dry. Wash one pillow at a time. These are the steps:

Press the air out of the pillow if the ticking is light. If it is heavy, open the end seam a couple of inches and squeeze the air out. Then baste the opening securely or pin it with a safety pin. Use warm water and a good mild detergent, or soap flakes plus a little softener if the water is hard. Run the machine for fifteen minutes. Rinse the pillow at least twice and spin it for at least 15 minutes to extract as much water as possible. Your pillow, when you take it out, will look as depressed as a

wet cat, but do not be alarmed. Put it to dry on a clothes rack in the open air. From time to time turn it and fluff it up. It will puff up as it dries and become fat and bouncy. Do not use the pillow until you are sure it is absolutely dry in the center.

IF YOUR PILLOW NEEDS NEW TICKING, or if you want to do an especially thorough job, you can take the feathers out and wash them separately. This sounds fantastic, but it really isn't. Uncle Sam himself tells how, in a release from his housekeeping area of government. You rip out the stitches to make a sizable opening in one corner of the pillow and baste a pillow case or muslin bag securely around the opening. Shake the feathers into that, stitch up the end, and so to the washer. Wash the ticking separately. To help keep the feathers from working through the ticking, coat the inside with a good thick solution of starch. When the feathers are dry, put them back in by reversing the operation described for getting them out. If you want to use new ticking you can buy it by the yard.

WOOLEN BLANKETS, except electric ones, can be dry cleaned if you prefer. All of them can be washed but, during the last few years, the technique has been changed. Recommended today is the "easy soak" method which saves energy and prevents shrinkage. Use lukewarm water and an unbuilt synthetic detergent. (Unbuilt detergents are those containing no soap and no "builders" such as washing soda, borax, and other chemical compounds that are alkaline in reaction. All soaps and all water softeners contain alkalis, which are damaging to wool.) First pretreat any spots or especially soiled areas with detergent. Dampen them and apply the detergent with a soft little brush or sponge.

You can use the easy soak method in either tub or washer. Fill the washer with lukewarm water, add the detergent, then put your blanket in. without operating the washer, let the blanket soak for 15-20 minutes. Then turn it over once or twice by hand and spin off the water. Refill the machine with lukewarm water, and then again without operating it, let the blanket soak-rinse for 5 minutes. Extract the water and turn the blanket. Soak-rinse a second time in this same way, then spin and hang it in the shade to dry—lengthwise with the fold in the middle—on a good tight line. Or hang the blanket over parallel lines placed about a foot apart for quicker drying. Do not use clothespins; they will leave a mark. When the blanket is thoroughly dry, fluff the nap up with a stiff clean brush and press the bindings but not the blanket. A

Electric Blankets / Bathrooms

mothproofing mixture (EQ-53) can be added to the second rinse if desired. The blanket can then be stored safely in the linen closet without wrapping. This method of washing blankets gives fine results. The detergents rinse out easily, leaving the blankets soft and fluffy, and there is less shrinking, matting, or pulling than when they are agitated in a washer or squeezed and rubbed by hand. This treatment is recommended for all washable woolens.

ELECTRIC BLANKETS can be washed the same way. They should **not** be dried in mechanical driers and they should **not** be dry cleaned unless the manufacturer's instructions stipulate that this is safe. Agents used in dry cleaning may damage the insulation of the wires inside the blanket. Mothproofing substances are generally ruled out for the same reason. Store the clean blanket in a suitable box, preferably the one it came in, and arrange the electrical parts as they were when the blanket was originally packed to prevent damage to the wiring. You can then wrap the box securely with paper and seal all the openings and folds with gummed tape to frustrate moths.

ORLON BLANKETS made of 100 per cent Orion fiber, can be either dry cleaned or washed. If they are to be washed, pretreat spots or very soiled bindings by brushing them with a detergent or soap solution. Wash one blanket at a time in warm suds (100° F.) either by hand or in a washing machine.

For machine washing use a synthetic detergent, or soap and a water softener. Wash the blanket for five minutes and stop the machine after two or three minutes of the final spin dry cycle, or use the complete special fabric cycle if it is available. Dry the blanket in the air, hung evenly over a clothesline; smooth the bindings. Or use a tumble dryer at low heat (120-140° F.) for about twenty minutes. Don't get it too dry. If desired the bindings can be pressed with a steam iron, or with a dry iron set for rayon. Brush up the nap.

DYNEL BLANKETS can also be washed by this method but they can stand hot water. Don't make it over 170° F., however, which is hotter than the hands can stand. Like Orion, only the bindings need pressing. Dynel also is unappetizing to moths.

COTTON QUILTS, though heavy to handle, can be washed at home like sheets, if they are colorfast and well stitched. Hang them straight on a tight line and they will not need to be ironed. If you send them to a laundry be sure to mark them for special handling, otherwise they may come back badly faded.

Electric Blankets / Bathrooms

LARGE COMFORTERS AND EIDERDOWNS should be dry cleaned and not washed. They mat and bunch up and are too heavy to handle. A small crib comforter containing a good grade of wool, well stitched, and made with a washable covering, can sometimes be washed safely, but test a corner first to see how it goes. If you decide to wash it make a good thick suds with lukewarm water and an unbuild synthetic detergent. Immerse the comforter in it and soak-wash it as described for woolen blankets but do it by hand. Fold it loosely to extract the rinse water and hang it straight on a line in the shade. It will not need ironing. Wash crib comforters stuffed with fiber glass the same way. Be especially careful not to rub or twist them.

SHEETS folded hem to hem and hung straight to dry can be smoothed, folded, and used without ironing. This saves work and leaves the sheets with a clean outdoor fragrance. If you like them ironed, fold them in quarters or eighths for easy management. Some women just touch up the hems.

WASHABLE BEDSPREADS can be handled like sheets. Fluff out chenilles as they dry. Comb out fringe while it is still wet. Stretch crocheted spreads gently to the proper dimensions as they dry.

CLOSETS should be given a complete overhauling at least twice a year. Take all suits and clothes out and if you can, air them outdoors. Remove hats, shoes, and other apparel from shelves and racks and give the closet a complete cleaning. If you wish, follow this with a mothproofing spray. Put fresh paper on the shelves and sort your gear as you replace it—with a rummage sale in mind as you review those things that you never wear.

SPACE SAVERS. There are all sorts of attractive boxes and space savers available in department stores to help you make the most of your coat and clothes closets so, especially if your quarters are cramped, you might want to investigate them. Pretty accessories are an inspiration to neatness.

During this thorough cleaning business you will doubtless want to clean out and straighten chest and bureau drawers and the shelves of your linen closet. Surprising, isn't it, the things that get into a linen closet? Old radio parts, stuffed toy animals, outgrown clothes that you have meant to give away. Now is the time to get rid of them and put everything to rights.

AN IMMACULATE BATHROOM is a sure sign of the good housekeeper. Instructions have already been given for

Cleaning Powders / Toilet Bowls

cleaning the walls and floors. Here is the rest of the story. Try to train your family to leave bathtub and basin clean after using them, and encourage cooperation by placing bathtub brush, cleaning sponge, and cleansers handy. Hot water, plus a good softener like trisodium phosphate or washing soda, swished with a long handled brush, make light of this routine cleaning. For a thorough cleaning use whiting or a mild cleanser, plus your softener, to remove scum. Detergents, too, do a pretty good job.

COARSE CLEANING POWDERS, aside from being difficult to rinse away completely, should not be used on porcelain enamel finishes. They etch it with fine scratches so that it becomes more and more difficult to clean. Old discolored tubs and basins can be improved in appearance by thorough scrubbing with a brush dipped in a paste made by adding hydrogen peroxide to cream of tartar.

TO REMOVE LIGHT IRON RUST STAINS from sink or tub rub them with a cut lemon. For stubborn stains use a 5 per cent solution of oxalic acid or a 10 per cent solution of hydrochloric acid, which you can get at a drugstore. Both of these substances are poisonous, so be very careful in using them and in storing them afterwards. If you have any cuts or scratches on your hands, wear rubber gloves. Apply the acid with a piece of soft cloth and rinse it away after several seconds. If it remains on the enamel too long, it will etch it. Blue stains caused by copper rust can sometimes be routed with ammonia and soapsuds. If this fails to work, try rubbing them with a little of the 5 per cent oxalic acid solution. Rinse the acid away thoroughly and promptly. Dripping water faucets cause these stains and they indicate that new washers are needed.

SHOWER CURTAINS today are available in so many different materials that, unless you saved the labels with "care" instructions, you might be doubtful about the proper way to clean them. But whatever the material, always spread them out after showering. This speeds drying and discourages mildew stains and odors.

MILDEW STAINS ON DUCK SHOWER CURTAINS that are not commercially treated can be removed with household bleach. There are also packaged chemicals on the market than can be used to give the curtains a mildewproof finish. If you use them, follow the directions on the package exactly. Do not use them on clothing because the chemicals they contain are often irritating to the skin. Duck, a fine canvas material, is

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an old standby for shower curtains, and if you prefer this sturdy fabric look at the label when you buy. Some are especially treated for water and mildew resistance. Duck curtains can be machine-washed in hot suds and whitened with household bleach. Rinse them thoroughly and dry in the sun, if possible.

RUBBER CURTAINS and curtains of rubberized materials are washed with mild lukewarm suds made with either soap or synthetic detergent. Work them around in the suds without rubbing or squeezing them, then rinse in cold water and put them back on the hooks to dry. You wouldn't, naturally, iron a rubber curtain, but a rubberized fabric can be pressed with a warm iron while it is still damp, if you are fastidious about it.

PLASTIC AND PLASTIC-COATED SHOWER CURTAINS should be spread out flat and washed with mild suds applied with a sponge. Rinse and rehang them. Other shower curtains are made of water-resistant cottons, silks, and rayons. These are washed in mild lukewarm suds, rinsed in warm water, and either rehung without pressing or ironed while they are damp, with a warm iron.

NICKEL BATHROOM FIXTURES usually can be cleaned with hot water, plus soap or detergent. Rub them to a polish. If they still look gummy, use whiting or a fine cleaning powder, moistened with alcohol. Rinse and polish. If nickel is not cleaned often it darkens.

FILMY CHROMIUM that will not respond to soap or detergent can be cleaned with the greatest of ease with a little kerosene on a damp cloth. Or use dry baking soda on a dry soft cloth. Harsh cleaning powders and metal polishes should not be used on chromium. It is a soft metal, applied as a thin plating, and it is easily scratched or worn away. While it is resistant to damage from most substances, it is damaged by salts; the only remedy for fixtures that have become green with corrosion is replacement or replating.

TOILET BOWLS should be cleaned and disinfected at least once a week. Use a disinfectant recommended for this purpose, washing soda, or household bleach. After adding the disinfectant, let it remain in the bowl for a while, then swish the bowl clean with a toilet brush or a disposable johnny mop. Flush. Clean the outside of the bowl, the rim and the cover with hot suds or a mild scouring powder. Rinse and wipe dry to avoid streaks.

6. FURNITURE CARE

A CAREFUL WASH FOR HARDWOOD FURNITURE is in order when it begins to look clouded and scummy in spite of conscientious dusting and polishing. You can choose between warm water with a mild white soap or unbleached synthetic detergent, or a furniture wash that you can easily mix yourself. Old wax can be removed by applying liquid wax generously and wiping the surface promptly. Special cleaners are also made for furniture but sticky accumulations must be dissolved with water.

SOAP AND WATER, properly used, will not harm most finishes, but de luxe lacquered furniture, such as pianos, require special treatment. For other finishes, squeeze a soft cloth out of light suds to make it as dry as possible. Wash a small area, rinse it with clear water, again using a well-squeezed cloth, and wipe dry. Move on to an adjacent part and continue until the piece has been completely cleaned. And renew your suds as they go flat. A soft brush inside the cloth will help on carved wood. This work must be done carefully and quickly because water should not stay on the furniture more than a moment or two. When it has dried completely, buff it to a lustrous finish with your favorite polish.

A HOME-MADE FURNITURE WASH, that is highly esteemed by some women, consists of three tablespoons of boiled linseed oil and two tablespoons of pure gum turpentine added to one quart of hot water. Mix well and allow it to cool. Wring a soft cloth out of this mixture and clean a small area at a time, wiping each section dry as you proceed. No rinsing will be necessary. Polish the furniture after it has dried completely.

A WHITISH BLOOM AFTER WASHING appears sometimes on furniture with a poor finish. Polishing usually corrects this. On varnished surfaces you can try wiping the fur-

Piano Finishes / Water Stains

niture with a soft cloth moistened with pure raw linseed oil. For a shellacked piece use a cloth barely dampened with alcohol, wiping the surface very lightly in order not to remove any of the finish. Polish afterwards. The chances are that you will not know what the finish is, but if the furniture has been waxed, this makes little difference.

FOR THE FINE NEW PIANO FINISHES manufacturers rule out all washes, all polishes, and even the usual dusters. If the finish looks dull wipe it with an old, well-washed piece of chamois leather that is damp (not wet) and then remove the moisture with a second piece of dry soft chamois. New chamois leathers should be soaked in water for twenty-four hours before being used on a piano. If chamois is not available, dampened cheesecloth can be used.

FURNITURE IN SUCH SAD CONDITION that refinishing seems to be the only remedy might be improved by this treatment: make the linseed oil furniture-wash described above, using slightly more turpentine, and test it cautiously on the finish to make sure no harm will be done. Wash the piece carefully and let it dry. Now dip a cloth into linseed oil (either raw or boiled), then into rottenstone or very fine pumice, and rub it over a small area in the direction of the grain. Wipe it off with a cloth moistened with raw linseed oil, then go on to the next area. When the whole surface has been cleaned in this way give it a good polishing with a soft cotton flannel cloth. Repair minor blemishes and give it a second polishing. You can use either an oil or a paste wax on top of the Unseed. You may have trouble finding rottenstone or powdered pumice; if you cannot get it at your hardware store ask your druggist to order some for you from a wholesale chemical house.

FURNITURE POLISHES fall into two main classes, oils and waxes. Both have their advocates. For a discussion of these see "Furniture Polish" in the index. After choosing the type you want to use, continue with it or you may find yourself in trouble. Even a little oil polish on a treated duster can gum up a waxed finish. Both types are good if they are used correctly. Oil polishes however should be avoided for blonde finishes because they tend to make wood a little dark. Select a light colored wax. Some polishes clean as they go; always read and follow the directions given for the kind you select.

APPLY POLISH SPARINGLY. Whether you decide upon oil or wax for your furniture, the first thing to remember is

Piano Finishes / Water Stains

that it should be applied very sparingly. If too much is used it will be difficult to achieve a fine polish. It is better for the furniture, and easier for you, to apply a second thin coating if this seems desirable, than to struggle with a heavy application that has made the finish sticky.

RUB POLISH WELL. The second thing to remember is that there is no substitute for hard rubbing; do only a few pieces at a time. After you have applied a thin coating of polish, let it stand a little while (consult the directions for your brand), then rub it with the grain of the wood until a clean finger leaves no mark. Finish with a soft flannel polisher, putting a brush inside the cloth for a good job on carved surfaces. And if you want the best results possible on chests and desks, you should take the handles off the drawers.

TO MAKE YOUR OWN FURNITURE POLISH: a mixture of gum turpentine and raw linseed oil in equal parts is an old standby; another polish highly recommended by an expert in such matters consists of equal parts of boiled linseed oil, turpentine, and vinegar. As with standard polishes, the best results with these will be had if you use them sparingly and follow them with elbow grease.

FOR THE ORDINARY DUSTING OF FURNITURE always use a clean soft duster or the dusting attachment of your vacuum cleaner. Use treated dusters only on furniture that has been oil-polished.

MINOR CASUALTIES TO FURNITURE frequently can be dealt with satisfactorily at home. Light scratches and scars can often be made practically invisible by extra hard rubbing with polish alone. Some polishes are made especially for this purpose. Others contain stains that make even a fairly deep scratch inconspicuous. In a pinch you can rub a scratch on dark wood with a cut walnut meat to darken it.

WATER STAINS ON DINING AND COCKTAIL TABLES, not protected by special finishes, can be fairly well prevented by repeated thin applications of hard wax, well rubbed in. To remove a water mark from a waxed surface, first try wiping it with liquid wax to remove the old wax finish, and then apply a fresh coating of wax. To remove a water stain from an oiled finish use a little camphor or peppermint oil on a cloth wrung out of warm water containing a few drops of ammonia. If neither method removes the mark, rub it very lightly, in the direction of the grain, with a thin paste made of rottenstone or fine pumice, and linseed oil. Remove this with a

Alcohol / Upholstery

cloth moistened with plain linseed oil and polish the spot. This same technique usually will remove heat spots too. Cigar ash can pinch-hit for the rottenstone or pumice.

ALCOHOL in cocktails, perfumes, lotions, and medicines can play havoc with a fine finish. Wipe them up instantly if they are spilled and rub the spot quickly with the palm of your hand or with a cloth moistened with an oil polish. Alcohol is a powerful solvent that dissolves some finishes. Light stains from alcohol mixtures, even when old, can sometimes be removed with the rottenstone and Unseed oil treatment described for heat and water marks. Try it on light burns too.

WHEN CANDLE DRIPPINGS FALL onto the table scrape off as much of the wax as you can, with a stiff card. The remainder can be washed off most surfaces. Or you can wipe the mark with a cloth moistened with cleaning fluid. Apply polish if needed.

SPILLED INK should be blotted up instantly—before it penetrates the surface. Press a dampened cloth on the spot to absorb the ink and keep turning the cloth to a clean place until no more ink is taken up. Do not rub, since that might force the stain into the wood. Ink can be washed off some finishes. On old stains you can try the Unseed oil and rottenstone method already described.

PAINT SPATTERS if they are fresh, can be removed from furniture with liquid wax, turpentine, or just soap and water. Old paint stains are a different story. Put Unseed oil on the stain and let it stand until the paint is softened, then scrape off as much as you can with a stiff card or a wooden spatula. Rub the traces that remain with rottenstone or finely powdered pumice, mixed with Unseed oil.

THE GRAYISH BLOOM that sometimes develops on highly polished furniture usually can be removed by wiping the surface with a soft cloth wrung out of warm water containing vinegar (about a tablespoonful to one quart of water). Rub the finish dry with a clean soft cloth. On a waxed finish a rub with liquid wax will usually remove the bloom.

DINGY-LOOKING CHAIR SEATS of rush, cane, or splint can be cleaned and revived by this beauty treatment: use your vacuum brush or a hand brush to remove all loose dust; next clean the seat with a mixture made by adding a tablespoonful of turpentine and three tablespoonfuls of Unseed oil to one quart of hot water. Keep this solution hot until you have finished, by using a double boiler or setting it in a pan

Alcohol / Upholstery

of hot water. Do **not** place it over a direct flame because **both** turpentine and linseed oil are highly flammable. Daub the wash onto the seat with a cloth pad, then scrub it into the crevices with a brush. Let the seat dry completely. If refinishing seems to be needed apply a thin type of floor sealer to both **the top** and bottom of the seat.

DEEP BURNS, SCRATCHES, STAINS and other serious mishaps to furniture call for the services of a competent cabinet maker or repairman.

TO CLEAN LEATHER FURNITURE use saddle soap preferably. It can be bought at shoe repair shops and hardware stores; follow the directions given on the tin. Or you can use thick suds made with pure white soap flakes. Squeeze your cleaning cloth or sponge as dry as you can in order not to get the leather too wet. Rinse off the soap solution with a clean damp cloth. Let the leather dry, then polish it with a soft dry cloth.

LEATHER TABLE TOPS AND UPHOLSTERY should be oiled thoroughly once or twice a year to keep them from drying out and powdering or cracking. Use castor oil, neat's foot oil, white vaseline (for light colored leathers), or a good commercial leather conditioner. Do **not** use linseed oil or mineral oil. If you select neat's foot oil (obtainable at shoe repair shops) remember that it leaves a dull rather than a glossy finish. Apply the oil with a clean soft cloth when **the** leather is clean and perfectly dry. Rub it in with your fingers or the palm of your hand until no trace of the oil remains, or it will soil clothing. Artificial leather can be wiped clean with a damp cloth or one dipped into suds made with soap or detergent.

ROUTINE CARE OF UPHOLSTERED FURNITURE includes regular dusting with the upholstery attachment of your vacuum cleaner or with a stiff brush, and the prompt treatment of spots. Remove the cushions and dust them first. Put them outdoors afterwards for a good airing in a well shaded place to avoid sun-fading, or place them near an open window. Then dust the furniture thoroughly, getting into all the crevices. Dimes, nickels, and quarters, or lost silverware, are often found during the process—sometimes even scissors and knives—so probe carefully. In removing stains, especially those of unknown origin, always test the fabric first where it won't show, to make certain that no damage will be done. Directions for taking out various marks are given in the chapter **Spots and Stains** (see also Index).

Upholstered Furniture / Marble

UPHOLSTERED FURNITURE CAN BE CLEANED at home without a great deal of trouble. On materials damaged by water, notably pile fabrics like velvet, use a standard dry cleaning fluid. On materials not harmed by water use a good upholstery shampoo or a stiff soap lather. The foam type of commercial cleaner is the most effective of the various kinds on the market. The Bissell upholstery kit includes such a cleaner in a pressurized can, from which it emerges ready to go to work.

FOR BEST RESULTS upholstered furniture should be cleaned before it is obviously soiled. Dark patches caused by hair oils, perspiration, etc., may alter the fabric chemically so that light or dark areas are left even when it is clean. Light cleaning before soilage is apparent will minimize this hazard and keep the material looking bright and new. It will also prolong its life.

A HOME-MADE UPHOLSTERY SHAMPOO: To prepare this, dissolve six teaspoonfuls of white soap flakes in one pint of boiling water and add two teaspoonfuls of ammonia or borax. Let mixture cool until it has jelled, then beat it to a stiff lather with an egg beater.

USE THE LATHER. Whichever cleaner you use, remember that it is the lather you want, not the water. If the stuffing in upholstery becomes wet, inexpensive dyes, often used in such fillings, tend to bleed into the fabric. Apply the lather with a small stiff brush to an area about the size of your hand; when it is clean, rinse the place with a sponge squeezed out of clear warm water. Move to an adjoining area and continue until the piece has been entirely covered. An electric fan will hurry the drying process, but don't put the furniture in the sun because colors might fade. Do not replace the cushions or allow the furniture to be used until it is completely dry.

VERY SOILED UPHOLSTERED FURNITURE is not an easy proposition and a professional can handle it best. Many firms that specialize in cleaning rugs will clean your chairs and sofa also.

SPONGE PLASTIC UPHOLSTERY with warm suds. Lather thoroughly using a sponge, and rinse quickly. Don't let water seep through woven plastic materials.

SLIP COVERS of washable, colorfast, shrinkproof materials can be laundered in your washer and are not difficult to do. First shake or brush the dust from them, being especially attentive to seams and bindings. Mend any ripped

Upholstered Furniture / Marble

places, then remove, or pretreat, spots and badly soiled areas. Wash the covers (zippers closed) with warm water and white soap flakes (plus a softener), or with a mild detergent. Two short washes of four or five minutes each are better than one if the covers are very soiled. Run the machine for four or five minutes, extract the water, then wash them a second time in fresh suds. After rinsing, hang them inside out to dry—indoors or in the shade. When they have reached the damp stage, iron the ruffles or pleated flounces and replace the covers on the chairs and cushions to finish drying, but do not put the cushions on the furniture until the drying is complete. Slip covers fit better and undergo less strain from handling if you do not iron them all over.

WROUGHT IRON AND MARBLE-TOPPED furnishings have come into vogue again during the last few years. Such furniture usually requires little attention other than dusting, but it might be a good idea to discuss the special care that is required occasionally.

WROUGHT IRON is less subject to rust than cast iron but it is sometimes polished with liquid wax for extra protection. If a spot of rust does appear remove it with steel wool dipped in kerosene or with plain steel wool, and then wax the area. If you are renovating an old piece of wrought iron, considerable soaking with kerosene, followed by rubbing with steel wool, may be necessary to remove bad rust. Wrought iron can be painted, but use the paint made especially for it and follow the directions on the container.

THE ORDINARY CARE OF MARBLE, and some of the materials suitable for cleaning it, have been discussed in Chapter 3, (The Care of Floors). A soft clean untreated duster, or a damp cloth, is about all you should ever need for marble furniture, or a cloth wrung out of a warm suds made with a mild detergent. Do not use soap, which leaves a film on marble. Rinse, wipe dry, and polish with a soft dry piece of chamois leather.

A **POULTICE FOR MARBLE**, so yellowed and stained that it might seem beyond hope, is very effective. The method is also the easiest and best for carved marble, and statuary with its hard-to-reach corners and crevices. To prepare a poultice simply add water, cleaning fluid, or hydrogen peroxide to Wyandotte detergent,* whiting, talc, or marble dust, to make a mudlike paste. Apply the paste to the entire surface, or to the stained portion of the marble, in a layer about half an

* Wyandotte Chemical Corporation, Wyandotte, Ohio.

Stained Marble /Tube Chairs

inch thick. A wooden spatula or paddle is good for this operation. Let the poultice remain for twenty-four hours or longer. If Wyandotte detergent is used, and marble experts strongly recommend it, the entire area should be covered, rather than just a part, and damp cloths should be applied to retard drying after the first twenty-four hours. All poultices should be discarded after use, excepting those made with Wyandotte detergent, which can be used again. Removal of the poultice should be followed by very thorough rinsing with clean water so that every trace of powder is removed. Sometimes a hose or a spray that can deliver a forceful stream of water can be used. From this beauty treatment old stained marble emerges clean and beautifully white.

STAINS ON MARBLE, like stains on other materials, should be given prompt attention. Old deep stains are difficult and sometimes cannot be removed, but light fresh stains often can be eliminated by gentle rubbing with a mild abrasive (volcanic ash, Wyandotte detergent, or Bon Ami, occasionally, on unpolished marble). In addition to abrasives there are bleaches, solvents, and reducers. The best bleach is hydrogen peroxide (17-20 volume, or hair bleach strength) to which a few drops of ammonia have been added, but ordinary household bleach (Clorox, Prox, Star Water, etc.) also can be used. Solvents recommended are alcohol, acetone, white unleaded gasoline, lighter fluid, and cleaning fluid of the flammable type (the other types are highly toxic). Special preparations, including reducers, made particularly for marble can be obtained from marble companies.¹¹ They are difficult to find in stores.

FOR OIL AND GREASE STAINS ON MARBLE, caused by such foods as salad oils, and dressings or butter, apply a white blotter soaked in a solvent and cover it with a piece of glass or heavy cardboard. If color remains use a bleach. For linseed oil from spilled paint use a poultice mixed with a powerful solvent such as acetone. If necessary, follow this with a poultice mixed with a bleach.

STAINS FROM FRUITS, FOLIAGE, TOBACCO, etc. are removed with a poultice mixed with a bleach.

TO REMOVE IODINE STAINS FROM MARBLE mix the poultice with alcohol.

INK STAINS will usually yield if you apply a cloth soaked with ammonia to the stain. Alternate wettings with ammonia

• Vermont Marble Company, Proctor, Vermont.

Stained Marble/Tube Chairs

and denatured alcohol are effective for some kinds of ink on marble.

WASH OFF SMOKE STAINS with an unbuil synthetic detergent. Deep-seated fire stains are poulticed alternately with solvents and bleaches.

MARBLE SURFACES ETCHED BY ACIDS from fruit or other sources may be smoothed with the finest sandpaper obtainable (a hobby shop can supply it) then polished with putty powder (tin oxide) or jeweler's rouge (peroxide of iron). Your druggist should be able to get these for you from a wholesale chemical house. Both materials may be used for an overall polishing.

SOMETIMES MARBLE IS WAXED as a protection against stains and scratches. Use a white water wax emulsion for white and light tinted marbles. Beeswax dissolved in turpentine is sometimes used on colored marbles, or Simoniz, or a light paste wax. However, waxing is not essential.

We have gone into considerable detail on the subject of marble furniture because information on this subject is hard to get and because special techniques are required. An added reason is that more marble furniture is being sold today than in the Victorian era. The methods described are applicable to all marble and also to alabaster—whether it composes a fireplace, floor, lamp base, or inkstand.

PAINTED FURNITURE is cleaned by the method described for painted walls and woodwork. (See Index.) It is often waxed to protect the paint from soil and to prolong its life.

PLASTIC FURNITURE seldom needs more than a wipe with a damp cloth, or a cloth wrung out of lukewarm suds made with a mild soap or detergent. Do not use chemical aids such as ammonia on plastics. Plastic table tops are sometimes waxed to improve their gloss and to hide small scratches. On acrylic plastics (lucite and plexiglas) use a white emulsified water wax.

CHROMIUM-PLATED TUBE CHAIRS and tables used in dinettes and kitchens need only a little washing now and then and a rub with a dry cloth. If they are corroded by salts and acids, their appearance can be improved somewhat by using silver polish but the results are not lasting if the plating has been damaged. Tube tables of magnesium or aluminum can be rubbed clean with soaped steel wool pads, rinsed, and dried.

Outdoor Furniture / Bamboo

OUTDOOR FURNITURE can be kept spic and span with suitable paints and waterproof varnishes. If in doubt as to the proper finish consult your furniture dealer. Cast iron furniture used in the garden must be protected scrupulously with a good outdoor paint. Before you paint, scrub off any signs of rust with steel wool dipped in kerosene or the rust will continue under the paint. A rustproof undercoating of red lead or aluminum paint is desirable.

WICKER, REED, CANE, AND BAMBOO FURNITURE can be dusted with a dampened cloth or dry untreated duster. Every now and then go over it with the brush of your vacuum cleaner to dust the crannies. Furniture made of genuine reed, cane, bamboo, or wicker needs good wetting now and then to prevent drying and splitting. Take it outdoors and spray it with a garden hose, or wash it with mild soapsuds containing a little ammonia. The furniture should not be used again until it has dried completely.

7. WINDOWS, DRAPERIES, AND CURTAINS

A logical time to tackle the job of washing the windows is right after you have taken down your curtains and draperies for washing or dry cleaning. Give the screens a brushoff first so that rain won't drive dust from them against your nice clean windowpanes. Dusty screens shut out a lot of sunlight too.

IF YOU WASH YOUR OWN WINDOWS it might be a good idea to make a round of some of the stores to see what is available in the way of laborsaving equipment. This will include long handled brushes—some with hollow handles into which you pour your favorite cleaner—squeegees of various sizes, with or without builtin cellulose sponges, and long handled brushes for the outside, that can be attached to a garden hose. You will also have your choice of a number of special cleaning preparations that are either sprayed on or spread on.

PLAIN WATER will, of course, do the job very nicely and that is what professional window cleaners use—nothing added. If, however, you feel better putting something in it, you can choose one of the following: vinegar, ammonia, washing soda, trisodium phosphate, alcohol, kerosene, or borax. All of these aids have their enthusiastic backers. But **never, never** use soap. It leaves smears on the glass that are very hard to rub off.

IF YOU USE VINEGAR OR AMMONIA add about a tablespoonful to one quart of cool water; or use one to two teaspoons of borax, TSP, or kerosene.

ALCOHOL IS RECOMMENDED for cold weather use to keep the water from freezing on the panes. About a quarter of a cup in a pail of water is right. Alcohol, the various sodas, and ammonia are damaging to painted surfaces and to varnishes

Windows / Cotton Curtains

so be careful not to spatter the furniture or woodwork if you are using them. Available also for cleaning windows are mild scouring powders in convenient cake form.

TO CLEAN WINDOWS WITH A WATER MIXTURE, squeeze your sponge, soft lintless cloth, or chamois as dry as you can. Wash the top, bottom, then the middle of the pane and polish it immediately with a clean dry cloth (old linen is tops for this), chamois, or a crumpled paper towel. Wipe cake powders on with a damp cloth to coat the window with a thin film and wipe it away with another cloth when it is almost dry. A vacuum cleaner dusting brush can be used for this. If you use one of the commercial preparations for window cleaning be sure to read the directions and to follow them, for best results.

THE TECHNIQUE OF USING A SQUEEGEE after washing the pane, is to apply it firmly downward, wiping the moisture from the edge of the rubber blade after each stroke. Squeegees and chamois leathers have the advantage of leaving no lint.

STRONG CLEANING SOLUTIONS ARE NOT NECESSARY to clean windows, since dirt cannot penetrate glass. Paint stains and putty smears, however, frequently cloud the issue. A little ammonia on a damp cloth will take care of the putty, and fresh blobs of paint can be wiped off with cleaning fluid or turpentine. Old paint stains can be softened with turpentine, then carefully scraped off with a razor blade. Be careful not to scratch the glass—hold the blade perfectly flat

AND NOW FOR THE CURTAINS AND DRAPERIES that are to go up all nice and clean. Very heavy lined ones and the non-washables will go to a good dry cleaner. The others can be handled at home.

IF YOU HAVE ANY DOUBTS ABOUT THE COLOR of cotton or linen draperies, test a scrap of the material or a small part of a corner by squeezing it in a basin of warm water. If the water becomes discolored the dyes are not completely fast. If only a little color seems to come out you can still wash the draperies if you are careful. Wash each piece separately in lukewarm suds made with pure white soap flakes, or a mild detergent, rinse it carefully, then spread it flat on an old turkish towel. Roll it up so that most of the water is absorbed, then immediately unroll it and hang the piece to dry in an airy place, preferably indoors. Hang it straight and be careful not to let the surfaces of the material touch.

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LINED DRAPERIES. Light washable draperies, even when lined, can be home laundered with a little extra trouble. Snip the linings loose on all but one side to make ironing easier.

COMPLETELY COLORFAST MATERIALS can be washed with abandon and dispatch in your washing machine, in good stiff soapsuds. Hang them indoors or in the shade to dry—straight on the line, for easy ironing.

DRAPERIES SHOULD BE IRONED LENGTHWISE with the thread of the material, to avoid losing length by side-wise stretching. Iron them on the wrong side, excepting glazed chintz, which will keep a better gloss if ironed on the right side.

GLAZED CHINTZ, even if it has a permanent finish, ultimately loses some of its gloss. It can be revived somewhat with a light starch solution containing wax. Use a piece of wax **about** the size of a walnut for each pair of curtains. Either paraffin or candlewax will do. Stir the wax into a boiling starch solution until it is completely melted. When the mixture has cooled enough, immerse the draperies, then hang them to dry. When they are nearly dry iron them on the right side.

GLASS FIBER DRAPERIES can be washed in hot soapsuds or with a detergent, by hand or in a washer, but be sure to remove all hooks and other attachments that might snag them. Rehang them while they are still wet (but not dripping) and straighten the hems gently with your fingers. Glass fiber materials should never be scrubbed during washing, squeezed in a mangle, or twisted. They are never ironed.

SHEER COTTON WINDOW CURTAINS should be handled gently when they are washed, especially if they are old, because the threads become increasingly weak through constant weathering. If your curtains are very delicate, wash them in a nylon net bag or a muslin bag—an old pillow case will do. Curtains in good condition can go into the washing machine. Those that are old, or especially delicate, are best done by hand. You will have to be the judge.

TO HANDWASH WHITE COTTON CURTAINS, the first step is to shake them out gently to get rid of as much dust as you can. Then let them soak for ten or fifteen minutes in lukewarm suds to loosen the soil. Without twisting or wringing them, lift them from the water and drain it away. Then wash the curtains carefully in lukewarm suds made with pure white soap flakes or a mild detergent. Squeeze the suds through them; don't rub or scrub. If they still look dingy give them a

Curtains / Ironing Silk

second washing with fresh suds. Think twice before adding household bleach to your first rinse. It will weaken the fibers a little even when it is used carefully and rinsed thoroughly. Most sheer cottons need to be starched to look their best, excepting organdy with a permanent finish, and even this material loses its crispness after a number of washings and needs starch or some other finish. Use blued starch or add bluing to your own starch mixture, taking care that it is evenly distributed.

MACHINE WASHING WHITE COTTON CURTAINS.

Soak them briefly then give them two short washings. **Run** the machine three to five minutes for the first wash and about two (with fresh suds, of course) for the second. Rinse carefully, blue, and starch. Hang them straight for easier ironing.

TO IRON CURTAINS fold them lengthwise down the middle and iron them double, with a lengthwise stroke. If the curtain is ruffled first iron the main part, doubled to the edge of the ruffle, then iron the heading and the top and bottom ruffles. Iron the side ruffle last and touch up the body of the curtain. By this method the main part of the curtain is finished before it has a chance to dry out. The ruffles usually remain damp enough to be ironed without constant rewetting and it is much easier to touch up the curtain proper if it accumulates wrinkles than to re-do mussed ruffles. Do not iron sheer starched curtains when they are too wet. The iron will pick up starch and stick to the material, often scorching or tearing it.

COLORED COTTON CURTAINS are handled much the same way, provided they are colorfast, but test them if you are not sure of their reaction, and always dry them indoors or in the shade. Some cottons that are fast to water are not fast to light, and fade more quickly if exposed to the sun when wet. Very sheer curtains can be rolled almost dry in a turkish towel, then ironed.

ORLON, NYLON AND DACRON CURTAINS are in the easy-care bracket. These are sturdy fibers and if the curtains are well stitched, they can go into the washing machine and be laundered with heavy duty soaps or detergents in **warm** water. If they are delicate or poorly seamed (can you pull out loose threads?) you had better do them by hand. Pat a little detergent into any especially soiled areas before you begin.

IF YOU LAUNDER SYNTHETICS BY HAND, you will find it easy because these curtains are not often heavily soiled. They usually do not require soaking, but it will not harm them.

Curtains / Ironing Silk

Simply fold them into suds made with lukewarm water and a detergent, and gently press the suds through them until they are clean. Do not wring or twist. Rinse thoroughly and then hang them over a line to drip dry. Dripping gives synthetics the greatest freedom from wrinkling.

IF YOU MACHINE WASH SYNTHETIC CURTAINS you may need to smooth them quickly with an iron set for ****nylon**" or "rayon." Tumbling them at low temperature in a home dryer may leave them comparatively wrinkle-free. Orion, nylon, and dacron curtains do not need to be starched or blued. Properly washed, they should not need bleaching ever. But if they are old and a shade or two off-white you can bleach them as you would white cotton fabrics. This treatment is described in the chapter Fabrics and Finishes.

SHEER GLASS FIBER CURTAINS should be hand washed in hot suds and, like glass fiber draperies, they most **not** be ironed. They should be handled very gently during washing—like all curtains—but in this case it is especially important not to wring or twist them. Hard rubbing and rough treatment distort the weave and may break threads. Dirt slides right off glass fibers anyway, so slap-dash methods are totally unnecessary. These curtains are a wash, rinse, and rehang proposition—no bluing, no starch. Roll them in a towel or let them drip for a while, then rehang them and smooth the seams and hems with your fingers.

SILK CURTAINS have moved into the luxury class and it is unlikely that many of us will have them, but the directions for handling them are also applicable to other articles such as summer dresses and scarves.

WASHABLE SILKS SHOULD BE HAND LAUNDERED in lukewarm-to-cool suds made with a mild detergent which is better for silks than the mildest soap. Handle silks gently, squeezing the suds through the fabric. Rough treatment damages the fibers. After rinsing put them between turkish towels to remove excess moisture, and hang them to dry indoors, away from any source of heat such as a radiator.

IRON SILK when it has dried to a uniform dampness, with your iron set for it. Silk that has dried completely and has then been sprinkled for ironing is likely to show water marks when it is pressed. This is especially true of pongee, which is ironed either uniformly damp or when it is completely dry. Iron silk on the wrong side, preferably with a piece of cheese-cloth over it as a protection, since silk scorches very easily.

Rayon Curtains / Blinds

If the silk is too wet when it is ironed it will emerge stiff and papery, and too hot an iron will turn white silk yellow.

SHEER WASHABLE RAYON CURTAINS are handled like silk but can be washed equally well with mild detergents or pure white soap flakes and warm water. Rayon fibers tend to be weak when they are wet and should therefore not be soaked before washing or hung with clothes pins. Roll them in a turkish towel to remove most of the moisture. Rayons differ widely in the amount of heat they will stand and if you have the manufacturer's directions for ironing, be sure to follow them. Otherwise start with a warm iron, dialed for rayon, and raise it if more heat is needed. Iron the top and bottom hems first, then iron the curtains lengthwise with the threads, on the reverse side.

LACE AND NET CURTAINS are often dry cleaned. If they are to be washed, measure them first so that they can be stretched to the right dimensions afterwards. Handle them like cotton curtains, using a nylon mesh or muslin bag if they are delicate. The threads of lace curtains are easily pulled or broken. These curtains can be stiffened with gelatin or gum arabic, which is better for them than starch. To make such a finish add an ounce of gelatin or powdered gum arabic to a pint of cold water, then heat the mixture until the powder is completely dissolved. Add from eight to fifteen parts of hot water to the gelatin mixture, and from five to ten parts to the gum arabic solution, depending upon the stiffness you want to give the curtains. The gum arabic solution is also good for silks and rayons. The gelatin mixture is often used in preference to starch for sheer cottons. Grocery store gelatin is what you use. The gum arabic powder can be purchased at a drug store.

BEIGE AND ECRU CURTAINS can be retinted with a strong solution of coffee or tea, or with dyes such as Tintex or Rit (follow instructions on the package). Add the coloring to hot water slowly and test for the shade you want on a sample of material before immersing the curtains. Remember that the color will be lighter when the fabric is ironed dry.

COTTON OR LINEN NET OR LACE CURTAINS are not ironed; they are dried on stretchers made for this purpose. Using measurements taken before washing the curtains, set them for one half inch less to allow for the slight stretching that takes place after they have been rehung.

WASH PLASTIC CURTAINS with a mild soap or detergent and warm water, unless you have specific directions

Rayon Curtains / Blinds

from the manufacturer. You can spread them flat and go over them with a cloth or sponge. Paper curtains can be used as throwaways, or cleaned according to the directions given by **the manufacturer.**

And while we are at the windows, what about the shades? Or have you Venetian blinds?

DUST WINDOW SHADES PERIODICALLY. They should seldom need more than dusting with a brush or the dust brush from your vacuum cleaner.

TO CLEAN WASHABLE SHADES, however, lift the slotted end of the roller, take the shade down and unroll it on a flat surface. Using a stiff lather of soap or detergent and a brush, scrub a small surface at a time until one side has been finished. Rinse the lather off with a cloth squeezed nearly dry out of clear water, taking care not to get the shade too wet **Turn** it over and do the other side. Non-washable shades can be cleaned with art gum, commercial wallpaper cleaner, or with cornmeal inside a gauze cloth. If the bottom of the shade is dingy the shade can be taken off the roller and the top and **bottom** reversed. Or you can have a new shade put on the roller, which costs less than buying a new one.

W THE SHADE IS LOOSE ON THE ROLLER, after it has dried completely and been replaced, lift the slotted end and roll it up by hand. This is easier than trying to rewind the spring by hand and amounts to the same thing.

VENETIAN BLINDS ARE EASILY DUSTED with lambs-wool brushes made with "fingers" especially for this task. Or you can close the blinds and dust the slats with the dusting brush of your vacuum cleaner. Reverse the slats and dust the other side.

TO WASH VENETIAN BLINDS use a sponge and warm water, with a detergent or paint-cleaning solution, and clean one at a time, on both sides, rinsing as you go. Cleaning waxes are often used on painted Venetian blinds as well as on blinds of natural wood. Change cloths as they become soiled and give each slat a rub with a clean soft cloth. The tapes can be cleaned with a dry cleaning fluid, or scrubbed with upholstery shampoo.

8. A FIRE ON THE HEARTH

Eons ago, when man first discovered fire, he wisely rigged up a hearth in his cave and cozily toasted his toes. He never let that fire go out and the hearth became the symbol of home.

A FIREPLACE DOMINATES ANY ROOM it occupies and its appearance tells what kind of person you are—neat, lazy, indifferent, or sloppy. A cluttered mantel, accumulations of trash in the fireplace waiting for the touch of a lighted match, and facings grimed with smoke suggest a carelessly run home. Yet the "clean-winged hearth" of which the poet sang is not difficult to attain, and the best way to clean it is almost invariably the easiest. Basic care, of course, begins with the chimney.

FOR A CLEAR DRAFT, as a precaution against falling soot, and for safety from fire, your fireplace chimney should be cleaned regularly (fire wardens say once a year if you use it often) and kept in good repair. A high blaze on the hearth, plus a heavy incrustation of soot in the chimney, invites a fire that could destroy your home.

A BRICK FIREPLACE, when it needs more than dusting, can be scrubbed down with a brush, using warm water containing about an ounce of trisodium phosphate, Oakite, or washing soda per gallon. Rinse carefully. This should remove ordinary soil and soot. If the bricks look faded, the color can be freshened by brushing them over with a cold water paint of the desired tint. (Oil paints are likely to blister with the heat.) An old fashioned method of restoring color to the bricks is to wet them with hot water and rub them with another brick.

A STONE FIREPLACE requires only a good brushing now and then, but if the stones have become stained with soot here is the formula for a thorough cleanup. To four ounces of yel-

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low laundry soap in a suitable kettle, add about one quart of hot water. Heat the water until the soap has been completely dissolved. Let it cool, then add half a pound of powdered pumice and half a cup of household ammonia. Mix these ingredients thoroughly. With a stiff brush remove as much soot as possible from the stones, then apply a coating of the soap mixture with a paint brush. Let it remain for a good half hour, then clean it off with warm water and a stiff scrubbing brush. Rinse the stones thoroughly with warm water.

IF YOUR FIREPLACE HAS A SLATE HEARTH and facings, wash them with a detergent or soap, using a mild abrasive if necessary. Rinse the slate and wipe it dry. For an added beauty treatment rub the dry slate with a soft cloth dipped in lemon oil furniture polish. With a fresh cloth wipe off any excess oil and then buff the stone. This makes the slates uniformly dark and glossy. Wax, recommended for slate floors, is not desirable here because heat from the fire affects it.

FOR MARBLE MANTELS AND FACINGS follow the directions for marble floors and marble furniture.

FOR PAINTED MANTELS follow the cleaning directions given for painted walls and woodwork.

BRASS AND IRONS AND FIRE TOOLS are not difficult to keep bright if they are polished regularly. Use a polish made for brass (metal polishes differ in their abrasive qualities) and rub until the tarnish is gone. Polish the brass with a piece of soft flannel or chamois leather. Burned-in resins from wood can be removed with steel wool but fine emery cloth, which can be bought at a hardware store, is better and easier to handle. Rub in one direction and use your polish afterwards.

LACQUERED BRASS needs only to be dusted or washed with tepid suds. If the lacquer begins to crack and peel, or has become blackened from the fire, the tools should be redone. To do them yourself, first remove the old lacquer with acetone (drugstore), then polish them. Wipe them again with acetone to be sure that every trace of the polish is removed, then brush or spray them with a transparent metal lacquer.

CLEAN IRON FIRE TOOLS with a brush or duster and rub them occasionally with a cloth moistened with kerosene. This will keep them black and prevents rust. Or they can be painted with a special, fire-resistant andiron paint, available in dull or glossy finish. If the horizontal bar of an andiron

Fireplaces / Fire Prevention

snaps, a welder will repair it for you at little cost, or put **on** a new piece.

FIRE SCREENS should be dusted frequently. If they become gummy or soiled, clean them with kerosene on a cloth, or scrub them with hot water and a good detergent.

FIRE PREVENTION. So much for your fireplace, except for a final note of caution. Never retire at night, or leave your home untended, while a fire still blazes on the hearth. If you can't wait for it to burn out bank it thickly with ashes. Fire screens are a must for untended fires. They should always be in place if there are small children about.

9. LIVING ROOM FINESSE

Aside from being the room most likely to have a fireplace, your living room is important because it keynotes your home and tells so much about you. In pictures and books it reveals your taste and personality and the interests and hobbies of members of your family. This is the haven your family seeks after the stresses of the day. This is where you entertain your friends.

Books, pictures, lamps, and bric-a-brac require care which, though simple, should be very correct if they are to be kept in good condition.

YOUR BOOKS should stand upright, not slumped over on partly filled shelves, but not packed so tightly that they cannot be taken out without a struggle. Books that slump, or have to be wrestled out of their places suffer broken spines and damaged bindings. If there are not enough books to fill a shelf completely, use a library bracket to hold the line. Large books and music can be stacked flat. Preferably arrange your books near the front edge of the shelf so that they are easily accessible and so that air can circulate around them.

IN DUSTING BOOKSHELVES AND BOOKS never bang the volumes together to get rid of dust. Use the dusting brush of your vacuum cleaner or a soft clean paint brush, working outward from the spine of the book.

FINE LEATHER BINDINGS should be protected every year or so against damage caused by drying by applications of a suitable oil or leather conditioner. For bindings in good condition pure neat's foot oil or castor oil are excellent. Neat's foot oil leaves a dull finish, castor oil imparts a gloss. Sometimes a half-and-half mixture is used, or saddle soap which both cleans and lubricates. More elaborate mixtures, containing Japan wax and sodium stearate are sometimes made, but

Book Bindings /TV Sets

the simple ones will do for the few leather bindings usually found in home libraries.

DO NOT LET THE OIL TOUCH PAPER or cloth portions of the book. Rub the oil in a little at a time with your fingertips, or with a small swab of cheesecloth, chamois or felt. After applying the oil let the books stand for several hours to allow it to penetrate the leather, then repeat the application until no more is absorbed. A final polishing can be given with a clean soft cloth or chamois leather. For added sheen rub in a little castor oil and give the binding a final polish. Leather-bound books—and any other articles made of leather—suffer damage from crumbling and cracking if they are not oiled occasionally. The treatment takes a little time but it does protect the bindings against damage caused by loss of oil.

VERY OLD AND CRUMBLING BINDINGS sometimes are sprayed with a coating of acrylic lacquer, available for easy application in aerosol cans. This gives them a protective coating and prolongs their life. Rub the rough spots smooth with very fine emery cloth, or crocus cloth, and oil the leather first if this seems desirable. Spray on a thin coating of the lacquer, let it dry, and then apply a second coating. Books cannot be oiled **after** they have been lacquered.

IF BOOKS BECOME MILDEWED, due to dampness, close the windows and dry the room out with an electric or other type of heater. Wipe the mildew from bindings and pages with a soft cloth, or with a cloth slightly dampened with alcohol, and leave the pages open fanwise to dry.

PICTURES AND MIRRORS, should be dusted along with the furniture and cleaned thoroughly about twice a year. Use a piece of soft cloth or chamois, squeezed as dry as possible out of cool water containing a little vinegar or ammonia. Be very careful not to let any water seep under the frame to make a stain. Polish the glass with another soft cloth or a dry chamois leather.

TREAT WOODEN FRAMES as you would furniture of the same finish.

FOR GILDED FRAMES, when they need more than dusting, use a little dry cleaning fluid on a soft cloth. This is better than solutions made with water. Gilded surfaces are made by covering the frame with a thin layer of gold leaf, or a thin gold coating in liquid or powder form. This delicate finish is easily damaged.

Book Bindings/TV Sets

FINE OIL PAINTINGS should be cleaned only by an expert. They can be dusted by brushing them lightly with a soft clean brush or with a piece of absorbent cotton.

PAINTINGS NOT ESPECIALLY VALUABLE and in good condition, can be cleaned of surface dirt by a simple home method: place the painting against a surface that gives it firm and uniform support, then go over it carefully with a pad of cotton or a clean soft brush moistened with cleaning fluid of the flammable type. If the surface looks dull after cleaning, it can be brightened by applying very carefully a fine quality wax emulsion cream furniture polish. Follow the directions given for the polish. These instructions are from an art museum no other treatment is recommended for home use.

WATER COLOR PAINTINGS cannot be cleaned.

PIANOS. In discussing furniture we have already told how the exterior of a fine new piano should be treated (see Index). Old pianos with waxed or varnished finishes can be treated like ordinary furniture. Clean piano keys by wiping them with a soft cloth, slightly dampened, and wipe them dry immediately. Ivory used for piano keys is especially bleached to make it white. The natural color is an off-white—slightly yellow—and ultimately this tint returns. There is no recommended way to whiten yellowed keys at home; they can be scraped and refinished at the factory. Keeping the keyboard closed when the piano is not in use helps to keep the keys from yellowing.

ASK YOUR TUNER TO CLEAN THE INSIDE OF YOUR PIANO occasionally. This helps to prevent corrosion of the strings and pegs, and damage to the wool felts from moths. Camphor may be put inside the piano to discourage moths, but in a place where it does not affect the metal or wood finish, or obstruct the action of any part. Pianos left for any length of time in an unoccupied house should be safeguarded against moths and also against moisture. Put a lot of newspapers inside to absorb dampness and cover the piano with heavy flannel or a cotton blanket. Vases and other objects tend to mark the cases; better not put them on your piano.

RADIO AND TELEVISION SETS should be moved gently during cleaning operations, and no musical instrument or receiver should be placed near a source of heat, such as a radi-

Cabinets / Pewter

ator. In caring for your television receiver you should follow the instructions provided by the manufacturer. Cleaning directions for General Electric models follow: the face glass can be cleaned with a mild solution of soap and water and wiped dry, after rinsing, with a soft dry cloth. No cleaning agents or solvents should be used on the face glass because they are likely to contain damaging materials, such as carbon tetrachloride, gasoline, or benzine. Care should be taken that furniture polishes, also likely to contain damaging compounds, are not used on the face glass or spilled on it. Harsh and gritty dust cloths will scratch its surface.

THE FINE FINISH OF TELEVISION CABINETS can be preserved by the regular use of a good wax polish. Rubber objects and articles likely to be impregnated with harmful chemicals should not be placed on top of television cabinets. And don't drape covers over them. Covers that hang down behind the set and block the holes in the back keep the tubes from ventilating properly, and they become too hot. For this same reason be sure that air can circulate freely between the receiver and the wall behind it.

ALL LAMPS IN THE LIVING ROOM should be disconnected and cleaned for an especially thorough housecleaning operation. The method used to clean the base or stand of a lamp will naturally depend upon its material, and the instructions given will apply also to ornaments, knickknacks, and candlesticks of the same category.

UNLACQUERED BRASS LAMP BASES should be cleaned with a good brass polish—and here let us emphasize again that metal polishes differ widely in composition in order to deal with different metals. Each metal has its own degree of hardness, and its individual reaction to acids and alkalis, to various chemical compounds, and to the types of abrasives used in various polishes. What is good for one metal may damage another. In addition, the wrong polish brings unsatisfactory results, often after much more work. So use brass polish for brass, following the directions on the container.

BRASS SHOULD BE CLEANED REGULARLY. Like everything else, it is easier to clean and polish if it is not neglected. Washing brass articles first in good hot suds will help if they have been let go too long. If you wash brass objects, dry them carefully before you apply the brass polish. Rub until the metal is clean and free of spots caused by corrosion, then polish it with a flannel cloth or a piece of chamois leather. This will give it a high gloss finish. If you want a

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soft finish, use a thin paste made by mixing a little raw linseed oil with rottenstone. After rubbing the brass clean with this mixture, polish it with a clean cloth. For brass encrusted with soot see "Andirons" in the Index.

LACQUERED BRASS is never polished. Just dust it or wash it in mild lukewarm suds, rinse it with lukewarm water, and wipe it dry. If the water is too hot it may remove the lacquer. Should lacquered brass become dingy and the finish begin to peel, remove the lacquer with acetone (from a drug-store) and polish.

BRASS WITH AN ANTIQUE FINISH is simply rubbed with a little lemon oil (paraffin oil used for furniture), then with a dry cloth.

A CUT LEMON DIPPED IN SALT, or hot vinegar and salt, will clean brass the old fashioned way. This method can be adapted to miniature brasses. Provided that they have no ornamentation and no wooden handles or knobs, you can get rid of most of the corrosion by boiling them for a few minutes in water containing a little vinegar and salt. Wash them with hot suds afterwards, rinse and dry them, then finish them with brass polish.

GOOD POLISHES FOR COPPER are to be found in your grocery store. Follow exactly the directions given on the container. With some, tarnish returns quickly if the copper is not washed thoroughly after polishing.

TO MIX YOUR OWN COPPER POLISH: make a paste of equal parts of salt, flour, and vinegar. Rub the copper with this mixture until it is clean, or let the paste remain on it for a while, then wash it with hot soapsuds, rinse, and polish. For a final polish use whiting or rottenstone, mixed to a paste with olive oil.

LACQUERED COPPER is dusted or washed, if necessary, with lukewarm water and a mild soap or detergent. Rinse it with lukewarm water and wipe it dry.

TOLE LAMP BASES (AND TRAYS), when they look dull, can be rubbed lightly with mineral oil containing a little turpentine. Mineral oil is the same as paraffin oil and essentially the same as lemon oil furniture polish. Use one part of turpentine to about ten part of oil. Wipe the article carefully clean with a soft cloth. (Tole is painted metal.)

PEWTER IS A SOFT METAL and requires a mild polish. Use silver polish or a mixture of your own. For a dull

Bronze Lamps / Lamp Shades

gloss on pewter lamps and ornaments use rottenstone or whiting mixed to a paste with olive oil. Apply the paste with a soft cloth and rub the metal until it is clean. Wash it afterwards, rinse, and wipe dry. For a bright finish use whiting mixed with denatured alcohol. Rub it on with a soft cloth and let the coating dry. Then polish the pewter by rubbing it with a clean soft cloth. Wash and rinse thoroughly after polishing and wipe the pewter dry. Stubborn spots can usually be removed from pewter with very fine (No. 00) steel wool, dipped in olive oil. The oil is to keep the steel wool from scratching. After removing the spots, polish the pewter again, as already described.

BRONZE LAMPS, STATUES, BOOK ENDS, etc., that need more than dusting, can be washed with one of the following: mild soapsuds, hot vinegar or hot buttermilk. Rinse immediately and thoroughly and wipe the bronze dry. If you want to brighten the bronze, rub it with **dry** rottenstone or whiting. Rinse to remove all of the powder and wipe it dry.

LACQUERED BRONZE is merely wiped with a damp cloth. Sometimes lampstands are made of steel which has been given a bronze finish. When this begins to wear away, or spots of corrosion appear, a new coat of bronze lacquer is needed.

CANDLESTICKS. Wax spilled on candlesticks or accumulated in the holder can be softened with hot water, and pushed off with your fingernail covered with a soft cloth.

CRYSTAL PENDANTS. Candlesticks and lighting fixtures with crystal pendants must be taken apart for cleaning. Remove the crystals carefully, so as not to break or bend the delicate hooks by which they are attached, and wash them with warm water containing a little ammonia. Rinse and dry with a soft lintless cloth, or simply let them dry on a padding of tissue paper. Clean crystal lamp bases in the same way.

OTHER MATERIALS. For lamps and ornaments made of other materials such as marble, alabaster, glazed pottery, china, and cloisonne, use a cloth wrung out of warm suds made with a mild synthetic detergent. Rinse with a cloth wrung out of clear warm water and wipe dry with a soft lintless cloth. (Do not use ammonia or other cleaning aids.) Sometimes a little paint brush is handy for cleaning nooks and crannies of china or porcelain ornaments.

KEROSENE LAMPS, though outmoded for general use in most areas, are kept on hand in many country homes for use when storms have disrupted electric service. These must

Bronze Lamps / Lamp Shades

be kept very clean for good service and for safety. Soapsuds containing ammonia, or suds made with a detergent, are very good for cleaning away the soot that collects on glass chimneys. Periodically the oil reservoir should be emptied, washed, and thoroughly dried before being refilled. Wicks are trimmed by pinching off burned threads with your fingertips, not with scissors. Bases and shades are cleaned according to their material.

LAMP SHADES ACCUMULATE DUST which may cut down on light and should always be dusted when you dust the furniture. Use your vacuum cleaner dusting brush or a soft brush or cloth. Dust the light bulbs too, or wash them to remove grime (the lamp being, of course, disconnected). If the bulbs are blackened from the inside they are about to go and are giving poor light. Put in new ones.

LAMP SHADES OF SILK, RAYON, and similar materials can be washed safely provided they are sewed, not glued, to the frames and that any trimming they may have is washable and colorfast. Fill a tub or basin with plenty of good warm suds, made with an unbleached detergent or white soap flakes and dip the shade up and down until it is clean. Any spots can be rubbed lightly with a very soft brush, provided the material is not old and fragile. Rinse the shade by dipping it up and down in clear warm water. Let it drip for a few seconds then place it to dry on a clean cloth in an airy place, but not in the sun. Shades should be dried as quickly as possible in case the frames are not rustproof. If you have an electric fan speed the drying with that.

LINEN, CHINTZ, AND PAINTED SHADES should be dry cleaned. Washing is likely to shrink linen or cotton shades and to damage hand painted designs.

PARCHMENT SHADES should be dusted with an untreated cloth and conditioned now and then with a suitable leather conditioner such as castor oil, or neat's foot oil, to keep them from becoming dry and brittle.

IMITATION PARCHMENT can be cleaned and brightened with liquid wax.

PLASTIC AND FIBERGLASS SHADES need only to be wiped with a damp cloth.

METALLIC PAPER SHADES seldom need more than dusting but now and then can be given a beauty treatment by dressing them with a mixture of paraffin oil and turpentine

Ornamental Pieces

(one tablespoonful of turpentine to half a cup of paraffin oil). Carefully remove any surplus with a soft clean cloth.

THE ORNAMENTAL PIECES in your living room may include bits of statuary fashioned of unglazed ceramic or plaster. These can only be dusted. Plaster figures not valuable enough to merit the attention of an art expert can be whitened when soiled by the application of a very thin spraying of top quality flat white paint.

And that just about covers the special cleaning problems to be found in a living room. Please don't try to do it all in one day.

10. DINING ROOM SPARKLE

Today's dining room may be a corner of the living room, or a little dinette. In these hurly-burly days, when practically no one has regular help, you may even serve most of the family meals at a table in the kitchen.

BUT WHEREVER YOUR MEALS ARE SERVED, in a real dining room or in an attractive corner, there are holidays and special occasions when you want your table to look its sparkling best. This means bringing out your linen, polishing the silver, and using your best china and glassware. These are your heirloom things, some probably irreplaceable. If you take good care of them you can pass them on to your children. And the care you give your best things can be applied in the same, or less, degree to your everyday tableware according to your inclination. It isn't really difficult. First, let's have a look at your best china.

LOVELY CHINA does not seem very important when we are very young. Sad to say, we are likely to develop a taste for it only after we have carelessly run through the supply we had when we were first married. It is when we try to replace the broken Minton and Haviland that we realize how expensive good china is and what a treasure we have squandered.

A HIGH SHELF IS THE BEST PLACE for your very best china during the time when children are small—but, oh, how energetic. Use it only on special occasions and return it promptly to its safe retreat. Stack it carefully, or store the plates on one of the plastic-covered racks made for this purpose. In stacking plates remember that the footing is often unglazed and can scratch the surface of the plate underneath if it is carelessly placed. A precaution against this is to slip tissue papers in between. Plastic covers are made especially

China / Dishwashers

to protect stacked plates from dust. If you use them you won't have to wash your dishes when you take them down for a dinner party. Chips are safest when they are hung on properly spaced hooks. Wrapping the spouts of delicate teapots with soft paper will safeguard them against chipping. So much for storage.

THE PROPER CARE OF CHINA is not complicated but there are certain details worth remembering. First, never let foods stand very long on china. Wash it immediately after use; if you simply can't, at least rinse it. Salty foods, salads and gravies have an injurious effect on china if they are allowed to remain on it. China used for eggs, gravies, and sauces containing flour, should be rinsed promptly with cold water. If these foods dry on a plate, or if hot water is run over them, they harden and are very difficult to remove.

FOR WASHING CHINA use hot water and a mild detergent or soap. Detergents are better because they are equally effective in hard or soft water, rinse easily, and do not leave a film. Strong detergents and soaps might harm some china. The manufacturers of some of England's finest chinaware say not to use either soap or detergent if a hot rinse will do the job. Long soaking may also be bad for china. It may soften the ingredients used in decoration, especially gold and platinum trim. Ammonia should be avoided for the same reason. Metallic and plastic sponges, steel wool, scouring powders, and even plain hard scrubbing also cause damage. A soft brush however can be very useful, especially on china that has a raised pattern. Tea and coffee stains on cups and saucers can be removed easily and safely by wiping them with a soft damp cloth or sponge that has been dipped into baking soda.

IN RINSING CHINA use hot, but not boiling, water. Boiling water often causes crazing; that is, the glaze may become meshed with a network of fine cracks. Overheating plates and dishes can accomplish the same disfiguration. Very hot water on cold china, or cold water on hot, is likely to crack it. Sometimes water that is too hot causes colors to fade.

AND NOW A WORD ABOUT YOUR DISH PAN. Aluminum pans are not good for washing china because aluminum marks it with fine pencil-like lines which are difficult to remove. Plastic dish pans are very good because they are resilient and dishes are less likely to be chipped. A plastic mat in your sink is a precaution against chipping if you do your dishes there. Let your china, well rinsed with hot water,

China / Dishwashers

dry itself in a rack. Dishes washed with detergents do not need to be hand dried.

FINE GLASSWARE is a treasure too. Hours of work go into its design and decoration and often it is made of crystal glass, a very special kind that is clearer and heavier than ordinary glass. Crystal glass is always used for cut glass and fine ornamental pieces.

THE CARE OF GLASSWARE, whether it comes from Tiffany's or the Five and Ten is not difficult. Wash it in clean hot suds, made preferably with a detergent, rinse it with hot water, and let it drain dry upside down. Detergents do not leave a film on glass as soap does.

IN WASHING STEMMED GLASSWARE it is best to lift each piece separately by the stem, rather than by the cup or base; wash and rinse it, then take up the next. Stemmed glasses break very easily and cannot be tumbled in the dishpan or sink with other tableware. If your table glass is ornamented with gold, it is even more important to use a mild detergent. Gold trim is easily damaged by strong soaps or detergents and also by water softeners like ammonia. Such glassware should never be allowed to soak in hot water lest the gilt be softened. Glasses with engraved designs, and cut glass, are cleaned easily with a brush. Vases and cruets that develop stains or cloudiness, or an accumulation of sediment in the bottom, can usually be made sparkling clear again with ammonia. Fill the vase or cruet with water and add several teaspoons of ammonia. Let it stand for several hours or overnight, then wash it and rinse away the blemish. Do not, of course, pour hot water on cold glassware or cold on hot. You would probably crack it.

IF YOU USE AN ELECTRIC DISHWASHER for your finest china you can wash it without damage **provided** you select the right detergent and use it in amounts **not** exceeding the directions of the manufacturer. The water should not be hotter than 160° F.

DETERGENTS FOR DISHWASHERS. The information which follows is from the manager of the research division of a company that makes some of the finest china and earthenware being produced in the United States. The findings were based on tests of the company's own products, and competitive wares. We quote:

"There are a number of detergents on the market which are not suitable. They will remove colors and gilt decoration and

Detergents / Polishing Silver

eventually even the glaze itself. Their makers probably tested them for efficiency in soil removal but neglected to determine the effect they might have on any ceramic ware.

"The ones that, at present, we find to be satisfactory are Cascade, Calgonite (Gold Box), and Chat in about that order. These should not be used at stronger concentrations than recommended on the box. To recommend detergents is rather a risky business as the manufacturer may retain his label and box but change the contents without notice.

"Along with the chemical effects from too-harsh detergents, we have found that dishwashers with metal baskets will remove gold and platinum bands by mechanical abrasion. The newer plastic-coated baskets are much better. Detergents for hand washing also show significant differences. We have found Liquid Lux and Joy to be the best for good cleaning action and minimum effect on colors and gilt decorations."

TO REMOVE THE CHALKY DEPOSIT which sometimes builds up on china and glassware in hard water areas fill your dishwasher with all the glasses and dinnerware that have hard water deposits. Do **not** put silverware or pans in the machine. Place a cup filled with Clorox or Purex upright in the bottom rack of the dishwasher. Turn on the machine and operate it for five minutes. Stop the machine, empty the cup—now full of water—fill the cup with vinegar and continue the washing cycle. Repeat with another vinegar cycle and then finish with a complete rinsing cycle. The bleach loosens the hard water deposit and the vinegar removes it.

USE YOUR SILVERWARE. We have suggested that you cherish your finest china while your children are small and bungling, but the advice for your silver is to use it every day. Jewelers say that constant use keeps it in good condition and gives the finish the soft patina so admired in antique pieces. Regular washing in hot suds and a rub when you dry it keeps it in quite good condition. Occasionally it will need special polishing.

SILVER HAS ITS ECCENTRICITIES. If you value it—and what woman does not—there are a few facts you should know about it in order to avoid trouble. Acids, which brighten copper, brass, and aluminum, are very bad for silver. They not only turn it black but etch into the metal if they remain in contact very long. Ammonia, an alkali, brightens it. Household gas in the air, even in small amounts, causes silver to tarnish quickly. So does salt in the air, near the sea. Sulfur is inimical to silver and rubber a deadly enemy.

Detergents / Polishing Silver

TO AVOID TROUBLE from sulfur, salts, and acids, never let foods containing them remain long in contact with your silver. Such foods include table salt, eggs, olives, salad dressings, vinegar, and fruit juices. Wash your silver promptly after use, in hot suds made with soap or a detergent. Rinse it in hot water and wipe it dry. Never let food stand in silver dishes. Watch your flower and fruit bowls, too. Decaying fruits, flowers, and leaves generate acids that make ugly little pit marks. If your silver seems to tarnish too quickly you might check your gas installations for leaks.

KEEP RUBBER AWAY FROM SILVER. A story will illustrate this point. Not long ago a young reserve officer, who had just been married, was called into service. Against better days he and his bride stored their wedding silver. They made sure that each piece was clean and shining, and wrapped it carefully in tissue paper. So far, so good. Clean silver wrapped in paper will stay bright for a long time because air is excluded. But to keep the tissue snug, they used rubber bands. Months passed and the officer completed his service and came home. When the silver was unpacked it was found to be marked with heavy black lines that would not be polished away. A jeweler was consulted but the damage was so severe that nothing could be done. The silver had been ruined because its owners, though careful, did not know that rubber corrodes silver in a matter of weeks.

CORROSION FROM RUBBER begins within a few days of contact and can occur even when the silver is well wrapped. The time required for the destructive action to take place depends upon the thickness of the paper or cloth and upon atmospheric conditions. Damp salt air accelerates the action and so does heat. Under normal conditions the silver will corrode within three or four weeks. By corrosion, to make matters perfectly clear, it is meant that the silver beneath the rubber is eaten away by microscopic particles emanating from the rubber and passing through the covering to the metal beneath. Once silver is corroded it is difficult or impossible to restore it, especially if the lines of corrosion have crossed an etched or stamped pattern.

FOR BEST RESULTS IN POLISHING SILVER, wash it first in hot water with a detergent or soap. Then use a good silver polish, based on whiting or jeweler's rouge, or use either of these two substances with ammonia or denatured alcohol. Avoid polishes that contain harsh abrasives such as silica. The electrolytic method, which involves aluminum and zinc, plus

Commercial Polish / Linens

baking soda, or salt and soda, is harmless but jewelers frown upon it. It removes the oxidation completely, leaving the design flat and the finish dead. Also not recommended by silver authorities are the "dip and shine" polishes. These are not only expensive but require great care and caution in use. They remove the oxidation from designs and have a tendency to "burn" the finish. This does not mean that these polishes eat into the silver, but that they can cause a discoloration that is not attractive.

IF YOU USE A COMMERCIAL POLISH, or one of the treated silver-polishing cloths, read the directions and follow them carefully. Polishes made with whiting will be white in color, while those containing jeweler's rouge will be pink.

IF YOU WANT TO MAKE YOUR OWN POLISH get a fine grade of gilder's whiting at a good paint store—it is very inexpensive—and apply it with a damp cloth, soft brush, or sponge moistened with ammonia. Go over the silver carefully, in straight even strokes, and wipe off the tarnish. Let the powder dry on the silver, then polish it with a soft flannel cloth or piece of chamois leather. This is how England's famous silver is cleaned, in a matter of minutes, however tarnished it may be. If you want a brighter polish, use alcohol with your whiting instead of ammonia. Last of all, wash the silver to remove every trace of polish, rinse it in hot water, and wipe it dry. Polish left on silver causes it to retarnish more rapidly.

SILVER PIECES WITH GOLD LININGS should never be polished inside. The lining is a mere wash and gold is a soft metal. It can be removed by just plain rubbing. New linings, of course, can be put in by your jeweler.

THE CARE OF SILVER PLATE is the same as for sterling or solid silver, but don't rub it too hard or too often, or it will have to be replated. Actually, silver does not need to be polished vigorously each time you remove tarnish. Just wipe the tarnish, wash the piece carefully, and it will be lovely when you wipe it dry.

LACQUER OR PLASTIC FINISHES are sometimes applied to ornamental silver pieces so that they will not require cleaning or polishing. Lacquered pieces need only dusting or an occasional washing in mild lukewarm suds. Lacquering silver is a job best done by a jeweler.

IF POLISHING SILVER IS A CHORE, clean and polish the little-used pieces, wash them carefully, wrap them in

Commercial Polish / Linens

tissue paper or special cloth from your jewelry store, and put them away until needed. They will remain bright because air is excluded. A camphor mothball or two in your silver chest or drawer helps keep tarnish away too.

TABLE LINENS. Easy-care table mats of plastics and bamboo and fresh paper napkins have edged linen off most family dinner tables, but it still presides on important occasions. Although adapted to weaves of exquisite fineness, linen is a very tough durable fabric that lasts for years. It launders easily to a snowy whiteness and has a stiffness all its own. It accepts dyes graciously and may be bought in a lovely array of colors. There is nothing complicated about its care.

LAUNDERING. White table linens should be soaked for about twenty minutes in plain cool to lukewarm water before being laundered. Then wash all but the most delicate pieces in hot water, using an all-purpose laundry soap or heavy duty detergent. In machine washing give them eight to twenty minutes, depending upon the amount of soil.

FOR BADLY STAINED CLOTHS AND NAPKINS use household bleach in the wash water (read the label for the proper amount) then rinse thoroughly. Most stains are removed by bleaching, but there are a few stains that should be treated before linen is put to soak: candlewax drippings, wine, fruit, tea, and coffee. Instructions are given in the chapter on stain removal. Lipstick and grease stains usually wash out, but it is a good idea to pretreat them with a liquid detergent or soap. This pretreatment is especially good for grease stains on colored linens, notably dark-colored ones that tend to hide grease spots until the material is ironed.

BLUING CAN BE USED FOR WHITE LINENS, if desired, but it is not necessary because, properly laundered, they emerge dazzling white.

STARCHING IS NOT NECESSARY unless an unusual amount of stiffening is desired. Women who are really fussy about the appearance of their table linens wash them separately from cottons. This is because damasks, especially, tend to pick up cotton lint that makes them look fuzzy.

FOR COLORED AND DELICATE WHITE LINENS use warm water and a mild soap or detergent. Dry white linens in the sun, if possible, and colored ones in the shade. Hang them neatly folded over the line with their hems smoothed straight for easier ironing later—never pin them by a corner.

Drying Linens / Ironing Cottons

IF LINENS ARE AUTOMATICALLY DRIED the temperature should not be too hot. Make it room temperature if you can.

TO IRON LINENS successfully, they must be thoroughly and uniformly damp—much damper than cottons, otherwise they will not be smooth and glossy when they are finished. All but the thinnest and sheerest linens require quite a hot iron (linen setting) and they should be ironed until they are completely dry. If you are truly fastidious about its appearance, you will cover your ironing board with an old linen cloth to avoid dimming the sheen of your linens with lint picked up from a cotton cover. A dry iron, rather than a steam iron, is recommended for ironing linen.

TABLECLOTHS AND NAPKINS should be ironed on both sides. To iron a tablecloth fold it wrong side out, lengthwise. Iron it with the thread of the material. Refold the cloth right side out and iron it again, pressing in the center crease. Fold it lengthwise a second time, then crosswise several times without pressing the folds. One sharp crease down the center is all you want. Iron napkins first on the wrong side, beginning with the corners and getting them properly right-angled to avoid distorting the weave, then iron them on the right side. Fold large dinner napkins in thirds and small ones in squares with the edges even.

OBLONG DOILIES AND TABLE RUNNERS should be ironed with the weave, in one direction only, so that they will lie flat. Again, start with straight corners. If linen is embroidered, iron it face down on a well padded board to raise the design.

IRON ROUND DOILIES from center to edge with the weave of the material.

CROCHETED AND HEAVY LACE DOILIES should be spread flat and coaxed into shape with your fingers, on a kitchen or laundry table. They will not need ironing.

STORAGE. Store table runners folded lightly or wrapped around a cardboard tube. Place small doilies flat in a drawer, taking care not to crease them.

IRONING TECHNIQUES FOR COTTONS are the same as for linens, but the iron must of course be the proper temperature. If you have an assortment of materials to iron begin with the ones that need the least heat (synthetics) and finish with the heavy linens which require the most.

Drying linens / Ironing Cottons

These notes on the proper treatment of china, silver, glassware and the table linens may seem tedious, but is it really more difficult to care for them properly than to follow a haphazard method? Properly handled, these fine accessories will grace your table for years, bringing pleasure to your **family and** your friends.

II. TODAY'S SERVANT—ELECTRICITY

In today's busy world, when more and more women work outside the home as well as in it the only servant most of us have is that mysterious traveler—electricity.

No one completely understands electricity; but day after day it accomplishes prodigious chores. For a few cents' toll, like a partially-tamed genie, it gives us light, washes our clothes, makes our toast, polishes floors, washes dishes, provides easy ironing, makes coffee, does the dishes, cooks waffles, and runs the kitchen range. For diversion it provides radio and television shows.

ELECTRICITY IS EVERYBODY'S FRIEND—as long as it is handled properly. Abused, it bogs down on the quality of its service, blows fuses, burns out equipment, and even sets houses afire. Government safety specialists of the United States Department of Agriculture recently warned that at least 12 per cent of all home fires today are caused by the misuse of electricity. Therefore it is important to know the basic rules for ingratiating our helper.

HAZARDS. Experts tell us that well equipped homes today are using twice as much electricity as they did a decade ago, yet many household wiring systems have not been modernized to take care of the increased load. Overloaded wires have become an ever increasing hazard as more and more electrical equipment, especially high-wattage and automatic appliances are brought into use. Overloaded wires may blow fuses, overheat and damage insulation, and start fires smoldering in walls. The remedy is a checkup of your home if you feel that larger wires and more circuits may be needed for the equipment you have or are considering buying. Some estimates say that as many as half of America's homes need their wiring systems modernized to keep pace with such equipment

Cords/Light Bulbs

as home freezers, clothes dryers, air conditioners, and television sets.

CORDS. A proper regard for your servant, electricity, demands also that attention be paid to cords. Repair shops often find that their major job is the repair or replacement of cords that have been damaged, though it is really easy to keep them in good condition. Jerking on a cord to disconnect it invites trouble, because such treatment loosens the wires from the plug. The proper way to disconnect a cord equipped with a switch is to cut off the switch first and then reach down and pull out the plug. If there is no switch, pull the plug from the wall outlet first, then from the appliance. Take hold of the plug firmly (not the cord) and pull straight. If it sticks, rock it gently back and forth as you pull, to loosen one connection at a time. Even if a cord has a switch it is a good idea to disconnect the cord from the outlet too, when you have finished using a heating appliance.

CORDS COVERED WITH RUBBER INSULATION should be kept clean of accumulations of grease that sometimes collect on them in the kitchen. Grease permanently damages rubber. Disconnect the cords now and then and clean them with a soapy cloth, then rinse and dry them. Other cords should be kept clean too, and free of dust.

WATER IS A CONDUCTOR OF ELECTRICITY. Do not replace electric cords that have been washed until they are thoroughly dry; you are likely to get a shock if you handle live cords when they are damp, or with wet hands. Guard also against water spilled around electric appliances.

CORDS SHOULD BE KEPT FREE OF KNOTS, bends, and kinks which might break the fine wires inside or damage their insulation.

STORE YOUR CORDS, when not in use, coiled loosely in a drawer or on a shelf, or hang them round wooden pegs or on two or more hooks, in a cool dry place. Cords permanently attached to appliances can be wrapped loosely around them after the appliances have cooled. Heat is damaging to cords too.

DON'T SWITCH CORDS indiscriminately from one appliance to another; they may not be designed to carry the same load.

DEFECTIVE OR DAMAGED CORDS should be repaired immediately or else replaced.

Cords / Light Bulbs

EXTENSION CORDS SHOULD BE USED WITH CAUTION. Do not run them underneath rugs, or around radiators, pipes, or nails.

CORDS IN OUT-OF-THE-WAY PLACES can accumulate a heavy coating of dust which is sometimes touched off by a stray spark to a minor explosion. This is frightening, so try to keep the dust from collecting behind your electric washer or refrigerator.

FAULTY PLUGS, as well as cords, are a source of trouble. If the prongs are broken you will have to get a new plug. If they are merely loose, make sure that the wires have not been pulled out of place, then tighten the two small screws that secure them.

THE PROPER VOLTAGE and type of current (usually indicated on the appliance) and its own cord, must be used on all electrical equipment. For safety in buying equipment look for the UL stamp, the Underwriters Laboratories seal of approval. File all instruction tags, leaflets, and booklets in a safe place for consultation when needed; don't just read them and throw them away.

ELECTRICAL APPLIANCES DIFFER in their care and it is impossible to give specific instructions for each item and make. So if you have lost your instructions, it might be a good idea to write for a new booklet. Be sure to give the manufacturer or your dealer the model number of your appliance, which is usually stamped somewhere on it.

FUSES ARE SAFETY GADGETS designed to cut off electric power when there is trouble in a particular circuit. The little metal wall box containing them is usually somewhere in the basement. When an electric circuit is overloaded, a strip of soft metal melts in the fuse, thus interrupting the flow of electricity. Overloading a circuit with appliances, worn cords, and defective equipment will cause blown fuses. Check these possibilities and then unscrew the broken fuse and put in a new one. Fuses screw in just like an electric bulb and are very easily replaced, but *make sure that the fuse you put in is of the same amperage*. The number of amperes will be stamped on the screw end of the fuse. If the new fuse blows, or if you cannot locate the trouble, call an electrician immediately.

ELECTRIC LIGHT BULBS. Consideration of cords, plugs, and circuit loads is of course elementary. So are electric light bulbs, but are you really well informed about them? To begin with, their wattage should be suited to the task they

Cleaning Fixtures / Toasters

are expected to perform and if you read or work with improper light you can expect aching eyes and glasses later. Any electric power company can supply you with information about this.

KEEP LIGHT FIXTURES CLEAN. You may be careful about using the proper bulbs in your lamps and wall lights and still not be getting adequate light. If lamp bulbs, shades, and reflecting bowls are dusty and soiled you are losing a great deal of the light you are paying for. Switch the lamp off and dust the bulbs, shades, and other parts when you dust your furniture. If the bulbs and bowls have accumulated a greasy, dust-catching film, take them off and wash them. Reflecting bowls and glass shades can be washed like other glassware. Bulbs and fluorescent tubes, however, should never be immersed in water. When they are cool, clean them with a damp soapy cloth and wipe them dry. Be sure your hands are dry when you replace them.

IF BULBS AND TUBES STILL LOOK DARK after they have been cleaned, they are about to go and are giving poor light. Screw in new ones.

DISPOSE OF OLD BULBS AND TUBES carefully. In fires, they produce minor explosions. Thrown out carelessly they can cause serious cuts, especially on children. And the materials used in some fluorescent tubes may be harmful when they are broken.

TO MAINTAIN ELECTRICAL APPLIANCES in good working order keep them clean and properly oiled. Some have sealed motors and never need oiling, but failure to oil the ones that need lubrication sends many a helpful gadget back to the manufacturer for repairs. Use the type of oil specified in your instruction booklet and the proper amount. Too much is often as bad as too little. If you have lost your instructions write for new ones or consult your local dealer.

MOTOR-DRIVEN EQUIPMENT—including vacuum cleaners, sewing machines, mixers, and home freezers—should never be stored in a place where the temperature goes lower than 40°F., unless they are designed especially to operate at low temperatures. Cold starting strains the motor and sometimes causes undue wear. If your appliance has been stored in a cold place, let it warm up at room temperature for several hours before you start the motor. This will give the oil or grease, used as a lubricant, a chance to warm so that it can do its work properly.

Cleaning Fixtures / Toasters

These are general rules that apply to all electric equipment.

TO CLEAN APPLIANCES. Now for more specific notes about cleaning various appliances.

RULE ONE: Never attempt to clean any electrical appliance without first disconnecting it.

RULE TWO: Disconnect all cooking appliances promptly when their work is done so that food and grease won't burn hard on the surface.

RULE THREE: While some electrical appliances are now being advertised as "immersible" never put any electrical appliance into water to wash it, unless the manufacturer specifically states that this can be done.

CHROMIUM PLATING ON TOASTERS, waffle irons, coffeepots, etc., usually needs only to be wiped clean with a damp cloth and rubbed to a polish with a soft dry one. If it is greasy use a cloth wrung out of hot water and detergent, then rinse with a cloth wrung out of clear water and polish the metal dry. Chromium will not tarnish and it does not usually require a metal polish. If spatters of butter or oil burn onto the finish and won't wash off, rub them with a little silver polish. Chromium is a soft metal, applied as a plating, and harsh rubbing can damage it.

THE GRIDS OF SANDWICH GRILLS can be cleaned with a spatula or steel wool, or unscrewed and washed or scoured.

THE GRIDS OF WAFFLE IRONS are never washed because this removes the oil used to pretreat them so that waffles won't stick. Wipe the edges of the grids with a dry cloth and brush out any crumbs that may have collected on the grids. A little wire brush is good for this. Then wipe the grids with a damp cloth. Store both these appliances with their tops down to protect the grids from dust.

CRUMBS SHOULD BE CLEARED FROM TOASTERS regularly too. Some toasters have a crumb tray that can be slipped out and brushed or washed. Others have a removable base which can be taken off and cleaned. A small soft paint brush is good for brushing crumbs from the wires inside but don't brush the heating units. They clean themselves. If your toaster calls for oiling, this is a good time to attend to it. And how about a plastic cover as a precaution against dust and the meandering mouse?

THE INSET PANS OF ELECTRIC ROASTERS, the racks and small utensils can be removed and washed like other parts

Percolators / Irons

of the same material. Wipe the outside of the roaster and the shell with a damp cloth and polish with a dry one. The shell should never be put into water because it contains the electrical elements and controls. Care also should be taken not to wet the electrical connections and coils of the broiler unit. Store your roaster with the lid slightly open to avoid the development of stale or musty odors.

ELECTRIC PERCOLATORS have their heating element in the base and it is important not to get it wet. Wipe the outside carefully with a damp cloth and polish it with a dry one. The removable parts can go into the dishpan. Wash the inside of the percolator with hot suds, rinse it well, and wipe it dry. About once a week clean the tube and the spout carefully with a percolator brush. All percolators, except those made of aluminum, can be given a thorough cleaning now and then by filling them partially with water containing about a teaspoon of baking soda. Let the solution "perk" for several minutes. This removes stale oils that may have penetrated the metal and improves the flavor of your brew. Try cream of tartar from the grocery, in the same way, for aluminum pots that might be darkened by soda. The care of the outside of your coffee maker will depend upon the metal.

ELECTRIC MIXERS AND FRUIT EXTRACTORS. Wipe the motor casings, or housings with a damp cloth. The removable parts can be washed like other equipment of similar material, dried, and replaced. For pushing down batters rubber mixers are better than spatulas or spoons which might cause damage if they were caught in the beaters. Your instructions may call for oiling.

MANY AUTOMATIC WASHING MACHINES rinse themselves and have sealed motors that do not require oiling. Washing machines which require oil should be lubricated regularly.

A SPECIAL MONTHLY CLEANING with detergents such as Calgonite and Electrasol, made for automatic dishwashers, is recommended by the makers of some washers. The washing machine is filled with hot water and when agitation begins, a solution made by adding two cups of the detergent to a gallon of water is poured in. To this is added four cups of household bleach. The washer is then allowed to run through its cycle. This solution cuts out accumulated soap curd, lint, and scum. In some non-automatic electric washers the washing mechanism can be taken out and cleaned. The wringer rolls of these machines also should be washed now and

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then, whether they are removable or not, and the tub should be washed inside and out, rinsed and wiped dry. You will have to be guided in such details by your instruction booklet. Washers should be left with their doors slightly open. If they are kept on a porch they should be protected with waterproof covers.

ELECTRIC CLOTHES DRYERS must be kept clear of lint in order to function efficiently. After each day's use, with the switch turned to "off," clean out the lint tray at the base of the dryer, then wipe the inside of the lint-catcher chamber with a damp cloth. Use the long handled brush supplied with the dryer to clean also the opening marked "air intake." The lint trap, however, should be checked for accumulations after every three loads of clothing. Once a month the inside of the dryer should be thoroughly cleaned.

TO VACUUM-CLEAN YOUR DRYER, which may be recommended in the instructions, attach the hose to the blower end. Begin at the top and move the hose slowly over the inside of the spinner basket. The lint is blown into the air intake opening. Now clean the air intake opening, first with the brush then with the vacuum cleaner hose, attached this time to the suction end of the machine. Complete the cleaning by inserting the hose into the air intake. Last of all remove the lint catcher and clean the chamber with the radiator attachment of your vacuum cleaner, not neglecting the part behind the fan. Clean the lint catcher and the screen with the same attachment. The outside of the cabinet can be wiped with a damp cloth, or cleaned with a type of cleaning wax that is made especially for such finishes.

DRYERS CAN ALSO BE CLEARED OF LINT with a long piece of cheesecloth, folded twice lengthwise. Slide the cloth into the air intake opening between the basket and the metal baffle at the side of the opening. Rotate the basket slowly by hand so that the cloth goes around with it, wiping away the lint. Then rotate the basket in the opposite direction until the cloth falls into the air intake chamber. Shake the cloth free of lint and repeat this operation on the other side of the drum.

These are general instructions for dryers. Makes may differ and you should consult your manufacturer's booklet if you have kept it. The main thing is that the dryer must be kept free of accumulations of lint.

THE SOLE PLATE OF AN ELECTRIC IRON sometimes becomes incrustated with burned-on starch which interferes with smooth ironing. This is usually due to ironing starched mater-

Ironers / Repairs

ials when they are too wet. Sometimes melted nylon (too hot an iron!) also burns on. If such coatings are not removed carefully the satin-smooth finish of the sole plate will be damaged. Disconnect the iron and, when it has cooled, wash the sole plate with soap or detergent on a damp cloth. If the stain is very stubborn use a little silver polish. Many sole plates are chromium finished and harsh treatment can damage them, so don't try to scrape the starch off with a knife or steel wool. But steel wool can be used on aluminum sole plates. Also—try not to scratch the bottom of your iron by running it over hooks and eyes, zippers, or buttons. Keep it slick with paraffin wax or beeswax.

LARGE IRONERS. The aluminum shoes or rollers of large ironing equipment also should be kept slick with wax, and washed when necessary like the sole plate of a hand iron. The muslin covers should be removed frequently and laundered, and the padding should be fluffed and turned occasionally so that it will wear evenly. A cleaning wax made for enameled finishes can be used on the outside. (See "Waxes" in Index.) To keep your electric ironer free of dust use a cover. Some ironers need lubrication while others do not. If you aren't sure, check your instructions or ask your dealer.

YOUR VACUUM CLEANER, with its array of special attachments, is one of your vital labor savers. If it is to do its work at peak efficiency it should be cleared regularly of dirt and dust. When you empty the bag-type dust container, rub the sides of the bag together to loosen embedded dirt. Every now and then take it outdoors, turn it wrong side out, and brush it thoroughly. The air you use to remove dirt is sucked out through the bag and the efficiency of your machine will be lowered if the current of air has to fight its way through dust-clogged pores. Machines fitted with filter pads need additional attention. The filter pads should be taken out now and then and vacuumed free of dust. About every six months they should be replaced. For top performance dust containers should be emptied each time you do your regular vacuum cleaning. Vacuum the brushes clean too before you put your machine away. Dust containers using water should be washed with soap and water after they are emptied. They should then be dried and replaced.

THE ROUTINE CARE of electric dishwashers, refrigerators, freezers, ranges, and garbage grinders is discussed in the chapter, *We're in the Kitchen*.

These are general instructions. They are not intended to

Ironers / Repairs

supplant manufacturers' instructions for care and use. They may not cover the full range of electric equipment in your home but they can serve as a guide regarding other appliances. Use care with all your electrical aids, especially those that generate heat—irons, cooking equipment, and heaters. Be especially careful about electric heaters in the bathroom. Never switch them on or off with wet hands or from the bathtub. Always disconnect such equipment from the outlet when you have finished using it, whether or not it has a switch. Electric equipment deserves to be pampered because it saves today's housekeeper hours of back breaking drudgery.

REPAIRS. And now, in closing this chapter, we offer a bit of advice about repairs to electrical equipment. If a small appliance breaks down and you do not have a repairman who inspires your confidence, box it, wrap it, and send it back to the factory. Usually you can find the name and address stamped somewhere on the equipment. With the box send a letter. Address and stamp this letter and fasten it to the **outside** of the package with cellulose tape, or put it inside the box, and mark the package "Letter enclosed." If you enclose the letter, an additional stamp for the letter must be added to the postage. Explain in your letter what the trouble seems to be and ask whether the appliance can be fixed and if so, what the charges will be. Make it a nice letter. If the equipment has given good service and you have enjoyed using it, say so. Address the box to the Care and Maintenance Department of the factory and then wait. You are likely to be surprised at the service you receive. It may take a little time but your repair bill probably will be very low, and the equipment will come back to you functioning perfectly and looking new (provided, of course, that it is "fixable"). Sometimes you will not even be asked to pay for the service. This is because every reputable company wants its customers to be pleased with its products.

The principles hold true for larger equipment. When you write about an appliance too bulky to send, give the model number (stamped somewhere on the equipment) and either ask them to send the part you need, or to give you the name of a repairman in your area who is accredited by the company.

12. WE'RE IN THE KITCHEN

This is where we spent so much time, bouncing back and forth between refrigerator, range, and sink—juggling pots and pans of various sizes, contours, and materials.

The major items of equipment that involve us here are the refrigerator and range and, of the two, the range perhaps poses the most exacting cleaning problem. It calls for rubber gloves, if you are fastidious, and know-how. The cleaning method is essentially the same whether power is supplied by electricity, oil, or gas.

MODERN KITCHEN RANGES have a fine porcelain enamel finish. It is durable and tough, and resistant to heat, stains, acids, and alkalies. A wipe with a damp cloth usually leaves the outside clean and shining if you attend to spilled foods promptly. If the surface is very hot when something spills, use a dry cloth rather than a wet one; you will be less likely to burn yourself or to crack the finish. For a thorough cleanup of the exterior use a cloth or sponge wrung out of detergent suds; rinse, and wipe dry. You should never need an abrasive on a fine enameled finish but, if you do, use whiting or the finest you can find. Try to avoid sharp blows and overheating. Keep strong acids and alkalies away from it. Remember that you are dealing with glass—glass fused on steel.

WHEN YOU USE THE BROILER, remove the pan and the rack with your steak so that the grease will not be cooked on harder by the remaining heat. Wash them thoroughly later and, before putting them back, wipe grease-spatters off the walls and the inside of the door of the broiler compartment which has now probably cooled sufficiently. Use hot water and a detergent or soapsuds containing ammonia. For stubborn spots use steel wool with ammonia or a mild scouring powder.

OVENS SHOULD BE CLEANED REGULARLY. If long neglected they become coated with burned-on grease and food

Ammonia / Pilot Lights

and are very difficult to clean. For routine cleaning use the same materials and methods described for the broiler compartment. When it has cooled, after use, always wipe up any splatters of grease or food from the oven so that they will not have a chance to burn on hard the next time the oven is heated.

AMMONIA IS A GREAT AID in cleaning a grease-splattered oven. The General Electric Company suggests that on the night before you plan a thorough cleaning, you place a small bowl containing about half a cup of ammonia in the oven, and close the door tight. The fumes loosen grease and burned-on food so that it will wash off quite easily in the morning.

FOR SPECIAL CLEANING take the racks out and **then** clean the bottom, sides, and the inside of the door with hot water and a detergent or soapsuds and ammonia. Use steel wool, with a mild scouring powder if needed. Stubborn stains on the bottom of the oven can be rubbed with a cloth dipped in ammonia. If necessary, leave the ammonia-saturated cloth on the stain for several hours to loosen it.

COMMERCIAL CLEANERS such as Easy-Off and Oven-Aid are available for cleaning neglected ovens. If you select such a cleaner be sure to read the directions carefully and to follow them exactly.

OVEN RACKS. If the racks from the oven do not come clean with a thorough washing in the sink with hot suds, put them on a thick layer of newspaper and scrub them with steel wool. Use scouring powder with the steel wool, or ammonia, or both.

THE GLASS WINDOW OF THE OVEN should be kept clean by rubbing it frequently with a damp cloth that has been dipped in baking soda. If the glass gums up badly it is very difficult to clean.

A REMOVABLE OVEN VENT, that can be taken out and washed in the dishpan is found on some electric ranges. Vents which are not removable should be washed now and then with a cloth wrung out of hot suds.

BEFORE CLEANING AN ELECTRIC STOVE check to make sure that all switches are in the OFF position. The rims of the heating units should be wiped clean with a damp cloth when you have finished cooking and the stove has cooled. Food that has spilled on open units can be burned off. Put a saucepan of water on the burner and heat it until the food has been completely charred, then when the unit has been

Ammonia / Pilot Lights

switched off and has cooled, lift the unit out and brush off the charred material. A mild scouring powder or steel wool can be used to clean the rim on which the unit rests. Wash it, after scouring, with a cloth wrung out of hot suds, rinse it, and wipe dry. Enclosed units are washed with a cloth wrung out of soapsuds. Particles that have burned on can be removed with steel wool or a mild scouring powder. It is important to keep the reflector pans under the electrical units clean and bright because they are designed to increase the heat output of the unit.

REMOVABLE DRIP PANS under the burners of kitchen ranges should be taken out and washed regularly along with other stove parts. Lining them with aluminum foil saves work here. And if you have a range without a drip pan do use aluminum foil because the area under the heating units is often very difficult to reach for cleaning.

TO CLEAN A GAS RANGE thoroughly the burners must be taken out and scrubbed with a stiff brush in hot suds made with an all-purpose detergent or soap and ammonia. If the burners are made of cast iron you can clean them easily by boiling them for several minutes with water containing a few tablespoonfuls of washing soda. (Don't use an aluminum pan for this.) In scrubbing the burners be particularly attentive to the little openings in the turn-on end through which the gas flows to the burners. If any of the little holes (called ports) in the burners are clogged, push out the soot accumulation with a wire or hairpin. Rinse the burners thoroughly, shake out the water, and wipe the outside dry. Then replace them, making sure that they are in the right position. Light each burner to complete the drying and to make sure it is functioning correctly.

GAS BURNERS are functioning correctly and with maximum efficiency when the flame is blue and even. A ragged yellow flame indicates that the burner is not getting enough air along with the gas. Such a flame blackens the bottoms of pans and gives poor heat. Sometimes this flame is due to clogged ports; if any are not burning properly, clean them with a wire. If cleaning the ports fails to correct the trouble and to produce an all-blue flame, see if the little air shutter at the turn-on end is open far enough to admit the proper amount of air.

PILOT LIGHT. Sometimes the pilot light on an automatic gas range goes out due to its tiny ports being clogged.

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Clean them out with a fine wire and relight the pilot with a match. Sometimes a puff of air can blow out a pilot light. Make the flame a little stronger by turning the screw at the end of the tube connecting it—to the left for a stronger flame.

PERIODIC CHECKUPS. It is a good idea to have both gas and electric ranges checked periodically by a competent service man to make sure that they set level and operate properly and safely. Ask your gas or electric company if this service can be arranged.

DEFROST AUTOMATIC REFRIGERATORS. Whether operated by electricity, gas, or kerosene, they should be defrosted and cleaned before the frost on the evaporator is a quarter of an inch thick, if they are to function at peak efficiency. Some models defrost automatically, others need defrosting every week or ten days—oftener if fluids are left uncovered in the food compartment. A thick accumulation of frost retards the cooling of foods and at the same time may increase the temperature of the food storage compartment even though the refrigerating system is working overtime.

REMOVE ICE TRAYS BEFORE DEFROSTING; this speeds the operation. Then make sure that the drip tray is empty and in place. Turn the control to "off" or "defrost" Never try to chip ice from the coils with a sharp instrument that might damage them, or pry ice trays loose with a knife. If the manufacturer recommends it, you can speed defrosting by keeping the ice trays filled with hot water. When all the frost has melted, empty the drip tray and remove the food, shelves, and glass or plastic accessories. Wrap frozen foods thickly with newspapers.

WASH THE COOLING UNIT inside and out, making sure that all the frost is gone. For this use a sponge squeezed out of warm water containing one tablespoon of baking soda for each quart of water. Using the same solution, wash all surfaces of the interior, including the inside of the door. If stains do not yield to the baking soda solution, squeeze out your sponge, dip it into dry baking soda, and rub the stain off. Wash the gasket (rubber or plastic seal) around the door with soap and water. Rubber gaskets especially must be kept clean and free of grease, which damages them. Rinse the cooling unit and all surfaces with clear warm water and wipe them dry.

WASH THE SHELVES, ice trays, and fruit and vegetable containers in hot suds in your sink; rinse, dry, and replace them. Ice trays of some models are coated at the factory with

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a special wax to facilitate the removal of ice cubes. Such trays should be washed with warm water so that the wax will remain. Never fill ice cube trays completely full; allow about a quarter of an inch for expansion.

THE OUTSIDE OF THE REFRIGERATOR should be kept clean at all times with suds made with a mild detergent or soap, or with one of the special cleaning waxes made for enameled surfaces. (See "Wax.") No harsh cleaning or scouring powders should be used on the outside—or any part—of a refrigerator.

CONDENSERS. About once every six months, sometimes oftener, depending upon the model, the condenser of an automatic refrigerator needs a little special attention. Disconnect the refrigerator before you attend to this. The condenser is located either in the motor compartment or at the back of the refrigerator, in which case you may need help. Its job is to release into the outside air heat taken from the food compartment, and it should be kept free of dust and lint to operate efficiently. Clean the fins with the dusting brush of your vacuum cleaner or with a stiff brush.

REFRIGERATORS WITH SEALED UNITS never need oiling; others do. If you do not have your manufacturer's instructions for such details you should write for them, giving the model number; or ask your dealer for advice.

GAS REFRIGERATORS. The burner compartment of a gas refrigerator, located at the base of the cabinet, should be dusted out occasionally too. Open the door of the refrigerator, then lift off the panel. Remove the dust and fuzz with a vacuum cleaner dusting brush or a stiff hand brush. On the top of gas refrigerators, toward the back, there is a louver assembly that should be cleaned at least twice a year, because dust accumulates rather heavily there and cuts down the circulation of air. You can clean the louver with your vacuum cleaner dust brush or with a damp cloth, but it is best to unscrew it and lift it out for a thorough cleaning. You are likely to find more gummy dust underneath.

While you have the louver out, take a peek at the compartment it covers. You will find a finned section that may be dusty too and you might as well clean it with your vacuum brush as long as you are already up there on your stepladder. The top louver assembly of gas refrigerators should always be unobstructed. The direction of air flow is from underneath the refrigerator, through the burner section, up the back, and out at the top where the louver, or grating, is located.

Gaskets/Heat Marks

GASKETS. If the motor of your automatic refrigerator seems to be running too constantly (about one third of the time is normal for electric models), test the gasket around the **door** to see if it is tight enough. To do this shut the door on **a** piece of wrapping paper about the size of **a** dollar bill. If the paper pulls out easily the door needs tightening. Adjust the screws that hold the hinges and latch, if you can, then repeat the test. If it is still easy to pull out, ask your service man for help. A new gasket may be needed.

FREEZERS. The deep-freeze compartments of refrigerators and home freezers require the same basic care. Follow the instructions for your make and model in operating them.

FREEZERS SHOULD BE DEFROSTED before there is more than half an inch of frost over **a** large area of **the** refrigerated surface. Usually this will be once or twice **a** year, but if the weather is extremely humid or if the freezer is frequently opened, one or two additional defrostings may be necessary. If possible, plan to defrost when the contents are low.

About twelve hours before you plan to defrost, turn **the** temperature control of your freezer to its coldest position. **The** foods will then be less likely to thaw while you are working. If frost is all you have to cope with and the food compartments are not too full, the freezer can remain in operation. Using **a** special tool made for this job—or **a** broad spatula, putty knife, or sharpened wooden paddle—scrape down the frost from the walls onto a cloth or newspaper arranged to catch it. Scrape the partitions and shelves too.

IF ICE HAS FORMED, or if **a** thorough cleaning is desired, the freezer must be disconnected and the food packages removed. Chill trays or baskets in the freezer and stack **the** packages in these so that the least possible surface is exposed. Now wrap the containers of food with chilled blankets **or** newspapers to insulate them.

WORKING AS RAPIDLY AS POSSIBLE, first scrape **out** as much frost as possible. Cold water can then be ran **over** the refrigerated surfaces to speed melting, but hot water should **never** be used because refrigerant pressure would be built up in the evaporator and cause difficulty in starting **the** compressor. Remove ice from **the** freezer surfaces as it is loosened, but do not try to chip it off with any sharp **tool** that might cause damage. An electric fan, so placed as **to** blow warm room air into the freezer or cold air out of it, helps defrosting.

Gaskets/Heat Marks

When ice and frost have been removed and water sponged out, clean the freezer inside and out, following the instructions that have been given for refrigerators. Reconnect the freezer and let it run for about half an hour to lower the temperature, then put the frozen foods back. This entire operation usually takes about an hour.

COOKING UTENSILS of various materials differ in the care they require but have a few traits in common. Here are some suggestions applicable to all. If food is badly stuck on a pot or pan, or has been scorched or burned in the bottom, put hot water in the pan and boil it for a few minutes. The food will be softened and can then be removed easily. Wooden spoons are good for stirring foods while they are cooking because they minimize the chance of scratches and dents. And never dunk very hot pans in cold water; such treatment is disastrous to some kinds and scarcely helpful to any. Plastic sponges are good "scrapers" and harmless to all cooking utensils. In washing pots and pans mild detergents are effective. They deal more competently with kitchen grease than soap and are kinder to your hands than heavy duty detergents. Now for specific materials.

NEW ALUMINUM WARE remains bright and shining for a long time with ordinary washing and rinsing. If the finish becomes dark or dull, rub it up with a soaped steel wool pad. For best results rub in one direction, using straight even strokes rather than a circular motion. After this treatment aluminum emerges from a hot rinse bright and clean.

Spinach, potatoes, and other alkaline foods tend to darken aluminum and so do strong soaps and detergents. Acid foods like apples and tomatoes brighten it. Neither reaction affects the food in any way. However, food should not be stored in an aluminum pan because chemicals in the foods sometimes cause pit marks. There is no danger of food poisoning involved, but the marks make the utensil unattractive in appearance and difficult to clean. Never use metal sponges or scouring powders on aluminum; they are too harsh for it.

STAINLESS STEEL needs only hot suds; it never rusts and is damaged only by long contact with foods containing salts and acids. Pit marks, when they occur, are practically impossible to scour off, but you can try steel wool and a scouring powder.

BLuish GRAY HEAT MARKS sometimes appear on the sides of stainless steel vessels. If they are light they can be removed with copper polish or scouring powder on a cloth.

Glass, Enamelware / Copper

(Keep the flame low, if you use a gas range, to avoid heat marks on stainless steel.) Samae, made by the Revere Company, cleans effectively both steel and copper and is made especially for their copperclad stainless steel vessels. Other copper polishes (Twinkle, Copper-Brite) perform a similar job. Follow the directions on the containers of these products.

GLASS AND ENAMELWARE cooking utensils share a number of traits, since enamelware consists of glass over steel. You can avoid scorching food in them by applying heat cautiously at the outset. Glass heats quickly but the heat is spread unevenly. Since glass is sensitive to sudden temperature changes be careful not to put hot glass or enamelware into cool water or to place it on a cold surface.

GLASS COOKING VESSELS CAN BE CLEANED with any material you select and no chemical found in food damages them. For burned-on food and hard-to-clean spatters use a plastic sponge or steel wool. Steel wool cuts more sharply. You can also use scouring powder, or if food has burned on, let them soak in water and baking soda.

THE CLEANING OF ENAMELWARE is usually accomplished easily with detergent suds. Use a plastic sponge for stuck-on foods, or put water into the pan and let it soak until the food is soft. Then scrape out the stuck food with a wooden spoon or plastic pot scraper. Metal sponges and steel wool leave dark lines which have to be scoured away afterwards with a mild abrasive powder. To remove burned food from enamelware put water into the pan when it has cooled, add a few teaspoons of baking soda, and bring the solution to a boil. Stains on enamelware usually can be removed by rubbing them with a damp cloth dipped in baking soda. Ordinary household bleach on a cloth is effective too. For a very stubborn stain put more bleach on your cloth, cover the stain with it, and let it stand.

The newest enamelware is a staunch product, resistant to acids and chemicals. But as a precaution, never let acids remain on its surface and do not store acid foods in it. Some enamels contain a chemical called antimony which acids could break down to form poisonous compounds. Strong acids, such as lemon juice, can damage the finish of most enamelware if they remain on its surface too long; they leave a rough etched spot.

GLAZED EARTHENWARE, so prized by fastidious cooks for recipes that call for long slow heating, must be handled gently to avoid chipping. Earthenware that is designed

Glass, Earthenware / Copper

for use on the top of a stove should never be placed on a burner empty. Put the contents in first, apply the heat very slowly and then, when food and pan have been well warmed, use full heat if you like. For frying foods in earthenware, put the butter or oil into the cold pan and heat it very slowly to the proper temperature. Earthenware cracks and chips more easily than either glass or enamelware. It washes like a dish.

CLEANING CAST IRON. There is no trick to washing and scouring cast iron frying pans, Dutch ovens, etc., and you can use steel wool and scouring powders on them with abandon. Soaking them too long in detergent suds, however, tends to remove the penetrating pretreatment they are given which makes them cook well and minimizes the chance of rust. Wash iron pots and pans with detergent and hot water, rinse, and wipe them carefully and thoroughly dry. Do not store covered pans with their lids on or they may accumulate moisture and odors.

IRONWARE FOR COOKING provides a very even heat and is cherished for this characteristic in spite of its weight. If it is not pretreated at the factory it is likely to be coated with lacquer to prevent rust. If you buy an iron pot or pan that is not labeled "pretreated" you will have to scour off the lacquer with steel wool or an abrasive powder, wash it in hot suds, dry it, and season it yourself.

TO SEASON AN IRON PAN coat it inside and out, including the lid, with an unsalted shortening or cooking oil, and heat it for several hours in a slow oven, or on a top burner turned as low as possible. It is a good idea to wipe on a little more oil from time to time during the heating period. Use a wadded paper towel for this. Last of all, when the pan has cooled, wipe off any excess oil. You should never have to repeat this operation, but for the first few weeks rub a little more oil on before and after use. Should spots of rust appear, scour them off promptly.

COPPER USED FOR COOKING must be kept very clean. It is a super conductor of heat, but the green rust that sometimes results from neglect is poisonous, like all copper compounds, so use your polish regularly if you cook in copper. Green rust, should it form, can be rubbed off with a mild abrasive powder or with copper polish. Sometimes soapsuds with ammonia will remove it. Wash copper utensils thoroughly in hot suds after polishing. Good polishes may be found in your grocery or hardware store. To avoid the hazards of green rust, copper cooking vessels are sometimes lined with tin or chromium.

Copper Pans / Garbage Grinders

LACQUERED COPPER PANS. New copper pans are often coated with lacquer which must be removed before they are used. Unless they have handles that would be damaged you can do this by covering the pots with boiling water and letting them remain in it until the water has cooled. The lacquer will then peel off.

GRIDDLES MADE OF MAGNESIUM, a metal lighter than aluminum, are a bright silver color when they are new. Remove the protective coating of wax, usually given them at the factory, with medium hot water and a mild scouring powder. After they have been rinsed and dried, condition them by rubbing the entire cooking area with a vegetable fat or oil before you use them for cooking. A slow heat is best for these utensils; properly used they are ideal for pancakes and toasted sandwiches. Magnesium darkens to a gunmetal color with use and when it has attained this finish it does its best work, so don't try to scour it bright again. Just wash it and give it a light brush with steel wool or a mild cleansing powder.

TINWARE used in the kitchen is actually tin plate. There is only a very thin coating of tin over a base of steel. Tin pans are favored for breads, pies, muffins and tarts. They are a bright silver color when they are new but darken gradually to black with use. When they are really black they are not at their baking best. Ordinary washing will usually clean tinware, but always dry it carefully or it will rust. Remove burned food from a tin vessel by boiling it briefly, no longer than five minutes, in water containing a little baking soda. To remove rust, use a cut piece of raw potato that has been dipped into a mild scouring powder. Hard scrubbing with steel wool and strong powders will remove the tin plating. Accumulations of grease that do not yield to ordinary detergents, can usually be removed by washing it in a solution made by adding a quarter cup of washing soda to a quart of hot water.

WOODENWARE—pastry boards, rolling pins, cutting boards and salad bowls—should be washed, rinsed, dried, and aired promptly after being used. They should not be put into an automatic dishwasher or soaked in water. For garlic or onion odors on cutting boards use water and baking soda.

Wooden salad bowls and plates should be stored flat, not on edge, to avoid warping and should be kept away from any source of heat. If your salad bowl has lost its finish, smooth it with very fine sandpaper when it is thoroughly dry, then rub it with a little Unseed oil. Wipe off any surplus and let it air until the odor has disappeared. Do not use wax or shellac.

Copper Pans / Garbage Grinders

PLASTIC UTENSILS. A safe rule for all plastics is to wash them with warm suds made of soap or detergent. Bread and spice boxes may need only to be wiped with a soapy sponge and rinsed with a sponge wrung out of clear warm water. Plastic utensils made for storing or serving food are made of rigid plastics that will not be damaged by washing in suds as hot as the hands can stand. Do not soak them, however, and do not use steel wool or any other abrasive on **any kind** of plastic. If you have plastic dinnerware check the manufacturer's instructions before washing it in an automatic dishwasher.

CLEANING YOUR SINK. Synthetic detergents used for dishwashing leave the sinks clean and free of incrustations of grease, so that they rarely need scouring. If you do need an abrasive, select the finest. Coarse scouring powders scratch the finish, making it harder and harder to keep clean. Always rinse away carefully any powders you use. Stains can be removed easily from a kitchen sink with household bleach. Just fill the sink with warm water, add a quarter of a cup of bleach, more or less, and let it remain until the stains are gone and the sink is uniformly white. Sponges and dish mops can be bleached at the same time. The removal of iron and copper rust stains from porcelain enamel are discussed in relation to bathrooms.

FLUSH THE DRAIN of you kitchen sink with plenty of hot water after using it. This cleans the drain and leaves the trap filled with fresh water. To keep the drain from becoming sluggish put a little washing soda down it about once a month and follow it with hot water. The soda will cut out light accumulations of grease and sweeten the drain.

GARBAGE GRINDERS. If you sink is equipped with an electric garbage grinder, operate it according to the directions given by the firm that made it. It will dispose of vegetables and fruit refuse, including pits and rinds, and shells of crabs and lobsters. It cannot manage bits of metal, including tin foil, splinters of glass or china, string, rubber, clam shells, or paper.

Garbage grinders have sealed motors and do not need to be oiled; the inside is scoured clean by their own action. Usually recommended, however, is a special flushing about once a week. To do this, close the drain opening and run two or three inches of cold water into the sink. Then, with cold water still running, turn the top of the unit to the "on" position and let the grinder run until the sink is empty. Do not

Garbage Pails / Insecticides

use chemical drain openers if you have a garbage grinder. They are not needed and might be harmful.

If a bottle cap or other forbidden item accidentally gets into a garbage grinder, the gadget will protest by emitting strange noises. Turn the motor to "off," remove the top, and take out the obstruction. The motor cannot operate when the top is off.

IF YOU DEPEND UPON A GARBAGE PAIL, use one with a pedal-lifter for the lid, and try to select a model that is rustproof—the inside of the lid as well as the container. Use leakproof garbage bags, or wrap refuse in newspapers, and keep the pail clean and odor-free by washing it frequently, inside and out, with hot water and soap or detergent.

ELECTRIC DISHWASHERS should be operated and cared for according to the manufacturer's instructions for different models. The following directions are general, applicable to most. After finishing the dishes, these aids rinse themselves thoroughly and require special cleaning only occasionally.

Use the proper amount of detergent of the special type made for dishwashers. If too much is used, heavy suds will be produced which interfere with proper cleaning action. Directions are usually given about the placing of various articles and utensils to be washed. Aluminum ware usually is placed toward the outer rim of the basket so that it will not be spattered with undiluted detergent. After it has dissolved the detergent will not spot aluminum. Dishes and pans should be completely free of food particles before being placed in the dishwasher. Do not wash woodenware, including knives with wooden handles, in an automatic dishwasher. Follow the directions given by the manufacturer of the plastic dishes and utensils you may have.

For a special cleaning of the tub take out the removable parts—trays, valve, impeller—and wipe the inside and the cover with a damp cloth. If necessary a little mild cleansing powder can be used.

WORK SURFACES in today's kitchens usually are made of materials than can be cleaned with the wipe of a damp cloth or sponge. If they need more, use a cloth or sponge wrung out of suds made with your favorite detergent. Mild scouring powders can be used on porcelain, stainless steel and monel metal, but always rinse them off well after cleaning.

LINOLEUM SURFACES should be protected as carefully as possible from standing water and seepage around the edges. Water damages linoleum if it is in contact long, unless it is kept well waxed.

Garbage Pails / Insecticides

COMPOSITION SURFACES of various types are often waxed too, although they are not especially sensitive to dampness. Plastic surfaces need only to be wiped with a damp cloth or a cloth wrung out of suds made with soap or detergent. They can be waxed if desired.

WOOD MAKES A DURABLE WORK SURFACE attractive and easily wiped clean if it is treated with boiled linseed oil. To give this finish to old wood, scrape and sand it down to clean wood then apply the linseed oil hot. The oil is highly flammable so heat a small amount in a double boiler, or in a small pan or cup set in a larger pan of hot water. Rub the oil into the wood with fine steel wool (not a soaped pad) and repeat the application on the following two days.

WALLS, WOODWORK AND FLOORS have been discussed in chapters two and three, and there is no need to repeat the instructions here. However, we have not quite finished in the kitchen; we have the pantry or the food shelves, and cabinets and drawers to consider. They require a special cleaning now and then.

SHELVES. Clean and put in order the shelves holding dishes and equipment, a few at a time if you prefer a piecemeal approach; but it probably will be simpler to attend to all the food shelves and cabinets on the same day. When cleaning these, sort your supplies over carefully, making note to use first the canned and packaged foods that have been there for a while and discarding those that are suspiciously old. Packages of dried peas, beans, and cereals that have stood around open invite insects. When cornmeal, cornstarch, and flour develop little lumps and cobwebby threads, the flour moths have been busy. You may have seen them flying around. Little holes in dried peas and lima beans show that the package has been invaded by weevils. Burn these infested cartons or throw them out and clean the shelf extra carefully. Dust up all crumbs and dried bits of food and scrub the shelves well, not neglecting the little supports that hold the shelves.

INSECTICIDE SPRAYS AND POWDERS—safely applied at points of invasion—usually enable a housekeeper to control infiltrating insects. Use them on window and door sills and around the water pipes under the sink, always, of course, following the directions on the container. If insects have become a serious problem, a full scale attack should be launched with the best weapons available.

"KNOW YOUR ENEMY* is a good motto for the war on pests. Insects are clever when it comes to a strategic retreat,

Insecticides

hiding in crack and crevice to reappear when all is safe. They like certain foods and are fussy about living quarters. You may not believe it, but they can detect the odor of their favorite foods miles away and fly to it. They even have their favorite colors and wave lengths of light. So try to suit your lethal weapons to the type of invader.

"KNOW YOUR WEAPON." Insect sprays and powders, available under many trade names, contain such chemicals as DDT, chlordane, pyrethrum, lindane, and dieldrin, alone or in combination. The carrying agent of the killer may be oil or water. If it is oil, you must be careful not to use the spray near any open flame and this includes the pilot lights of gas stoves and refrigerators. Some sprays are available in pressurized cans, making a hand sprayer unnecessary.

Sprays using pyrethrum (from chrysanthemum petals) kill insects quickly, says the Department of Agriculture, but must be applied repeatedly because they do not leave long lasting traces that continue to kill pests. Those containing DDT, lindane, chlordane or dieldrin, applied to small areas where insects have been seen, give slower but longer lasting riddance. DDT sprays, to be effective, should contain at least 5 per cent DDT, and those containing chlordane 2 per cent of the killing agent. DDT, dieldrin, chlordane, diazinon, and malathion are good weapons against cockroaches. Chlordane leads the list for ants.

READ THE LABEL CAREFULLY before selecting an insecticide so that you will know just what it contains. Then follow exactly the directions for its use, given on the label. Most insecticides are toxic to people and animals if they are not applied correctly. Store them safely on a high shelf, out of reach of children and pets.

13. SPOTS AND STAINS

It's a smart woman who takes time to learn how to remove stains from clothing and household furnishings. She can rescue many an expensive or well liked item that another woman might discard as hopeless, or ruin by hit-or-miss attempts to clean.

STAIN REMOVERS. The first requirement in stain removal is to know the agents that are specific for the different stains. Some spots are unaffected by water but are removed by solvents, and vice versa. Among the solvents, each one is particularly effective for a certain class of stains. Facing this page are listed the groups of stain removers discussed in this chapter, with a few general notes for their use. Detailed treatment of some common stains will follow.

ABSORBENTS (see list) are dry materials that take up certain kinds of spots. Light spatters of OIL on delicate materials can often be removed with one of them: sprinkle the cloth with an absorbent; let it stand as long as seems necessary, shake it out and repeat. An absorbent, well worked in, is often very effective on THICK MATERIALS and RUGS. Keep applying it and brushing it out, or vacuuming it out, until the oil has been absorbed. Or mix the absorbent to a paste with cleaning fluid, spread the paste on the stain and let it dry. After it has dried, brush or vacuum it off. This might have to be repeated a number of times. Absorbents will not harm any material, and solvents mixed with them and applied to GREASE STAINS rarely leave a ring.

SOLVENTS (see list). In addition to removing OIL and GREASE STAINS, solvents such as carbon tetrachloride will deal competently with a number of other trouble makers—CHEWING GUM for instance. In dealing with chewing gum, first pick off, or rub with ice and crack off, as much of it as

Stain Removal / Steam

MATERIALS FOR STAIN REMOVAL

ABSORBENTS

Cornstarch
Cornmeal
Talcum powder
French chalk
Fuller's earth

STAIN SOFTENERS

Vaseline
Lard
Pepsin
Glycerin

ACIDS

White vinegar
Acetic acid (10%)
Lemon juice

OXALIC ACID*

(do not use on weighted materials)

ANTI-ACIDS (alkalies)

Baking soda
Ammonia *

SODIUM THIOSULFATE

(hypo solution)

BLEACHES

Household (chlorine): for cotton, linen and synthetics without wrinkle-resistant finishes
Sodium perborate: for all materials, especially wool
Hydrogen peroxide: for all materials
Color remover (Rit, Tintex) *: follow instructions on container

SOLVENTS

Cleaning fluids (non-flammable)
Carbon tetrachloride * Stoddard solvent

Flammable

Benzene, gasoline, and commercial cleaning fluids so designated
Turpentine
Alcohol * (denatured); dilute with one to two parts of water for acetate and delicate colors
Kerosene
Acetone; do not use on acetate, Dynel or Arnel
Amyl acetate (banana oil); can be used on acetate

SOLUTIONS FOR RUG STAINS (*see also* Rugs and Carpets)

Detergent

2 teaspoons of detergent stirred until dissolved in 2 cups of warm water. Apply to stain with medicine dropper and wipe gently with clean cloth, using rotary motion. Sponge with clean warm water, then blot with damp cloth.

Vinegar

1/4 cup of white vinegar in 3/4 cup of lukewarm water. Apply as above, gently patting the area with cloth. Allow solution to remain on stain for 15 minutes, then blot and rinse as above.

* **Poisonous: store carefully. Keep bottles tightly stoppered.**

Stain Removal / Steam

possible. Then saturate the spot with carbon tetrachloride until the gum yields. **STICKY FLYPAPER**, **ADHESIVE TAPE**, **WAXES**, and **COD LIVER OIL** also respond to cleaning fluids. But treat the cod liver oil stains **before** the material is washed. For **PRINTER'S INK** rub in vaseline or lard, then use the fluid. For **RUBBER CEMENT** use cleaning fluid. If the cement stain is old and hard, soften it with vaseline before using the cleaning fluid, or rub it with a dry cleaning soap. Solvents are also useful in dealing with stains made by **SHOE DRESSINGS** and the tough kindred group made up of **TAR**, **ROAD OIL**, **AXLE GREASE**, **PITCH**, and **ASPHALT**.

OTHER SOLVENTS good for paints of various kinds are carbon tetrachloride, benzene (for ordinary spar **VARNISH**), kerosene, alcohol (for **SHELLAC**) and acetone. Acetone is especially good for **LACQUERS** and seldom affects colors. It will remove **FINGERNAIL POLISH**, **MIMEOGRAPH CORRECTION FLUID**, and **AIRPLANE "GLUE."** Acetone can be used on rugs and on all fabrics excepting acetate, Dynel, and Arnel, which it dissolves. For these, first wet the stain with cleaning fluid, then apply a drop of amyl acetate (banana oil), but if the stain was made by a lacquer that contained acetone, the fibers will already be damaged.

WATER. Many stains caused by materials other than grease—even fruit stains—can be removed from cloth with plain cool water if they are treated when they occur. Always try cool water first; it is the safest of all solvents. Rugged play clothes, badly stained (as when little Susie and Jerry discover a wild strawberry or blackberry patch) can be easily cleaned if you put them right into the washer with the water set for very hot and run them through without soap or detergent.

STEAM from a boiling tea kettle can rout several stains that many women consider difficult. For instance a fresh **IODINE** stain can be removed easily from almost any material if you wet it with water and hold it in steam. If the fabric is heat-sensitive (silk, wool, or synthetic) hold it further from the spout where the heat is less intense. **IRON RUST** stains often yield obligingly to the steam treatment too. Moisten them first with water, then squeeze lemon juice directly onto the stain and hold it in the steam for several minutes. Rinse the stain with water and if the stain has not disappeared completely repeat the treatment as many times as necessary. Another way is to apply lemon juice and salt and place the material in the sun. **WATER SPOTS** are caused by displacement of sizing used

Fabrics /Tar, Pitch

in finishing cloth and these too can be steamed. Since crisp silks and rayons are the materials most likely to be spotted by water, and both are sensitive to heat, hold them well away from the spout. Shake the material about in the steam and press it after it has been thoroughly dampened. Use steam to freshen VELVETS too.

YOU SHOULD KNOW THE FABRIC you are dealing with, for success in routing stains—whether it is silk, wool, linen, cotton, rayon, or one of the other synthetics—and whether it has a special finish. You should also know, if possible, what caused the stain. If the material will not wash and you are uncertain about these things, it will be better to send an expensive article to a good dry cleaner than to try to do it yourself. Fabrics differ in the stain removers they can stand, and what works on one stain will not necessarily work on another, or on a different material. So test your stain remover on a hidden seam on in some inconspicuous area if you are in doubt. However, the stains that you can remove successfully and easily are legion.

STAINS ON WASHABLE SYNTHETICS. Many stains can be removed very easily from washable synthetic clothing at the time they occur. The material will dry quickly and there will usually be no trace. Just sponge them off with soap or a detergent and water. Stains such as CATSUP, MUSTARD, CHOCOLATE, SHERBET, LIPSTICK, and even SOME GREASE STAINS disappear from nylon by this simple method, while ordinary household cleaning fluids will deal with stubborn GREASE and CHEWING GUM. If you have any doubt about the effect of some other stain remover you may consider using, test it first in some inconspicuous place, such as a seam.

ALL STAINS SHOULD BE TREATED PROMPTLY, whatever their source, because the fresher they are the easier they are to remove. Stains allowed to stand often become hopelessly set and some become difficult or impossible if the material is washed, ironed, or pressed. So sponge off grease and oil stains quickly with cleaning fluid and treat others promptly with plain cool water.

OIL AND GREASE STAINS on washable fabrics are best treated before they go into the water. While they often wash out in the course of ordinary laundering, their removal will be more certain if you pretreat them with detergent or soap (whichever you plan to use), or by sponging them with cleaning fluid. Dark-colored table linens and clothing tend to hide

Fabrics /Tar, Pitch

such spots until the material is ironed, and ironing a grease spot also tends to set it. In addition to grease stains caused by foods on linens there may be lipstick stains, which can be tricky depending upon their composition, and candlewax drippings. Drippings of candlewax should be scraped off gently with a case knife, after which any remaining traces can usually be sponged off with cleaning fluid. If color remains from lip stick or candlewax, sponge the spot with a cloth dipped in alcohol. (Dilute the alcohol with one or two parts of water for very delicate materials.)

FOR OIL AND GREASE STAINS on non-washable fabrics use cleaning fluid. Use carbon tetrachloride in a well ventilated room or outdoors because the fumes are poisonous. Do not use flammable cleaners near an open flame. Place a pad of clean cloth on your working surface and arrange the stained part of the cloth on the pad. If the material is thick, put the cloth wrong side up so that the stain can be worked out without having to go through the material. Apply the cleaning fluid to the stain with another pad of cloth, working always from the outer edge of the stain toward the center. This avoids spreading the stain. Use the cleaning fluid sparingly and quickly, repeating applications as many times as are necessary. Use a light brushing motion since hard rubbing damages some materials. Keep moving the pad as it absorbs the stain and excess cleaning fluid. To avoid making a ring, feather the cleaning fluid irregularly into the cloth around the stain and fan it to make it evaporate quickly.

SHOE DRESSING STAINS. To remove white shoe-dressing spots, rinse them first with cold water; then launder the washables. Sponge stains made with colored paste shoe dressings with cleaning fluid or turpentine. It is often helpful to first rub in a softener—vaseline, lard, or glycerin. Liquid dressings should be sponged with alcohol, diluted with two parts of water for acetate, rayon, or delicately colored materials. If dye stains remain use a bleach. Sponge them with hydrogen peroxide or with a sodium perborate solution, or moisten the stain and sprinkle sodium perborate powder directly onto it. Rinse thoroughly after using these bleaches.

FOR THE TAR AND PITCH GROUP, casualties of the open road, first rub lard or vaseline into the stain until the tar is softened. After that, wash fabrics that will launder, in warm suds. Sponge non-washable fabrics with cleaning fluid, or dip the stain into it and rub between your hands. If the stain is on a rug, scrape up as much of the tarry material as possible,

Mud/Ink on Rugs

then apply cleaning fluid with a cloth. Use an upward brushing motion to keep it from being worked down into the rug.

MUD is another road casualty. Always let mud splashes on clothing, or mud tracked onto a rug, dry thoroughly before you do anything about it. When it is dry, brush off as much as you can and then sponge the stain with clear water, or with a detergent and water. The last traces usually will yield to sponging with alcohol.

FURNITURE AND FLOOR WAX. Stains from paste or liquid polishing wax and no-rub furniture wax can be removed with cleaning fluid. If traces remain, wash or sponge the material with warm soapy water. On rugs you can use either soapy water or a foam-type rug cleaner. Warm water and a detergent usually will deal with spots from self-polishing floor wax and cream-type waxes. If the stain is on a rug, follow, if necessary, with a foam-type cleaner or (when thoroughly dry) with cleaning fluid. For very stubborn spots on a rug use a brush dipped in cleaning fluid.

TARNISH STAINS from brass, tin foil, copper and other metals, usually can be sponged off with an acid. Use vinegar, acetic acid, or lemon juice, and rinse after the stain has been removed. Do not use bleaches on these stains.

STUBBORN IRON RUST STAINS can sometimes be removed with special iron rust soaps or with oxalic acid (poisonous: don't handle it if you have a sore or cut). Sprinkle a few crystals onto the stain, dip the fabric (if washable) into boiling water, then rinse thoroughly. You may have to repeat this. It is almost impossible to remove iron rust stains from non-washable materials. Consult your dry cleaner. If the stain is on a rug try sponging it with clear water. If this is unsuccessful, consult a professional cleaner.

FOR GRASS, FLOWER, AND FOLIAGE STAINS on washable fabrics first try hot water with soap or detergent. Rub the stain briskly or scrub it with a soft brush, then launder the garment. If the stain has not yielded completely use a bleach. Sodium perborate is a good selection. Moisten the stain, sprinkle it with sodium perborate powder, let it stand for half an hour, then rinse. Or immerse the garment in a solution of one tablespoonful of sodium perborate in a pint of water and let it soak for several hours or overnight. Use hot water for all washables excepting silk and wool. Stains continuing after this treatment can be soaked in a stronger solution of the bleach. Household bleach also will deal with

Mod/Ink on Rugs

these stains but it may harm colors and cannot be used on silk, wool, blends containing these fibers, or on wrinkleproof resin finishes.

FOR GRASS, FLOWER, AND FOLIAGE STAINS on non-washable materials try sponging with denatured alcohol or benzene. Rinse by sponging with clear water.

Ink stains, pencil marks and crayon hieroglyphics have a way of getting around the place easily if there are small fry in the family.

INDELIBLE PENCIL. Water will spread a stain made by an indelible pencil, so don't try it. Sponge the stain with alcohol, or diluted alcohol, or soak the material in it, after making sure by testing that the dyes will stand it. Remaining traces may be washed out, or sponged away with soap and water, or bleached. Use household bleach on white cottons and linens, excepting those with crease-resistant finishes. Apply it directly to the stain and let it remain no longer than one minute. Rinse promptly and thoroughly. Government home economists recommend using an anti-chlor solution as a final rinse (two tablespoonfuls of white vinegar in a cup of water) to stop the destructive action of the bleach. Materials that household bleach might damage can be sponged with peroxide containing a little sodium perborate.

LEAD PENCIL MARKS can sometimes be erased off or washed off fabrics. Sponge woolens with a half-and-half solution of water and alcohol.

FOR CRAYON MARKS on washables, apply soap or detergent and hot water. If traces remain, sponge them with diluted alcohol. Crayon marks on non-washable materials can usually be sponged off with carbon tetrachloride or other cleaning fluid.

INK STAINS while tough, are not hopeless. There are many kinds of writing ink and the removal method depends somewhat upon the kind that has made the stain. Most ballpoint inks can be removed by sponging the stain repeatedly with acetone or cleaning fluid. Acetone is harmless to most fabrics, but it damages acetate, Dynel, and Arnel. Some inks will wash out, while others are set by washing. If you can test the ink by making a similar stain on a piece of fabric of the kind you want to wash, do that first.

INK ON RUGS. Washable inks can be removed by using a damp absorbent cloth. For ballpoint inks, use cleaning fluid. For permanent inks, consult a professional cleaner.

Ink on Clothes / Mildew

INK ON CLOTHES AND LINENS. Modern textile chemists today say that the safest first step toward removal of all stains caused by writing inks (other than ballpoint) on clothing and table linens, is to soak the stained fabric in cool water for thirty minutes, or even overnight. After soaking, rub them with soap or a synthetic detergent and wash in warm suds. If traces remain they can be bleached. Use household bleach on cottons, linens, and synthetics with special finishes. On special finishes use a sodium perborate hot bleach solution, made by adding a tablespoonful or two of sodium perborate to a cup of very hot water. Treat any remaining yellow stain like an iron rust stain. (See Index.)

AMMONIA TREATMENT FOR INK. Certain types of ink can be removed or made inconspicuous by sponging with an ammonia solution. Use one tablespoonful of ammonia to a cup of water. Sponge the stain repeatedly because the ink stain tends to reappear as the fabric dries. Use the ammonia treatment for silk, wool, and Vicara, and wrinkle-resistant cottons, which would be damaged by household bleach, or by the sodium perborate solution applied hot. Sponge silk, wool, or Vicara, first with cool water to remove as much of the ink as possible, then with the ammonia solution. If the stain does not disappear completely sprinkle it with a non-precipitating water softener such as Calgon, place a wet pad of cotton on it, and let this remain for an hour or longer. Finally rinse the cloth carefully. If the spot still shows, make a hot solution of commercial dye stripper, apply a few drops, and rinse promptly. Most dyes will stand this quick treatment, but test colored cloth first in an inconspicuous place, such as a seam. You may have to repeat the process. A yellow stain remaining should be treated as an iron rust stain. (See Index.)

STAINS MADE BY CARBON PAPER usually wash out in good stiff suds. If the material will not wash, sponge the stain with alcohol or diluted alcohol and rinse by sponging it with cool water.

Sad as it may seem, some clothing is stained right in the laundry—scorch, for instance.

LIGHT SCORCH STAINS usually can be removed from cotton and linen materials by rewashing them and leaving them in the sun for one or two days, or they can be treated with household bleach. For white washable materials this method is often effective: dampen a wet cloth with hydrogen peroxide and cover the stain with it. Place over this a dry

Ink on Clothes / Mildew

cloth and press with a medium warm iron. If the peroxide soaks through the top cloth, replace it immediately with another dry cloth to avoid getting an iron rust stain. It may be necessary to repeat this treatment several times. Rinse the article thoroughly afterwards. Another method is to sponge **the** stain with hydrogen peroxide containing a little sodium perborate, then rinse.

SEVERE SCORCH STAINS on linens and cottons damage the fibers and cannot be removed. This is also true of silks, **but** the appearance of woolens can sometimes be helped by brushing the marks with emery cloth.

BLUING STREAKS AND OVERBLUING usually can be corrected by prompt rewashing with plenty of soap or detergent. Sometimes just a cold water rinse will do the job.

POORLY RINSED MATERIALS, washed with soap, sometimes develop a stain during ironing which looks like scorch or iron rust. Rewashing and thorough rinsing usually remove these stains. But put them in the sun after relaundering if **you** can.

UNFAST DYES. For stains caused by running dyes first try water and sunlight. Just rinse the stains with cold or lukewarm water, or soak the stained material for ten to twelve hours, then wash it and put it in the sun. If the stain refuses to depart, try a bleach: dye stripper, according to the directions **on** the package; household bleach for white cottons, linens, **and** synthetic materials without special finishes; hydrogen peroxide plus a few drops of ammonia; or a little sodium perborate for any material. But for colored material, test these bleaches first.

MILDEW will occur on damp towels and clothing if they are placed in a hamper wet, or allowed to sit around the laundry too long after they have been dampened for ironing. Mildew is a mold. It grows on damp fabrics, leather, and even **wood**, and eventually destroys them if it is allowed to remain.

SOAP AND WATER WILL REMOVE MILDEW from washable materials if the growth is fresh. Drying in the sun helps kill any traces of mold. If the stains are old, you will have to use a bleach. Sometimes lemon juice and salt will do the work. Squeeze lemon juice onto the stain, sprinkle it with salt, and put it in the sun. Or use household bleach for cottons, linens, and synthetics without resin finishes. Sodium perborate is safe for all materials. Soak the stained article in

Mildew / Fruit Stains

a solution made by adding four tablespoonfuls of sodium perborate powder to a pint of water, or dampen the stain and sprinkle the powder directly onto it. Rinse with clear water.

MILDEW ON FURNITURE. Upholstered chairs, mattresses, and leather articles that have become infested with mildew should be taken outdoors and brushed so that the mold will not be spread through the house. The upholstery attachment of your vacuum cleaner will help get it out of cloth. Follow this dusting with a thorough airing in the sun to stop the growth of the mold. Sometimes a light sponging with detergent suds or upholstery shampoo helps. Rinse afterwards with clear water. Or sponge the stains with a half-and-half solution of water and alcohol. Dry carefully after either treatment. Indoors, an electric fan will speed the drying.

MILDEWED LEATHER. Wipe with the alcohol and water mixture, dry it, and if necessary wash the leather with a cloth or sponge well wrung out of mild soapsuds, or with saddle soap. Dry it outside afterwards, or in an airy place, or with an electric fan. Shoes and luggage can be waxed for protection, but don't use wax on leather furniture because clothing will adhere to it.

PAINT, VARNISH, AND LACQUER STAINS should be treated immediately; once these substances harden they are practically impossible to remove from cloth. Water-mixed paints, and even oil paints and varnishes, can often be washed out with hot water and a strong detergent if they are very fresh. If the stain has hardened, soak it thoroughly with turpentine or other solvent, or rub it with lard or vaseline, and let it stand until the spot has softened.

ANOTHER METHOD FOR PAINT is to sponge the stain with pure turpentine or to wash the stained article with it. Mixing the turpentine half-and-half with ammonia is sometimes very good. Rinse with pure turpentine.

PAINT AND VARNISH SOLVENTS. Paint spots can be treated with the solvent used for the paint. If instructions say to thin the paint with turpentine, that will be the appropriate solvent. For alcohol paints you would select alcohol, and so on.

A GOOD PAINT-REMOVER recommended by the Department of Agriculture which you can mix yourself and keep on hand, is made of equal parts of benzene, carbon tetrachloride and amyl acetate (banana oil). This is worth considering if you have child hobbyists in the model-making field.

Mildew/Fruit Stains

GLUE AND MUCILAGE. And while we are among the paints and varnishes, which suggest refurbishing and repairs, let us note that a long soak in cold water is the antidote for casein glue. For ordinary glue and mucilage, soak the spot in warm water and if it refuses to yield, boil the stained article, provided of course that it will stand such treatment. Also recommended for glue and mucilage are 10 per cent acetic acid or white vinegar. Sponge first with water, then with the acid, and rinse.

FOR FRUIT AND BERRY STAINS, the newest instructions from government home economics experts are as follows for the whole range of washable fabrics: hold the stained fabric under cool water and rub the cloth gently to loosen the stain and rinse away solid particles. Let the stained article soak overnight in plain cool water, then rub the stain with synthetic detergent and launder it as usual. If a trace remains, use a mild bleach. Avoid household bleach if you think the material may have a wrinkleproof resin finish. Use hydrogen peroxide or sodium perborate instead, diluted with water. Dilute one part of peroxide with eight parts of water for white fabrics, or one teaspoonful of sodium perborate with one cup of water. Test colored fabrics in an inconspicuous place before using a bleach.

THE BOILING WATER METHOD is an alternative for all fruit and berry stains excepting cherry, peach, plum, and pear on cottons and linens. Stretch the stained fabric over a bowl, secure it with string or a rubber band, and pour boiling water onto it from a teakettle held two or three feet above the bowl. It may be necessary to repeat this operation a number of times to get rid of the stain. For peach, cherry, plum, and pear stains, use a liquid detergent, rubbing the material between your hands. Rinse, then wash.

FRUIT JUICES AND ACIDS ON RUGS. For fruit juices and other acid substances spilled on rugs, first blot up with a damp cloth as much as possible. Sponge several times with clear water. If a spot remains, sponge it lightly with a solution of one tablespoonful of ammonia or baking soda in a quart of water. This will neutralize the acid. Rinse afterwards with a cloth wrung out of clear water.

FRUIT STAINS ON NON-WASHABLES can often be sponged off with cool water, if the stains are fresh. On woolens apply the water with a medicine dropper. Place the material on a pad and squirt the water through the stain. If this fails to remove it, work a mild detergent into the stain while **it is**

Fruit Stains / Catsup Stains

still wet and rub the material gently. Let the detergent remain on the material for several hours, then add several drops of white vinegar or 10 per cent acetic acid. After a minute or two rinse by sponging the spot with cool water.

NEVER USE SOAP ON A FRUIT STAIN. It will cause it to set.

SPRINKLE WINE STAINS WITH SALT, and then use the boiling water method to remove them.

CANDY AND SUGAR SYRUP usually wash out in warm suds. Sponge non-washable materials with clear warm water. If chocolate or dye stains remain, treat them as described for these substances. For rugs, wipe the spot repeatedly with a cloth or sponge wrung out of clear water.

SOFT DRINKS AND ALCOHOLIC BEVERAGES contain tannin and make a stain that is very treacherous because at first it does not show. If it is allowed to remain, or if the article is washed and ironed, or pressed, the stain turns brown and is almost impossible to remove. Prompt sponging with cold water, or with a mixture of alcohol and water in equal parts, will usually remove such stains. If you want to be absolutely certain that the stain has been routed, rub in glycerin, let it stand for thirty minutes, then rinse or sponge the material with clear water. On rugs use clear water or detergent solution.

IF TEA AND COFFEE STAINS do not wash out on washable materials, use the boiling water method described for fruit stains. On non-washables use glycerin. Apply the glycerin to the stain and rub it in. Let it remain for about an hour then sponge the stain with clear water. If a grease spot appears after the stain has dried (from cream), sponge it off with cleaning fluid.

COCOA AND CHOCOLATE STAINS usually wash out during laundering. If traces remain, sponge them with hydrogen peroxide and rinse. On materials that will not wash, scrape off as much as you can, then sponge the stain with cleaning fluid to remove the greasy part of the stain. When the cloth has dried thoroughly, sponge the stain with warm water and dust it with powdered pepsin. Work the pepsin thoroughly into the cloth. Let it stand for half an hour, then brush off the pepsin and sponge the material with clear water.

MILK AND ICE CREAM STAINS are seldom a problem on washable materials. Just moisten them with cool water and wash them. On rugs sponge such stains with detergent

Fruit Stains / Catsup Stains

solution, then with clear water. For stains on non-washable materials sponge with cleaning fluid to remove the oily constituents, then with cold water to remove the sticky part. Follow title pepsin treatment described for chocolate stains if traces remain.

PRETREATMENT. Food stains on washable materials usually disappear in the laundry but pretreatment may make their removal more certain.

EGG, MEAT JUICE, AND GRAVY STAINS should be rinsed with cold water before they are washed. Non-washables should be sponged with cold water. Later, when the material has dried completely, the stains should be sponged with cleaning fluid to remove oily traces.

WHITE SAUCE AND CREAM SOUP SPOTS on washable materials can be treated with warm water and soap and detergent. Sponge non-washables with warm water, let them dry, then sponge away oily traces with cleaning fluid.

SALAD DRESSINGS. Use warm water and soap or detergent on stains made by salad dressings containing eggs or cream. Use hot water for French dressings. Sponge salad dressing stains on non-washable materials first with lukewarm water, then (when dry) with cleaning fluid. Instead of cleaning fluid, if desired, you can sprinkle the stains with an absorbent or an absorbent mixed to a paste with cleaning fluid. Let the absorbent stand for a while, then brush off the powder. You might have to repeat this treatment several times, but the method is very safe for all materials.

FOR MUSTARD STAINS on washable fabrics apply glycerin and rub it in well. Then launder the garment. Sponge materials that will not wash with denatured alcohol, or diluted alcohol. If the stain is not entirely removed and a bleach is necessary, use a commercial dye stripper (two tablespoonfuls to a pint of water). Sponge the stain quickly and rinse thoroughly. Or use an oxalic acid solution made by dissolving three tablespoonfuls of crystals in a pint of water. Apply this solution with a medicine dropper and let it stand for several minutes, then rinse promptly with water. Apply a weak solution of ammonia, borax, or baking soda to counteract the acid, and rinse again.

TOMATO JUICE AND CATSUP STAINS should be rinsed or sponged with cold water to remove the solid particles. Work glycerin into the stain, let it remain for half an hour, then wash with warm water and soap or detergent

Lipstick / Bloodstains

Sponge any remaining traces with hydrogen peroxide or sodium perborate solution, then rinse or sponge them with cold water.

LIPSTICK AND ROUGE are two of the commonest stains any housewife encounters. First soften with vaseline, then on washable materials launder in warm soapsuds. Never use soap before the stain is softened so as to avoid setting it. On non-washable materials, use a solvent, preferably carbon tetrachloride. Sponge with alcohol if any slight stain remains after the solvent. Washable materials, if colorfast, may be bleached with hydrogen peroxide and sodium perborate mixture (one teaspoonful of perborate to one pint peroxide).

PERSPIRATION STAINS, like all other stains, should be treated when they are fresh, for the best results. If they become set, they are difficult to remove and the fabric may be weakened. Summer clothes, whatever the material, should always be stored clean and spotless to avoid trouble from this cause and others.

Stains caused by perspiration are usually acid when they are fresh, but become alkaline when they are old. Anti-perspirants are usually acid.

For top success in dealing with fresh stains, wash or sponge them promptly with warm water containing a detergent or soap. Water is essential, no matter what the material is, because dry cleaning fluids will not dissolve either perspiration or anti-perspirant preparations. Sometimes oil from the skin is included in such stains and these can be sponged with cleaning fluid after the stain itself has been dissolved with water and the material has dried thoroughly.

Perspiration and anti-perspirant stains, improperly treated or disregarded while they are fresh, become yellow with age and often weaken the fabric. They must be bleached, and you might try sodium perborate first.

DISCOLORATION FROM PERSPIRATION. Perspiration may change the colors of fabrics. The original color sometimes can be restored (after laundering) when the stain is still **fresh** by sponging the place with a mild alkaline solution made of warm water and ammonia or baking soda. Just holding the discolored fabric in the fumes from an open ammonia bottle sometimes does the trick. Old stains, which are alkaline, sometimes can be treated successfully with an acid. Try sponging them with a weak solution of water and white vinegar. Rinse afterwards with water. THIS ACID-ALKALI REACTION,

lipstick / Bloodstains

incidentally, is fundamental in treating any spots caused by acids or alkalies.

FOR ANY SPILLED ACID, which may destroy the color of a fabric or damage its fibers, do this: wash the stain first with cold water to stop the action of the acid. Then rinse thoroughly with cold water. Next apply water containing a little ammonia or baking soda (one tablespoonful to a quart). Or you can sprinkle both sides of the stained cloth with baking soda and wet it. Bubbling will indicate that acid and alkali are reacting. When the bubbling stops, rinse the cloth thoroughly. Other antidotes for acid spot are ammonia fumes, as described for perspiration stains, or ammonia water diluted to half strength. If the ammonia water seems to be affecting the dyes, apply white vinegar quickly and then rinse with plain water. For acid substances, including fruit juices, on rugs, first blot up the liquid promptly with a damp cloth, then sponge it several times with clear water. If a spot remains, sponge it with water and baking soda (or ammonia) solution described for cloth. Sponge finally with clear water.

SPOTS CAUSED BY SPILLED ALKALIES also should be treated quickly because they too can destroy colors and fibers. Rinse the spot first with cold water. This may be enough for mild alkalies like baking soda and ammonia water. But to be sure that colors will not be harmed or damage done to fibers, apply afterwards lemon juice, vinegar, or acetic acid to counteract the alkali. To use lemon juice, squeeze it directly onto the spot and let it stay until it loses its bright yellow color, then rinse it out. Vinegar is sponged on and then rinsed out with water. Acetic acid is applied with an eye dropper or glass rod, then rinsed or sponged off with water.

BLOODSTAINS should be soaked in cold water or sponged with it until they are almost gone. (Hot water sets them, sometimes permanently.) If the material is washable it can be laundered after the cold water treatment. Stains that are old or stubborn often yield to water containing salt or ammonia. Use a cup of salt, or one tablespoonful of ammonia, to each quart of water. Soak the material in the solution or sponge with it. Traces of stains remaining on non-washable materials after they have been sponged thoroughly with cold water can be sponged with hydrogen peroxide, but test color fabrics in a hidden place first to make certain that there will be no fading. If there is still a stain, sprinkle it with sodium perborate powder, let it stand for an hour, then rinse it away. These two

Bloodstains / Arnica

bleaches are safe for all fabrics but might fade some colors. If you are afraid that they might cause fading, simply dampen the stain with water and put it in the sun.

BLOODSTAINS ON A RUG can be sponged with cold water. If a spot remains, use detergent and water, then rinse with clear water.

MUCUS. For sickroom casualties involving mucus, give materials a good soak in lukewarm salt water, using two cups of salt to a gallon of water. Or use two tablespoonfuls of ammonia instead of salt. Rinse with cold water and launder.

STAINS CAUSED BY URINE usually wash out of materials that can be laundered. Non-washable materials should be sponged promptly with plain warm water or salt water. (Use a half cup of salt to a quart of warm water.) Sponge the salt water onto the stain, let it stand for fifteen minutes and then rinse by sponging with clear water.

Normal human urine and that of meat-eating animals is usually acid and may alter or destroy colors. If the colors seem to have been affected, first try sponging the stain with a weak solution of ammonia or baking soda and water. (About a tablespoonful of either to a cup of water.) If this fails to restore the color try sponging with white vinegar, diluted with two parts of water. Rinse with plain water. Sometimes colors cannot be restored.

PET STAINS ON RUGS can cause conspicuous disfiguration. Blot up urine stains immediately with a damp cloth, then go over the spot with the detergent solution recommended for rugs in the list of stain-removing materials. Rinse with a cloth dampened with clear water, blotting up as much of the moisture as possible. If the spot has dried, saturate it with a solution of half a cup of white vinegar to a cup of warm water and let it stand for a few minutes. Blot and repeat this treatment until the discoloration disappears. Then dry the rug as quickly as possible.

FOR REGURGITATED FOOD first scrape up the solid materials then sponge thoroughly with clear water and blot up the liquid. Follow this with the neutralizing ammonia or soda solution already described. Always dry a rug or carpet as quickly as possible after sponging off stains. Lift it from the floor if you can and slide something underneath that will support it. Or use an electric fan.

MEDICINES can produce a variety of stains and some are almost impossible to remove, especially if the ingredients are

Bloodstains / Arnica

not known. The following general advice, like much of the other information in this chapter, is from government sources:

If the medicine is tarry or gummy, try the formula for removing tar.

If the formula indicates that the medicine contains iron, use the directions given for iron rust stains.

Wash out sugary medicine stains with soap and water or detergent.

For medicines dissolved in alcohol, sponge the stain with alcohol.

For medicines of doubtful composition try the boiling water technique described for fruit stains. On materials that will stand it (cotton, linen, rayon, and other synthetics without special wrinkle-resistant finishes) use household bleach. Apply it undiluted, with a medicine dropper. Let it stand not more than **one** minute. Apply an anti-chlor solution (two tablespoonfuls of vinegar in a cup of water) to stop the destructive action of the chlorine and then rinse thoroughly.

MERCUROCHROME OR MERTHIOLATE STAINS

should be treated very promptly or they may be there to stay. Sponge them first with a half-and-half water and alcohol solution, then keep working glycerin into the stain until no more color comes out. Wash afterwards in suds made with soap or detergent and rinse with water containing a little ammonia. If this treatment still leaves traces of the stain, apply 10 per cent acetic acid with a medicine dropper and rinse afterwards. If none of these works try a suitable bleach.

IODINE STAINS on materials that are harmed by water can usually be removed by denatured alcohol. For acetates, very delicate materials, and colors, dilute the alcohol with one or two parts of water.

OLD IODINE STAINS can be removed by sponging them with a harmless chemical called sodium thiosulfate. This is the hypo solution that photographers use and you can buy hypo crystals at a drugstore or photographer's shop. Dissolve one tablespoonful of the crystals in a pint of warm water and either sponge the stain with it or dip the material into it. Rinse afterwards with water. Hypo crystals are harmless to all materials and do not alter colors.

ARNICA, used in some external medications, produces brown stains which can be removed by sponging, (or soaking) them first with alcohol, then with hypo solution.

Silver Nitrate / Argyrol

STAINS MADE BY SILVER NITRATE, an ingredient of some medicines used to swab a sore throat, can also be removed by hypo crystals.

ARGYROL, another medicine, also can produce a dark stain which yields to hypo crystals or solutions. Sponge the stain first with cold water, then cover it with iodine. Let the iodine stand for about fifteen minutes, apply hypo solution and rinse.

The instructions in this chapter cover a broad range of stains, and we hope that you will find your particular problem covered. Be sure to act quickly when stains occur; you can save time, trouble, and perhaps an article or garment that you cherish.

14. FABRICS AND FINISHES

THE BEWILDERING ARRAY of new textile fibers and blends, with their variety of special finishes, has caused a wail to go up from the women who use them, the manufacturers who spin the synthetic fibers, and the textile experts in the government who are called upon to answer questions about them.

THE SPECIAL FINISHES and no-ironing materials are intended to ease the laundry burden of today's busy women and to give them pleasure through beauty of texture, feel, and drape. This they certainly do. But each new material, finish, or blend, must be understood and treated properly in the laundry if it is to give its best service. Gone are the days when just plain cotton held sway in the clothing field with the other natural fibers—linen, wool, and silk. Today we have these and synthetics too—in uncounted blends.

LABELING. While some yard goods and clothing are labeled carefully to tell just what they are, much is not, or the information given is incomplete. Women need to know exactly what the material is and, if it is a blend, just what fibers have been used and in what proportion. They need to know what finish, if any, has been applied and whether it requires any special attention. If the material is colorfast, they should know what it is fast to: dry cleaning? washing? light? perspiration? crocking? (*loss* of color through rubbing when the material is dry)? They have to know whether a garment must be dry cleaned and, if it can be washed, exactly how to do it. Women queried by the government said they wanted this information on garment labels because they have learned that saleswomen often have not been briefed adequately on the newer materials.

Labels / Soiled Collars

A BOX FOR LABELS, whether they are detailed or not, with each one marked clearly to indicate the garment it belongs to, is a must for today's home, regardless of whether clothing is to be washed or dry cleaned. Things have been happening even to wools and cottons, and information is needed about them as well as about the synthetics. The information that follows is intended to help when labels are lacking, give vague instructions, or have been lost. It has been obtained from the manufacturers of synthetic fibers, notably the Du Pont Company, and from leaflets and bulletins prepared by textile experts of the United States Department of Agriculture.

THE MANY SPECIAL FINISHES on fabrics today are intended to give fibers desirable properties which they lack and to increase the wearability of various materials. They can be applied to all fabrics. Some special finishes are permanent, some vanish with the first dry cleaning, and others are lost gradually with repeated launderings or cleanings. It is important to know what finish, if any, has been applied to the cloth you use and how long the finish can be expected to last; also whether it can be restored by a dry cleaner.

HANDLING SPECIAL FINISHES. Most finishes do not require special treatment in laundering or dry cleaning, but a few do. Materials with crease-resistant finishes are best laundered with warm water because some of them are removed by repeated laundering in hot water, which also causes heat-set wrinkles. Chlorine (household) bleaches must not be used on cottons and linens with such finishes unless the label stipulates that they are safe. The finishes are usually made with resins, some of which react unhappily to the chlorine in the bleach, to cause stains and to weaken or even to destroy the fabrics. Some glazed finishes on cotton, rayon, acetate, and nylon go with the first washing; others last for a long time. Since you may be asked to pay a higher price for a "finished" fabric, look for a label that says "permanent," and for any special washing instructions. Moth-resistant finishes on woolens also vary in the length of time they last so that an accurate label is needed there. Another important label is for water-repellants. Some finishes of this sort are removed with one dry cleaning while others last through several washings or dry cleanings. One kind can be renewed by the dry cleaner.

OTHER SPECIAL COATINGS that are given to various kinds of cloth are the anti-curl finish for organdies, flame- and fume-resistant finishes for rayons, metallic coatings on

Labels / Soiled Collars

coat linings, and finishes that resist mildew, perspiration, shrinkage, slipping, spots, and stains. There is a finish to reduce the static in silks, wools, and synthetics, and there are finishes for minimum-care and permanent pleats.

And now for a rundown of various materials, both old and new, to see what has happened to them and how best to keep them bandbox clean.

COTTON, of course, comes from a plant and is one of the oldest textile fibers known. From the standpoint of world use, it is still the king of fabrics. More clothing is made from cotton than from any other material. Cotton with a long fiber, or staple, is the finest, and "pima" is an outstanding long staple variety. Long cotton fibers are combed to make them lie parallel and produce smoother yarn; these are "combed" cottons. Mercerization is a treatment that adds a silky luster to cottons, increases their absorbent capacity, and makes them more comfortable to wear. Mercerized cottons do not require special care.

ORDINARY COTTON FABRICS, unless of delicate weave and color, can stand hard laundering with hot water and almost any soap or detergent, and ironing with a hot iron. They give very little trouble. White cottons, unless treated with a special finish which might interfere, can be bleached, and sterilized by boiling. They look their best if they are blued and starched.

VERY SOILED COTTONS. Ground-in dirt is hard to get out of any fabric and it is better to launder clothes before they are too badly soiled. However, when cottons are very dirty, here are a few tricks to help:

SOAK GREASY COTTON OVERALLS and work shirts for fifteen or twenty minutes in hot suds containing about half a cup of household ammonia. You can use the tub of your washing machine for this. After the soak, spin or wring out the water and wash the clothes as usual. For slipcovers, curtains, and play clothes that are very soiled, try a soak in warm water containing a detergent or a non-precipitating water softener. Use one half to one tablespoonful of either of these for each gallon of water. Soak the soiled items in this for ten to twenty minutes, then extract the water and wash them as usual.

SOILED COLLARS. Soil worn into the fabric on collars, neckbands, and the cuffs of men's shirts must be loosened before washing. Using the same detergent that you plan to use for washing the shirts, apply suds to the soiled areas and

Cottons / Wool Fabrics

work them in with a brush, a sponge, or by rubbing the material between your hands.

THE NEWER COTTONS. To meet the demand for fabrics that do not need ironing, textile engineers have been working on blends, finishes, and weaves that enable cottons to drip dry, ready to wear. Seersuckers and plisses are made of cotton plus Dacron or Orion, which eliminates ironing, and special finishes are given to other weaves that make it wrinkle-and-spot-resistant. Some of the new cottons are the equal of the synthetics or close to them in their "no-ironing" quality and have the advantage of being more absorbent. However, they do look better with touch-up ironing.

WATER, OIL AND SOIL RESISTANT finishes are in the test stage for cottons. A new device, simple and inexpensive, can be installed on a standard loom to produce cotton cloth with a tight, tricky weave that gives it wind and water resistance without the use of chemicals. In addition to being practically waterproof the new cotton fabrics admit cooling air and are thus more comfortable to wear than materials with sealed pores. Since these advantages are achieved by a special weave, there is no laundering problem involved.

A NEW WRINKLE-PROOF TREATMENT for cottons is also expected in the near future. Such finishes today are always applied to piece goods before they are made into clothes and are satisfactory only for simply-cut garments because they resist not only undesirable wrinkles but desirable creases, making flat seams, pockets, and pleats difficult or impossible. A new treatment being tested lets a dry cleaner give the crease-resistant treatment to the clothes after they are finished so that seams and creases, once set, will stay. Tests have shown that garments treated this way keep their creases after many launderings, need little or no ironing, and resist unwanted wrinkles. Furthermore they do not require starch. Nice going indeed. If it all works out you can take your cotton dress to a dry cleaner and have it "set." But chlorine bleaches will still not be usable.

"FULLY ACETYLATED" COTTON is also in the laboratory stage. This is heavier than ordinary cotton but it dries faster and is stronger. Also it is more resistant to heat and rot. In appearance it looks like ordinary cotton but has a harsher feel, a matter that probably will be corrected by chemical treatment. Pleats that stand considerable wear can be ironed into acetylated cotton fabrics with a dry iron set

Cottons / Wool Fabrics

for wool. They are easily reset after laundering, but you can iron the material flat if you wish, or you can pleat it a different way.

NEW PRETTY COTTONS. In another phase of current investigation are extra-pretty cottons that are also very practical—cottons that are softer, smoother, and more lustrous than any of the materials being woven today. Such cottons would be used for draped street dresses, underwear, and for jacket and coat linings. Production of these cottons involves chemical and mechanical treatment of the fibers, and exhaustive tests for laundering, bleaching, dyeing, durability, and tear resistance.

LINEN FIBERS, from the flax plant, are more durable than cotton and, since they vary widely from fine to coarse, produce a range of materials of different weights—from sheer handkerchief and dress materials to tweeds for summer suits and coats. Linen fabrics are absorbent and comfortable to wear in warm dry climates. They have a soft luster and good draping qualities, but they wrinkle easily unless given a special finish. The finishes make linens less absorbent, and less likely to shrink when they are laundered. If linens do shrink they can usually be restored to their original size if they are ironed damp. Laundering linen is discussed in the chapter dealing with dining rooms.

Fabrics made entirely of linen fibers are labeled "linen," "pure linen," or "flax." When blended with another fiber the law requires that it be marked to give the percentage of each fiber, or that the content be disclosed by weight. Materials of other fibers, treated or woven to look like linen, may be labeled "rayon linen," "nylon linen," or "silk linen." Other fibers with trade names using the syllables "lin" or "lynn," etc., may be entirely of another fiber.

ALL-WOOL FABRICS, like the cottons, are no longer content with the old way of life. Naturally resilient and resistant to wrinkles without the help of chemicals or other fibers, they are cherished as they are. However, science is seeking to add new virtues to the old standby. In the offing are permanent pleats—which is to say more permanent—and woollens that resist soil and defy shrinkage. New treatments also are being sought that will make wool moth-, mildew- and acid-resistant. If a method is found to give acid resistance, acidic dyes can be used for woollens, which will mean clearer, more brilliant colors.

Woolens / Rayon

SHRINK-RESISTANT WOOLENS are actually in the test stage now. The process found is said to come close to eliminating or controlling shrinkage. A blend of resin chemicals is applied to the woolen fabric after it has been processed. **The** film with which the fibers are coated makes for toughness, durability, and flexibility. Besides making the wool shrink-resistant it helps reduce pilling—the formation of little balls of wool on the surface of the fabric. So, in the future, expect wools that can be tossed into the washing machine. Tests made showed that after a slight shrinkage in the first washing, repeated launderings in a home washer did not affect the treated fabric further.

LAUNDERING WOOLS. While waiting for the advent of this shrinkproof wool on the retail market, we had better follow, for washable woolens, the general procedure outlined for woolen blankets but wash sweaters and other woolen clothing by hand. Use mild detergents, water that is just warm, and the minimum handling that is involved in the soak-wash method. Remember to pretreat spots (a little soft brush is best) with your detergent. Blends of wool with silk, cotton, or synthetic fibers can be safely washed by the method used for all-wool materials.

WOOLENS SHOULD BE PRESSED with a warm iron, preferably with a press cloth to avoid scorch and shine. Use a stamping rather than a gliding technique and always leave them slightly damp, to finish drying on a hanger. They will have a fresher appearance.

SOME WOOLENS ARE NOT WASHABLE so you must look for the label.

KINDS OF WOOL. The label should also tell you whether you are buying worsted or wool (worsted has long fibers and is superior). "Virgin" on a label means the material was made with fleece right from the sheep. "Reprocessed" tells you that it is made of fibers left when wool is felted or woven, and "reused" that it has been reclaimed from wool products that have been worn or used. Camel's hair, mohair, angora, alpaca, and vicuna are made from the hair of camels, goats, and llamas; they are classified as wool and are washed or dry cleaned in the same way. Wools blended with another fiber should be labeled to tell what the other fiber is and its percentage, also whether it has been given a special finish.

SILK TODAY, once fairly inexpensive, is now in the luxury class. There is no other fabric quite like it. It is easy

Woolens / Rayon

to sew, drapes beautifully, is absorbent and comfortable to wear, naturally resilient, and can be dyed in the full range of spectrum colors. Silk fibers, spun by a lowly worm to build the cocoon from which it emerges with wings, have a strength and natural luster adapted to fabrics and weaves of distinction. Most of the silk we have today comes from Japan, China, and parts of Europe. It is used largely for fine dress silks—taffetas, satins, crepes, and sheers. Do you know what to look for on a silk label?

KINDS OF SILK. "Cultivated" silk, with fine even filaments, is produced by domesticated silkworms. "Wild" silk, also called tussah, comes from wild silkworms and the filaments are thicker and coarser, suitable for heavier fabrics. Douppioni silk comes from cocoons that have grown together. The filaments have thick uneven nubs for weaves such as shantung and pongee. Waste silk is composed of short filaments from damaged cocoons or the less desirable outer parts of cocoons. It is used for rough-textured silks, crashes, and pile fabrics. These are sometimes labeled "silk noils." If the label says "pure dye silk," "pure dye," or "all silk" you can know that no other fibers have been included, and no weighting or other substances except dyeing and finishing materials.

CARE OF SILKS. Most silks are better dry cleaned, but some are washable. Shantungs, silk organdies, and paper taffetas lose some of their body in cleaning but this can usually be restored by the dry cleaner. Washable silks should always be hand laundered, very gently. The directions for this and the best type of detergent to use are given in the chapter on curtains, draperies, etc. Printed silks which are not entirely colorfast are often rolled in a towel, to remove excess moisture, and dried by gentle shaking until they have reached the proper dampness for ironing. Silks should always be ironed before they are completely dry because they may appear spotty if they are sprinkled. Improper laundering, as well as normal aging, tends to yellow white silk. Too hot an iron easily scorches and damages it.

THE NEWER FIBERS, which are not grown but are produced by chemical processes from various raw materials will be discussed briefly.

RAYON is the oldest of today's synthetic, or man-made, fibers. There are two kinds, similar in some ways, but made by entirely different processes, the viscose process and the cuprammonium. Viscose rayon, often called "Bemberg" from the company that produces most of it, is the official rayon.

Acetate **Fibers** / **Washing**

Materials made by the cuprammonium process are now labeled **acetate**. Both are made from cellulose, found in almost all plant life. Mainly the cellulose used comes from wood and cotton linters.

Rayon is woven into sheer and semisheer fabrics for dresses, coat linings, blouses, drapery, upholstery, and suitings. It is the only man-made fiber from which true crepes can be woven. Rayon has a soft feel and is absorbent; it drapes well, and adapts excellently to blends. Cool summer fabrics are made of it, but it can be woven also in heavy warm materials resembling wool. Rayon is usually washable but tends to be weak when wet so that plenty of water should be used and handling should be gentle. With wear, rayon tends to wrinkle so it is often given a wrinkle-resistant finish—sometimes finishes also for water resistance and shrinkage. Rayon is color-fast to sun, dry cleaning, washing, and perspiration. Napped rayon fabrics are highly flammable unless treated.

ACETATE FIBERS are used both for luxury and volume materials. They are silky, drape well, and often take the place once held by silk in satins, taffetas, jerseys, failles, and bengaline. Properly dyed acetates offer bright colors, and unusual color effects can be obtained by blending acetate with other fibers. Subject to fume or gas fading in the past—color changes due to atmospheric conditions—today's acetates are likely to have been processed to overcome this handicap. By adding appropriate dyes before the fiber is spun, the color becomes a part of the fiber itself. These acetates are known as solution-dyed or dope-dyed. Acetates, less absorbent than rayon, dry more quickly. They are more wrinkle resistant but, with wear and washing, some acetate fabrics develop wrinkles that are hard to press out. Neither rayon nor acetate is attacked by moths if stored clean,

CARE OF RAYONS AND ACETATES. They are dry cleaned or washed by hand, depending upon their construction, finish, and the dyes that have been used. So a label you **most** have. If the garment is washable and instructions for washing it have not been given or have been lost, this is the procedure recommended by one of the large producers of these two fibers:

Dissolve heavy duty detergent or soap in warm (not hot) water before dipping the fabric into it. Gently squeeze sudsy water through the fabric. Avoid rough handling and do not soak colored fabrics, which should be washed separately. Rinse thoroughly in clear lukewarm water, but do not wring or twist. Excess water can be removed by rolling the garment

Acetate Fibers / Washing

in a towel. Most rayon and acetate fabrics are best ironed when they are nearly dry. They should be pressed on the reverse side to avoid shine, with a warm iron (set for rayon).

NYLON, ORLON AND DACRON, are newer than rayon or acetate. They are spun by chemical and mechanical processes of an intricate nature from chemical elements found in such improbable materials as coal, air, water, petroleum, natural gas, (in the case of Orion) limestone.

Nylon, Orion and Dacron are versatile, no-ironing-needed, fibers. They share traits in common, yet each has its **own** characteristic qualities. They are lightweight but very strong, and resistant to moths and mildew. Cooperative in blends with other fibers, they contribute valuable qualities that might otherwise be lacking. They can be woven in super sheers, knits, pile fabrics, and sturdy materials suitable for work clothes. Dyes, finishes, and trim may make some clothing, fashioned of these fibers, unwashable; always look to the label. If instructions for washable garments of nylon, Orion and Dacron are not given on the label, or if the label has been lost, use the procedure which follows, quoted verbatim from information supplied by the manufacturer of these three fibers, E. I. Du Pont de Nemours and Company of Wilmington, Delaware:

"PREWASHING INSTRUCTIONS. Just as for other washable garments, severely soiled areas generally require pretreatment with a thick paste made of a soap or detergent and water. Rub the paste thoroughly into the soiled areas, using the fingers or a soft brush. Soaking in suds, prior to washing for ten to fifteen minutes, has also been found to be helpful in severe soil removal. For spot or stain removal, follow normal procedures for other washable fabrics.

"WASH WHITE GARMENTS SEPARATELY from colored or pastel garments and when possible wash white synthetics together. Frequent washing, preferably after each wearing, gives greater satisfaction.

"WASHING PROCEDURE. Wash garments thoroughly either by hand or machine in warm suds (100°F.) of a heavy duty detergent, or soap and non-precipitating water softener such as Calgon or Tex or a similar product. In using these agents, follow explicitly their manufacturer's instructions on quantity and when to use. The use of soft water cannot be overemphasized.

"Consult washing machine manufacturers' instructions **for** washing times.

Temperatures / Nylon

"In general, machine washing affords the best method for removal of stubborn soil.

"Fabrics of delicate construction or trim, in most instances, should be hand washed. If they are machine washed, enclosing them in a mesh laundry bag is suggested for added protection. If the machine is equipped with a special fabric cycle, it can be used for this type of garment.

"HIGH TEMPERATURES (in washing, rinsing, or drying), twisting, wringing, and spinning, tend to cause wrinkling. Minimize these as much as practical in either hand or machine washing.

"BLEACHING, BLUING, or optical whitening agents (brighteners) may be used on many white garments. For their use on specific articles of clothing, observe the garment manufacturers' washing instructions. Also follow explicitly the directions on the containers of these agents for quantity and when to use.

"RINSE GARMENTS THOROUGHLY in water to remove all traces of dirt, soap, or detergent. The addition of a water softener in the first rinse is helpful when soft water is not available.

"DRIP DRYING. For drip drying, following machine washing, allow the garment to go through the recommended washing and rinsing cycles and remove before the final spin drying cycle. Place the garment while wet on a non-staining hanger and allow it to drip dry. Smooth the seams, cuffs, etc., with the fingers while the garment is still wet. Knit garments such as sweaters should be laid out flat to dry.

"MACHINE DRYING. If a home tumble-type dryer is available use the complete machine wash and spin dry cycles. Then dry the garments at the "Low" temperature setting for about twenty minutes. Recent studies have shown that even greater satisfaction may be had if a drying temperature of 170° F. is used, followed by five to ten minutes of tumbling without heat. Remove the garments immediately at the end of the drying cycle and hang on stainless hangers.

"When in doubt, dry for the length of time suggested by the dryer manufacturer. Avoid tumble drying of pleated garments.

"IRONING. When ironing is desired, use a steam or a dry iron at the 'Rayon' or 'Synthetic' setting. The use of a press cloth is helpful in many instances. Ironing of garments of

Temperatures / Nylon

Dacron, Orion, or nylon is very easy and can be done in considerably less time than is required for garments of other fibers."

ANTI-STATIC RINSES. The tendency of clothing made of synthetic fibers to snap, crackle, and pop in cold dry weather, or cling to the body, can be reduced by special rinses. The clinging is due to the accumulation of static electricity in the cloth and is not limited to synthetics. Wool and silk also cling under similar conditions.

To reduce static build up, say Du Pont authorities, add a small amount of a liquid detergent, fabric softener, or special anti-static agent to the final rinse water. Liquid detergents and fabric softeners (often called "miracle laundry rinses") can be bought at food and grocery stores. For liquid anti-static agents go to a drugstore or to the notion counter of a department store. Typical products, known to produce results, are listed as follows by the Textile Fibers Department of the Du Pont Company: liquid detergent, Glim; fabric softeners, Sta-Puf and Nu-Soft; anti-static agents, Slip Ease and Negastat. There are undoubtedly other products which are also suitable.

Wash the garments in the usual manner and afterwards rinse them in a solution of the product selected, according to the instructions on the container. Some people accumulate more static than others; in this case modify the amount to suit **your** static tendencies.

DRY-CLEANABLE GARMENTS of synthetic fibers can be given static protection easily by a competent dry cleaner. An anti-static dry cleaning detergent, such as Buckeye Clean Charge, is added in a 2 to 4 per cent concentration to the usual cleaning solution. This treatment reduces static buildup to a point where it is not bothersome. It is not permanent and must be repeated each time the garment is cleaned. Washable garments with anti-static finishes are best washed with soap; detergents remove them.

CARE OF WHITE NYLON. Women who complain that white nylon yellows or discolors with use can blame it on one or more of four principal causes according to its manufacturers: the use of soap and hard water without a softener, improper washing procedure, insufficient rinsing, and the finish that may have been applied when the cloth was made. Properly laundered, white nylon should remain white. Here are some special notes on the proper laundering of white

White Material / Drying

nylon and for bleaching nylon that has become discolored. They are from the Du Pont Company which makes most of the nylon fibers used by textile mills today.

LIKE OTHER WHITE MATERIAL, white nylon should never be laundered with colored materials. Clothing should be washed frequently, preferably after each wearing, and the washing should be thorough. Because nylon often looks delicate and fragile, women have probably erred in using soaps and detergents that are very mild, in a quick swish and rinse in a washbowl. Remember that nylon is tough enough to be used for carpets, fish nets, truck tires, hawsers, and ropes. Unless they are poorly constructed or the trimming is very delicate, nylon clothes and household furnishings will take machine washing with heavy duty soaps and detergents and this is the treatment recommended by the Du Pont Company. Specialty products, optical whiteners known as nylon whiteners or brighteners (Pro-Nyl, Nylonu) aid in keeping nylon white if they are used repeatedly and also can be used to improve the appearance of use-discolored nylon. In the latter case the improvement is not immediate but occurs gradually with a number of treatments. Heavy duty detergents often contain optical whiteners that act in the same way. Soft water is essential to any good washing procedure so, if the water you use is hard, add a non-precipitating type of softener. Badly soiled areas always should be pretreated with a thick paste made of water and detergent.

DIRECTIONS FOR BLEACHING WHITE NYLON while washing it in your machine: use warm water (100° F.), a strong detergent, a softener, and a household bleach such as Clorox or Purex. (If the material has a resin crease-resistant finish, use sodium perborate instead.) The amount of bleach you use will depend upon the water capacity of your washer. Read and follow the instructions on the container. Some manufacturers of household bleach recommend adding a little vinegar to the usual solution.

Run the load to be bleached through a five to eight minute wash cycle, followed by the normal rinses and spins unless the load is to be drip dried. In that case stop the washer before the final spin.

FOR HAND WASHING AND BLEACHING use the same materials and procedure. Be sure to rinse thoroughly and do not wring or twist the nylon while washing it. Hand washed garments should be bleached periodically. Soak them for thirty minutes in warm water containing two tablespoon-

White Material / Drying

fuls of household bleach for each gallon of water and follow this with a thorough rinsing.

FOR STUBBORN DISCOLORATION that is not corrected by the washing procedure just described, the following treatment is suggested for restoring the whiteness of nylon. First wash it thoroughly; then, to about one gallon of hot water (160° F.), in an enameled container, add one package of Rit color remover and stir it until it is completely dissolved. Place the wet garments in this solution immediately and, keeping the temperature at 160° F., stir them gently. If whiteness is restored after thirty minutes, remove them and rinse thoroughly in hot water. Otherwise leave them for another thirty minutes, then remove and rinse them. (Do not let the heat of the water exceed 160° F., or hard-to-remove wrinkles may be set in the nylon.)

IF THIS IS NOT EFFECTIVE, try step two: add to a gallon of warm water two tablespoonfuls of household bleach and two tablespoonfuls of a detergent. Soak the garments for about thirty minutes, stirring them occasionally. Then rinse them thoroughly with warm water, and, after the final rinse, immerse the garments in about a gallon of warm water containing a tablespoonful of one of the optical whiteners already mentioned.

FABRIC BLENDS WHICH INCLUDE NYLON are laundered as if they were made entirely of the other fiber unless the manufacturer has given special instructions.

WASH-AND-WEAR PLEATED SKIRTS and dresses containing Orion or Dacron fibers, if properly handled, emerge fresh and crisply creased after many washings. Usually the blend contains 50 per cent or more of Dacron or Orion fibers, which contribute their ability to retain heat-set pleats to the other fiber.

HAND WASHING PLEATS. Wash pleated clothing in warm water, following the directions given for hand washing nylon, Orion, and Dacron. Hot water and vigorous rubbing should be avoided. After a thorough rinse in warm water hang pleated dresses on non-staining hangers, with the zippers or other fastenings closed. Skirts should be suspended by the band on skirt hangers, or pinned in several places to keep the waistband straight. Finger-press the seams and trimming and let the skirts drip dry.

IF THE MATERIAL IS HEAVY, or you wish to speed the drying process, roll the skirt into a tubular shape with

Pleats / Men's Shirts

the pleats parallel and, beginning at the waistband, squeeze the water out gently from waistband to hem. (Never wring or twist a pleated skirt.) Shake it out and hang it up to dry.

MACHINE-WASHING PLEATS. While hand washing is best, some pleated clothing can be washed in a machine, and the guide here will be the manufacturer's label. Again, be sure that the water is just warm and make the washing cycle from three to five minutes. All water-extraction cycles should be omitted. Rinse thoroughly and follow with the drying procedure outlined for hand washing.

TO PRESS PLEATS. If, after a number of washings, it seems desirable to press a pleated garment, use a steam iron or a dry iron set for synthetics or rayon. Carefully align the pleats and press them on the reverse side, using a damp press cloth. Allow each area pressed to cool before handling it or lifting it from the ironing board. Pleated garments of Orion and Dacron blends can be dry cleaned too, and repleated by the dry cleaner.

HAND WASHING SWEATERS of Orion and nylon is also preferred, and is a **must** for those ornamented with sequins or other delicate trimmings. The rules are the usual ones for synthetics: warm water, strong detergent, or soap plus a softener, no strenuous rubbing, scrubbing, or twisting. A little soft brush, gently used, is very effective for spots. Follow the washing with a thorough rinsing in warm water. The addition of a fabric softener such as Sta-Puf or Nu-Soft to the final rinse water is recommended to keep these sweaters soft. Directions on the container will tell you how much to use. When you remove your sweater from the final rinse water, squeeze out excess water gently then spread it flat to dry. While spreading the sweater flat is the preferred method of drying, hangers can be used. Let it drip dry and it will still keep its shape. Orion and nylon sweaters do not shrink.

MACHINE-WASHING SWEATERS. If you decide to use your washer to launder sweaters, here are suggestions from the DuPont Company. Set the washer for a five to eight minute wash cycle and, after the last rinse (before the spin dry cycle), stop the machine and take the sweaters out dripping wet and dry them as described for hand laundering. If you use a home dryer, let the sweaters go through the spin dry cycle, and then dry them at a low temperature setting for about twenty minutes. Remove them immediately at the end of the drying cycle.

Pleats /Men's Shirts

FUZZING. Should your nylon or Orion sweaters fuzz, you can make them look better by brushing them lightly with a soft brush.

PARTY DRESSES. Whether you hand wash or machine wash little girls' all nylon or all Dacron party dresses will depend, again, on the manufacturer's tag. If the instructions have been misplaced or lost, the following procedure will be easiest and safest. First, remove delicate trimmings such as ribbons and bows, which usually are safety-pinned or tacked on with large stitches. Wash delicately constructed dresses by hand (take a look at the seams) after pretreating or spot cleaning where this is necessary.

If you decide to wash the dresses by machine do not include them in a heavy load, and do not wash white dresses with colored ones. Use warm water and a three to five minute wash cycle. Preferably, stop the machine before the spin dry cycle begins. Best results are achieved with drip drying and no ironing should then be required. Just straighten the hem, seams, and collar. If the weather is bad for drying, or if you need the dresses in a hurry, follow these directions for drying, but do not include dresses with pleats: remove excess water by letting the dresses go through several minutes of the spin dry cycle after they have been washed and rinsed. Then, using the lowest temperature setting possible, let them tumble until they are damp dry. Remove the dresses immediately and place them on stainproof hangers. If they need touch-up ironing, use a steam iron or a dry iron set for "rayon" or "synthetics." A press cloth may be helpful.

FOR WOMEN'S BLOUSES of Dacron, or Dacron and cotton blends, follow the directions for nylon party dresses, always pretreating badly soiled areas as described. Delicately made or trimmed blouses should be washed by hand; sturdier ones can be machine washed for five to eight minutes. The general rule for blends is to follow the washing instructions for the most delicate fiber in the fabric.

MEN'S SHIRTS. Use essentially the same technique for men's Dacron, or Dacron and cotton shirts. Drip drying gives the most wrinkle-free results for both blouses and shirts, but if you want to use a dryer for shirts set it at "low." Most recent studies have shown that best results are obtained with a tumble drying temperature of 170° F., followed by five to ten minutes tumbling **without heat**. Remove the shirts **immediately** at the end of the drying period and place them on

Stained Shirts / Topcoats

hangers. Shirts allowed to go through the complete drying cycle may need ironing, but it can be done easily and quickly—in about half the time usually required for a man's cotton shirt.

DISCOLORED OR STAINED SHIRTS or blouses of Dacron, or Dacron and cotton blends, that are not satisfactorily clean after washing, can be given the following treatment: dissolve one cup of Calgonite or Electrasol (detergents used in electric dishwashers) in one gallon of water, using an enameled container. Submerge the garment completely and let it soak overnight, then wash it by the method given. Care must be taken not to expose the skin long to the Electrasol or Calgonite solution, or to get it in the eyes. If it should get into the eyes, wash them thoroughly with water.

WASH-AND-WEAR MEN'S SUITS. Hand washing is preferred for these, but they can also be done by machine. In either case it is important that the water not be hot nor the washing action vigorous, if the easy-care properties are to be maintained. And remember to pretreat badly soiled areas and spots.

FOR HAND WASHING use warm water, a strong detergent, or soap and a water softener, and a container large enough to give space without crowding. No wringing or twisting, and be sure to rinse thoroughly.

FOR MACHINE WASHING, using the same materials, give the suit a five minute wash and remove it before the spin dry cycle starts. If your machine has a special fabric cycle, that is the one to use.

The preferred drying method for these suits, whether laundered by hand or machine, is the drip dry. Put the coats soaking wet on non-staining hangers. Suspend the trousers by their cuffs on pants hangers with the creases carefully aligned.

MACHINE DRYING. If it is necessary, or seems desirable, to use a tumble dryer for your wash-and-wear suit, allow it to go through the complete washing cycle. Then place it in the tumble dryer and allow it to dry for about twenty minutes at the low temperature setting. Top results in machine drying these suits, according to the most recent studies, are achieved if a drying temperature of 170° F. is used, followed by five to ten minutes of tumbling without any heat at all. Take the suit out of the dryer **immediately** and hang it as described for drip drying. If it needs a little pressing use a

Stained Shirts / Topcoats

steam iron, or a dry iron set for rayon, and a dampened press cloth. These suits may also be dry cleaned.

THE "AUTOMATIC" WASH-AND-WEAR SUITS, which are newer and are made of specially engineered Dacron or Orion textiles and sewn under closely controlled conditions, will stand the most vigorous washing and drying. Only occasionally will they need light ironing. These are the laundering procedures that have been developed, after many tests, for washing "Automatic" suits: after pretreating oil and grease stains with a solvent, and applying detergent paste to especially soiled areas, put the suit into the washing machine and wash it for five minutes in warm water (100° F.) with a strong detergent or soap, and a water softener. Use the special fabric cycle if there is one, otherwise use the regular machine cycle. **Run** the washer through the complete cycle of spins and rinses. A fabric softener such as Sta-Puf or Nu-Soft in the final rinse will improve the drying performance of the suit and minimize static. Use one-fifth of the amount of softener usually recommended by the manufacturers of these products.

IF A TUMBLE DRYER IS USED for these suits it should be set at low to medium (140-160° F.). Tumble for twenty to forty minutes, using the "wash-and-wear" cycle if you have it. Remove the suit immediately at the end of the drying cycle and put it on hangers. Best results with dryers have been obtained in those of an exhaust or vented type that have a cooling period during the last part of the cycle. In any case, high temperatures are to be avoided.

TO DRIP DRY "AUTOMATIC SUITS they may be taken out before the final spin, or they may be hand washed and allowed to drip dry. Smooth the collars, cuffs, lapels, and seams while the garments are wet. If pressing ultimately becomes necessary use a steam or dry iron, set for rayon, and a damp press cloth.

SUCH SUITS ARE DRY CLEANABLE TOO, and this is advised if they accumulate stubborn stains or soil. Tell your dry cleaner what the material is.

EVEN TOPCOATS OF THE NEW FIBERS can go into the washing machine today. If the maker's tag says your 100 per cent Orion or nylon fleece coat is washable it means just that. Whether you wash the coat by hand or machine the general instructions are the same. Pretreat spots and stains; use plenty of warm water with a strong detergent, or soap

Machine Drying / Dynel

with a water softener; no twisting or wringing, and give a thorough rinsing. Take it dripping wet from the last rinse water and put it on a strong hanger to dry.

If you use a machine, use the highest water level possible and a low temperature setting (100° R). Wash the coat for five to seven minutes. Remove it before the water extraction cycle begins and let it drip dry.

FOR MACHINE DRYING let the coat go through the complete wash cycle to remove excess water, or if it has been hand washed, let it drip until most of the water has been removed. Then place the coat in the dryer at the lowest temperature setting available and let it tumble until it reaches the damp dry stage. Then remove it immediately and put it on a hanger. Shape the collar, cuffs, and seams.

SOILED NYLON AND ORLON COATS can also be dry cleaned, and this is advised for those that have acquired severe soil or stains.

VERY TOUGH AND DURABLE WEAVES are being produced today by combining Dacron and Orion fibers with rayon. These materials are acid-resistant, shrinkproof and colorfast, and they wash ready to wear. Among clothing made of them are smart looking uniforms for gas station attendants. If washing instructions were not given, use this procedure recommended by the Du Pont Company: after pretreating spots and areas of severe soil, put them into the washing machine at a temperature setting higher than that recommended for most synthetics (120° F.) and wash them with a heavy duty soap. Du Pont textile experts say that soap, in their opinion, does a better job on grease stains.

TO AVOID LINT PICKUP it is best to wash such clothing separately from materials that shed lint. Using medium hot water, wash the clothing for twenty minutes or more, using enough soap to produce a heavy suds and about half a cup of a non-precipitating water softener (Calgon, Tex, etc.). Let the washer go through the complete cycle up to the final spin dry. If this treatment does not remove stubborn dirt or stains follow it with the Electrasol or Calgonite treatment described for Dacron blouses and shirts.

After removing the clothing from the rinse water, hang shirts and coats on hangers and trousers by the cuffs. Smooth collars, cuffs, and seams with the fingers.

IF PRESSING BECOMES NECESSARY use a low setting for your iron.

Machine Drying / Dynel

SUCH CLOTHING CAN BE DRY CLEANED. If, after long wear and many washings, creases lose their sharpness, have a dry cleaner reset them.

VICARA. We still have not reached the end of today's synthetic fibers and blends. There is the unobtrusive Vicara, made by complicated processes from the protein in corn. Not a strong fiber, Vicara appears in blends, giving desirable qualities to wools, rayons, and other materials. It gives woolens a soft feel—almost like cashmere—and helps them keep their size and shape, because Vicara does not shrink. To rayons and other materials it contributes the elasticity they would otherwise lack, and to acetates and other synthetics it gives absorbency and better reception of dyes. It is nice to know, sometimes, that Vicara is there. It presents no cleaning problem because it is a sturdy product with excellent chemical resistance. Vicara blends are dry cleaned or washed, depending upon the instructions given on the manufacturer's tag. If the garment is washable, simply treat it as if it were made entirely of the other fiber in the blend.

ACRILAN is similar to nylon and Orion. It is washed (if tagged washable) according to the instructions already given for Orion and nylon. The only fabric in which it is used by itself is a challis—soft, warm, lightweight, wrinkle-resistant and washable. Acrilan is combined with wool to make a soft washable jersey that requires little pressing, and with rayon to make a suiting material that keeps its crease marks when washed, but needs occasional light pressing.

DYNEL, spun from chemicals is exceptionally tough and versatile. Extremely resistant to strong acids, alkalies, and a **range** of chemicals, it finds an important place in clothing for industrial workers. It is used for blankets, socks, draperies, and a variety of wool-like materials. For Dynels marked washable, water up to 170° F. can be used. This is hotter than the hands can stand. Any kind of soap or detergent can be used. However, Dynel is very sensitive to ironing heat. Use a "cool" iron, never hotter than 240° F. of heat. (Usually wrinkles fall out of Dynel without any ironing at all.)

For clothing, Dynel appears most often in napped or piled fabrics and in blends. Fleece-type coats of spring and summer weights are made of Dynel, and they are lightweight, warm, and wrinkle-resistant. In appearance they resemble wool or cashmere. These can be washed by the method described for Orion or nylon fleece coats and need no pressing.

Pressing / New Fabrics

PRESSING TEMPERATURE. Proper laundering and drip drying eliminate the need to iron or press most of the clothing made of synthetic fibers and their blends. When ironing is desirable, however, it may be confusing to say, as for Dynel, that the iron should be "never hotter than 240° F.". How will you know? Here is a scale that will help you decide how to set your iron.

On most irons, according to fabric specialists, the temperature range is from 180° to 550° F. The temperature required for heavy cottons and linens is the highest setting—from 500 to 550° F. The wool setting is from 450 to 500° F.; light-weight cottons and some rayons, 400 to 450° F.; and for silk it is about 350° F. For synthetics the temperature is considerably lower than for silk. Ironing temperatures are lowered slightly when a steam iron or a dampened press cloth are used, and is recommended for synthetics.

HEAT, MOISTURE CONTENT, AND PRESSURE all must be considered for smooth successful ironing and it is not always easy to gauge any of these factors for the great variety of new fabrics we have today. If the iron is not hot enough it won't press out the wrinkles. If it is too hot it may glaze or melt certain synthetics.

To avoid casualties at your ironing board always begin with the fabrics that you know require the least heat, and work toward the heavy cottons and linens that need the most. If you are dealing with a material you do not understand, or a blend that puzzles you, set the iron for the synthetic temperature first. Or test your ironing temperature cautiously on **the** edge of an inner seam.

WHAT THE FUTURE WILL BRING in new fabrics and finishes can only be guessed, as the scientists work away with their test tubes and retorts. The stack of ironing keeps getting smaller as the new textiles appear, but at the same time women—and men too—must be more attentive to the composition and finish of the materials used in the clothes they buy. New materials always mean new techniques and, if these are not understood, the advantage may be lost. So no more tossing away of labels, please, when new suits and dresses are unwrapped, or you will find yourself in a fog of indecision when wash-day rolls around.

15. ATTICS AND BASEMENTS

A THOROUGH TREATMENT once or twice a year is needed for attics and basements to be put in order, swept, and dusted. This is the time to discard the accumulation of worthless stuff that tends to move toward the opposite poles of the house.

There is a certain glamour to attics, especially old cluttered ones, with their lure of hidden treasure, rare stamps, papers, or antiques. Let's ascend—up steps or ladder—taking the vacuum cleaner along.

THE ATTIC. This is like a moon station, remote and weird; it suffers great extremes of climate, frigid cold in the winter and stifling heat during the summer months. Dust filters down from it as from a distant star to dim the floors and furniture below. Strange objects infest it. Though seldom visited, it seems to have a life of its own because the things you remember distinctly storing in one place will frequently be found in another, or strewn all over the floor. This would be the work of the young, who infiltrate a house everywhere.

THE MAJOR PROBLEM is to rout the dust and achieve order. Here is where you really need your vacuum cleaner, but is there a floor outlet up there? If not, you can use an extension. In this case an ordinary one will do. Or you can have your vacuum cleaner man make one for you to match the cord you have. (If you do not have a vacuum cleaner, brushes and brooms will do.)

CLEANING THE WINDOWS FIRST is a good idea because you will then have more light for sorting and stacking, while using your vacuum brushes to devour the dust.

JUNK IS A FIRE HAZARD. If you have cartons handy, sort it out with the next church rummage sale in mind and get

Stairs / **Paint Brushes**

rid of all the worthless stuff you will never get around to using. Be utterly ruthless in this, otherwise things will keep moving down from the attic to litter the rest of the house. Store what you want to keep, carefully, in cardboard boxes and, if you have woolens stored in chest or trunk, examine them for moth damage and make sure that they are well protected with mothballs or para crystals. Directions will be on the box or tin of the insect assassinator you select.

CLUTTER ON THE STAIRS. When you finish, descend carefully, making sure that there is nothing left on the stairway to constitute a safety hazard. If yours was a winter ascent, you may be wondering about providing insulation up there. If summer, you **could** be thinking of the advantages of an attic ventilating fan. But probably you visited the upper reaches of your house in the spring or fall. In the Pluto-ish region under the house, temperatures are more equable than in the attic. If summer has begun it is really nice and cool.

THE PROBLEM IN THE BASEMENT, unless it is a de **luxe** edition, is dust, grit, cobwebs, and clutter, the job-to sweep, arrange, and firmly discard. Here we are likely to encounter a type of junk altogether different from that found in the upper reaches, especially if the family includes boys. There will be garden tools in various conditions, old brushes and brooms, disembowled and dissected mechanical gear which has yielded desired parts, or is allegedly being persuaded to "work"; and cans of paint in different stages of decomposition.

Since the value of many of the mysterious and assorted items found in a basement is difficult for a mere woman to assess, you are in a real jam down here. No boy ever wants to part with hardware, whatever its condition. If you consult about it you will be lost. And, if you do not consult and blithely toss out the stuff you will be riveted with an icy glare and informed that the rusting, ancient pump, the beat-up dictaphone, or wheezy radio was either on the verge of yielding important parts or its troubles approximately diagnosed. Again, if you attempt to store the stuff in boxes, you will find that you have solved the problem only temporarily. In less than a week somebody looking for something will have it out and scattered all over the place again. So this is a problem you will have to solve yourself.

GOOD ORGANIZATION is perhaps the foundation for keeping the basement under control. In other words, work

Stairs / Paint Brushes

centers must be established—places for garden equipment, paints, woodworking tools and so forth.

WHEN YOU CLEAN YOUR BASEMENT, tie a cloth around your head to protect it from dust, wear work gloves, and descend toting your next-to-best broom or floor brush.

BEGIN WITH STAIRWAY, cleaning it as you go. Basement stairs, often poorly lighted, should always be kept in good repair and clear of objects that might trip someone in a hurry and send him headlong in a nasty fall. Before you start straightening the place, why not unscrew any penny-pinching electric bulbs you may have been using and replace them with 100-watt numbers that will provide really good light.

IF YOU GO IN FOR HOME CANNING, you might start with the shelves used to store jelly glasses and fruit jars. Thoroughly dust and clean the shelves and arrange the empty jars and glasses neatly according to their size. Sort over jars of home-canned foods and remove any that may have spoiled. This is one organization, or work, center.

PAINTS AND PAINTING EQUIPMENT may comprise another. If you have a small cabinet that can be used for paint storage that will be fine. Place all paints that you have on hand on the shelves and provide for the brushes on the inner side of the doors. Steel wool, sandpapers, emery cloth, thinners, scrapers, rollers, and all other equipment that may have to do with painting, can be kept together here so that it will never be necessary to waste time hunting them. This cabinet, or shelf if you do not have a cabinet, should be located away from any source of heat as a precaution against fire. Oily or paint-stained rags used in a painting job should be discarded after use, never saved to be used again.

GOOD PAINT BRUSHES (and a poor one can really botch a job) are expensive and deserve proper care. Put them away clean. The time to clean them is right after you finish using them. If the paint hardens even a little, the cleaning job will be more difficult and, if the brush is left to another day, you may never be able to reclaim it.

SOME TIPS ON CLEANING PAINT BRUSHES: first, there are many kinds of paintbrush cleaners on the market, and also equipment intended to keep brushes soft and conditioned for a job that is to be resumed the next day. Some of these cleaners are designed for neglected, paint-hardened

Paint Brushes / Tools

brushes that might be worth saving, and you may want to investigate them. Otherwise you will consider the thinner used in the paint or varnish that you are using with a particular brush, because that is the agent that will clean the brush best when the painting job is done. For brushes used with rubberized and synthetic resin paints, which are thinned with water, you would use warm water with a good detergent. Work out as much of the paint as you can on a clean newspaper before you clean the brush. If washed immediately these brushes are easily cleaned. When the brush is thoroughly clean and you have shaken out as much of the water as possible, wrap a clean piece of paper around the bristles, leaving just the tip of the brush exposed, snap a rubber band around it, and hang the brush up to dry—bristles down. When you want to use the brush again the bristles will be straight and even, without those troublesome side whiskers that stick out and daub bits of paint in the wrong places. If you can't hang the brush up (and why can't you?) at least lay it flat; never stand it on its bristles. And never leave a brush you propose to clean soaking in water. Such a course may loosen the bristles.

BRUSHES USED WITH OIL PAINTS, varnishes, and enamels mixed with turpentine should be cleaned with turpentine; those for paints and varnishes thinned with denatured alcohol are cleaned with denatured alcohol; lacquer brushes with "lacquer thinner," or acetone. And so on. The can of paint will have printed instructions that will tell you what solvent has been used so you can scarcely go wrong if you read the directions. After cleaning your brush in the proper solvent, wash it thoroughly with a detergent and water, rinse, wrap, and hang it up, as described. The solvent used for cleaning can be saved and used again for this purpose, or as a thinner for future paint jobs. Stopper it tightly. Most of the paint dissolved in the solvent will settle in time to the bottom, leaving the fluid clear.

NYLON PAINT BRUSHES are sensitive to alcohol and should never be used for applying shellac or cleaned with denatured alcohol.

GARDENING EQUIPMENT can be localized in a corner of the basement, perhaps near the outside door for convenience. A row of clip-type holders, of the sort sometimes used for brooms or mops, can be fastened to a convenient wall to hold rakes, hoes, sickles, sharpeners, and other garden tools

Flint Brushes / Tools

so that you can find them easily when they are needed. The clips will secure them in an upright position, off the floor, so they won't all slide down when you are attempting to extract what you need from a jumble of tools. And you will be able to sweep the floor without having to move them.

GARDEN TOOLS, especially at summer's end, should be stored clean and dry. Mud left on spades, hoes, rakes, etc., encourages rust to develop, and insecticides left over the winter in a garden sprayer can corrode the metal parts to such an extent that it will not be usable in the spring. Remove the mud from all garden tools in the autumn, if you take pride in good equipment; rub off any rusted spots with steel wool, and wipe the metal with a good lubricating oil, or vaseline. Wash out sprayers and insect dusters and store them thoroughly dry.

POWER MOWERS AND SMALL TRACTORS, stored in the basement, are not a woman's job, but probably the woman will be the one to nudge the greens keeper of the family into putting them up properly in the autumn. The Department of Agriculture says this is how to do it: drain all left over fuel oil from the gas tank and carburetor to avoid gum deposits. While the engine is warm, drain out the old oil and then refill the crankcase with fresh oil of the weight you will use in the spring. Take out the sparkplug and squirt a teaspoonful of oil into the firing chamber, roll the fly wheel a few turns to distribute the oil³⁶ and then replace the sparkplug. Last of all, cover the exhaust pipe to protect it from moisture. As for the lawn mower, obviously, the one that is sharpened and put in tiptop condition before the grass begins *to* sprout has the edge on the one that is left to be sharpened during the early spring rush.

CARPENTRY TOOLS. In a household of putterers no items of equipment are more elusive than carpentry tools. Screwdrivers, small hammers, and such items apparently have a life of their own, migrating according to the dictates of fancy to locations ranging from the attic to the basement. This is why so many women have learned *to* use hairpins, knives, and kitchen scissors for an amazingly wide variety of minor repair jobs. However, if you can achieve it, there is nothing like a well organized carpentry bench in the basement—with jars for nails, tacks, and screws of various sizes, and racks for tools, neatly arranged. Tools can be kept from rusting by rubbing off spots of corrosion with emery cloth, and wiping the metal parts with olive oil or vaseline. Store sharp tools safely in racks or on their sides to protect the cutting edges.

Firewood / Basements

There are wall racks with adjustable pegs that encourage the neat disposal of small tools and you might want to try one of those. The problem, though, is to get members of the family to put the tools back into place after using them.

FIREWOOD stacked in the basement should be arranged, if possible, in a place that has a cement rather than a dirt floor. This is because the wood may possibly contain termites, which need a contact with the moisture contained in earth to survive. Other insects likely to be hibernating in firewood may emerge in the warmth of the house but are not likely to cause damage or to survive very long. If you are squeamish about them, spray the walls and floor of the wood storage area and the inside of your woodbox with 5 per cent DDT. Spraying the wood itself is not desirable.

THE PRESENCE OF TERMITES is sometimes indicated by mysterious little piles of wood dust on window sills, accumulations of insects' wings, or strange little earthen tubes extending from soil to wood. If you notice these, call for help from an exterminator.

DISPOSE OF ALL TRASH. And now, in words anyhow, the work centers of the basement have been straightened up. Put all the trash you have collected into suitable containers, to be taken away by the collector next time he comes. When you get rid of all the old papers and rags, wood shavings, and litter that accumulate in the neatest of basements you are safeguarding your home against fire.

DUST DOWN THE WALLS and ceiling now, with brush or broom, also any water and heating pipes that may be exposed. Sweep the floor clean and let's call it a day.

IN SWEEPING THE FLOOR you may want to use a sweeping compound to keep the dust down, or to dampen your broom with water. Should you have a floor drain, make sure it is free of litter and in good working order. If the basement floor is cemented and you want to wash it, follow the directions that have already been given for the best and easiest way to do it.

IS IT TOO DARK IN YOUR BASEMENT, even with the 100-watt electric bulbs? Even after wiping the windows dust-free with a dry cloth or washing them? Have you ever thought that whitewashing the walls might make it much lighter? Whitewash is better than oil paint for a basement inclined to be damp.

And, now let's get out of here—clean up, and have dinner in some nice restaurant.

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