Bulletin

OF THE

AGRICULTURAL EXTENSION SERVICE, THE OHIO STATE UNIVERSITY

## WHEN YOU BUY YOUR WASHING MACHINE

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"Shopping around" before you buy your washing machine is advisable. Differences between makes and models will readily show up if you make an effort to find them. In this way, you will find what really makes the difference in cost, convenience, and ease of control. By shopping, you will be more likely to make a better buy, save money, and obtain other satisfactions from your purchase.

There are two major types of washing machines on the market, nonautomatic (see Figs. 1, 4, 6, and 7) and automatic (see Fig. 2). Non-auto-



matic washers range in price from about \$40 to \$175. Most washers of the automatic type are priced between \$200 and \$300. They wash, rinse, and damp dry the clothes (ready to hang up) without anyone having to handle them during the process. Usually, there is some expense involved in installing automatic machines. Additional equipment, such as rinse tubs, are needed with non-automatic washers.

## Automatic Washers

Many manufacturers are making automatic washers for the first time. The real test for any product is in its use under normal conditions. The first buyers are the ones who usually have to pay for mechanical failures and inconvenient features due to newness. In time, reputable manufacturers iron out such difficulties. Remember a guarantee is only worth as much as the manufacturer and dealer behind it.

Water Requirement.—Automatic machines must be connected to both hot and cold running water and a drain. An adequate supply of hot water is a necessity for the satisfactory use of an automatic washer. For the average family, a 60-gallon water tank will supply enough het water for all wash day needs. If your hot water tank is small, wash dayswith an automatic washer may need to be an every-other-day affair.

THE OHIO STATE UNIVERSITY AND THE UNITED STATES DEPARTMENT OF AGRICULTURE, COOSSATING AGRICULTURAL EXTENSION SERVICE, H. C. RAMSOWER, Director, Octombus, Olive Printed and distributed in furtherance of the Acts of May Statisfield une 30, 1914 Each automatic washer load, however small, requires the same amount of hot and cold water and water softener, if the automatic wash-rinse-dry cycle is used. Therefore, in order to make the best use of your water supply, it is important to have full loads. In areas where water is limited full loads are *essential*. The amount of soap will vary with loads.

Washing Action.—At present, most automatic washers have a rotating basket or cylinder which is either in a vertical or horizontal position (see

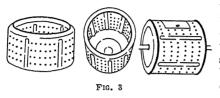


Fig. 3). This basket is used for both washing and spin-drying the clothes. Those built in a vertical position produce a washing action similar to agitator type machines. The clothes are swished through the water. When the basket is in a horizontal position, the clothes are dropped against the water and basket wall and the soil is removed

by a light pounding action. Other types of washing actions are being developed. How they will operate, time alone can tell.

No washing machine will take all stains and soil from very dirty clothes. Pre-rubbing with soap of the very dirty spots is necessary in the use of *any* washing machine. If this is done, time for washing is reduced and there will be much less wear on the clothes.

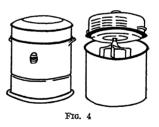
## **Non-Automatic Washers**

The price of non-automatic washers depends on size of tub, type of washing mechanism, method for removing water from clothes, and special features, such as pump, timer, and styling.

Size of Tub.-Non-automatic washers are rated according to dry weight of load. Generally, standard sizes hold from 5 to 9 pounds. Apartment or

portable washers will hold only 2 or 3 pounds (see Fig. 4). The washer at the left has the motor in the base, while the motor is housed in the cover of the washer shown at right in Fig. 4. Double tub washers, with a washing mechanism in each tub, are designed especially for the larger family's needs.

Overloading any washer causes a strain on the operating mechanism and requires longer washing periods. Therefore, it is important to select the size best suited to your needs.



Mechanism of Washing Machines. — Most non-automatic washers have their washing mechanism attached to a shaft in the center of the tub (see

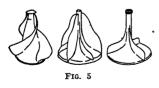


Fig. 5). This mechanism or *agitator*, for which most companies have their own trade names, turns back and forth and *swishes the cloth through the water*. A few washers use suction or vacuum cups to produce the washing action. Washing by suction forces the water through the clothes. The design of the washing device in relation to the tub and power mechanism is individual with each type, make, and model. The effectiveness of the washing action of any *one* machine will depend, in large part, on you, the user.

The amount of clothes in relation to the specific washer, the amount and temperature of the water, the amount of water softener and soap are factors which you alone will be able to control. Therefore, the "timing" for any load, or part of load, depends on these factors as well as the fabric and the degree and kind of soil.

The agitator should never be left on the agitator shaft, except when the washer is in use. This is because water collects on the shaft and in time causes gear trouble. Therefore, some provision for the easy removal of agitator from the shaft is necessary.

Wringers.—Generally, family size washers below \$90 in price have wringers. A safety release, which automatically separates and stops the rollers, if clothes or fingers or hair should get caught between them, is important. A wringer which locks in at least four positions adds to convenience. Drain boards should have smooth corners and should be easy to reverse. Wringers are safer if the rolls stop revolving after release of the pressure between rolls. Automatic control of roll pressure adds to convenience.

Spinner Dryers.—Spinner dryer washers cost from about \$100 to \$175 (see Fig. 6). They have an advantage over wringer washers from the stand-

point of safety to person and to clothes. Buttons and other fasteners are not damaged in the dryer while they may be with the use of a wringer. No deep creases are put in the fabric with the use of spinners. The basket should be large enough to hold the full load of washed clothes. In some of the newer models, very little handling of clothes is necessary because the clothes are washed in the same basket as the one in which they are whirled dry.

**Two-Tub** Washer.—A two-tub washer (see Fig. 7) is designed to save time and energy. Clothes may be washed or put to soak in one, while more clothes are being rinsed or washed mechanically in the other. If you let the agitator



do the work of rinsing, time and energy will be saved and a more thorough rinsing job will result. Double tub washers cost around \$150.

Over-all Construction.—All structural parts should be sturdily built. It is desirable that parts be either welded or riveted together. If bolts are used, as they may be to attach legs to frame, they should be rust-resistant and of the lockwasher type.

Most tubs are made of aluminum, or of steel finished with porcelain enamel. Parts, such as cover, legs, and body trim, are usually finished with a synthetic enamel. Special care must be given to those parts to lessen peeling.

Adjustable Machine Height.—In order for you to work comfortably at your machine, some means for adjusting the height of the tub is desirable.



Is the Machine Easy to Move?—You can find out if the machine is easy to move only in one way—by moving it yourself. Machines with large swivel wheels seem to move more easily than those with castors. Lock devices on wheels or castors help to keep the machine stationary while in use.

Are the Controls Within Easy Reach?—All controls (motor switch, clutch, wringer and spinner dryer controls) should be within easy reach. For safety reasons, controls should be so located that the clothing of the operator will not catch on them.

A fairly new control on non-automatic washers is a timer. If desired, the timer can be set to stop the agitator after the clothes have been washed for a designated number of minutes. It needs to be re-set with each load. If you are considering a washer with such a time control, be sure to learn how to use it so that damage to the machine will not result.

What About Motor and Gears?—It is important that the motor be protected from possible splashing and be well insulated from the frame of the machine. The gears of most washers are now encased in oil. If you use your machine according to manufacturer's directions, usually no attention to gear lubrication will be needed for several years. Common causes of gear trouble are overloading machines with clothes and water and not removing the agitator during periods between use.

How Does the Machine Drain?—If there is no drain in the floor where you use your washer, a pump is well worth the additional cost, around \$10. It saves the bother of a siphon or draining the water into a bucket. You will want to check whether or not the bottom of the tub slopes toward the drain opening. Such construction makes for faster and more complete draining. If there is no pump, the drain outlet should be threaded so that a standard hose could be connected to it. The drain control valve should be easy to open and close.

What About Electric Safety?—The electric cord should be heavily insulated and rubber covered. Your washing machine probably will not be supplied with a *ground wire*. However, for safety's sake, it would pay you to have an electrician equip your machine with such a wire.

## Special Features

Special features, such as timers, extra controls, double wall tubs, built-in water heating devices, and styling are often designed for their sales appeal. A special feature to one buyer might be considered essential to another buyer. Everything that is added to a product costs something, even though it may not have a price tag all its own. Sometimes, quality of essential parts is sacrificed in order to provide an eye-catching feature. You will have to decide for yourself if any one special feature is worth the price.

Purchase your washing machine from a reliable dealer whose reputation has been established. Such a dealer handles products that will not be orphans at an early date. It is important that he be able to service your appliance properly and get parts readily. Generally, the manufacturer's guarantee is only as good as the local dealer behind it. Washers made by reliable manufacturers are approved by the National Board of Fire Underwriters and bear their seal of approval.