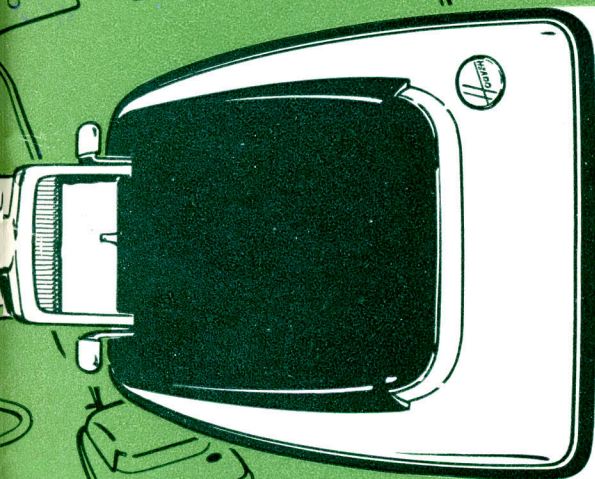




A Guide to Modern Cleaning Methods



The Hoover Home Institute

THE HOOVER COMPANY NORTH CANTON, OHIO

The ingenuity of American industry brings better living to today's families through production of labor-saving equipment and improved housekeeping methods. In the field of cleaning equipment, much research is being done in laboratories and in homes; bulletins, books and magazine articles are written, all giving a wealth of information. These are the contributions of engineers and home economists of the equipment manufacturers, authorities of the carpet and rug industry, personnel of government agencies, universities, the extension service and equipment editors of home publications.

To aid you in keeping pace with the latest developments from all these sources, the Hoover Home Institute has done intensive research to prepare this manual of authoritative and pertinent information for reference and use in classes.

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CLEANING PROBLEMS in the Home

Housekeeping methods change with the times. New patterns of living, larger families and the trend toward a casual mode of life affect the care of the house. Modern appliances, television and increased pride in our homes have made entertaining at home more popular. Women also want time for outside interests as well as relaxation with their families. The fact that an increased number of women are working outside the home means less time is available for housework. But modern living demands a well-kept home.

To help the homemaker reduce time spent in the care of the home, good cleaning equipment, wisely used, is more important than ever. The information given here on selection and use of cleaning equipment has been considered in light of present living trends, new types of homes and their furnishings as well as old ones.

WHAT IS TO BE CLEANED?

First it is important to visualize just what is to be cleaned. Care of the home involves the basement to the attic, the front porch to the patio and all the surfaces, fabrics and furnishings found there. This is a big order but selection of the right equipment can simplify the work. Here are some of the most important jobs to consider.



Soft Floor Coverings

Carpets and rugs should be given prime consideration for two reasons. They represent a sizable expenditure of money and cleaning is important to reduce wear. Secondly, the cleanliness of the rest of the house depends on a thorough cleaning of carpets. If a vacuum cleaner is not efficient in removing dirt from carpets, dust will rise when they are walked on and settle in other parts of the room.

The trend is to the use of more and more wall-to-wall carpeting and large rugs. In addition to wool, the basic rug fiber, fibers such as cotton, nylon, rayon, acetate and acrylics such as Acrilan and Verel have increased in popularity to add variety and new effects. Regardless of the fiber content, practically all rugs can be cleaned with the vacuum cleaner.

Factors Which Affect Cleaning

The ease of cleaning carpeting depends largely on construction. Some rugs have two levels of pile (either cut or uncut) to give a sculptured or carved effect. If the difference in levels is great, more strokes of the cleaner may be necessary to remove dirt from areas of the lower pile level. Carpets having deep pile of low density may be difficult to clean.

For more information on carpets and rugs which will be helpful in understanding carpet care, see pages 22 and 23.

Hard Surface Floors

Modern hard-surfaced floors include wood, linoleum, terrazzo, asphalt, rubber, vinyl, cork and ceramic tiles.

In the kitchen, recreation or family room, bathroom, breezeway and porches, these floorings are popular because of their practicality.

The vacuum cleaner should be regularly used for cleaning these floors to do a thorough job and avoid scattering dirt from one area to another.

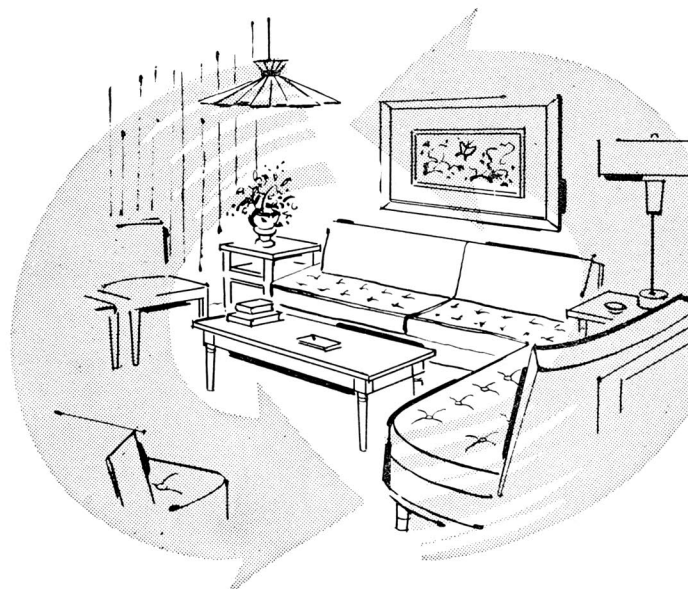
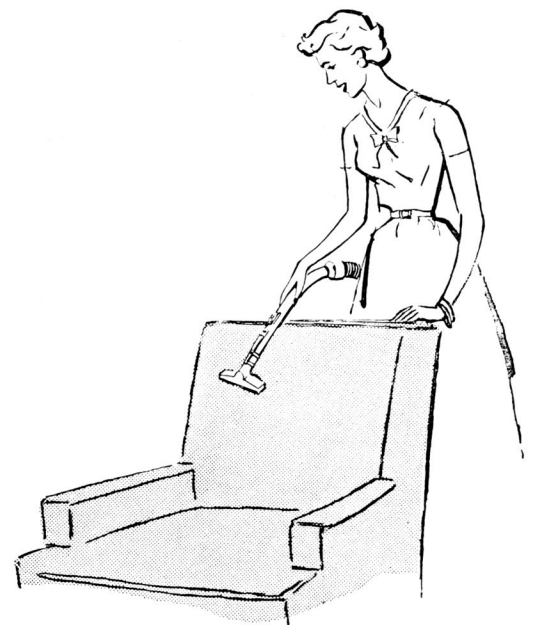
It is not unusual to find linoleum, asphalt, rubber or vinyl tile in the living room or bedroom. However, the trend now is to cover these floors with a room-size rug, leaving a border of the hard surface. Both the rug and the hard floor, which of course may also be wood, will need to be considered in selecting a cleaner.

Above-Floor Surfaces

Practically everything in the home can be dusted with the modern vacuum cleaner and its attachments—all furniture, draperies, beds, mouldings above doors and windows, baseboards, books, lamps, lighting fixtures, Venetian blinds, pictures, knick-knacks, hard-to-get-to places between cabinets and refrigerator, radiators—virtually all home furnishings.

Dusting chores can be kept to a minimum if rugs and carpets are thoroughly cleaned. Dust from dirty carpets rises to settle on furniture. Use of an efficient vacuum cleaner on rugs, and attachments for above-floor cleaning are the best assurance that dust and dirt are not moving in a vicious circle from one part of the house to another. Vacuum cleaner attachments pick up the dust and trap it into the dust bag so that it cannot settle again.

These cleaner tools are useful in every room—sun porch, terrace, kitchen, bedroom, living room, dining room, bathroom, basement, garage.



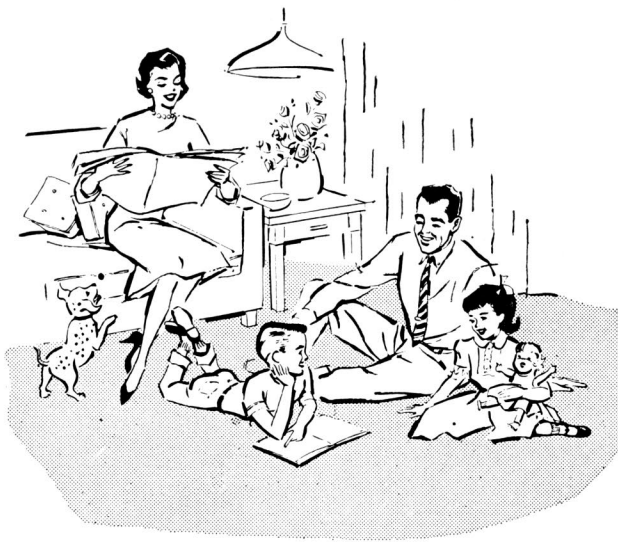
WHEN TO CLEAN ...

Factors to Consider

The frequency and length of time the vacuum cleaner should be used will vary in each home. A regular cleaning schedule is important to remove all types of soil and prevent grit from becoming embedded in rugs. The schedule will be determined by the following conditions.

Size and Type of Family

In a family with several children it is to be expected that there will be tracking of dirt into the house many times each day. The vacuum cleaner



may need to be used every day and occasionally several times during one day. Other less active families may need to use the cleaner once or twice a week.

Size of Home, Type of Community

In an apartment, less dirt may be brought in than when the entrance is directly from the street. A family living in the country will have different cleaning problems than one in a factory town. Also during the winter more dirt is usually tracked in, which calls for frequent cleaning.

Type of Carpets

Some rugs require more frequent cleaning than others, as mentioned on page 3.

Type of Cleaner

Cleaners vary in effectiveness. A motor-driven agitator vacuum cleaner, a motor-driven brush vacuum cleaner and a suction-type vacuum cleaner—each requires different methods and amounts of energy and time. The following pages will deal with this subject.

SUGGESTED SCHEDULE

Daily Jobs

(In some homes two or three times per week.)

Rugs and Carpets—remove surface litter from exposed areas with vacuum cleaner as necessary.

Hard Surface Floors—borders around rugs should be cleaned with combination rug and floor nozzle (or floor brush attachment) when rugs are cleaned. Use floor brush attachment on hard surface floors daily for rooms which are in constant use.

Weekly Jobs

Rugs and Carpets—clean thoroughly using about five forward and back strokes over areas of heaviest traffic with an upright cleaner. More strokes will be needed with a suction cleaner. Clean the hidden areas such as under sofa or piano. Wall-to-wall carpeting should be cleaned around edges with crevice tool.

Furniture, Lamp Shades, Picture Frames, Bric-a-Brac—dust with dusting brush.

Upholstered Furniture—thoroughly clean with upholstery brush. Use a crevice tool also if necessary on some pieces of furniture.

Hard Surface Floors—dust floors with floor brush or combination floor and rug nozzle in all rooms, porches.

Venetian Blinds—dust with dusting brush.

Radiators—clean with crevice tool, also dusting brush.

Baseboards and Mouldings—clean with crevice tool, also dusting brush.

Occasional Jobs

Rugs and Carpets—remove spots and stains at once. (See pages 24-25).

Hard Surface Floors—use floor brush to clean floors of rooms not in daily use, such as base-

ment and attic. All floors will need other attention also, such as waxing and polishing with an electric polisher-scrubber. Old wax should be removed, new wax applied and polished.

Kitchen Cleaning Jobs—clean cabinet drawers with crevice tool, also between cabinets and appliances and other hard-to-get-to places. Clean condenser of refrigerator with crevice tool.

Bedrooms—clean dresser drawers with crevice tool. Bedspreads, mattresses and springs may be cleaned with upholstery nozzle and crevice tool.

Draperies—clean with upholstery tool, reducing suction if necessary.

SOURCES AND KINDS OF DIRT

Sources of Dirt

Dirt in the home comes from many sources. It is brought in on shoes and objects carried in from the outside. Some blows in through doors and windows, while other dirt originates when jobs of various types are performed in the home.

Types of Dirt

Regardless of the sources, all homes have three general types of dirt to be removed. Vacuum cleaners capable of doing an all-round job can pick up all types with the help of their various attachments.

The First Type is referred to as litter. Examples are cat and dog hairs, threads, ravelings. These cling to the surface of rugs and upholstered furniture and are often difficult to remove.

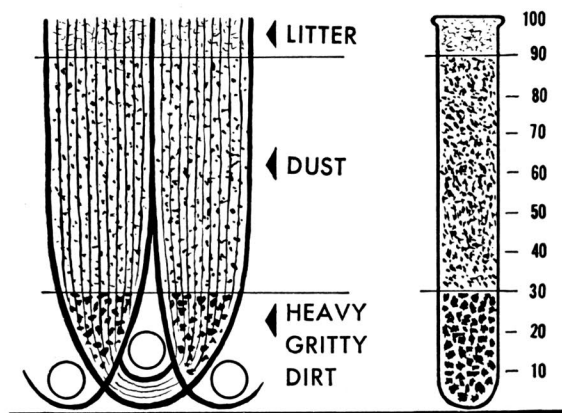
The Second Type, ordinary dust, is familiar to everyone. It settles on rugs, furniture, baseboards, hard surface floors, lamps and everywhere. In rugs, draperies and other furnishings, dust dulls the appearance, causes color changes and may eventually result in rotting of fabrics.

The Third Type is heavy dirt or destructive grit. This sinks into the pile of carpets and out of sight. It is ground in deeper each time someone walks across the rug. This dirt is a hidden demon because it may pass unnoticed.

The surface of a rug or carpet may appear perfectly clean. Yet grit may be so deeply embedded in the carpet that sharp edges cut off carpet pile at the base of the tuft. To prolong the life of any carpet or rug, it is essential that this dirt be removed regularly.

Choice of Cleaner

An efficient cleaner should remove all three types of dirt: Litter is removed by brushing, dust by suction and deeply embedded dirt by agitation. Inquire about features of different cleaners which are designed especially to do these jobs well. More about this is included on page 6.



Test tube shows proportion of dirt by weight in average carpet



CLEANING EQUIPMENT for the Home

Choosing a Vacuum Cleaner

To care for the home properly today an efficient vacuum cleaner is highly essential. Before a selection is made, keep these two things in mind: First, become familiar with the different types of cleaners and their advantages. Second, consider the type of home and furnishings where the cleaner is to be used. Each of these subjects is discussed here.

I. Know the Facts About Types of Vacuum Cleaners

Basically there are three cleaning principles used in vacuum cleaning; these are suction, sweeping and agitation. Some vacuum cleaners use one of these principles, others two and a few employ all three. As will be seen from the following discussion, each of these types of action is effective on different types of soil.

Suction Cleaners

If suction is the predominant cleaning principle used to remove dirt, a cleaner is classified as a suction cleaner. A small amount of sweeping action may also be used if the nozzle or tools include a brush.

There are two basic body designs of suction cleaners, as given below.

Canister Cleaners

The trend in suction cleaners is toward the canister type. There are many sizes and shapes. One of them is shown in the picture at the left. For further information on performance for different jobs—rugs, hard floors, above-floor cleaning, see pages 8 to 19.

Tank Cleaners

Tank cleaners are basically the same in cleaning principles and performance as canisters. An example of this type is shown at the top of this page.

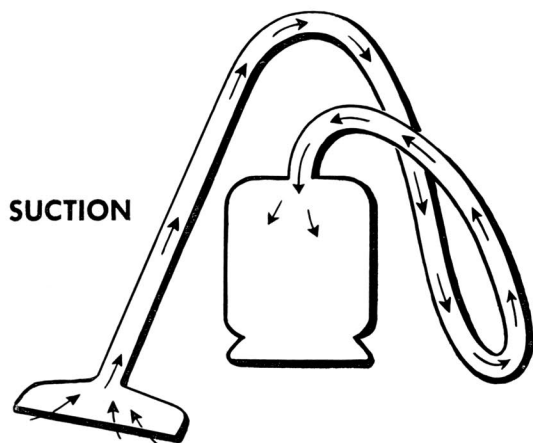
Upright Cleaners

There are two types of upright cleaners—the motor-driven brush and the motor-driven agitator.

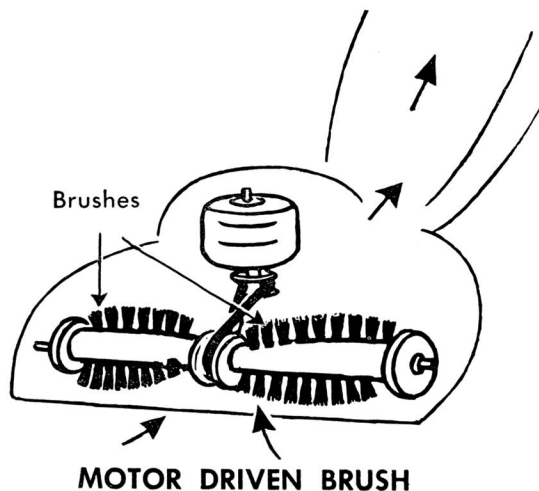
Motor-Driven Brush Cleaner

In addition to suction, this type of cleaner also uses a sweeping action produced by a rotating brush driven by the motor. Power is transmitted from the motor to the brush roll by means of a rubber belt.

How to recognize this type: The rotating brush on a roller can be seen from the under side of the nozzle. See picture at left.



SUCTION

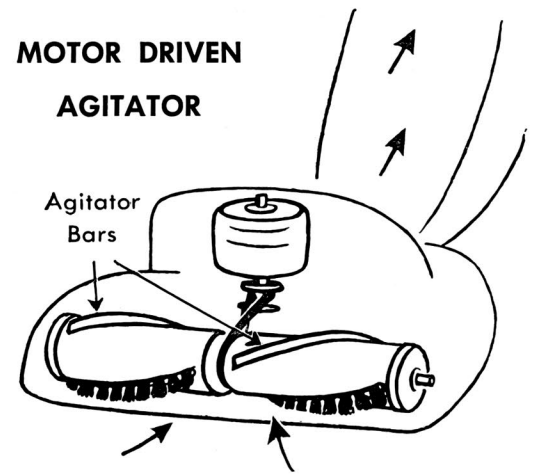


MOTOR DRIVEN BRUSH

Motor-Driven Agitator Cleaner

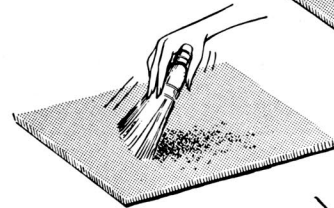
All three cleaning principles, suction, sweeping and agitation are employed by this type of cleaner. A roll in the nozzle is driven by the motor. Brushes on this roll sweep the clinging litter from the carpet so that suction can whisk it into the bag. The outstanding difference between this type and the motor-driven brush cleaner is the highly polished metal bars on the roll. These cause "positive agitation" of carpets—for as the roll revolves, the bars gently beat the carpet, which has been lifted up to the nozzle of the cleaner by suction. This agitation is necessary to dislodge the deeply embedded dirt so it can be drawn into the bag by suction.

How to recognize this type: Look at the bottom of the nozzle. Note the polished metal agitator bars on the roll with the brush. See picture at right.

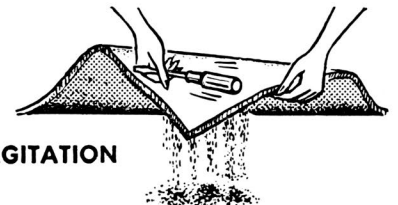


THE THREE CLEANING PRINCIPLES

1. SUCTION



2. SWEEPING



3. AGITATION

Cleaner Attachments

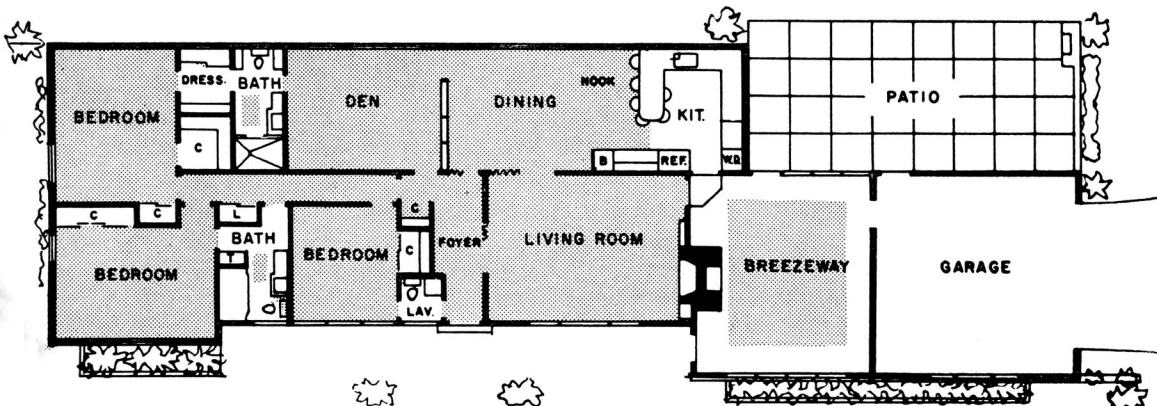
For cleaning jobs other than rug and carpet cleaning, the attachments used on suction and upright cleaners are essentially the same. These include: upholstery nozzle, dusting brush, crevice tool and floor brush. For further details about these tools and their uses see pages 15-19.

II. Pick the Cleaner to Fit the Home

Decide on the more important cleaning jobs: In many homes there will be an expanse of carpeting and large rugs. A cleaner will be needed which can clean them thoroughly. Other homes may have more hard surface floors, and a different type of vacuum cleaner may be preferred. In all cases remember that cleanliness of the house as a whole depends on thoroughly clean rugs. The following pages give more details on relative efficiency and ease of handling different cleaners for the various jobs.

Is one cleaner enough? Many families find two cleaners a great convenience and sometimes necessary to do the best possible job in every room. When purchasing a new cleaner, the old one is frequently retained, and used in bedroom wing or for upstairs work. The new cleaner may be kept handy to the living areas and save steps.

The trend toward the use of more rugs plus the great variety of jobs which modern cleaners do efficiently means a vacuum cleaner may be used from one end of the house to the other. A ranch type home, typified by this plan, has many rugs which are best cleaned with an upright cleaner. The hard surface floors of kitchen, bath, breezeway, garage and patio are conveniently cleaned with a suction cleaner. Attachments are needed for dusting and cleaning furnishings throughout the house. Two cleaners would be desirable in this home while a smaller one may need only one cleaner.





Use of the Vacuum Cleaner on CARPETS AND RUGS

Here are the factors which affect the cleaning efficiency of different types of cleaners when used on carpets and rugs.

SUCTION CLEANERS Canisters and Tanks

Amount of Suction

Since suction is the predominant cleaning principle with these cleaners, the amount of suction should be high. However, high suction does not always mean high cleaner efficiency; there are other important factors which determine overall efficiency. Some of the effectiveness of high suction may be lost if the nozzle is not well designed.

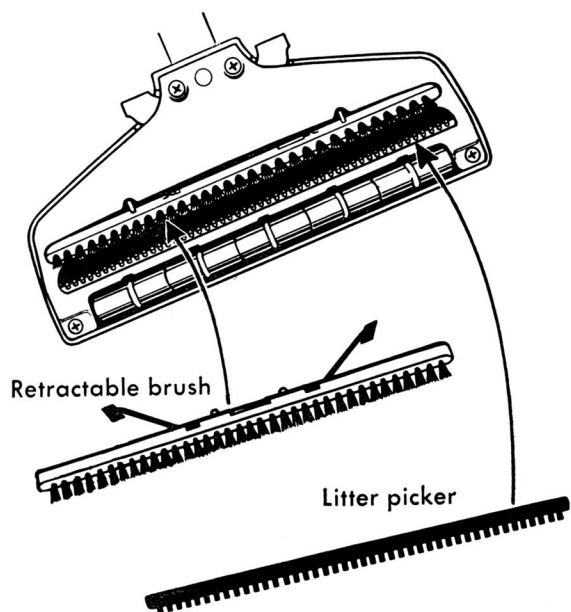
Design of Carpet and Rug Nozzle

The nozzle should be designed so that, essentially, there is equal suction over its entire length. The lips of the nozzle should be sloped, flat surfaces to permit movement over the carpet with acceptable ease.

The inner part of the nozzle should include two devices to aid in pick-up of dirt. To remove litter from the surface and raise carpet pile, the nozzle should contain a soft but firm plastic device to produce a combing effect. The brush in the nozzle supplies sweeping action. This aids in removing tightly clinging surface litter, causes some disturbance of the surface and reduces the time required to clean carpets and rugs. However, the brush may also increase the amount of effort needed to push the cleaner over the carpet. The brush should be moderately stiff. Horsehair has been found to be one of the most satisfactory types of bristles. It should adjust automatically to the height of the carpet pile and be retractable so it can be lifted and held out of contact with the carpet when not needed for picking up clinging litter.

Wheels or rollers on this nozzle are desirable to make it glide over the carpet with less effort. If well designed, they also keep the nozzle at the right angle with the carpet. This is very important to prevent loss of suction and cleaning power.

Some cleaners have a nozzle which can be used for both rugs and bare floors. This is especially desirable when a room-size rug has a border of bare floor around it. See page 16 for more about this type of nozzle.



COMBINATION RUG AND FLOOR NOZZLE

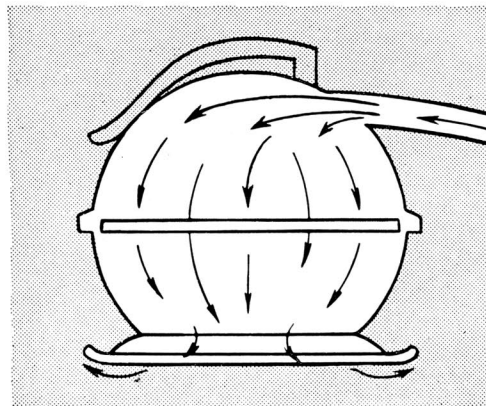
Some suction cleaners have revolving brush attachments which can be used in place of the regular rug nozzle. The brush may be either motor-driven or air-driven.

Size of Motor

The size of the motor, rated in horse power, should not be confused with cleaner efficiency. Some of the most powerful motors produce high suction but may not give high cleaner efficiency because of the design of other parts of the cleaner.

Ease of Mobility

Most suction cleaners are designed to be easily moved about while in use. They often have wheels or runners of various sizes. Another means of movement is by a unique principle called "air lift." Air exhausted from the base lifts the cleaner slightly so that it will glide across the carpet without tugging or pulling.



"It walks on air"

UPRIGHT CLEANERS

Motor-Driven Brush Type

Cleaning Principles Involved

Two cleaning principles are employed in this type of cleaner; the motor-driven rotating brush provides sweeping action and suction carries the dirt into the bag.

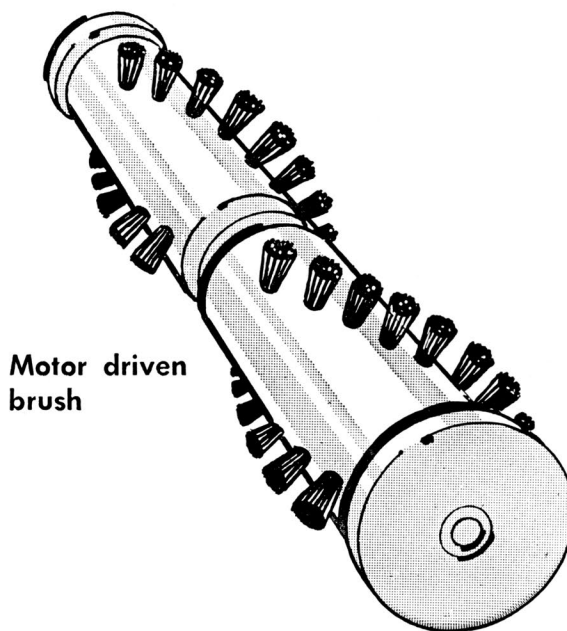
Type of Brush

This is extremely important to the efficiency of the motor-driven brush type of cleaner. To obtain disturbance of the pile, brushes must be firm and stiff.

Design of Brush Roll

The brush roll should be designed so that when brushes become worn, the roll will adjust (automatically or manually) to the correct cleaning position. After the brushes have become completely worn a new roll must be installed, or in some cases the brushes alone can be replaced on the old roll.

If the roll diameter is small, then the brush tufts should be long and close together. If the diameter is large, then the tufts can be shorter but they should still be close together. If tufts are widely spaced, a winding of threads and string is apt to occur.



UPRIGHT CLEANERS

Motor-Driven Agitator Type

The efficiency of the cleaner when used on carpets and rugs will depend on these factors:

Cleaning Principles Involved

All three cleaning principles are employed by this type of cleaner. In addition to suction and sweeping provided by the motor-driven brush cleaner, this type adds the third principle, agitation. This is accomplished by the metal bars on the roll in the nozzle.

The Agitator Action on Rugs and Carpets

First, suction lifts the carpet to the lips of the nozzle. Then the bars gently tap the carpet and loosen the embedded heavy, gritty dirt, bringing it to the surface. This grit, which is extremely harmful to carpets, is swept up by the brushes, and carried into the bag by suction. The brushes also loosen all the clinging litter from the carpet so that the flow of air through the nozzle can carry it into the bag.

Design of Nozzle

Engineers recommend that the lips of the nozzle be made of smooth durable metal to reduce friction between nozzle and carpet so that the cleaner can glide over the carpet with minimum pushing effort. The nozzle height should be adjustable for good performance over a wide range of types of carpet. A manual adjustment is recommended so that the correct nozzle height can be obtained, in case the pile is unusually high. Adequate provision for either manual or automatic nozzle height is extremely important for the many varieties of pile heights and densities of today's carpets and rugs.

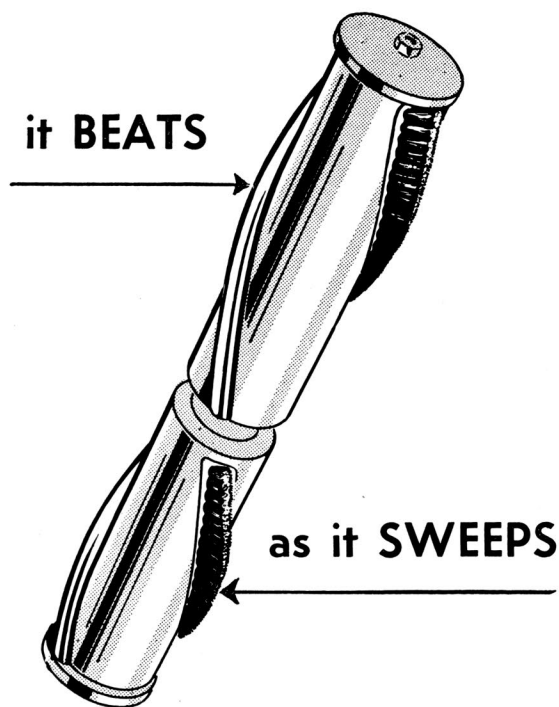
Design of Brushes

Many carpet manufacturers say that horsehair bristles are most effective in cleaning carpets and rugs. For this type of cleaner, these horsehair bristles should be just stiff enough to facilitate easy pick-up of surface litter. Curving the brush achieves a good balance between litter removal ability and quiet operation.

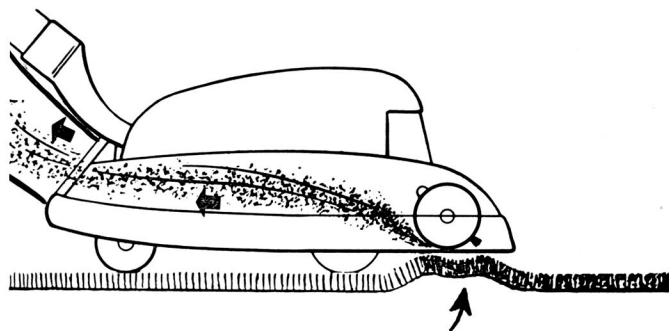
Brushes should be replaceable — and independent of other mechanisms so that it will not be necessary to replace the complete unit when brushes are worn.

Design of Agitator Bars

These bars are very important because they provide the third cleaning principle for this type of cleaner. They increase the effectiveness of this principle of cleaning by agitation because they do not wear down with use. It is best that the



as it SUCTION CLEANS



on a cushion of air

bars be made of hard metal with a very bright finish which retains high lustre. The high polish provides a smooth surface which prevents possible snagging of carpet. It is also recommended that bars be curved so good cleaning and quiet operation can be effected, using the minimum amount of power.

SUMMARY OF PERFORMANCE

of Three Types of Vacuum Cleaners on Carpets and Rugs

Dirt Removal

The upright motor-driven agitator cleaner using three cleaning principles, according to many authorities, removes twice as much dirt as the average suction-type cleaner with one cleaning principle. It will remove, in the average cleaning time, approximately three times as much dirt as the least efficient suction cleaner (without a brush or device to disturb the pile).

The upright motor-driven agitator type with its three cleaning principles will, in the time used by the average homemaker, remove up to 40 to 50 per cent more dirt than the average motor-driven brush type which uses two cleaning principles.

Efficient operation of all cleaners depends on the size and material of the dust bag. The filtering area of many suction cleaners is only one-third that of the upright cleaner. This means that the cleaning efficiency of a suction cleaner with a small bag decreases at a much more rapid rate because the filtering area is covered more quickly and densely with dust. A few suction cleaners have larger bags which approximate the size of bags on upright cleaners.

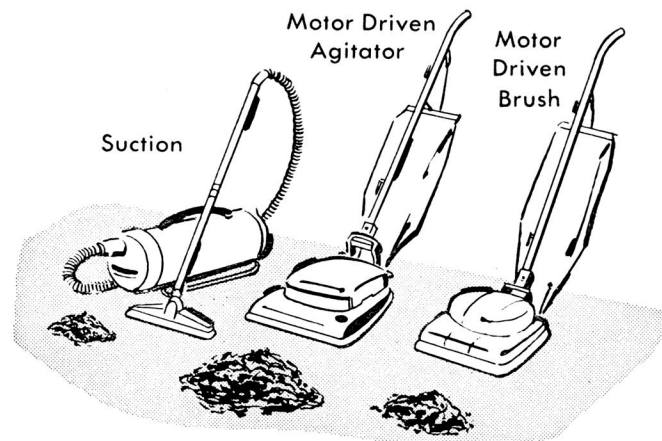
Cleaning Work

The higher the suction used, the greater the amount of work needed to push the nozzle over carpets. And, if a brush is included in the nozzle, the amount of work required may be over 200 per cent greater than for an upright cleaner. Wheels or rollers on the nozzle of a suction cleaner, or a motor-driven brush reduce the effort needed.

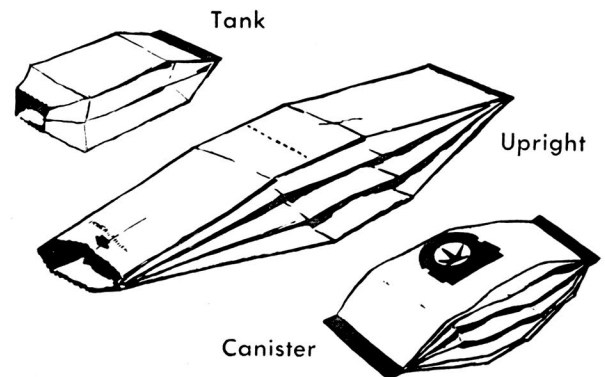
Assembling Time and Ease of Handling

Getting a suction-type cleaner assembled and ready to use each time will take at least twice the amount of time and effort as that required for the upright cleaner. Assembling a suction-type cleaner involves bending and stooping, which increases energy expenditure.

Many women consider the suction-type cleaner easier to carry upstairs, especially if it has a comfortable handle and is compact in design.



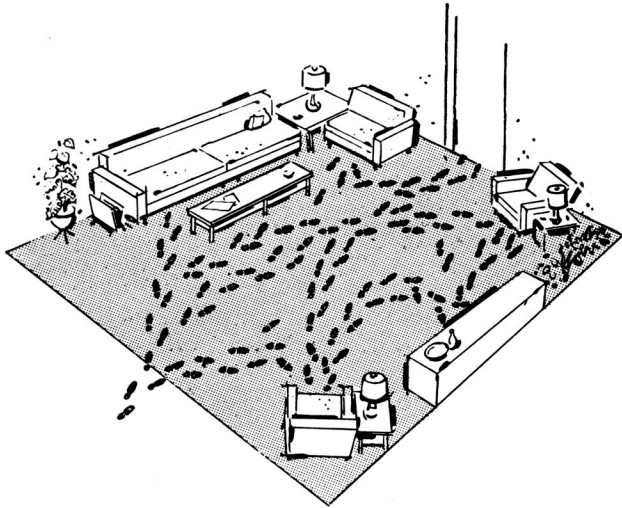
AMOUNT OF DIRT REMOVED
BY DIFFERENT CLEANERS



THE LARGER THE BAG
THE MORE EFFICIENT THE CLEANER



CAUSES and PREVENTION of Carpet Wear



**HEAVY TRAFFIC ON CARPETS
AND RUGS**

There are two major causes of carpet wear and an efficient vacuum cleaner can do much to hold both of them to a minimum. One cause of wear is daily traffic which, of course, every carpet has to withstand. The other is gritty dirt which becomes embedded and cuts the pile. It is important to know more about these causes and how to use the vacuum cleaner to minimize wear.

Daily Traffic Causes Wear

According to cleaning engineers and rug designers, practically all carpet wear is caused by traffic. Members of the family walk back and forth, heels dig into the carpet. The claws of pets catch and pull the pile.

Every time an average adult walks over a carpet, a pressure of 12 to 100 pounds per square inch (depending on whether the weight is concentrated on the heel or toe of the shoe) is exerted on fibers which may be surrounded with sharp grit. Frequent use of the vacuum cleaner removes much of the dirt before the traffic has a chance to embed it.

Embedded Grit Cuts Pile

The second major cause of wear is this heavy, gritty dirt which becomes embedded and cuts pile of the carpet. Here, again, the vacuum cleaner is invaluable in reducing wear. Regular cleaning of carpets with a motor-driven agitator-type cleaner employing three cleaning principles can bounce out this deeply embedded dirt and draw it into the dust bag before it has an opportunity to damage the carpet.

It is hard to believe, yet true, that a rug can hold practically its own weight in dirt and still the surface may appear clean. The unseen dirt is composed of deep soil and grit which cause carpet wear.

A good illustration is the first and second steps of a carpeted stairway. The bottom two steps are subject to scuffing of dirt and heavy traffic; here the carpet is always worn down fastest.



**DEEP SOIL AND GRIT
CAUSE CARPET WEAR**

How to Prevent Wear

1. Thoroughly clean carpets and rugs at least once each week. This should be done with an efficient cleaner to make certain embedded grit has been removed.

2. Where traffic is heavy, vacuum-clean two or more times each week to remove litter and prevent surface dirt from being ground into the fiber by the many feet which pass over it each day.
3. Turn rugs around periodically so that they will wear and soil evenly.
4. Use a rug cushion or pad. It fills in any uneven spaces of the floor and helps prevent worn spots.

CAUTION

New rugs have loose bits of pile material left during manufacture. They appear to be shedding but **this is not carpet wear**. Carpet authorities recommend a thorough vacuuming to bring all these loose ends to the surface. A number of cleanings may be required before all have been removed.

Rug Cushions

Rug cushions stretch the life of pile floor coverings and absorb noise. Their use reduces the cushion of pile and adds softness to all carpets and rugs.

Cushions made of hair and jute fibers are the most generally used. Rubber cushions, which are relatively more expensive, are gaining in popularity. Rug cushions are constructed for use **under** floor coverings and should be walked on as little as possible unless covered by a carpet or rug.

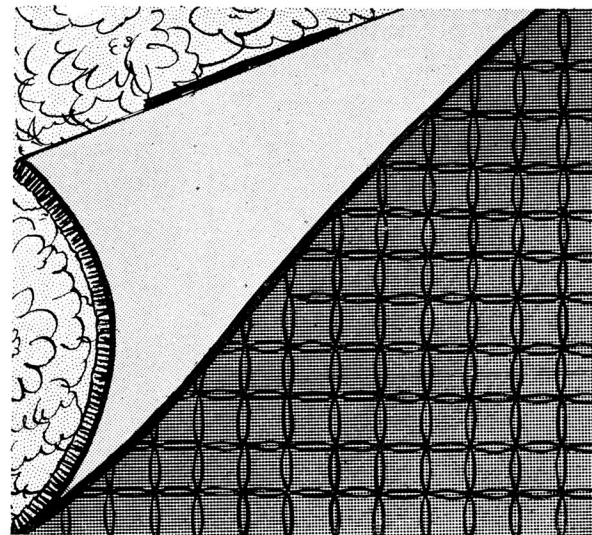
Cleaning Rug Cushions

Cleaning is seldom necessary since the cushions are always covered. However, when the rug is rolled up for turning, moving or sending it for professional dry-cleaning, the cushion may be vacuum-cleaned. Care should be taken to prevent damaging the surface of cushions made of hair, jute or soft rubber. After cleaning they should be rolled up and not walked on until covered. Firm rubber cushions are not easily damaged and can be cleaned the same as any carpet or rug, with the vacuum cleaner.

With a suction-type cleaner use the carpet and rug nozzle with the brush retracted. With an upright cleaner use one of two methods. The floor brush attachments may be moved lightly over the cushion in one direction only, to avoid damaging the surface. The second way is to disconnect the brush or roll of the cleaner by loosening the belt. Then use the cleaner the same as for carpets and rugs.



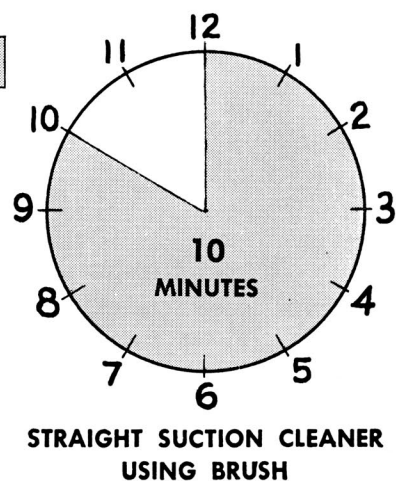
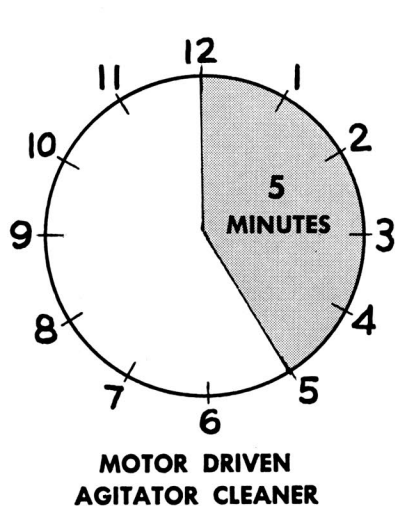
CLEANING HALLS



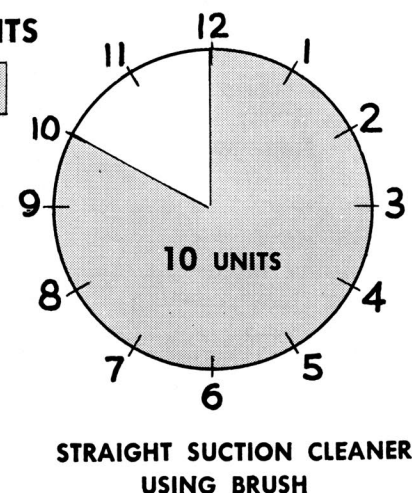
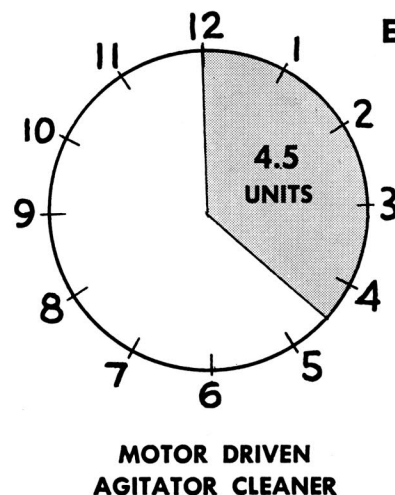
RUG CUSHION

Rug Cleaning Ability of Different Type Cleaners

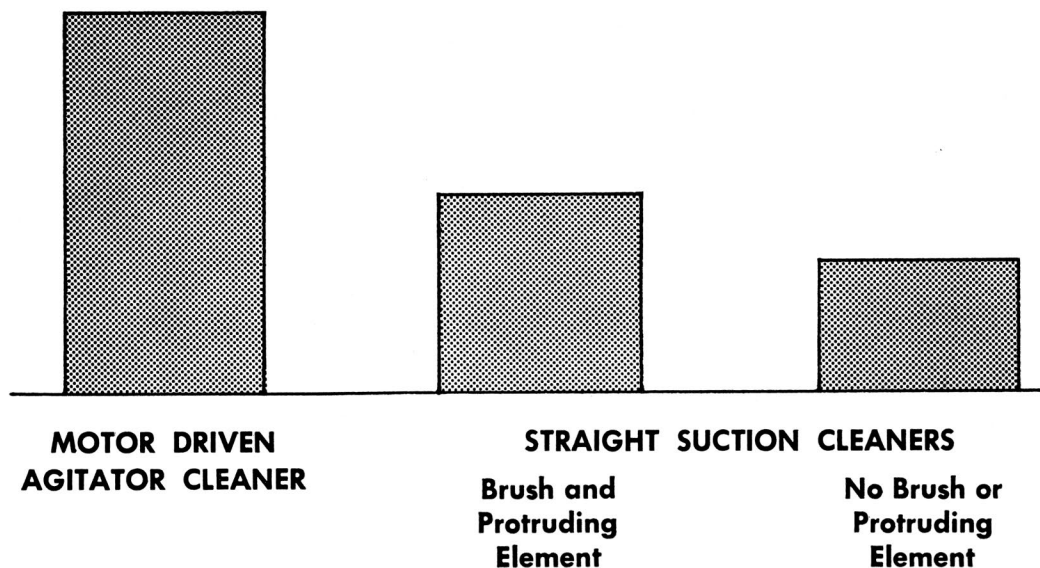
TIME REQUIRED
to remove the
same quantity
of dirt from
carpets and rugs.



**ENERGY
CONSUMED**
in removing the
same quantity
of dirt from
carpets and rugs.



**COMPARISON OF
DIRT REMOVED
FROM 9 X 12 RUG
IN THE SAME
CLEANING TIME**



Use of the Vacuum Cleaner on HARD SURFACE FLOORS

Practically all modern vacuum cleaners have accessories and special features to make them effective for cleaning hard surface floors (discussed on page 3)—in the kitchen, bathroom, porch and all parts of the house.

Cleanliness of these hard surfaces depends a great deal on how clean the carpets of the home are kept. If an inefficient cleaner is used on the carpets, family traffic will stir up dust and dirt which will settle on nearby surfaces. This results in the need for more frequent cleaning of all surfaces.

Often there is a border of hard surface flooring around the room-size rug. In cleaning these rooms, both soft and hard surface flooring must be considered and the cleaner should do both jobs effectively.

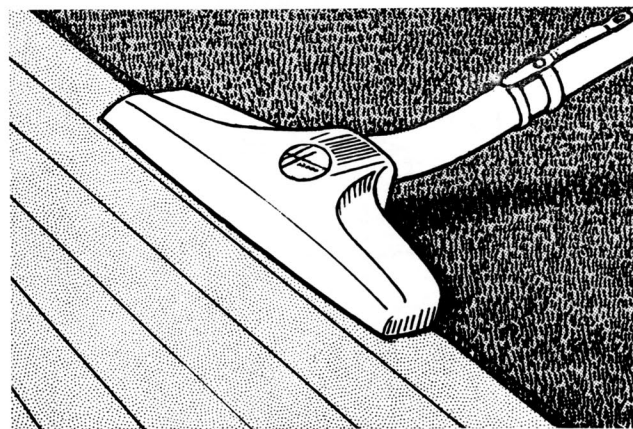
Using the vacuum cleaner, either upright or suction-type, results in more complete removal of dirt than other methods and prevents scattering it from one place to another as with a dust mop or broom.

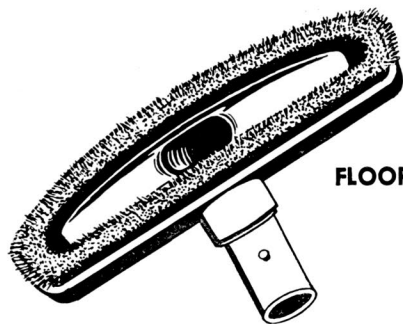
Attachments Needed for Hard Surface Floor Cleaning

Cleaning hard surface floors with suction-type and upright vacuum cleaners involves essentially the same types of attachments. However, in using the upright cleaner, a converter is first installed.

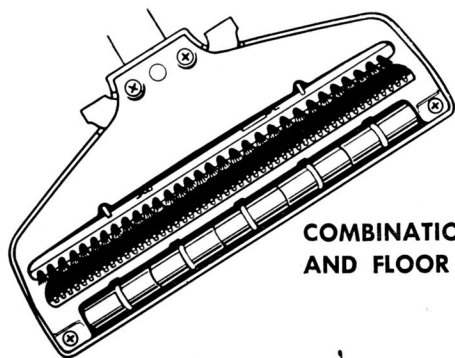
Converter for Upright Cleaner

The converter (as shown in picture at right) is inserted on the underside of the cleaner. The hose with wands and floor brush are connected to this. The converter raises the nozzle of the cleaner above the floor surface so it makes no contact. In some new models the use of the converter speeds up the motor and increases the suction up to 50 percent. This is important as hard surfaces are cleaned largely by suction, whereas when the upright cleaner is used for rugs, the action of the revolving brush or agitator performs much of the work.

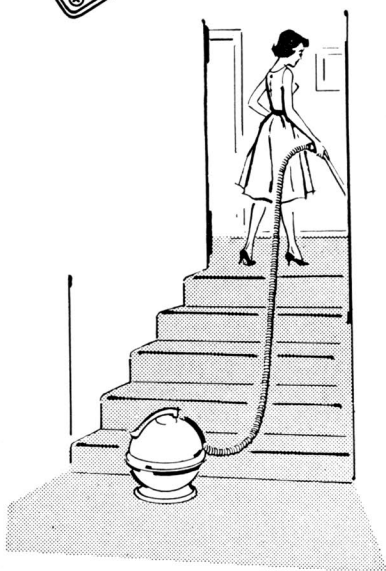




FLOOR BRUSH



**COMBINATION RUG
AND FLOOR NOZZLE**



Floor Brush

A floor brush attachment is used for cleaning hard surface floors of all kinds. This tool should pick up dry dirt of all types—dust, sand, mud, lint, ashes, hair, crumbs and sugar.

There should be equal suction over the entire width of the brush. For greater efficiency, bristles should be continuous with no openings at the ends.

Tufts should be close together and stiff enough to remove tightly adhering material such as mud, but not harsh enough to scratch floor surfaces.

The brush should be large enough to clean the floor quickly, yet small enough for convenient use. For easiest use, there should be a swivel joint on this attachment or a swivel should be formed when the brush is attached to the curved end of the wand.

Combination Rug and Floor Nozzle

Some suction cleaners have a nozzle which can be used for both rugs and hard surface floors. Homemakers find this convenient where there are room-size rugs with a border of hard floor, because the entire floor can be cleaned without changing tools.

When the nozzle is supported by wheels or rollers, they should be of material that will not scratch the floor surface. A floating brush in the nozzle is important for loosening soil by sweeping. To prevent marring walls or furniture, the top and sides of the nozzle should have a guard of soft non-marking plastic.

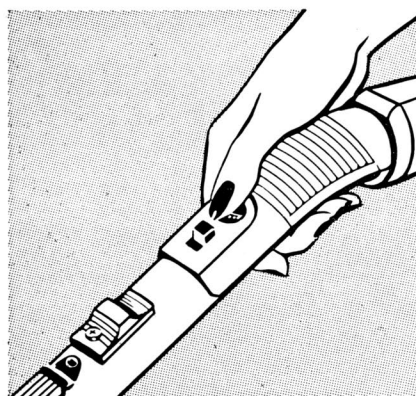
Flexible Hose

The hose is the link between the cleaner and the wands to which the floor cleaning tool is attached. For ease of handling, the hose should be lightweight and flexible. It may be made of braided cord or of plastic. The trend is toward plastic because its flexibility prevents kinks and awkwardness, making it easier to handle. Braided hose may be very stiff and almost the entire length must be manipulated when using attachments.

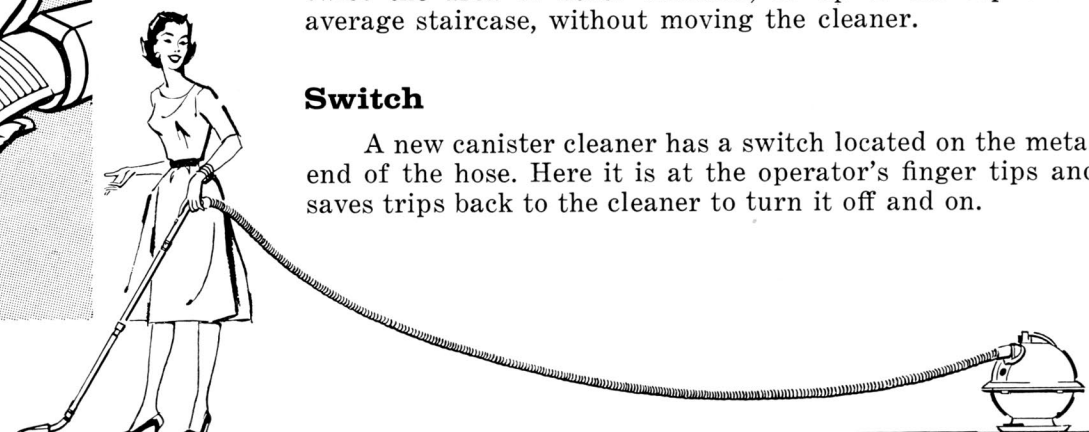
A new development of plastic hose which adds tremendously to its advantage is its ability to stretch to twice its length. With this double-stretch hose it is possible to clean twice the area of other cleaners, or up to the top of an average staircase, without moving the cleaner.

Switch

A new canister cleaner has a switch located on the metal end of the hose. Here it is at the operator's finger tips and saves trips back to the cleaner to turn it off and on.



**EASY
"ON AND OFF"
SWITCH**

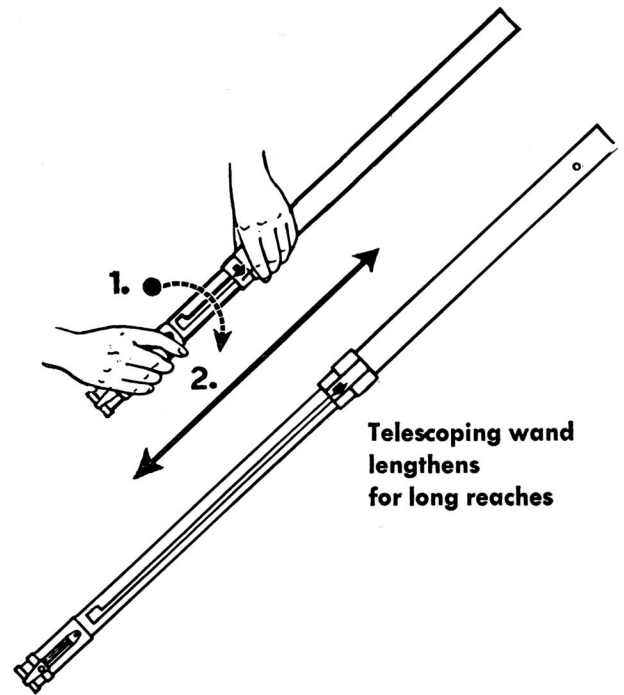


The type and location of the "on" and "off" switch can contribute much to the convenience of the use of the cleaner. Most upright cleaners have the switch on the handle. Suction cleaners usually have a foot-operated switch on the body of the tank or canister.

Wands

The wands or metal tubes connect to the hose. They may be of either steel or aluminum; the latter is lighter in weight. One of the tubes is straight, the other may or may not be curved. They fit together by friction or latch-type joints. Joints which snap or latch together are easier to assemble and disassemble—and will not come apart in use.

A new type of wand is designed so that the two sections telescope. It can be shortened for close work and lengthened when greater distance is needed. It remains as one compact unit for easy storage and cuts assembly time slightly.



SUMMARY OF USE

of Different Types of Vacuum Cleaners on Hard Surface Floors

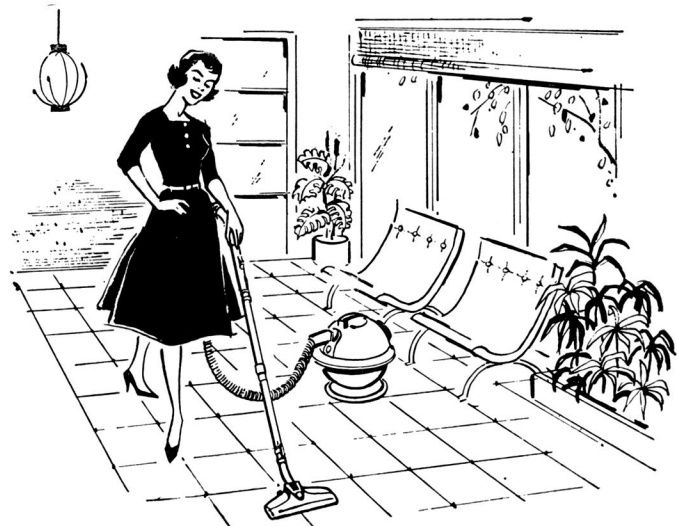
Dirt Removal

Since upright and suction cleaners use similar tools and both depend principally on suction for cleaning hard surface floors, the amount of dirt removed will be essentially the same. However, this depends also on a well-designed floor brush or combination rug and floor nozzle as described on page 16. Some of the dirt picked up from the floor is fine, powdery material. This rapidly saturates the filtering area of the dust bag. Since the dust bag of the average suction cleaner is smaller than that of the upright, this means that the over-all cleaner efficiency of the suction cleaner may be reduced at a more rapid rate.

There will be variations in the amount of dirt picked up by different upright cleaners. These cleaners have relatively low suction because for rugs they depend on other more effective cleaning principles which are built into them. An upright cleaner with a converter, which can increase its suction when used on bare floors, will pick up more dirt than one whose suction is constant.

Assembling and Ease of Handling

In comparing suction and upright cleaners for ease of use on hard surface floors, much will depend on the individual cleaners. Both types will need to be assembled each time they are used. One extra piece, the converter, is needed for the upright, otherwise the assembly of the two types may be expected to be similar.





Use of the Vacuum Cleaner for ABOVE-FLOOR CLEANING

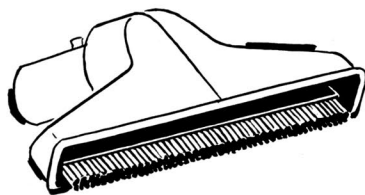
A dust cloth picks up a small part of the dust and moves the rest from one surface to another. On upholstered furniture, a whisk broom is sometimes used, but this stirs up dust which settles elsewhere in the room. The modern, efficient method actually to remove dirt from furniture and other surfaces is with the vacuum cleaner attachments, which are basically the same for all types of cleaners. The dirt is trapped in the bag and the homemaker will not be picking up the same dirt over and over again.

Upholstery Nozzle

Uses: This attachment is used for cleaning upholstered furniture, draperies, tapestries, mattresses, clothing, furs and carpeted stairs. It may also be used for interiors of cars.

Design: This nozzle may be made of resilient material or have a resilient guard around the outside to prevent damage to furniture and fabrics. The design of the tool should be such that it can be used in crevices of upholstered furniture.

The attachment may have a lint remover, usually at the back, to loosen tightly clinging lint and dust. This may be a short-bristle brush or pliable plastic which gives a good brushing action.



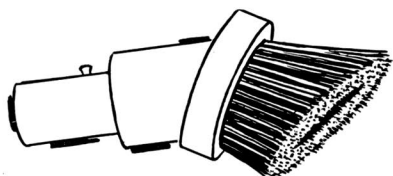
UPHOLSTERY BRUSH

Dusting Brush

Uses: For dusting jobs such as carved furniture, shelves, knick-knacks, lamps and lamp shades, lighting fixtures, Venetian blinds, louvered doors and shutters, wicker furniture, pictures and frames, registers, desks, tables and the like, the dusting brush is the modern and quick means of cleaning. Anything formerly dusted with a cloth can be more thoroughly and easily cleaned with this attachment of the cleaner. The dusting brush may be used with the wand or connected directly to the end of the hose.

Design: This attachment should have tufts placed close together so that air enters at the tip of the brush. Bristles should be firm enough to remove dust but flexible and not damage lamp shades and polished furniture. An angle-trimmed brush is the most effective.

To prevent air leakage between tufts of bristles, the tips of the bristles should form a continuous circle. There should be an inner guard to keep bristles from separating under pressure and prevent air leakage while using. To protect furniture there should be an outside resilient guard.



DUSTING BRUSH

Crevice Tool

A tool of many uses, this attachment is designed to reach the hard-to-get-to places. Until the use of this tool with the vacuum cleaner, there was no other way easily to clean deep

into crevices of upholstered furniture, the edges of wall-to-wall carpeting, radiators, into hot air registers, interiors of cabinets and dresser drawers and between kitchen appliances.

The crevice tool should be of sufficient length to reach into these places. The end should be angled to get into the corners. To avoid scratching objects which it contacts, the tool should have a smooth surface.

SUMMARY OF USE

of Suction and Upright Cleaners for Above-Floor Cleaning

Although the tools used with both suction and upright cleaners are basically the same, other over-all factors should also be considered.

Suction Vacuum Cleaners

This type of cleaner has more suction than necessary for most above-floor cleaning. Therefore, a regulator is needed to reduce suction for cleaning draperies and delicate fabrics. This regulator is usually found on the metal end of the hose. By increasing the size of the opening (see illustration at right) the suction is lowered.

To save steps, it is desirable to be able to carry the tools for the cleaner along with it while in use. Some canister and tank cleaners have a rack for tools as shown in the picture at the right. Others may have a compartment within the body of the cleaner or a separate carrying case.

Most suction cleaners are compact and easy to maneuver about the many rooms of the house where they are needed for above-floor cleaning. Some means of mobility such as wheels or air lift is desirable.

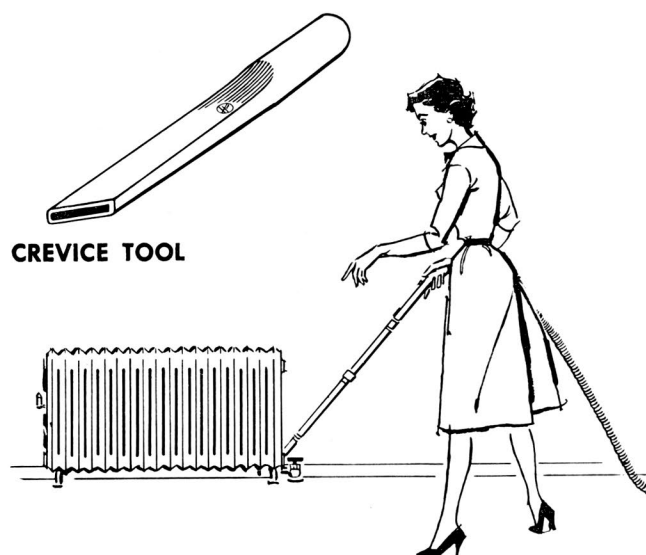
A comfortable handle is helpful in carrying this type of cleaner upstairs or down to the basement, out on a porch, or to the car, where it is very useful for many types of dusting and cleaning.

Upright Cleaner

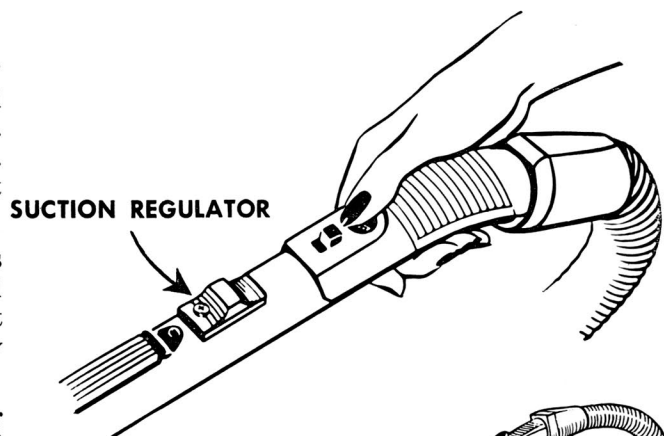
In a home with an upright cleaner which removes the highest amount of dirt from carpets, there is less dirt scattered from carpets and rugs to above-floor surfaces. This means that these surfaces will not need cleaning so frequently.

In addition to the tools similar to those used with the suction cleaner for above-floor cleaning, the upright cleaner also requires a converter. See page 15 for further description of this device.

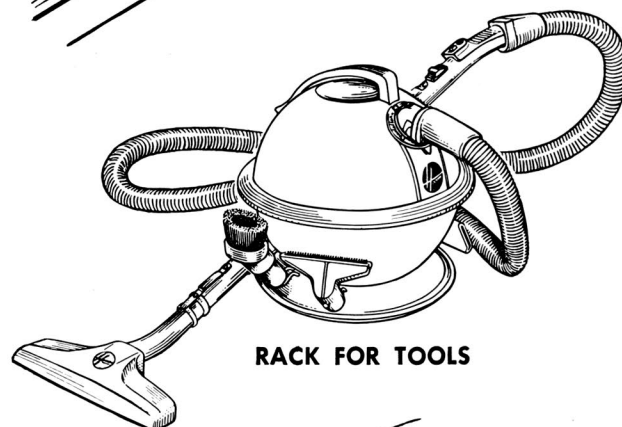
Some women feel that this type of cleaner is less compact for carrying upstairs. In a home with two cleaners, the upright is often used in living areas, both for rugs and above-floor cleaning, with a second cleaner of the suction-type kept in the sleeping area, or upstairs, where there is likely to be less carpet, less gritty dirt and much above-floor cleaning to be done.



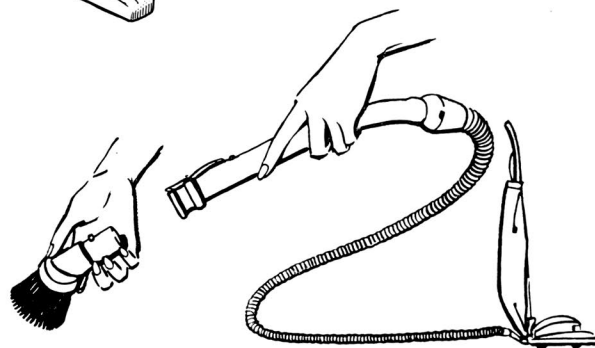
CREVICE TOOL



SUCTION REGULATOR



RACK FOR TOOLS



**UPRIGHT CLEANER
ATTACHMENTS**

SUMMARY OF PERFORMANCE

of Suction and Upright Vacuum Cleaners

As stated on previous pages, the selection of a cleaner will depend on the type of cleaning to be done. These jobs vary in each home. It is reasonable to expect that some cleaners may be more convenient and efficient for a given home

than others. However, it is important to keep in mind that thorough cleaning of rugs and carpets is a prerequisite to a clean house; this prevents scattering dust and dirt to other parts of the house. To compare cleaners, check chart below.

PERFORMANCE CHART

USE	SUCTION CANISTER OR TANK	UPRIGHT MOTOR-DRIVEN BRUSH	UPRIGHT MOTOR-DRIVEN AGITATOR
Carpets and Rugs	Must be assembled before using. Dirt removal fair to good. Requires more strokes and effort.	No assembly necessary. Dirt-removal good. Less effort required than for suction-type cleaner.	No assembly necessary. Dirt-removal excellent, including deeply embedded grit.
Room-Size Rugs with Border of Bare Floor	Both surfaces clean fairly well with one tool, the combination rug and floor nozzle.	Two tools needed. Clean rug, then assemble attachments with floor brush and clean floor.	Similar to motor-driven brush, except, with converter, suction and efficiency increased.
Hard Surface Floor	Excellent and easy to use with combination floor and rug nozzle.	Satisfactory. Suction sufficient for most cleaning jobs. Use floor-brush attachment.	Efficient. Suction increased by use of the converter. Use floor-brush attachment.
Above-Floor Cleaning and Dusting	Efficient and easy to handle for all above-floor cleaning. Suction can be decreased for cleaning fabrics.	Fairly satisfactory. Suction sufficient for most cleaning jobs.	Efficient. Suction and efficiency increased by use of the converter.
Stair Cleaning	Easy to use, especially if it has a stretchable hose or if cleaner is designed to rest on stairs.	Satisfactory. Not as convenient as suction cleaner.	Same as motor-driven brush — stretchable hose is an asset.
Portability	May have air lift and follow user without pulling, or have wheels or rollers. Handle for carrying when necessary.	Wheels from place to place. Some have a handle for carrying when necessary. Usually not as easy to carry as suction cleaner.	Same as motor-driven brush.

VACUUM CLEANER STORAGE

A well-organized cleaning closet can contribute to the ease of use of the cleaner and cut time spent in getting ready to clean.

Storage near where it is needed most will encourage use of the cleaner more frequently.

Do-It-Yourself Ideas for Cleaning Closet

A few simple inexpensive changes can make a closet convenient for cleaning supplies.

Line the door of the closet with peg board. Insert two or three pegs long enough to hold the hose in a U-shape fashion as shown in the picture at the right. Other pegs can be added to hold a kit of attachments. Wands may be stored with the attachments, or more pegs may be added to hold them horizontally. Tack up a set of pockets made from sheet plastic for storage of miscellaneous items. One of these may be large enough to contain a supply of disposable cleaner bags, another may hold the cleaner instruction book.

An electric floor polisher, a sponge mop, and a plastic bucket are conveniently stored in the same closet. A shelf in the closet holds attachments for the polisher, waxes, furniture polish, cleaning cloths, and solvents for easy spot removal from carpets and rugs. The closet can also (as shown in the picture) provide storage for an ironing board.

Storage of Attachments to Save Time

If a suction cleaner has a rack or other provision for holding attachments on the cleaner itself, this will make storage more compact, cut assembly time and save trips during use.

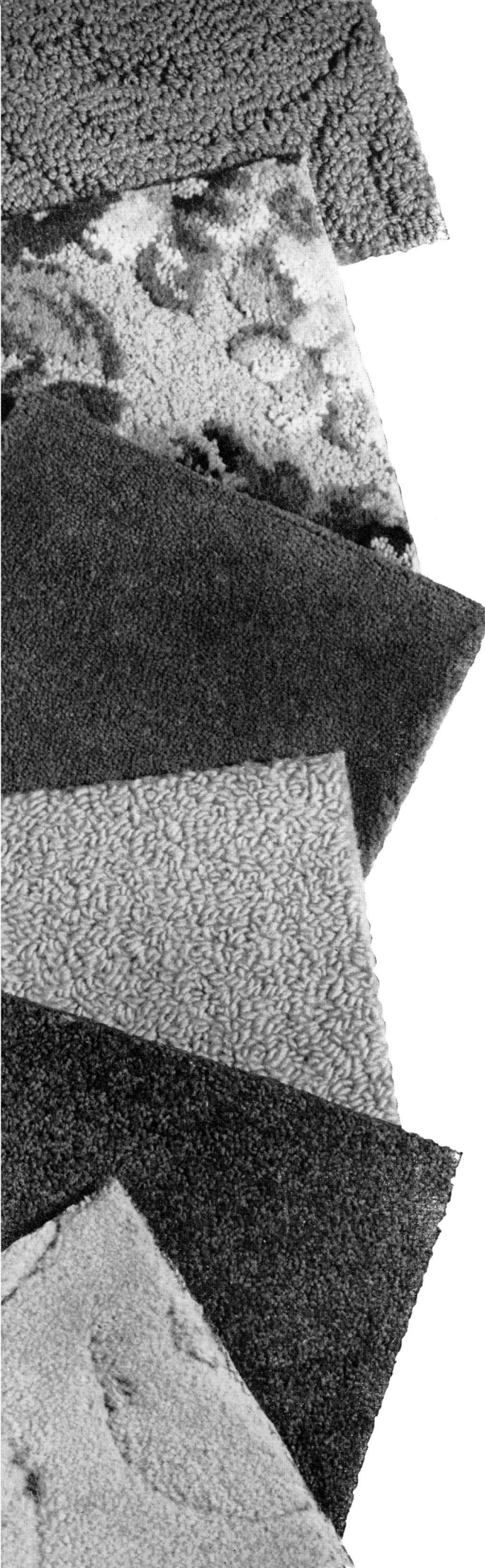


A carrying kit with a place for each tool is often provided. This is also useful for storage.

If space permits keep rug nozzle of suction cleaner connected to wands; clamp to side of closet or on the door. This will save assembly time.

Storage of Two Cleaners

The upright which is especially efficient for rug cleaning should be stored near the living areas. A suction cleaner, if this is the second cleaner in a home, may be kept in a closet near the bedrooms. Then each will be near the jobs for which it is most often used.



CARPET FACTS

Carpets and rugs, thoroughly vacuum-cleaned, are the key to a well-kept house. To understand and appreciate many of the problems of carpet care, additional facts about carpets are given here.

The Trend to Soft Floor Covering

The United States Department of Agriculture Marketing Research Division reports that 81 percent of American homes have one or more rooms with soft floor covering. According to another recent survey, 13 out of 14 women prefer carpeting to any other floor covering. They say carpeted floors are easier to keep neat and clean with a vacuum cleaner than are other types of floors.

These home experiences have been borne out by hotels and other institutions where maintenance cost is extremely important. A research study showed that the cost of maintaining carpeted floors was 40 to 50 percent less than for non-carpeted floors.

This trend to more carpets and rugs points up the need for knowledge of the different types and changes which are taking place.

Changes in Carpets and Rugs

Perhaps the biggest change in carpet buying is the diminished interest in carpet construction. Homemakers are chiefly interested in appearance. They buy by color, design and price. They are interested in materials, patterns, pile and surface texture.

Color and Surface Texture

A greater variety of colors are now available with a trend to more light colors and many solid-color carpets. As the demand for plain-colored carpets and rugs increased, the patterns have also changed. Formerly design interest was obtained by use of multiple colors. Now with one color predominant, design is often created by variations in surface texture. By use of cut and uncut pile of different lengths, an interesting textured appearance is achieved. Carpets are also machine-sculptured and hand-carved to give pile of uneven height and variety in texture.

New Fibers for Carpets

Formerly there was the feeling that the only good rug was an all-wool one. However, with the introduction of man-made fibers and new developments with cotton, this is no longer true. Now about 44 per cent of the carpets being made are wool, 40 per cent are of man-made fibers, 7 per cent are cotton and 9 per cent are a combination of wool with other fibers. The newer fibers are not to be regarded as substitutes; rather, they can be engineered to give variety in styles, color,

textures and contours not possible before. The man-made fibers used in carpets and rugs include nylon, acetate, rayon and acrylic fibers such as Acrilan and Verel. One of their advantages is that they are mothproof and mildew resistant. However, some wool and wool-blended rugs are now being permanently mothproofed by the manufacturer.

Carpet and Rug Construction

Two processes are widely used in rug making, weaving and tufting.

Until after World War II almost all carpets were woven. The backing and pile are woven on a loom at the same time. A variety of colors, patterns and textures are available in woven carpets. Some of the best known carpet weaves include Wilton, Axminster, Velvet and Chenille.

Tufting is an important new method now used for 50 per cent of the carpets and rugs made today. Pile yarns are sewn to a broad fabric backing by wide multiple-needled machines. The backing may be jute or cotton canvas. After tufting is completed, yarn ends are secured by coating with latex on the back.

Tufted carpets and rugs, first made with cotton, now use all types of fibers, including wool. A wide variety of colors and designs are possible with this process but it does not, at present, allow the flexibility of design in multiple colors as known in woven carpets. However, developments are being made in color and texture variations.

Good quality tufted carpets and rugs have a thick, dense pile that feels luxurious and wears well.

For ways in which construction affects cleaning, see page 3.

Important Carpet Terms

Backing—foundation or underside which secures the pile yarns in position. Usually cotton, jute, carpet rayon or kraft cord.

Broadloom—seamless carpet of any weave produced on broad looms from six to eighteen feet wide. Also applied to tufted carpet made in wide widths.

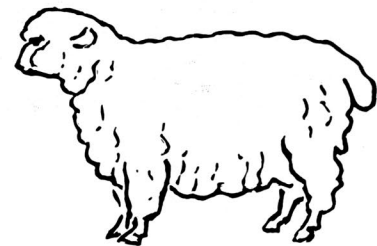
Jute—a vegetable fiber imported from India. Heavy and tough.

Kraft Cord—tough yarn made from wood pulp. Used in weaving the backing of some carpet.

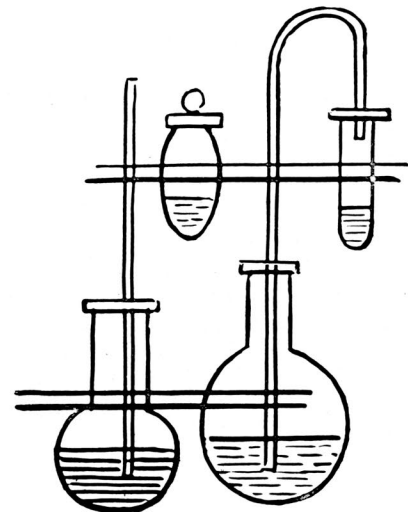
Pile—tufts of yarn that stand erect from the base of the carpet and form the surface. Ends may be cut or looped.

Warp—yarns running length of carpet. Pile yarns of woven carpet run warp-wise.

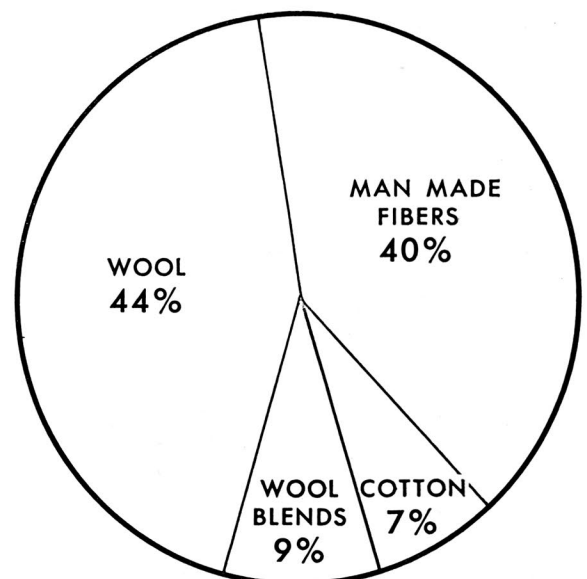
Weft—yarns running width of carpet. In the tufting process, pile yarns run weft-wise.



WOOL



MAN-MADE FIBERS



FIBERS USED IN CARPETS AND RUGS TODAY

Spot Removal

Courtesy-American Carpet Institute Inc.
"How to Care for Carpets and Rugs"

Almost every carpet or rug is the victim of spots or stains from time to time. That doesn't mean that the housewife should worry unnecessarily, however—most of these accidents of spilling and dropping can be taken care of with little trouble. And since carpet is an especially durable home furnishing, it can withstand a great many accidents without being ruined.

The dangers of spots and stains can be minimized if the housewife will follow these three rules: (1) Act quickly when anything is dropped or spilled on a carpet. Remove spots and stains before they dry or "set" themselves. (2) Have necessary cleaning equipment always at hand. (3) Try to identify what caused the spot or stain and remove it by following directions carefully.

There are two types of cleaning material which should be kept on hand at all times for quick spot cleaning of carpets and rugs. They are really the only two suitable for home use. Other materials you may hear about are useful in the hands of skilled cleaners, but may do considerable damage if not properly used. The two cleaning materials you may safely use are these—and be sure that these materials are available for ready use in your home:

Water - Detergent - Vinegar Solution



Add one teaspoonful of a neutral detergent such as "Dreft," "Vel" or "Breeze" to a quart of warm water. To this add one teaspoonful of white vinegar which is a weak acid and will serve to neutralize any alkaline materials.

Sponging the pile surface with a CLEANING FLUID



This method is particularly suited to rugs and carpets made of wool or man-made fibers. It is not recommended for cotton rugs.

A cleaning fluid dissolves the oil film which makes dirt particles adhere to carpet fibers and thus effectively brightens colors. This cleaning material will not injure the carpet yarns

or the dyestuff, and it evaporates quickly and completely, leaving no residue.

The fluid should be applied sparingly with a gentle wiping motion so that only the top portion of the carpet pile becomes wet. Excess fluid may leave rings or soak into the backing and soften the backsizing. Solvent-type cleaners will not remove stains or soil due strictly to water-soluble materials, such as sugars or starches.

Examples of such dry-cleaning solvents which are available in most areas are Carbona (carbon tetrachloride), Renuzit and Vythene. *While these materials are very friendly to your carpets, they may be flammable or toxic, or both. Therefore, please read the manufacturer's recommendations as found on the label and in all cases take the following precautions:*

1. Avoid inhaling fumes which are toxic.
2. Have windows open so liquid evaporates quickly and lessens chance of inhaling fumes.
3. When working with a cleaner which is flammable, avoid having lighted cigarettes or running electrical appliances around during the cleaning operation.

If you cannot identify a spot or stain on your carpet, use a general cleaning procedure such as this:

- Step 1.** Remove excess materials. In the case of liquids, absorb with a clean white cloth or other absorbent material. If semi-solid, scrape with a knife or spatula, or use a sponge.
- Step 2.** Apply the detergent-vinegar-water solution. Use a clean cloth and wipe gently from the edge of the soiled area toward the center. At intervals blot with a dry, clean cloth to absorb excess solution.
- Step 3.** Dry the carpet.
- Step 4.** Apply a dry-cleaning fluid, again wiping gently and working from the edges of a spot or stain toward the center.
- Step 5.** Dry the carpet and brush the pile gently to restore the original texture.

In using the general procedure, you will want to exercise judgment as to whether both types of cleaning solution are necessary, or if any application should be repeated. For example, if the detergent-vinegar-water solution seems to remove most of the stain, it would be wise to repeat application of it.

Be sure to dry a wet carpet quickly and completely. Thus you will avoid mildew and other types of carpet damage. Raise the cleaned area off the floor, if possible. Or direct the air blast from a fan or vacuum cleaner nozzle against it. A solvent cleaner will dry quickly, but be sure to allow for ventilation until all of the fumes have disappeared.

The following types of spots require special comment:

NAIL POLISH—The so-called "nail polish remover" is also a satisfactory spot remover for nail polish spilled on a carpet.

However, both nail polish and polish remover will seriously damage any carpet containing acetate fibers, and such cases require professional service. It is also true that some dyestuffs are not completely "fast" to polish remover, so test it first by applying it sparingly in some inconspicuous area of the carpet. If no damage appears, then proceed as follows:

1. If the stain is still wet, absorb as much polish as possible on a dry cloth, taking care not to spread it.

2. If the stain is dry and hard, apply polish remover to the area with an eye dropper and allow a few minutes for it to penetrate and soften the mass. Repeat if necessary.
3. Using a spoon with a dull edge, scrap off as much polish as possible. Then apply polish remover to the stained area and mop up the excess, repeating this procedure until the last traces of the nail polish have been removed.

CIGARETTE BURNS—Cigarette damage cannot be completely remedied except by reweaving. However, an area of carpet charred in a superficial manner can be improved by this procedure:

1. Carefully clip off blackened ends of tufts, using small, sharp scissors.
2. Follow this with an application of the detergent-vinegar-water solution as described in the general procedure for spot removal.

ACID SUBSTANCES—Weak acids such as are found in fruit juices will not damage a carpet and these stains should be treated as described under the section on "Stains" in the spot removal chart.

Strong acids are not in common use. However, carbolic acid disinfectants and some tile cleaning compounds do fit into this category. If these should be spilled on a carpet, prompt and drastic action is necessary to prevent serious damage. Flush the affected area with water. Sponge up the excess and repeat several times until the acid has been diluted and washed away. Finally, sponge the area with a dilute alkaline solution prepared by adding one tablespoonful of baking soda to a quart of warm water—and rinse again.

By this time the carpet will be very wet, so be sure to dry it as quickly and as thoroughly as possible.

RUST—Rust stains almost always require professional service because the cleaning agents required are hazardous when not properly used. In some cases, especially if the stain is fresh, the general cleaning procedure, using the detergent-vinegar-water solution, may be successful.

PERMANENT INK—Permanent inks are strong, fast dyes and cannot be removed by any spotting procedure. However, prompt action in blotting up ink stains and washing with water may be successful.

When ink has been spilled on a carpet, try to determine if the ink is a washable type. If so, the procedure described in the chart under "Stains" will be helpful.

If you can identify what caused a spot or stain, use this chart.

Removal of Specific Spots and Stains

TYPE OF STAIN	PROCEDURE
 OILY MATERIALS butter grease oil hand cream ball-point-pen ink	Remove excess materials, apply a dry-cleaning fluid; dry the carpet; repeat application of solvent if necessary; dry the carpet and gently brush pile.
 OILY FOODSTUFFS ANIMAL MATTER coffee tea milk gravy chocolate blood egg ice cream sauces salad dressing vomit	Remove excess material, absorbing liquids and scraping semi-solids; apply detergent-vinegar-water solution (as described above); dry the carpet; apply dry-cleaning solvent; dry the carpet and brush pile gently.
 FOODSTUFFS STARCHES AND SUGARS candy soft drinks alcoholic beverages	Blot up liquids or scrape off semi-solids; apply detergent-vinegar-water solution, dry the carpet — re-apply the solution, if necessary; dry carpet and brush pile gently.
 STAINS fruit stains washable ink urine excrement	
 HEAVY GREASE, GUM gum paint tar heavy grease lipstick crayon	Remove excess material; apply a dry-cleaning fluid; apply detergent-vinegar-water solution; re-apply dry-cleaning fluid; dry carpet and brush pile gently.

Class Projects and Demonstrations

PROJECT I **Objective: To become familiar with types of household dirt and learn how each is removed**

WHAT YOU NEED

About 2 yards fine sewing thread cut in 1-inch pieces to represent clinging litter

½ cup baking soda to represent fine dust

½ cup corn meal to represent gritty dirt

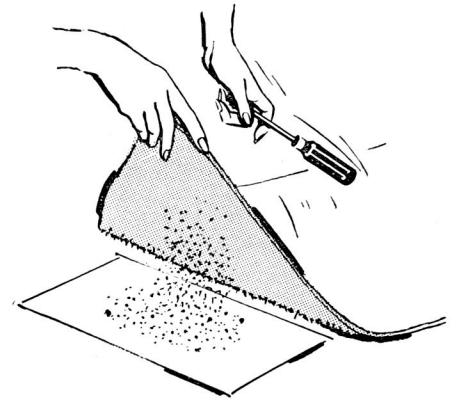
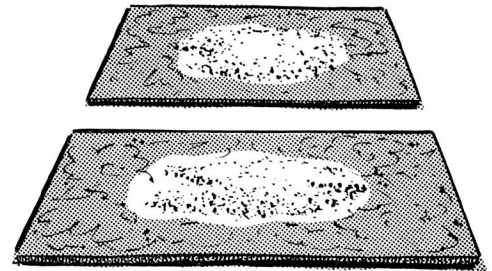
Suction-type cleaner

Motor-driven agitator cleaner

2 small rugs, identical, with medium-height pile

WHAT TO DO

1. Scatter half of each of the three types of dirt over about 1 square foot of one rug and place the remainder on the second rug in the same size area. Walk over both or rub the artificial dirt in the rug with the sole of the shoe, until all but thread and a small amount of corn meal disappear.
2. With the suction-type cleaner, clean one rug with two forward and two backward strokes. Next, run the upright cleaner on the other rug, taking care to use only two forward and two backward strokes for comparison.



Questions to Discuss

1. Which type of dirt disappears first when rubbed in the rug? Can a rug look clean when it holds a lot of dirt?
2. Does any dirt remain on the surface after rubbing?
3. Compare the ability of the two cleaners in removing the clinging litter (threads).
4. Spread plain white paper on the floor; turn rugs over and tap the back of the rugs with a screw driver or other heavy instrument so that dirt from the rug will drop on the paper. Is any soda (fine dust) left in the rug after vacuuming? Is any corn meal (gritty dirt) left in the rug?
5. Compare the efficiency of the two cleaners in removing the three kinds of dirt.

PROJECT II **Objective: To become acquainted with the upholstery nozzle and its uses.**

WHAT YOU NEED

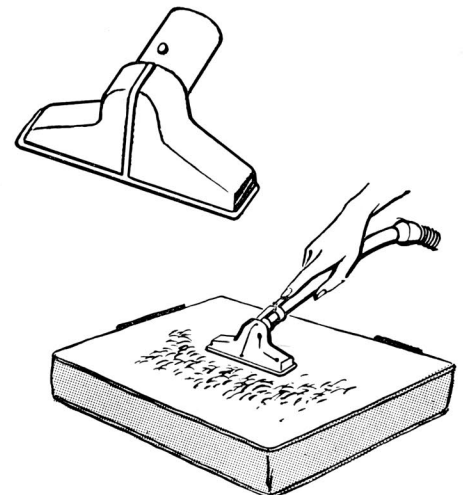
Upholstery nozzle, one or more. Use one with brush and one without brush if available.
Vacuum cleaner

Kapok

Chair or cushion with upholstery of wool or mohair

WHAT TO DO

1. Spread kapok over the cushion or seat of chair; remove by hand the large pieces, leaving only fine clinging particles.
2. Clean half of the cushion with upholstery nozzle attached to vacuum cleaner. Count the number of strokes needed to remove the kapok. Repeat, using the other upholstery tool to clean the second half and count strokes required.
3. Use the upholstery tool to clean draperies at the window. If fabric is drawn into the nozzle, reduce suction with the suction regulator. (For suction-type cleaner.)



Questions to Discuss

1. What parts of the upholstery nozzle aid in removal of clinging litter?
2. What are the purposes of the suction regulator?

PROJECT III

Objective: To become acquainted with the dusting brush and its uses

WHAT YOU NEED

Table
Baking soda
Dust cloth, plain or chemically treated
Dusting brush and vacuum cleaner

WHAT TO DO

Sprinkle soda over the table, using a flour sifter to get a fine, light dust. Dust half the table with a dust cloth. Note any soda that falls on the floor. Examine cloth and note the dust from the furniture is now on the cloth. Dust other half of furniture with dusting brush attached to vacuum cleaner. Note the ease of use. Examine brush for signs of soda or dust.

Questions to Discuss

Which method most efficiently removes dust from sight? Which is more sanitary?

Compare the work required to clean the dust cloth and the dusting brush attachment.

For what other cleaning jobs can this tool be used in the living room, bedroom, porch, dining room or other parts of the house?



PROJECT IV

Objective: To become acquainted with the crevice tool and its uses

WHAT YOU NEED

Kitchen cabinets, refrigerator or range
Crevice tool, vacuum cleaner

WHAT TO DO

Use the crevice tool to clean between refrigerator and cabinets or range and cabinets, also inside cabinet drawers. Examine room for other uses for this tool.

Questions to Discuss

What are the uses for the crevice tool in the kitchen, living room, hall, bedroom, porch or other rooms?



PROJECT V

Objective: To become acquainted with tools for cleaning hard surface floor

WHAT YOU NEED

Upright cleaner with floor brush
Suction-type cleaner with combination rug and floor nozzle
Baking soda
Hard surface floor, wood, vinyl, linoleum etc.

WHAT TO DO

Sprinkle soda lightly over the floor, including the area near the baseboard.

Have one of the group clean half of the floor with the upright cleaner and floor brush, running the brush as close to the baseboard as possible.

Another student may clean the remainder of the floor with the suction-type cleaner and the combination nozzle.

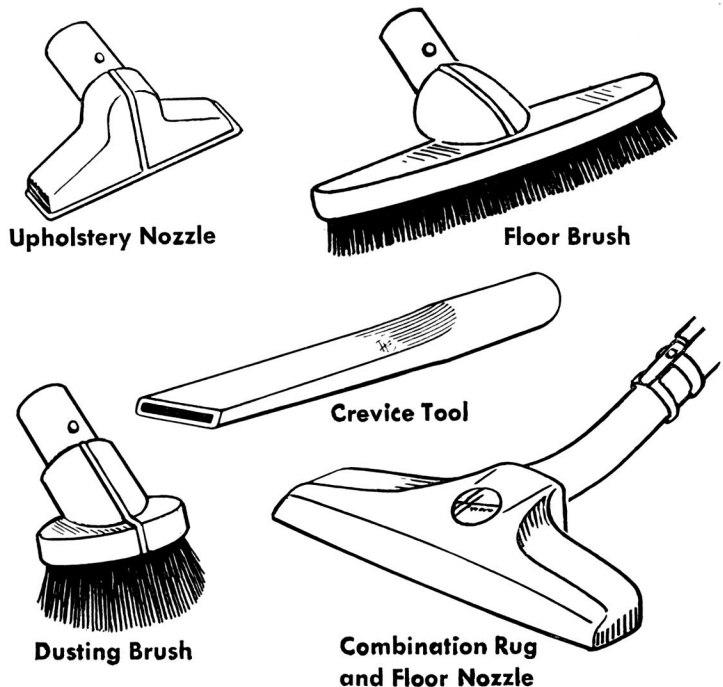
Questions to Discuss

Will the cleaners pick up the dust close to the baseboard? Compare the cleaners for ease of use, assembly and cleaning job which each can do.



OBJECTIVE: To learn the uses for the different attachments

The cleaner tools and features are listed in the column below at the left. Each of these has several uses. How many do you know? Place the numbers corresponding to the uses listed at the right in the blanks following the names of the features. To check your answers, read pages 16, 18, 19.



TOOLS AND FEATURES

Upholstery nozzle _____
Floor brush _____
Crevice tool _____
Dusting brush _____
Reduced suction _____
Combination rug and floor nozzle _____

CLEANING JOBS

1. Between cabinet and refrigerator
2. Room-size rug, border of bare floor
3. Edge of wall-to-wall carpeting
4. Draperies
5. Dresser drawers
6. Tiled bathroom floor
7. Mattress
8. Carved furniture
9. Baseboards
10. High moulding over door
11. Radiator fins
12. Kitchen floor
13. Upholstered furniture
14. Books

The Care Your Cleaner Deserves

Just as a car or other mechanical device needs periodic servicing, it is wise to have a vacuum cleaner checked regularly at an authorized vacuum cleaner service station.

To Get the Most from the Cleaner

Before using the vacuum cleaner it is strongly recommended that the manufacturer's instruction book be read carefully. It will tell the best way to use the cleaner and how to get the best possible service from it.

The care given a cleaner will largely determine the cleaning results obtained. There are three simple rules to follow, often called the three B's because they concern the bag, brushes and belt.

1. **The bag** should be replaced at frequent intervals. If the cleaner has a cloth bag it should be emptied after each use for maximum efficiency. The bag is designed as a filter to hold the dirt inside and allow the air to pass out. When a large amount of dirt is allowed to accumulate, the pores of the bag become clogged and the cleaner loses its ability to pick up dirt efficiently.

Many cleaners now have disposable bags used inside the regular cloth or plastic cover. A supply of bags comes with the cleaner and extras can be purchased as needed. The instruction book should be consulted for the manufacturer's recommendation on when to change the bag. Only bags recommended by the manufacturer should be used with that cleaner.

2. **Brushes** should be checked to see if they are worn. To examine the brush of an upright cleaner, place a piece of cardboard across the nozzle and turn the brush roll or agitator slowly. If brushes do not contact the cardboard, they should be adjusted or changed. Suction cleaner air- or motor-driven brushes can also be checked for wear in a similar manner.

The floor brush attachment and dusting brush should be cleaned with suction after each use. They may also be washed in warm sudsy water, rinsed and dried.

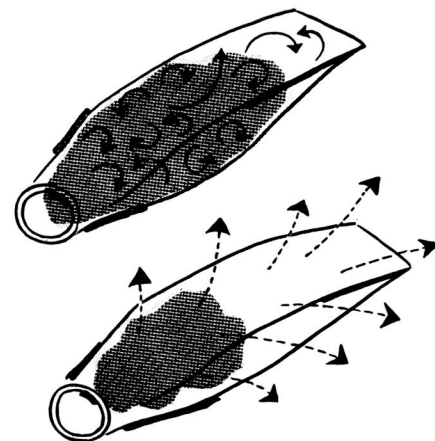
3. **The belt** of an upright cleaner should be checked to be sure it is in good condition. If stretched, nicked or cut, the cleaner will be less efficient.

To prevent damage to the belt, avoid picking up hard sharp objects such as bobby pins, tacks, etc. These may nick the fan or cut the belt and puncture the bag.

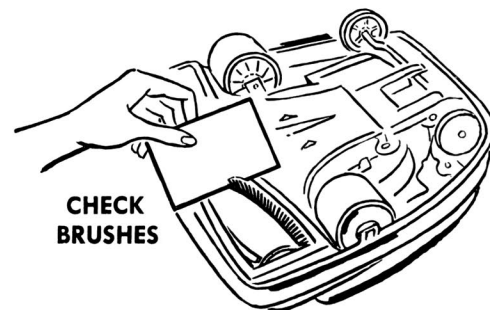
Cord—Avoid running the cleaner over the cord. For upright cleaners, when stored, wind the cord on the hooks provided to prevent undue wear and strain. Canister and tank cleaners often have provisions for storage of the cord by wrapping it around the handle, on hooks, or around the cleaner. A clip is sometimes provided on the plug to fasten the end of the cord.

Where to Get Replacements and Service

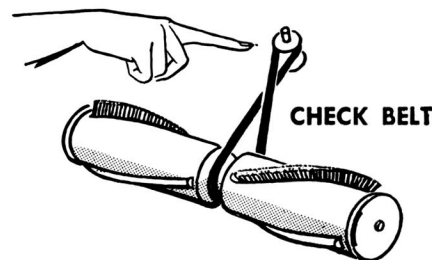
If the name of a service station or dealer is not known, consult the yellow pages of the telephone directory. Replacements for bags, brushes, belts and other help may be secured there.



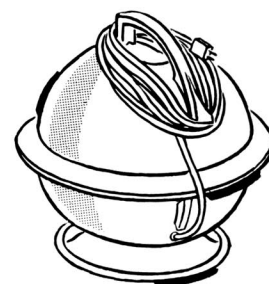
REPLACE BAG OFTEN



CHECK
BRUSHES



CHECK BELT



WRAP CORD FOR STORAGE



SERVICE

NOTES

