



## CHAPTER 1: ELECTRICAL HOUSEWARES

### Small Appliances

#### COFFEEMAKERS

Home use coffeemakers include percolator and drip models.

Drip coffeemakers are easy to use. A filter containing coffee is placed in the filter basket, the decanter is placed on the warming unit and water is poured into the reservoir. Brewed coffee begins to drip in about 30 seconds and the pot is done in about nine minutes.

Grounds are thrown out with the disposable filter. The carafe of brewed coffee is kept hot for serving and, most important, coffee does not continue to be flavored by the grounds, getting stronger and stronger; nor does it have the sediment sometimes found in perked coffee.

Most recent models feature timers that allow consumers to begin brewing automatically at a preset time, automatic drip stop to help prevent leaks onto the warmer and brew strength control to regulate how much of the grounds are soaked with water.

Under the cabinet models are popular for saving counter space. Consumers should be cautioned about the dangers of leaving nearly empty or empty carafes on a heated warming unit. This has caused an alarming number of home fires.

Percolators have three to 12 cup capacity. They are made with a "chimney" heating element which stands up in the center of the perc, "rope" element (coiled on floor of unit), or a ceramic warming unit (in side walls for longer life). Some percs have an 11 hour timer, which permits delayed starting.

Better percs are heavy gauge, polished aluminum, stainless steel, chrome plated copper, glass ceramic or heat resistant glass. Some have nonstick interiors and/or colored exteriors, either bonded ceramic coating or anodized aluminum.

Percolators ensure good coffee because a thermostatic heat control allows coffee to brew without boiling, keeps brewed coffee at drinking temperature (about 185 degrees) without re-perking and brew selectors control coffee strength automatically.

Percs require special handling when it comes to care and cleaning. Few percs can be immersed in dishwasher; those that can are marked "immersible."

Infrequently used percs should be chemically cleaned before being stored. These cleaners are perfectly safe for stainless steel, but may pit or darken anodized aluminum.

One warning for customers: Don't let a perc run dry. Put water in before plugging it in, and unplug it as soon as it is empty.

Party percs have 18 to 100 cup capacities and "well" heating elements located in the base. Like the smaller percs, these have either rope or ceramic warming units. Most percs are heavy gauge, polished aluminum, the remainder stainless steel. The most popular sizes are 22 and 35 cup. Party percs have most of the features of household percs, with the addition of a recessed base and spigot positioned high enough to allow a cup and saucer to slide under and back out without tipping the full cup.

Glass ceramic percs are completely immersible except for the cord. They do not have a brew strength control. They are, however, one of the easiest percs to clean because they can be washed with other dishes and because their nonporous surface rejects coffee stains. The surface also prevents carry over of stale coffee flavors.

Heat resistant glass percs consist of a glass carafe that fits into a base containing the heating element. The carafe can be lifted out of the handle and base, the basket assembly removed from the carafe and all pieces (except base) washed.

One serving beverage makers will heat as much as 12 oz. of water in 90 seconds for tea, hot chocolate and other instant drinks or soups. These have grown tremendously in popularity. A big advantage is that they allow users to have a variety of choices of flavors.

#### BLENDERS

When it comes to food preparation, there are some jobs nothing but a blender can do . . . and some jobs a blender will do, but not as well as another appliance.

Blenders will crush, liquefy, stir, mix, puree, crumb, chop, grate, grind, whip, frappe and blend at up to 20 speeds.

Unless equipped with attachments, blenders will not beat egg whites, mash potatoes, crush ice, knead bread dough, mix batter, grind raw meat or extract juices.

They can be used to whip cream, although a mixer is better, or to grind coffee, but a coffee mill is better.

Blenders are built with either conventional or solid state controls. Motor rating usually is 350 to 1,000 watts.

Cutter blade gear, driving four or six tempered stainless steel blades, is either metal (which is most durable), hard rubber or plastic. Because stainless steel is rust resistant, all parts should be stainless for a longer, maintenance free life.

The main features of a blender container are its heat, stain and odor resistance, cup or ounce markings,

comfortable handle and pouring lip. Containers come in 32 to 48 oz. capacities and are 10½" to 16" high.

Stability depends on the way the container is seated on the base—it should be locked or fastened securely during operation. Glass containers are strong and heavy enough to endure normal use. Plastic containers may scratch or discolor.

Blender costs are predicated on number of speeds, container capacity and features such as a removable container open at both ends for easy cleaning, removable blade assembly and automatic timer.

"Blend and store" covered containers are well suited for juices and batter, since they come in sizes from 12 oz. to 48 oz. and can be stored in the refrigerator.

A "low silhouette" is a selling point if the customer has a storage problem, as it can be pushed under overhead cabinets. Portable or cordless models may be attractive for the same reason.

Blenders that cannot be disassembled for cleaning should be filled with soapy water, run at low speed for a few seconds, rinsed and dried. To remove last traces of dampness, run the empty blender at a low setting for a few more seconds.

## FRYPANS

There's a fine line between frypans and cookers, because they do many of the same jobs. Frypans (also called skillets or buffet fryers) roast, fry, stew, bake, simmer and pan broil (which a cooker can't), in addition

to warming food for table serving.

Promotional skillets usually are thin gauge, stamped aluminum which may warp with prolonged high heat use or scratch when scoured.

Better quality frypans are heavy gauge, polished or porcelainized cast aluminum or stainless steel with aluminum core for better heat distribution. Aluminum won't scratch with scouring and the smooth finish of steel reduces chances of food sticking. Some have nonstick cooking surfaces such as SilverStone and Teflon. Neither should warp unless mistreated. Brown stains on the underside of frypans—caused by carbonized grease—can be removed with a commercial cleaner.

Other quality features are proper fitting, dripless lid and smooth edges on both lid and pan; vented lid to release steam; cooking chart on lid or handle; indicator light on thermostat and removable liner also suitable for use in oven.

Additional features include 11" or 12" square; 7¾" × 11" rectangle; 3½ to 5½ qt. capacity; deep dish (high sides) or low base; buffet or stick handle; standard (1½" deep) or high dome (5" deep) lid; removable or built in thermostat.

Some frypans are available with crockery inserts that can cook as long as 10 hours as slow cookers. Two types are offered: an open bodied ceramic insert or partitioned to provide two or three separate cooking areas. The addition of steaming racks extends the usage for food preparation.

A high dome cover adds room to roast larger meat cuts, while a standard cover almost limits a pan to frying and some baking. Lower priced dome covers are separate from the pan; better ones are hinged with one, two or three tilt positions.

Clear, see-through covers on some models are for cooking convenience and buffet serving. Broiler covers are available on some models. Removable thermostat and water sealed heating elements make a frypan immersible; a built in thermostat (usually in handle) means the skillet is not completely immersible—the handle must not get wet.

## ELECTRIC COOKERS/FRYERS

Electric slow cookers are attractively designed electric casseroles that can be set at a low temperature so that food begins cooking in the morning and cooks all day with no attention from the cook.

They may also be used as serving dishes. Available in 1 to 6 qt. capacities, some are porcelain or nonstick finished aluminum pots on a separate heating base. Others are ceramic crocks with a wrap around heating element encased in metal.

### SAFETY AND CARE TIPS FOR APPLIANCES

- Always read the manufacturer's instruction book.
- Use the appliance for what it was designed—nothing else.
- Never place small electric appliances on a range or store them in an oven.
- Never touch electrical cords or fixtures when hands, feet or shoes are wet; cords should never come in contact with water.
- Plug small appliances directly into wall outlets whenever possible. When using an extension cord, the electrical rating of the cord must be no less than the wattage of the appliance. Do not overload outlets.
- Turn off an appliance before unplugging it. If it has a detachable cord or control, plug into appliance first, then into wall outlet, disconnect at wall first, then from appliance.
- Hold the plug itself to disconnect; don't yank on the cord.
- Operating appliance should not be left unattended, particularly if children are around. Small appliances are not intended to be used outdoors.
- Unplug heating appliances as soon as finished and allow to cool.
- Replace worn or damaged cords immediately.
- Clean after every use.
- Always clean underside of appliance; if brown stains develop, use commercial cleaner.
- Don't put water in hot pan; it will warp.
- If pan is greasy, wipe with paper towel while pan is still warm.
- Don't immerse an appliance unless the label says you can; if it is immersible, always remove the heat control immediately after using and wipe with damp cloth.
- Light scouring is permissible for metal surfaces; NEVER for non-stick coatings.
- Always wash and condition non-stick finishes before use and occasionally use commercial chemical cleaner (specifically for the purpose) on non-stick surface to clean stains.
- Always remove parts—waffle grids, knife blades, beaters, can opener cutting wheels, etc.—from motor housing to wash them. They can safely be put in dishwasher. Never immerse the motor housing; wipe clean with damp cloth.

Either type may offer a removable liner for easy cleanup—somewhat of a chore with the nonimmersible, one piece units.

Be sure to explain that slow cookers will not overcook, even though cooking time may be prolonged by as much as two hours. Also point out that cooking temperatures are relatively low but still sufficient to kill bacteria.

While most cookers offer only low and high heat settings, some do vary by degrees. In either case, shoppers will appreciate your pointing out that they should be careful to set the dial exactly on target; being slightly off can cause it to not heat up.

Also find out where the shopper intends to use the cooker, as there are model variations in cord length.

Other electric cookers include deep fryers, electric Dutch ovens, electric kettles or removable crockery vessels to slow cook stews, soups, roasts or vegetables; deep fry potatoes, chicken or seafood; pop corn; warm rolls, buns or bread; steam puddings; blanch vegetable for home freezing, and bake casseroles.

Most have a 5 qt. capacity, polished aluminum or porcelainized exterior, with or without nonstick interior, and come with a deep fry basket. Mini versions of these deep fryers have 2½- to 5-cup capacity.

Some electric cookers function as “double cookers” with separate cooking units on the same base, with separate controls for each unit.

Features to point out include warming controls to keep food at eating temperature but not continue cooking; wide simmer range; clearly visible heat indicator light that shows when preset temperature is reached, and a large, well balanced and sturdy fry basket that won't let food drop into fryer.

Some cookers have removable thermostats and sealed heating units for safe washing. Those with built in controls must be cleaned by putting a small amount of warm soapy water in the cooker.

Whatever the kind of cooker, advise your customer to read manufacturer tags and booklets with cooking and handling instructions. Some cookers perform best with foods requiring some liquid; others may require a lower temperature than oven cooking because the food is in direct contact with the heating element in the bottom of the cooker.

A few variations on the basic cooker include:

Electric saucepan—4- to 5-qt. capacity in polished aluminum with nonstick lining. Has deep fry basket and thermostat controlled heating element with warm setting.

Electric casserole—2- to 3½-qt. capacity with removable insert that can also be used on top of stove. Primary function is baking and roasting; will not brown meat. Has 150 degrees warm setting.

Electric egg cooker—boils or poaches eggs. Boiling rack will hold up to eight eggs. Poaching insert holds four eggs (insert can have nonstick coating). Visible or audible signal when eggs are done.

## **WAFFLE BAKERS AND GRILLS**

Waffle bakers are round, square or rectangular; come with or without nonstick finish; have plain waffle pattern grids or fancy design grids; include four or six waffle sections, and make regular waffle size or large, family size.

Round bakers and less expensive rectangular ones are waffle makers. The rest convert to a griddle by changing plates or reversing waffle grids. In any case, grids are made of heavy cast aluminum and are removable for washing. They usually have a chrome plated exterior.

Other features common to some units are overflow rim on waffle side and grease drain spouts on grill side; thermostat reaching 485° that shuts off when preset temperature is reached; signal light that comes on when waffle is done or when unit is preheated; light/medium/dark settings, and expandable hinges that allow movement of upper grid as waffle rises.

As griddles, they can be used flat as a normal grilling surface or closed to grill sandwiches. Belgian waffle makers make thicker waffles with indentations up to 1” deep to hold more syrup or other toppings. They generally have no sections as traditional waffle bakers do and are equipped with greater heat-adjustment control and nonstick surfaces.

Automatic grills provide a large (about 200 sq. in.) grilling surface—enough to hold 15 hamburgers, eight to 10 pancakes or to cook two entirely different foods at the same time. They can also be used to heat frozen dinners, as a roll warmer or warming tray.

Most grills are cast aluminum with or without nonstick finish and have a detachable thermostat with range of 150° to 450°, light indicator, drain hole with grease cup, cooking guide on grill and low side rim. Some have domed covers.

Electric crepe pans have a small, circular, nonstick grill surface with long life tubular heating element. Just dip pan in batter and turn right side up, wait a few seconds and gently pry loose with a spatula for wafer thin crepes.

Crepe makers can often be turned and used as gourmet frying pans for sautéing and frying. The base surface can also be used as a hot plate. They are energy efficient, too, using only about 750 watts.

Emphasize to buyers the importance of preparing batter of exact consistency and carefully adhering to suggested dipping times when making crepes. This is an ideal product for dynamic in store demonstrations.

## **BUFFET RANGES**

Buffet ranges have one or two burners and cook anything that can be cooked on a kitchen range, only more slowly.

A single burner range reaches maximum heat of 1,100 watts; a double burner unit has one fast, high heating burner (1,100 watts) and one slow, medium heating burner (550 watts) and dual controls.

Higher priced ranges have variable heat control; chrome plated, enameled or porcelainized steel cabinet; chrome cooking surface; front or top mounted controls; lift up

elements, and removable chrome drip pans.

They have sealed rod heating elements—insulated wires sealed in a metal tube that looks like a flat spiral (like a burner on an electric range). They are electrically safe because no wires are exposed, although in high humidity, dampness may penetrate to wiring and produce a mild shock hazard.

Less expensive buffet ranges have only off/on switch, galvanized sheet metal cabinet and chrome or enamel top.

These models frequently have open coil elements, which means heating coils are laid in grooves on the surface of a ceramic plate. Open coils are potentially hazardous because the live wire is exposed.

Although a double pole switch ensures that element is not electrically alive when unit is turned off, it does not eliminate the danger of accidentally touching the wire when unit is on.

A few other questions to answer about the units you carry include:

If controls are located on top of range, can setting be changed without brushing knuckles against a hot pan? Can setting be accidentally changed if bumped while moving pans on burners?

Does the range heat up on the sides and around the controls? Do the control knobs or buttons stay cool enough to touch while range is on?

If a two burner range, are high and low heat burners identified?

Will it maintain a low warming temperature?

Are burners far enough apart to hold two large pans?

How thick is chrome plating? If thin, it may be susceptible to scratching and rusting, especially in high humidity areas.

## TOASTERS

When a customer walks into your store to buy a toaster, there's a wide variety to choose from. Two slice or four slice? Square or slim line? Single or double control? Reflector? Toaster oven combination? Under cabinet or counter top model?

Two and four slice pop up toasters toast one to four slices and automatically lift toast when done. Square toasters have single or double pairs of slots side by side; slim-line toasters have slots end to end; under-cabinet models mount so that toast pops out of the front.

Selling features include adjustable light/dark settings; hinged crumb tray; toast lift that raises toast high enough to remove without reaching into slots; bread wells wide enough for most thicknesses of bread, frozen waffles, etc., and an easily cleaned finish.

Each slot has two heating elements (better ones are made of nichrome wire wrapped on mica for longer life) and holds bread an equal distance from element. All toasters have toast release to interrupt toasting cycle if desired, and

some have a heat sensing device to warm up cold toast without further darkening it.

Some models have energy saving switches that cut out one bank of elements, especially in four slice units, so that one side of the element arrangement heats up when only two slices of bread are being toasted. Others have separate controls for each pair of slots.

Timing mechanisms on better toasters heat and cool quickly, automatically compensate for voltage variations, and toast bread to same degree of selected color in same amount of time, regardless of number of slices toasted successively.

Wattage reduction control toasters allow user to regulate wattage in the outside elements for toasting pastry foods with sugar glazed coatings that would otherwise melt inside the toaster. Adjustable width slots will toast a variety of different sized breads and pastries without concern that they will warp or stick inside the toaster.

## FOOD MIXERS

Speed and power are the major differences between portable and stand mixers.

Many customers prefer portable mixers because they are usually less expensive, more compact and can be stored conveniently. But even those with 12 speeds won't serve as well as a stand mixer if your customer has a large family, entertains frequently or does a lot of baking. The portables simply do not have enough power to perform adequately in large, heavy mixtures—stand mixers have 50 percent to 75 percent more power.

Neither kind of mixer should be

### SELLING TIPS FOR ELECTRIC APPLIANCES

#### TRY ANSWERING THESE QUESTIONS ABOUT THE APPLIANCE YOU ARE SELLING:

- *Are they easy to operate?*
- *Are controls accessible and marked clearly?*
- *Are materials suitable for the appliance's intended use?*
- *Is there any feature of the appliance that may create a hazard for the customer who uses it?*
- *Are handles sufficient to move the appliance without chance of dropping it or harming the user?*
- *Are feet and handles heat-resistant?*
- *Is base insulated to protect tabletop or countertop?*
- *Do appliances have non-marring feet or bases?*
- *How easy are appliances to clean?*
- *Point out removable parts and accessories, surfaces that wipe clean with little effort.*
- *Do you understand the warranty well enough to answer any questions?*
- *What happens if the appliance needs repair? How readily available is service? And from whom?*

#### THEN ASK YOUR CUSTOMER A FEW QUESTIONS BEFORE YOU BEGIN SELLING:

- *What size will fulfill the need?*
- *What equipment does the customer already have? Try to sell an appliance that doesn't duplicate.*
- *How often will it be used? This indicates whether a heavy-duty, long-wearing appliance is better, whether storage is a factor, whether customer will pay more for a better-quality item.*

## SAFETY WARNING

One point to make to the purchaser is not to plug in more than one heat-producing appliance on a 15-amp (normal house current) circuit at one time. It will probably overload the circuit and blow a fuse or trip a circuit breaker.

Extension cords are not advisable on heavy current pullers, but if one is absolutely necessary, use nothing smaller than a #16 gauge.

Always caution the user about the hazards of using electric personal care appliances around water. These appliances can cause electrocution when plugged in, even when not in use. Recommend use in the bedroom or other room besides the bathroom, especially for children.

forced beyond its motor capacity. If it can't cope with the mixture, the motor will slow or stall, then overheat and burn out.

Portable mixers will stir, mash, mix, cream, beat and whip. Stand mixers perform these functions plus handle heavy dough or batter and larger quantities of other foods.

food scraps don't catch between them as they cut. Motor housing is heavy duty plastic unaffected by heat generated by the motor.

Retail price depends on some of the following features: tapered blade tips to trim and cut around bones; extra set of shorter blades for paring; well balanced, comfortable handle that helps user direct the blades; grease guards on blades; table rest on handle to keep blade from tipping forward onto table; two cutting speeds; fingertip blade release button; wall hanging storage rack and/or detachable cord for plug in knives, recharger stand for cordless ones; and safety blade lock to keep blades from cutting even when the knife is plugged in but not being used.

It is not a good idea to use any electric knife to cut through bones or frozen foods; use kitchen saws for that. It is best to carve on a wooden board, since blades may scratch dinner platter or metal pan surfaces.

All mixers have either conventional or solid-state motors, and the better conventional motors are governor controlled. The major advantage of a solid state motor is that it maintains full power at lower speeds. Governor controlled conventional motors offer the same advantage plus maintaining full and steady power at all speeds.

Some selling features apply to both portable and stand mixers: adequately controlled motor power; selective or variable speed control; beater ejector positioned for one hand operation; mixing guide on head or handle, and open center, chrome plated, tightly locking beaters with plastic tips to prevent scratching bowl.

Other features that apply only to portable include light weight (under 3 lbs.); balanced handling; comfortable handle (must be held through mixing job); detachable cord if plug in or recharging unit if cordless, and under cabinet mounting.

Stand mixer features include sturdy and well balanced stand unit; method of detaching head from stand; 12 speeds varying from 150 rpm to 1,200 rpm; one, two or three glass or stainless steel bowls in graduated sizes from 1½ to 4 qt.; bowl shift lever or two position turntable mounting; ball bearing or other smooth operating turntable; bowl contoured beaters that cover full diameter of bowl; detachable cord; instant extra power button that delivers increased speed to mix tougher batter.

Included among the attachments for stand mixers—another selling point, since portables won't operate these attachments—are can openers, food choppers, vegetable slicers, dough hooks, juicers, knife sharpeners, drink mixers, blenders, silver buffers and ice cream freezers.

## ELECTRIC KNIVES

An electric slicing knife consists of two 9" or 12" serrated blades linked at the tip and locked into a handle containing a motor which is activated by pressure on a trigger to drive the blades back and forth.

Blades are hollow ground stainless steel, some tungsten carbide tipped. They should fit tightly together so that

## CAN OPENERS

Why grind away on a tough can when a small, powerful motor will do it for you? This is the way to sell electric can openers. They cost more than manual ones, but the effort and time they save may be worth it.

Can openers operate one of two ways: 1) single lever pierces lid, activates motor and requires constant hand pressure to keep motor running; 2) cutting begins automatically when can is clamped into place and stops when can is open.

A popular feature is a removable turning gear that allows the opener to be cleaned completely. The cutting assembly can be removed without tools, and the gears that turn the can while the lid is being severed lift out to be cleaned.

Features to point out include: steel cutting blade attached to removable unit; the opener cuts irregularly shaped cans and is high enough to cut large juice cans; cans lock into cutting position and a magnet holds severed lid (if it isn't aluminum); unit is properly weighted, so weight of can won't tip it; retractable cord or cordless option offer convenience; and under cabinet or countertop storage saves space.

Presence of these features is a major factor affecting price, as is the material from which the housing is made. A brushed chrome plated or enamel housing withstands tougher use and protects the motor better than a plastic housing.

Other appliances commonly combined with a can opener include a knife sharpener, ice crusher, fruit juicer or bottle opener. Each of these works off the same motor as the can opener and is usually located on the opposite side of the housing.

## IRONS

Whatever the job, whatever the preferred price range, there's an electric iron to fit it. In regular irons, you can step up from a steam/dry iron to a spray/steam/dry iron, corded or cordless. In travel irons, it's either dry or steam and dry.

A few points apply to all irons. Soleplates can be polished cast aluminum or nonstick finished to resist starch pick up. Soleplates on less expensive irons are less durable and may scratch easily.

An iron should never be used on rough surfaces like zippers, pins, snaps, etc. A scratched metal plate can be smoothed with fine sandpaper and rubbed with paraffin or waxed paper to replace its finish; a nonstick finish shouldn't be hampered by small scratches.

Some irons turn off automatically if they are not picked up for several minutes. They usually give an audible warning signal before they shut off.

Metal plates can be cleaned with mild, nongritty powder and rubbed with waxed paper to clean off any foreign material. Nonstick finishes should be wiped with soft cloth--never use abrasive cleaners.

Most manufacturers say that unless the customer has extremely hard water--more than 180 parts per million of dissolved minerals--tap water is fine to use with steam or spray/steam irons. However, many consumers may prefer to use distilled water. (Hard tap water contains lime and other minerals which, in time, clog the steam chamber, duct and vents.) A commercial cleaner will dissolve these deposits but may also damage internal parts of the iron (follow manufacturer recommendations on this point).

"Self cleaning" irons utilize an extra burst of steam to blow sediment out of steam ducts and vents.

Steam/dry irons are fitted with an electrically heated water chamber that should hold enough water for a half hour's normal ironing. A pushbutton should open the steam duct to release steam through soleplate vents.

Others have water chambers in the base. They take about 30 seconds to heat, two minutes for steam to develop, and weigh 3 to 4 lbs.

Steam/spray/dry irons are constructed generally like steam/dry irons but have a second pushbutton that produces a fine mist spray that does not leave water spots. Some irons have two sprays, fine and medium, and some offer an extra puff of steam for badly wrinkled areas.

They need about the same time to heat, weigh about the same as steam/dry irons and are more expensive than steam/dry irons.

Manual spray can be used at any fabric setting and requires thumb pumping to produce spray. Power spray works only on steam settings and provides a continuous spray as long as the pushbutton is depressed.

The important factor is not the number of steam vents but whether they provide complete coverage over the soleplate.

To store any of these irons, empty reservoir, wrap cord if it has one loosely around handle (after iron cools) and store on heel rest, never on soleplate or in carton.

Some have retractable cords. Other features that help sell irons include heating element and thermostat that maintain steady temperature at any setting for long periods; tip

proof heel rest; comfortable, heat resistant handle with thumb rests on either side (for right or left handed people); centered cord lift; fingertip adjustment of temperature selector and steam/spray buttons; fabric guide on handle or saddleplate; wide mouthed, funnelled fill opening; water window or fill guide; chrome plated shell with smooth edges and tight fit; permanent press touch up setting, and button nooks.

Cordless irons rest in a recharging stand that is plugged in while the iron is in use. When the user stops ironing to adjust clothes on the board, the iron is placed in the stand to recharge for a few seconds. Light to medium ironing loads can be done in one recharge; heavy jobs may require a second recharge.

Travel irons are naturally more compact and lightweight to take up minimum room in a suitcase. They usually have a full range of fabric settings and a handle that is either built low or folds flat.

Some have a built in water reservoir, while others have a plastic water bottle that screws into the iron. Travel irons will usually tolerate tap water.

They frequently come with overseas adapters and voltage adjustment bars and are packed in a serviceable travel bag.

As with other irons, they shouldn't be used on rough surfaces and should be thoroughly drained and dry before packing.

## **POPCORN POPPERS**

Two to 6-qt. poppers rest on the heating base. Most have nonstick linings and see through covers. Automatic poppers turn off when popping is done; nonautomatics require user to remove bowl and unplug the unit when popping stops.

Special dispensers in some models will butter popcorn as it pops. See through covers usually double as 4 qt. serving bowls.

A "hot-air" popper pops corn with heated air, not oil. Called continuous flow units, most hot-air poppers feature built in thermostats, butter melters and premeasured bins for loading the correct amount of corn. Not all hot-air poppers will pop "gourmet" popping corn; check manufacturer's literature.

## **FOOD PROCESSORS**

Food processors are multipurpose kitchen appliances that perform a wide variety of food preparation functions in a few seconds.

Functions most food processors perform are: slicing; chopping; grating; shredding; mincing; crumbing bread, crackers, cookies, cereals; kneading bread; pureeing, and mashing. Mini-processors generally perform the same functions but have a smaller capacity.

A serrated cutting blade is used for heavy duty chopping of meat and kneading bread; slicing disc uniformly slices vegetables, fruits, etc.; shredder disc shreds and grates, and a plastic mixing blade whips, blends and kneads larger

amounts of bread.

Features on better models include: cover locking tabs and bowl locking rims so that motor will operate only when bowl is covered and locked into position; cover with food chute to add liquid or dry ingredients while processor is in action; food pusher used to direct food in chute into discs and bowls; thermal overload protection device that automatically cuts off the motor in seconds if overheating occurs; three position switch (on/off/pulse); sturdy housing, and a base with suction feet.

## OTHER APPLIANCES

The following "glossary" lists other portable appliances generally sold by do it yourself retailers:

Coffee grinders—usually consist of an upper container for coffee beans and a lower container to catch ground coffee. Have grind setting and measure marks on coffee container or cup measuring device.

Cookie/candy gun—a cylindrical press that produces cookies, canapés and candy at the press of a trigger. Also useful for stuffing manicotti and cream puffs and making decorative garnishes. Comes with up to 11 attachments.

Electric meat slicers—similar to the meat slicers seen in delicatessens, but downsized for home use, meat slicers can be of die cast metal with chrome finish or plastic. Blades measure 6 3/8" to 7 1/8" in diameter, and are made of serrated stainless steel. Slicers have adjustable thickness control from paper thin to a half inch. Units should always have a thumb guard and should be held steady by a table lock or nonskid feet.

Freezer bag sealer—seals up fresh and leftover foods in air tight freezer bags. Electric unit seals bags in five seconds. Bags come in three sizes: 8, 24 and 32 oz. Some even have compartments for sealing several foods in one bag for instant meals. The unit can be wall mounted or used on countertops. Other features include: recessed cord storage, "on" indicator light and instant on off without warmup.

Ice cream freezers—consist of tub, can and driving mechanism much like hand operated freezers, but electric motor drives the cranking mechanism. Tubs frequently made of fiberglass. Can is suspended in tub and holds ingredients; tub is packed with ice and salt. Newer models offer 2 qt. makers that will prepare two flavors at the same time. Most units will freeze ice cream in 30 minutes to an hour.

Meat grinders—operate much like attachment for food mixer but are in their own housing and have their own motor. Have coarse and fine cutting discs and come with hardwood pusher. Also chop or grind vegetables, cheese, nutmeats, etc. May have salad maker attachment, or slice/shred vegetables, fruits, etc.

Warming trays—look like serving trays but have warming unit under shatter resistant glass surface to keep food warm for serving; cannot be used as cooking surface. May have shallow drawer for rolls, pies, etc. Can also be used to melt butter, chocolate, etc. Food should not be placed directly on tray, always in serving dish. Some have high,

low and normal settings.

## Portable Ovens

### TOASTER/TABLETOP OVENS/BROILERS

These mini ovens have a wide range of kitchen uses, including toasting, browning, heating and baking.

Features common to most portable ovens include temperature range from 200-500°; separate controls for each function; removable doors, crumb trays, racks, heating elements and rotisserie assemblies; automatic timer; adjustable door position; chrome plated housing; and metal accessories.

Toaster oven/broilers have smaller capacities and are capable of toasting bread on both sides at the same time. Tabletop oven/broilers are much larger and will toast only one side at a time. While some models have top and bottom elements for baking and broiling, some come with only one element. This one element unit stands with the element in the top to broil; when entire unit is turned over, the element is on the bottom to bake or roast.

These appliances are useful as second ovens or can be used in place of a large oven to reduce energy consumption. However, capacity is obviously limited and food preparation results may be less consistent than a conventional oven.

Toaster ovens come in different sizes, some with a signal bell that rings when food is done. Some models pop up toast from the top, like a regular toaster. Those that offer "slow-heat" cooking have low wattage current constantly flowing through top and bottom elements so different foods can cook simultaneously.

Other models provide two shelves for baking, but heat distribution may be uneven.

Other toaster oven features include a special defrost cycle and porcelain catalytic finish that cleans itself continuously at normal cooking temperatures.

Related to the table broilers/ovens are the smokeless broilers and broiler rotisseries, which have no covering but are safe for indoor cooking because they do not smoke or spatter. Two reasons explain this:

1. Infrared heating element reaches a temperature well above smoke range and forms a heat shield around the element; grease disintegrates as it strikes the element . . . without smoke.
2. A stainless steel reflector pan under the broiler rack or spit has water in it (about 3/4"). Should drippings fall through the element, they land in the water. . . no spattering.

Most smokeless broilers have aluminum frame and chrome plated grilling rack, spit and skewers. They disassemble for washing.

## MICROWAVE OVENS

Microwave ovens use very short electromagnetic waves to cook foods in a short time—about 10 minutes per pound for most meat cuts. All basically cook the same, so it's usually a matter of directing customers to the right size with the right features to suit their needs.

Microwave ovens offer a variety of features including digital timer, automatic cycling defroster, variable power dial for changing cooking speed and automatic food temperature control (oven stops automatically when internal temperature of food reaches temperature set on indicator).

Other things that must be considered are:

1. Placement of oven. Will the customer need a left hinged or bottom hinged model? How about the vent? A front vented model can be placed under an upper cabinet, but a back vented appliance must have air space of 2" from the wall.

Space requirements vary. Newer microwaves have been downsized without sacrificing interior cooking space. Under cabinet models also solve some counter space problems.

2. Kind of cooking to be done. If the oven will be used mainly for defrosting and reheating, a smaller, lower priced, two power model will be fine. The compact microwaves available may require slightly longer cooking times but are good for one or two person households.

A top of the line model with variable power settings and temperature sensor probe is preferable for extensive, full meal cooking.

Check the wattage output, which will range from 300 to 700 watts. Cooking will take twice as long in a 300 watt, and most microwave cookbooks are written for 600 to 700 watt models.

3. Timers. Since a lot of cooking will be done by counting seconds, digital timers are good. If it has dial timers, is one marked off in 15 second increments? Touch timers (those that are sensitive to finger heat) require fewer repairs than dial timers.
4. The megahertz (one megahertz equals one million microwave cycles per second). Most microwave ovens operate on 2,450 megahertz.
5. Browning option. Some foods cooked for a short time with microwaves will not brown as in conventional cooking. (Foods with a high fat content, such as bacon, will brown in a short cooking time.) Is it worth more money to have a unit with a browning coil? (A few minutes in a conventional oven can finish the job. So can a microwave browning dish that costs much less.)
6. Power setting. There are models with three to 10 power settings. Lower settings are needed for egg and cheese dishes, less-tender meats, baked products, softening butter, melting chocolate and defrosting.

Models with phase cooking make it possible to set both low and high power at one time, which is useful for those who cannot stay with the microwave to reset the timer when switching from defrost to cook.

Many models are also equipped with a memory function. User can preset the time an oven turns on, at what power and for how long. This feature is particularly useful for families where both parents work outside the home—meals can be cooking with nobody in the kitchen.

In addition to cooking foods from scratch, the oven is also useful for heating beverages, soups, precooked casseroles, sandwiches, leftovers, canned vegetables and baked goods.

Microwave ovens are a safe and convenient appliance, provided that purchasers know and follow some guidelines:

1. Do not tamper with the safety interlocks, which prevent a microwave oven from operating when the door is open. Operation with the door open may result in harmful exposure to microwave energy.
2. Do not place any object between the oven front face and door or allow soil or cleaner residue to accumulate on sealing surfaces.
3. Do not operate if unit has damaged door (bent), hinges or latches (broken or loosened), door seals or sealing surfaces.
4. Microwaves should be adjusted or repaired only by properly qualified service personnel.

To clean, use a mild detergent, water and a soft cloth. Commercial cleaners specifically for microwaves are also available. Odors can be eliminated from inside by boiling a solution of one cup of water and several tablespoons of lemon juice in the oven for five to seven minutes.

These are the most important guidelines that you as an employee can provide—emphasize to customers that they thoroughly study manufacturer's information before operating their microwave oven.

### ENERGY SAVING TIPS

- Don't "piggy-back" appliances—plugging in more than one appliance into the same outlet. The circuit could overload, plus it takes both appliances longer to do their jobs.
- Operate appliance away from drafts so they don't have to overwork to maintain temperature.
- Keep appliances ship-shape. Worn, frayed electric cords can use extra energy and make other appliance parts work overtime to compensate.
- Don't use extension cords unless you must. They're not energy-efficient.
- Pressure cooking, pressure frying or stir-frying cuts cooking time and adds up to energy savings.
- Follow directions carefully. Use a timer so you know when cooking time has elapsed.
- Always follow manufacturer's instructions for product capabilities and helpful hints.



## CONVECTION OVENS

Convection ovens use electrical energy as do conventional ovens, but more efficiently. The air inside a regular oven is almost static, and cooking depends on the gradual conduction of heat from the outside to the center of food.

Convection ovens use a stream of power driven air produced by a high speed fan that swirls continuously over a standard heating element. This results in uniform temperature throughout the oven, which not only speeds cooking but saves up to 50 percent of the energy used by conventional ovens.

Because of the constantly circulating air inside convection ovens, they remain efficient when filled to capacity, even with foods touching each other and the oven walls. In fact, convection ovens are more efficient than microwave ovens for larger amounts of food, though they too lack the size of conventional ovens. Some can be used as slow cookers or to dehydrate fruits and vegetables.

Foods can be cooked at lower temperatures for shorter periods of time in convection ovens—in many cases, temperatures may be lowered by up to 75 degrees when baking, and roasting time is cut by about one third.

Frozen convenience foods, such as TV dinners, can be cooked in half the recommended time with a 25° temperature reduction. Since convection ovens give off less heat than conventional ovens, the kitchen remains cooler when they are in use.

Convection ovens need no special adapter; regular household current may be used. They are easy to clean—most have either removable, dishwasher safe components or continuous clean interiors, or both. Optional temperature probes are also available.

## Personal Care

Every customer wants to buy quality items for personal care, be it a shaver or a blow dryer. And that's where you come in. Remember, you are selling what the product does, not just a piece of machinery.

When a customer buys, he or she is usually looking for a model with a special feature. Because so many different models are available, color, styling and storage provisions may be deciding factors. A study of the appliances in your store will tell you what features you can point out.

Don't forget the men and teenagers in your merchandising efforts. Teenagers are especially susceptible to the advertising media's efforts to promote a better appearance. By advertising personal care items, you can get these segments of your market to come into your store regularly.

A quality personal care product will have a small, quiet, powerful motor to do the job well; a well sealed housing with few or no crevices to collect dirt; will handle easily, and has clearly readable, easily set controls.

## HAIR DRYERS, STYLERS

Consumers—both men and women—are opting for carefree hair styles and equipment to keep their hair looking good with a minimum of time and effort. Hand held blower dryer/stylers are a sure seller, and there are many to choose from.

Pistol type models feature relatively high wattage (1,000-1,250) to dry hair rapidly. Styling is done by simultaneously shaping the hair with a brush.

Compact, lightweight, hand held dryers, averaging 8" long, are usually mid range wattage, generally about 1,200. Often, handles fold down for storage and travel.

Other models combine the drying feature with comb, brush or detangler attachments. They usually offer 850-1,000 watts, but some offer adjustable power from 300 to 1,000 watts and airflow control from fast drying to soft styling.

Either kind provides from two to five temperature settings and can be used to style wet or dry hair.

New models have added safety features to help prevent electrocution should the dryer be immersed in water. If you merchandise these dryers, the safety factor will be a major selling point, particularly to customers with children.

There's also a hair-care center consisting of a power center with detachable hose which can be hooked up to a bonnet, pistol type nozzle, brush or comb. It features 1,000/700/575 watts with three comfort settings: low speed/low heat, high speed/medium heat and high speed/high heat.

Soft and hard bonnet dryers share a few selling points: quick heating and drying (about 20-25 min.); number of heat settings; (usually four—high, medium, low and cool); quiet operation; variety of accessories; lightweight and durable carrying case; ease of setup and dismantling.

A soft bonnet dryer usually averages 300 to 400 watts and consists of a large, soft bonnet with elasticized headband. The small heater/blower unit is attached to the bonnet with long, flexible hose or is built into the bonnet with remote temperature control, in luggage style carrying case, either hatbox or handbag shape.

Accessories for bonnet dryers include nail polish drying slots on blower, brush and comb, mirrors, hair rollers or spot drying unit that is cup shaped to fit over one roller at a time.

Salon or hard bonnet dryers consist of rigid plastic hood attached to base containing heater/blower by angled, collapsible support arm. With most of these dryers, arm folds into base and hood fits down over base to form a carrying case. These dryers average 900 to 1,000 watts.

The base also holds a mist unit, cord storage compartment, any other attachments plus extra storage space for rollers, pins, etc.

## HAIR SETTERS

Hair setters usually consist of a kit including heating base fitted with thermostat controlled heating posts that hold hair rollers, clips and small foam pads to cushion rollers so they don't feel hot against scalp.

Rollers heat in eight or nine minutes, then can be rolled into dry hair and left for six to 15 minutes to set hair. The longer the rollers are left in, the firmer the set.

Rollers should not be used in wet hair, nor should they be used every day, for they tend to leave hair dry and brittle.

In some hair setters, all posts are heating posts; in others, some are storage posts.

When rollers are hot, readiness is indicated by an indicator light on the heating unit or by a temperature sensitive paint dot on each roller that turns dark when roller is hot. After indicator says rollers are ready, they continue to heat a while longer, then temperature stabilizes.

Price depends mostly on number of rollers, variation of size of rollers and whether or not the setter has mist or steam feature.

Features indicating better quality hair setters include quick warm up, evenly heated rollers, low readiness temperature, carrying case with mirror, and lighted on/off switch.

## **CURLING IRONS**

Curling irons operate on the principle of wrapping hair around a heated element. They feature thermostat controlled even heat, cool handles and long cords.

Some have a mist spray for firmer set and nonstick coating to prevent pulling hair (this also prevents rusting in mist spray). A heel rest is usually included or incorporated into the base of the wand.

An expanding barrel on some irons lets a woman choose the size of curl she wants without the use of additional attachments.

Some irons are cordless; they plug into a base heat source. Or, they may fold down to fit into a purse or suitcase.

Models often have swivel cords to prevent cord tangles.

## **SHAVERS**

Men's and ladies' shavers are basic to any personal care line. Certain features are common to both—plug in or cordless, detachable cords, removable shaving heads, vibration free, smooth shaving without nicking, pulling or scraping.

Shaving heads on men's shavers are flat, curved or rotary; those on ladies' shavers are usually flat. Flat or curved heads produce a back and forth motion with steel or stainless steel blades. Rotary heads have two or eight circular cutting heads all turning in the same direction.

Most shavers offer a grooming feature for beards, mustaches and sideburns. Some models will automatically adapt to any international current by means of a built in charger.

Ladies' shavers are smaller and may be styled in various colors with small lights. Models have separate or reversible shaving heads and/or adjustable comfort bars (some with up to five settings) that provide the right degree of closeness for underarms or legs. Cordless shavers will recharge in eight to 24 hours.

## **LIGHTED MIRRORS**

One problem women often encounter when applying makeup is that the result changes in appearance under different lighting conditions.

Lighted mirrors provide shadow and glare free light around regular and magnifying mirrors in several settings to simulate indoor, outdoor, office and evening lighting.

These mirrors, depending on construction, swivel or tilt to preferred positions. Lights, either incandescent or fluorescent, are across the top or on either side of rectangular or square mirrors or encircle a round one.

## **SUN LAMPS, HEAT LAMPS**

Sun lamps produce the same tanning rays as the sun, and because the density of these rays can be several times stronger than the sun, users should be careful with exposure times and distances. Users should follow manufacturer recommendations on time and distance carefully to avoid burns.

Infrared heat lamps provide warmth to relieve aches and pains, but also pose danger of serious burns if not used properly.

Lamps are rated by hours of performance, from 2,000 to 5,000 hours, with the higher rated lamps being more expensive.

## **HEATING PADS**

Heating pads are another source of warmth for relieving minor aches and pains. Usually they have three to six settings ranging from 110° to 145°, a rubber or plastic inner cover to protect heating wires from moisture, illuminated control panel, and cloth outer covers. Regular size pads are 12" × 15" and king size are 12" × 24". Flexible band styles measure 6" × 20" and are equipped with straps to fasten around the body.

Moist heat types come with sponge pads that can be dampened and fit next to the heating pad with a terry cloth clover.

## **MASSAGERS**

Handheld massagers offer several vibrating speeds from flat surface vibration to slower, penetrating motion. Infrared massagers add heat to vibration and usually have three heat settings but only one vibration speed. They can be used with or without heat. Swedish massagers fit on the back of the hand, and the vibration is transmitted through the user's hand. They have single or dual speeds.

Foot massagers provide relief through the vibration of warm, swishing water.

## **DENTAL HYGIENE APPLIANCES**

Electric toothbrushes have a power handle that drives individual brushes up and down, back and forth or in an orbital motion. They can be plug in or cordless, and come with stands that hold the power handle and four or six individual brushes.

Cordless brush stands contain the recharging base while plug in stands function only as storage. The power unit is sealed against water but should not be left in standing water.

Most brushes have serrated bristles to work in and around teeth. Replacement brushes are available as are wall brackets and removable travel chargers.

Oral lavages use a jet of water to flush out food particles and to massage gums. These devices are especially good for cleaning partial dentures, bridges and orthodontic appliances.

Usually the lid of the unit is turned upside down to become a reservoir for water or mouthwashes, to which is attached a retractable plastic hose that holds the sprayer nozzle.

## HOME HEALTH CARE

A continuing interest in health and fitness and high technology have combined to create a personal home healthcare category. Items such as digital thermometers and electronic blood pressure monitors are now available for home use.

Digital thermometers are available in one and two piece styles. One piece thermometers resemble pencil type glass thermometers, with the readout on the end of the unit. Two piece styles feature a small, lightweight probe, linked to the readout by a flexible cord. Some feature beeper signals when the thermometer has reached peak temperature.

Electronic blood pressure monitors feature a digital readout meter with a connected arm cuff. No stethoscope is required with the units. Higher end features include blood pressure reading printout, automatic inflation of arm cuff, pulse meter and clock. Units operate on penlight batteries.

Humidifiers relieve common winter problems connected with dry air, such as swollen sinuses, sore throat and dry skin. Although this is not a new category, recent technological breakthroughs have brought a new type of humidifier to the forefront--the ultrasonic humidifier. While warm mist humidifiers use heat to create the steam, and cool mist units use paddles and air pumps, the ultrasonic units break up the water with sound waves. Ultrasonic units are priced three to five times higher than conventional humidifiers, but they generally offer quieter operation and few refills.

Remind customers that no matter what type of humidifier they buy, water should be changed often and the unit should be cleaned frequently to remove any bacteria from standing water and ensure proper operation of the unit.

## Clocks and Watches

Clocks and watches are fashion items and should be given proper treatment in your store. Sell fashion to your customers, not just a timepiece.

Don't be afraid of price. There is such a wide price range that customers can easily find a timepiece in the style and price range they want. Customers aren't afraid to pay for quality.

Manufacturers oblige by offering clocks and watches in every conceivable style and decorator scheme.

### CLOCKS

Clocks operate one of three ways--spring wound, battery operated or electric--and fall into four general categories depending on use--alarm, wall, occasional and travel.

#### Clock Operation

All spring wound (or key wound) clocks must be wound by hand. Many of the smaller, less costly ones, like alarm clocks, will run for 40 hours (72 hours if alarm is not used) without winding.

More expensive strike and chime clocks, sometimes called eight day clocks, need winding once a week. "Anniversary clocks," often sold as gifts, require winding once a year.

Battery operated cordless electric clocks operate on a single flashlight battery, which provides enough electric current to wind the mainspring. Technological advances have improved timekeeping accuracy of battery operated mechanisms.

Timekeeping accuracy of both types depends on the owner. Spring wound clocks must be wound regularly, preferably at the same time (morning or evening for 40 hour variety and same day of week for eight day clocks). Cordless electric models need a battery change about once a year.

Besides fashionable styling, spring wound and battery operated clocks can be used anywhere, regardless of availability of electricity.

Electric clocks operate on a 60 cycle, 110 volt current, but will run satisfactorily on 95 to 125 volt linage.

Accuracy of electric clocks depends on the power source. Only a major disruption in the power line should stop the clock or cause it to lose time.

Although styling of electric clocks can be equal to that of battery operated clocks, home decorators prefer the latter because they needn't worry about placement near an outlet or an unsightly cord.

#### Digital Clocks

Light emitting diodes (LED)--better known as "digitals"--come in all price ranges.

The modern look and convenience of digital clocks make them necessary to clock selections. They operate on

household current and perform all the functions of other clocks, even clock radios. They feature a solid-state unit with no moving parts and a battery operated auxiliary power supply in case of household power failure.

### **Wall Clocks**

Here is where fashion really counts. People don't buy wall clocks, even for the kitchen, just to be able to tell time; they want the clock to blend with room decor themes.

Wall clocks can be battery operated or electric, but the former are the most popular. If your customer prefers an electric clock but doesn't want the cord to ruin a carefully planned room, you might suggest a recessed wall outlet immediately behind the clock, and refer the customer to the electrical department for the necessary equipment.

Kitchen clocks have joined the ranks of under cabinet appliance. These models can be coordinated with other under cabinet appliances if the consumer is interested.

### **Occasional Clocks**

Occasional clocks include expensive, highly decorative, finely made table, mantel or shelf clocks, such as strike and chime pieces.

Traditional strike and chime clocks are automatically compensated to strike the correct time within one hour after setting or resetting. They chime every quarter hour and strike each hour, but some can be adjusted to strike only on the hour.

With their gracious styling, modern or traditional hand rubbed hardwood cases, these clocks can be expensive.

Cordless electric occasional clocks with wood or metal cases carry lower retail prices.

### **Alarm Clocks**

Most electric alarm clocks have a buzzer alarm, although more expensive ones may have a bell alarm or blinking light that accompanies or replaces the ringing alarm. Many offer a "snooze" feature—the alarm rings once, then rings again several minutes later.

Lower priced clocks are simply the timekeeping and alarm mechanism enclosed in a plastic case. Medium priced clocks will have plastic or metal cases, illuminated dials or lighted alarm set indicators. Higher priced models may have metal or hand rubbed wood cases, blinking light alarm indicator and metallic finished bezel and dial.

Better electric and spring wound alarms have shatterproof crystals, sweep alarm and/or second hands, separate setting and winding keys on the back. A few electrics have alarm bars on the front which set and turn off the alarm.

A more enjoyable form of alarm is a clock radio. Instead of sounding a bell or buzzer, the clock turns on the radio. Some clock radios can be set to turn off at night and to turn on again in the morning.

Better models combine all quality features of portable radios and alarm clocks, and some combine clock/radio and telephone in one unit.

Convenience features include reversible time setting, "snooze" function and brightness control. The radios are limited in quality of sound mostly due to size, but some higher priced models deliver better tone quality.

### **Travel Clocks**

Compact travel clocks, averaging about 3" in opened height, fold down to a small 1" depth for packing. All have alarms, and better ones incorporate the "snooze" feature. The more extras added to the clock, the more dollars added to the price.

## **WATCHES**

Digital watches feature no moving parts to wear out, need little or no service or repair, and are far more accurate (within one minute per year) than the most expensive mechanical watches. They offer as many as five functions—second, minute, hour, day and date.

Most digital watches do more than tell the time—many also act as stopwatches and have dual night viewing lights.

The digital watch operates with four battery powered components. The battery causes a quartz crystal to vibrate rapidly, and an integrated circuit divides the vibrations into one pulse per second and accumulates the pulses to compute seconds, minutes, hours and days. The circuit transmits signals to the display to illuminate appropriate parts to show time or date.

Most watches sold in the United States incorporate light-emitting diode (LED) glowing numerals that are turned on by pushing a button. But an increasing number use liquid crystal display (LCD), which provides continuous reflected light. Two silver oxide batteries will provide enough watch power for at least a year.

Experts say there are negligible working differences in efficiency between the lower priced digital watches and more expensive models, since neither involves moving parts.

As for mechanical watches, one of the most frequently used descriptions of better watches is the number of jewels.

Jewels are used in a watch mechanism as bearings at friction points. Watches without jewels have only metal at these points, and metal will wear out in time—jewels will not.

The more jewels in a watch, the more friction points are protected, the longer the watch will last . . . and the more it will cost.

## CHAPTER 2: NON-ELECTRIC HOUSEWARES

### Floor & Rug Cleaners

Electric Floor Polishers and Scrubbers—Floor polishers and scrubbers leave floors with a longer lasting polish with less effort.

Features vary from model to model, but top-of-the-line appliances have three speed motors to scrub and apply wax at lower speeds and polish at higher speeds. They also may have extra brushes that convert them to rug shampooers.

Lightweight versions with detachable handles can also be used for stripping and wood refinishing.

If the appliance picks up water after scrubbing—an optional function—the machine must dry the surface thoroughly before being used to apply wax; moisture will smear the waxed surface. Floors should be swept before using one of these units to ensure that loose dirt does not block the water pickup openings.

Solvent based waxes should be recommended for polishers because they will not smear as will self polishing, water based and resin waxes.

### Vacuum Cleaners

Upright and canister vacuums fill general purpose cleaning needs. Personal preference dictates which type a consumer will purchase; both (with appropriate attachments) perform household vacuuming chores, including lifting dust from drapes and upholstery.

Convenience features include carpet-pile selectors, bag-change signals, retractable and extra-long cords.

Lightweight stick vacuums, used primarily for quick cleaning, handle much like a broom. The motor is housed in the handle. Some depend on suction for cleaning while others have a brush or comb in the nozzle to loosen dirt.

Cordless, battery operated or corded, electrically operated hand held vacuums are another quick clean up convenience.

Battery operated vacuums run for a short time on each charge. Both types provide enough suction to pick up surface dirt. Some come with tool attachments.

Neither the stick nor hand held vacuums are good substitutes for

standard upright or canister household vacuums.

Heavy duty shop vacuums for use around garages, patios and workshops pick up wood shavings, sawdust, bits of metal, twigs and other light debris.

Wet vacuums will draw up water as well as dry dirt. Sizes most often used around homes are 5 , 6 , 10 or 12 gal. capacity.

These vacuums have heavier construction than household machines. Features include a steel or plastic drum, stronger suction, extra filters to protect the motor from heavy dirt and larger hoses to allow relatively large debris to pass through without clogging.

Accessories include extension wands, crevice tools and floor nozzles with brushes.

Cleaning effectiveness of any vacuum is determined by suction, not horsepower. Nozzle and agitator construction are important, as is brush placement. Review of manuals and manufacturer literature will provide specific information on the units you sell.

### Rug Cleaners

A wet shampooer carries a liquid shampoo solution in the tank; rollers distribute the shampoo, and brushes lift the nap of the rug and work shampoo into the pile. Tank capacity ranges from two to four quarts.

Dry shampooers, primarily for Oriental and noncolorfast fabrics, substitute powder for the liquid shampoo. Again, rollers apply the powder and brushes work it into the carpet. The powder is removed with a vacuum cleaner.

Heavier duty electric steam or dry units are usually handled as rentals, with the consumer buying the steam detergent or cleansing powder. Wet and dry units are not interchangeable.

A steam cleaner injects a solution of hot water and detergent into the carpet under pressure and removes it immediately with powerful suction.

The dry cleaner spreads on the cleansing powder and works it into the carpet; the powder is then vacuumed up.

Some types of steam and dry cleaning units operate with rotary brushes. Others use an oscillating or vibrating brush. Some vibrating brush units are powerful enough to pull dirt particles through from the carpet's underside.

A final method of carpet cleaning is an aerosol spray. It is the easiest method and suitable for spot cleaning.

The aerosol is sprayed directly on the carpet, allowed to dry and vacuumed up. Brushing the foam into the carpet with a stiff brush increases its cleaning action.

For best results with any cleaning method, carpets should be thoroughly vacuumed before cleaning to remove loose surface dirt.

#### VACUUM CLEANER CARE

- Remove lint and hair from brushes and wash occasionally with mild detergent. Use damp cloth for interior of canister shell and dust bag cover.
- Replace bag frequently; it can burst without being completely full. Plaster dust and other fine dusts can clog the pores of the bag, cutting off air flow.
- Replace paper filters. Permanent plastic filters should be washed occasionally and allowed to dry completely before put back.
- Watch for small objects lodged in hose or fan. If they cannot be removed easily, find a repair center.

## Carpet Sweepers

Hand operated carpet sweepers are another means of picking up surface dirt in a hurry. Most have adjustable settings for thick or thin carpet pile and can be set low enough to clean bare floors.

Nylon or rubber wheels with nylon bearings and nylon bearings in the brushes mean smooth and long wearing operation. Cleaning action comes from nylon or mixed-bristle brushes and metal combs that lift dirt from carpets into the sweeper.

Compact storage and reasonable prices are the prime selling features of carpet sweepers.

## Upholstery Cleaners

Upholstery shampoos clean with liquid or aerosol shampoo.

Liquid shampoos apply shampoo directly to the upholstered fabric; the material should not be saturated.

Aerosol shampoos work through a brush attached to the can. The brush combines a foam-rubber pad with nylon bristles to spread the cleaner and work it into the fabric.

Most upholstery shampoos are safe for colorfast fabrics, but it is wise to test before covering the entire piece.

Some steam cleaners also come with an upholstery-cleaning hand tool. The tool is attached to the machine and the cleaning procedure is the same as in cleaning carpets. A special steam detergent for upholstery is designed to prevent overwetting.

## WAXES AND POLISHES

Floor Waxes—Water based, solvent based and polymer are the three major kinds of floor waxes.

Water based and polymer waxes dry to a high gloss without buffing; solvent based wax requires vigorous buffing. This is best accomplished with an electric polisher. One step waxes clean and wax simultaneously.

Water based wax should be recommended for asphalt, vinyl, vinyl asbestos and rubber tiled floors; solvent based waxes produce a hard, shiny finish and are best for wood, cork and terrazzo floors.

Self polishing waxes, such as polymer or resin, will yellow or discolor and wear off in heavy traffic areas; they should

be stripped off and reapplied after three or four coats. Water based waxes can be damp mopped without damaging the shine, but use of detergents will eventually dull the finish.

### FLOOR CARE

**SCRATCHES:** Blend in surface scratches by applying paste or liquid wax and buffing well. Use furniture touch-up polish to cover deeper scratches.

**SPILLS:** Wash the stained area promptly with household vinegar. After three to four minutes, wipe dry. May be necessary to repeat several times. Black heel marks can be removed by rubbing with liquid wax and fine steel wool.

## Wax Removers

Most wax removers contain chemicals that can be injurious if splashed in eyes or come in contact with the skin. It is a good idea to suggest rubber or plastic gloves as protection.

Some general purpose cleaners, either those that contain ammonia or require it to be added, will remove wax; but if the wax buildup is heavy, a special remover will ease the task.

## MOPS

Inexpensive cotton string or rayon wet mops have a tendency to mildew and rot if stored damp. Better-quality nylon/rayon blends or sponge-rubber mops resist rot and mildew and are less likely to shed.

Cellulose sponge mops with single or double heads wash floors, mop up spills, apply self polishing wax and other cleaning compounds. All have some form of squeezing mechanism.

Dust or dry mops are made of cotton, wool, nylon or nylon/acetate blends. Those of 100 percent nylon yarn generate static electricity as they move across the floor and attract dust and lint better than other materials. Quality dry mops should have flexible plastic or metal handle to mop connectors to slide under low furniture.

Other quality features in both wet and dry mops are replaceable heads, long, smooth handles and rust resistant plating.

## BROOMS AND BRUSHES

Brooms and brushes are made of natural or synthetic fibers held together by staples, wire or ties.

Heavy duty patio brooms are usually made of coarse natural fibers such as palmetto, palmyra or brass fiber; indoor brushes and brooms have softer fibers such as Tampico horsehair or broomcorn.

Synthetic fibers are unaffected by water, are more durable, pick up more dust and are less likely to break or shed.

## FLOOR MATS AND RUNNERS

Indoor/outdoor mats have nonskid backings and rough surfaces to remove mud, dust and snow from shoes and boots.

Outdoor natural hemp and cocoa fiber mats and those made of heavy rubber or vinyl links may be hosed clean.

Indoor mats of nylon pile with nonslip backing can be washed with soap and water. Chemically treated mats are machine washable, but after several washings should be retreated with dust attracting chemicals.

Vinyl runners protect carpeting from dirt and dust; they, too, can be cleaned with soap and water. When weight is placed on the runner, cleats grip carpet to prevent slippage.

## HOUSEHOLD CHEMICAL SAFETY

- Keep Chemicals, especially flammables and aerosols, away from open flames.
- Read the label—when you buy it and each time before you use it—and follow the directions explicitly.
- Store flammables and aerosols in a cool place, away from gas and oil furnaces and heaters.
- Store dangerous and poisonous products where children cannot reach them.
- Use chemicals as they are intended; don't experiment.

## HOUSEHOLD CHEMICALS

Every cleaning and polishing compound is a chemical formula of some kind. They are potential health hazards if not used according to directions and if not stored properly. Labels will warn of possibly dangerous ingredients and you

should remind customers to read and heed the labels.

Polishes should be used for whatever surfaces they are recommended for and for the purpose stated on the label: to clean metal or chrome or to polish glass, porcelain, bathroom tile or wood paneling. These agents come in cream, paste, liquid or aerosol form and some will clean more than one finish.

For furniture, there are wax, oil and cream polishes and silicone based polishes that protect plastic or laminated surfaces from scratches, fingerprints and static.

All purpose household cleaners usually spray on and require no rinsing to remove stains, fingerprints, heel scuffs and kitchen grease. Oven cleaners are stronger than general household cleaners and contain chemicals harmful to the skin. Rubber or plastic gloves are a good add on sale for any cleaning agent.

Aerosol powder spot removers that are sprayed on, allowed to dry and brushed out are safe for most clothing fabrics as well as carpeting and upholstery.

## Laundry Supplies

### IRONING TABLES AND COVERS

Most ironing tables have perforated or metal-mesh tops that allow heat and steam to circulate and rubber tipped tubular legs to prevent slipping or marring floors. Table heights are adjustable.

Other convenience features include built in cord holders, outlets with extension cords, or flaps on both sides of the table that can be extended to convert it to a worktable.

Sleeve boards are especially useful for home seamstresses. Average dimensions are 21" to 27" long and 5" to 7" wide.

Better ironing table covers are made of heat resistant, nonscorch material such as a combination of Teflon treatment and polyester, fiberglass or silicone aluminum finished cotton. They are made of heavier material that wears longer than promotional grades. They are cut more fully and have sturdier ties.

Ironing pads, usually made of plastic or foam rubber, keep

the cover from slipping, prevent damage to tabletop or to buttons and zippers and make a smoother ironing surface.

### DRYING RACKS

Major considerations in the choice of a drying rack are stability, number of lines and smooth construction.

Smooth rungs, whether made of wood, aluminum, steel or plastic, are important in indoor racks which are frequently used to dry sheer fabrics that could be snagged. Collapsible racks that can be stored when not in use offer from 15' to more than 50' of drying space.

A post type dryer on tripod legs, more suited to garage, basement or patio use, has individually strung plastic lines that provide up to 100' of drying space. It can be folded for storage.

The most compact indoor dryer is one that fits into a shower. Steel racks are held against two walls by spring tips. The line holder is mounted on rack wall and lines attached to the facing rack. Lines retract when not in use.

An umbrella style outdoor revolving clothes dryer is fitted into a permanent ground box. Lines are plastic coated and metal parts are aluminized or galvanized to resist rust. Drying capacity ranges from three to six average washer loads.

Quality indicators for all kinds of drying racks include the number of lines on each arm, length of arms, gauge of arms and post and type of metal finish.

### CLOTHES POSTS AND LINES

Clothesline posts should be galvanized or coated with aluminum enamel to prevent rust. "T" and acorn posts are commonly used. "T" posts are embedded in cement or installed in a ground box. "T" posts have from four to eight line hooks which permit the line to be stretched between "T" posts.

Acorn (or round-hub) posts have pronged tops that hold four lines. These posts can be installed the same as "T" posts, but lines can be strung to trees, garage or house instead of to a matching post. "T" installations require two posts.

Disappearing clotheslines require one post. A metal case holding the lines is mounted on a wall. Lines are attached to a handle, pulled out, locked to desired length and fixed to a post, another wall or a tree. When not in use, lines are wound back into the case. They can be installed inside or out.

Pulley lines are strung through a pulley so the user can hang or remove clothes from one location by pulling the line through the pulley. Only solid braided line or multifilament line is suitable for pulleys. Other types of line can be used but may not wear as well; wire line should never be used.

Other types of line include plastic coated steel line which cleans readily but damages easily and tends to sag. Plastic line with a polyethylene core wears well and can be used with pulleys.

## LAUNDRY ACCESSORIES

Most cleaning and laundry departments carry an assortment of accessories which ease washday chores.

Ironing caddies to hold freshly ironed garments have either single or double lightweight tubular steel bars and wheels or casters for portability. Some have height adjustments and all can be folded for storage.

Other accessories include laundry carts and sorters which combine fabric pockets with tubular frames to organize and transport garments for laundering.

## Storage and Disposal Supplies

### GARBAGE CANS

Galvanized steel and plastic are materials used in the manufacture of garbage and trash cans. Galvanized cans are durable but may be subject to rust in damp climates; plastic containers are lighter weight and will not rust but can be blown about by a strong wind.

Galvanizing is fusing rust and corrosion resistant zinc to steel. Top-quality items are made from heavier gauge steel and galvanized after fabrication to ensure complete coverage.

Promotional lines are usually made of pregalvanized steel sheeting. Rough treatment during manufacture may produce minute cracks that permit moisture to seep in under the coating. Vulnerable spots are side seams and the seam where the bottom is attached to the sides.

### PLASTIC PRODUCTS

Plastic garbage-can liners and trash bags are a necessity for nearly all consumers.

For greatest resistance to tears and punctures, bags should be made of 1.5 to 1.8 mil. thick plastic.

In general, bags are sized as follows: garbage-can liners, 17" × 19"; wastebasket liners, 22" × 35" to 33" × 40"; lawn bags, 33" × 48" to 34" × 56".

Oversize heavyweight storage bags, an adaptation of standard-sized bags, offer the advantage of sealing tight to keep out dust, dirt, bugs and moisture. Sizes as large as 5' × 9' will hold a full-sized bike, mattress, sofa or whole Christmas tree. Small sizes will seal up a single chair or a rack full of off season clothes. A handful of mothballs in the bag will deter mice as well as bugs.

Storage bags should be semitransparent so you can see what's in them and heavyweight to prevent tearing and punctures. Extra long twist ties should be included to seal the bags tight.

Plastic drop cloths help do it yourselfers protect furniture, carpets and floors from paint spills. They can be an excellent add on item in paint and decorating departments. The most popular sizes are 9' × 12' and 10' × 20'. Thicknesses range from .0003 mil. to 3 mil.

Plastic sheeting has a wide variety of uses, including: cover for pools, boats, firewood and barbecue grills; a moisture barrier in home weatherproofing; landscaping and underlayment; shrubbery protection, and ground or car cover.

## Cookware

To sell cookware, you must know not only an item's construction features, but also why it appeals to your customer. Keep the following selling tips in mind when you talk to your customers:

Sell a color that blends with the total kitchen decor. Also, make sure the color finish doesn't pose a cleaning chore.

Remember that a porcelain or ceramic coating on a pan doesn't affect cooking performance; the pan has the cooking characteristics of the base metal.

A smooth, nonporous surface, with or without a nonstick finish, doesn't harbor food particles. There should be no interior seams or crevices to retain food. Check to see if the finish is dishwasher safe—some, such as anodized aluminum, aren't.

Size is important. How large is the family? Sell a pan that will hold enough food, but not so large it wastes storage space and burner heat.

Consider storage. If a kitchen is small, the buyer may want pans that nest, hang or stack. Will the finish scratch if the pans rub together?

A pan should be heavy enough not to burn food or warp (warped and dented pans can develop hot spots that may burn foods) and tough enough not to break when dropped or subjected to direct heat.

Pan lids should fit snugly into the rim, so the pan will hold heat and moisture better, cook faster. However, they shouldn't be so tight that force is necessary to remove them.

### HOW TO FIGURE SIZE, CAPACITY OF METAL COOKWARE

	TOP-OF RANGE WARE	OVENWARE
Capacity of Saucepans and Saucepots	Fulllest liquid measure at over-flow or liquid capacity expressed in quarts	Liquid measure at over-flow full; for casseroles, expressed in quarts
Capacity of Frying Utensils	top outside dimension—bottom outside dimension may also be stated	Not applicable
Markings	Marked permanently on utensil or on removable label	Marked permanently on utensil or on removable label
Order of Dimensions	Not applicable	Round utensils—diameter by depth; rectangular utensils—length by width by depth
Tolerance of Normal Margin of Error	1/4" total dimension size; 5% total liquid volume	1/4" total dimension size; 5% total liquid volume



Pan bottoms should be flat, or slightly concave, and designed to flatten when heated. They should be wide enough to cover the burner completely and not waste heat.

Look at handles and knobs. They should be fastened securely, be sized and shaped so they're easy to hold, and made of a stay cool material, such as wood or plastic. They should be balanced with the weight of the pot to prevent tipping, and should have flame guards.

Know what your customer is looking for and stress buying the best quality budget allows. To know if a utensil is worth the price, you'll have to know general quality features and relate them to specifics covered in manufacturer literature.

## METAL COOKWARE

Metal transfers heat quickly and evenly from the heat source to the food; this, and its durability, make it an efficient and popular cookware material.

Metal cookware sales will also get a boost from the popularization of induction cooktops. In induction cooking, heat is transferred through magnetic attraction. So the cookware used must be made of a magnetic material, such as cast iron. To test pans, use a common kitchen magnet.

### Aluminum

Aluminum pans have a natural selling point—they provide good results. Aside from copper, aluminum is the best heat conductor used for cookware. It has even heat distribution and no "hot spots" where food will stick and burn.

Aluminum heats rapidly and evenly, and cools almost as quickly when removed from stove burner, so it will not keep foods warm for serving unless extremely thick. It is also relatively lightweight.

Aluminum pans are not all alike; their method of manufacture and gauge (or thickness) make the difference. The two most common manufacturing methods are stamping and casting.

Stamping involves placing flat sheets or round blanks of aluminum, rolled to specified thickness, in a press that forms the utensil. After finish is applied, handles are attached.

In the casting process, molten aluminum alloy is poured into molds. When the metal has cooled, the pan is removed from mold.

Medium- and light-gauge utensils are stamped, while heavier and more expensive ones are either stamped or cast. Both are one piece with no seams or hard to clean corners.

Pans used for top of range cooking are at least 18 gauge. The heavier the pan, the more durable it is and the more it costs. A top quality pan could be about 5 to 7 gauge.

Thinner metal (22 gauge) offers more chances for food to scorch and it may dent or warp.

Aluminum range top pans have satin finished bottoms

(to speed heat conduction) and sides that are polished, chrome plated, anodized or covered with porcelain or ceramic.

Aluminum bakeware with a dull or anodized finish absorbs heat quickly, while highly polished bakeware reflects heat.

The outside walls of cake pans and cookie sheets usually have a shiny finish to bake light golden cakes or to keep cookies from browning too much on the bottom.

Best metal pie pans have satin or anodized finish to absorb oven heat which is conducted quickly and evenly to the pie. Nine inch is most common, but other sizes are available.

Muffin pans, also used for cupcakes, are sold in 6 and 12 cup sizes. Mini size muffin pans are also available.

Covered roasters are for fowl or less-tender cuts of meat: those that require both heat and moisture to become tender. Shallow, rectangular, open roasting pans are designed for tender meat cuts.

Cooking tools made of wood, plastic or smooth edged metal are recommended for use with aluminum. Sharp edged tools such as knives, mashers and beaters may scratch it.

### Stainless Steel

Stainless steel pans are smooth, hard, warp and scratch resistant, nonporous and exceptionally durable. Adding chromium and nickel to steel alloys makes the utensil stainless by forming an invisible film that protects the surface from rust, corrosion, pitting, cracking, chipping and tarnishing. The chromium renews the film if anything mars it.

Stainless steel bakeware is usually solid stainless steel, while range top utensils combine stainless steel with other metals.

The reason for this is that stainless steel does not conduct heat as rapidly or as evenly as aluminum. To improve heat conduction, it is combined with aluminum, copper or carbon steel.

Different manufacturing methods produce "ply pans" in several combinations of metals that are bonded together before the utensil is formed. These include:

Two ply pans—stainless-steel interior with another metal on the outside. Occasionally this is reversed.

Three ply pans—stainless steel on the inside and outside with another metal as the core.

Bottom-clad pans—solid stainless or three ply with another

## WHAT IS GAUGE?

- Gauge is the thickness of metal used in cookware. The lower the gauge number, the thicker the metal. For example, 10 gauge is thicker than 16 gauge.
- A rule of thumb to apply to cookware is that 10 to 18 gauge metal is suitable for range-top use; 20 and 22 gauge is too thin for use over direct heat and may result in burned food or a warped pan. Baking pans may be thinner gauge, but must be sturdy enough to maintain shape under normal usage.

## HOW TO CLEAN AND CARE FOR METALS AND FINISHES

*Always follow the manufacturer's instructions for cleaning and caring for metals and finishes. Generally it's best to wait for pans to cool before washing or rinsing them, as they may warp if submerged in cold water while still hot.*

**ALUMINUM-** should be washed in warm, soapy water. Hand rather than machine washing is recommended. The extremely hot water in automatic dishwashers, combined with minerals in water and detergents, may discolor aluminum, especially colored anodized finishes. Remove stains with a non-abrasive cleaner.

**STAINLESS STEEL-** should be washed in hot, soapy water or warm ammonia and water solution, thoroughly rinsed and immediately dried to avoid water spots. Use mild, stainless steel cleansers or light scouring with a plastic or stainless steel scouring pad to remove most stains; don't use steel wool, chlorine bleach or alcohol.

**CAST IRON-** is usually pre-seasoned (coated with unsalted fat and heated to prevent rusting), unless porcelain coated. It should be washed in warm sudsy water and frequently treated by coating the cast iron interior surface with unsalted shortening, left until its next use, then wiped out. To re-season, scour the pan completely, rinse and dry; then coat the inside with unsalted fat and leave in moderate oven for two hours. Remove and wipe off excess grease.

**COPPER-** to remove discoloration use commercial cleaner or a mixture of flour, salt, lemon juice and ammonia applied before regular washing.

**CHROME-** wash with warm water and soap or detergent. Do not use abrasive cleaners.

**PLASTIC LAMINATES-** wash with detergent and water or a mild cleaner. Although strong and heat-resistant countertop coverings, they should not be used as cutting boards, trivets or hot pads, as they can be cut and burned.

**ACRYLIC ENAMEL-** use soap or detergent in warm water for cleaning. This exterior finish can be marked or damaged by ammonia, alcohol or bleach.

**BAKED ENAMEL-** somewhat chip-resistant, it is used on cabinets and appliances. Use soap or detergent in warm water or household cleaner. Do not use abrasives, alcohol or chlorine bleach.

**PORCELAIN ENAMEL-** commonly used on bathtubs, sinks, appliances and cookware. Use soap or detergent in warm water- mild cleaner if necessary. A sharp blow with a hard object may chip porcelain enamel.

metal applied to the bottom of the pan after it is formed.

Five ply/bottom-clad utensils—made by three ply process with two clad layers on the bottom.

Five ply pans—stainless steel on both the inside and outside surfaces with three layers of aluminum forming the core.

Like aluminum, stainless steel can have a highly polished or satin finish, and for the same reasons. Again, heavier gauge denotes quality.

### Cast-Iron Ware

Cast-iron ware is one of man's oldest forms of cookware. Today's cast-iron implements are alloys that permit thinner (and lighter-weight) pans with greater strength.

Most common items of cast iron are chicken fryers, skillets, roasters, Dutch ovens, broilers and grills, as well as specialty items like muffin or corn-stick pans.

Cast iron heats more slowly than other metals, but distributes heat evenly and maintains a steady surface temperature desirable for browning, pan broiling, slow stewing or baking. Cast-iron skillets have become more popular with cooking blackened meats and Cajun recipes.

Cast iron requires different care from other cookware metals (see chart on cleaning metals and finishes). The addition of nonstick interior coating and porcelainized exterior finishes makes cast iron easier to care for. However, interior coatings rob cast iron of its browning ability, often regarded as its most desirable characteristic.

### Copper Cookware

Copper is the best conductor of heat among cookware metals; it not only distributes heat evenly, but holds heat to keep foods warm. It is, however, heavy and expensive, and it dents and tarnishes easily.

Copper cooking surfaces must be lined with a coating such as stainless steel or a nonstick coating; otherwise they may produce toxic salts when exposed to some foods.

Also, cooked foods left in contact with uncoated copper may become discolored. The discoloration isn't appealing, but is harmless in most cases.

Copper is used mostly in combination with other metals, such as stainless steel (see section on stainless steel).

### Tin Ware

Tin, like cast iron, is one of the older metals used in cookware. Although it may be subject to warping and denting, pure tin will not rust and this characteristic makes it an ideal plating

for steel utensils. However, tin ware will rust if the tin plate is cut and the steel exposed. It is manufactured into durable, lightweight and inexpensive baking pans.

Much tin ware now has an embossed, silver like finish which reduces sticking and permits retention of grease in the batter.

### Chromium Plated Steel

Chromium plated steel utensils are stamped from cold rolled steel, polished and then plated with copper, nickel and chromium. These pans offer a shiny, hard chrome surface that is dent and warp resistant and maintains its nontarnishing surface with ordinary dishwashing.

They are also available with nonstick interiors.

### Exterior Finishes

Aside from natural metal exteriors, the emphasis on colorful kitchens has created a big market for colored cookware and that means special exterior finishes. Porcelain and ceramic coatings are most often used, since they offer solid colors and designs on an easily cleaned surface. Some pans and skillets are painted.

Porcelain is a form of durable glass bonded to metal at a high temperature.

Porcelain-enamel cookware should not be used over a high

## WHAT IS RANGE-TOP WARE?

*Range-top ware includes items used on top of the stove that come in direct contact with heat. Food is cooked by conduction- transfer of heat through pan to food. Basic to this category are:*

**SAUCEPANS-** have one long handle, come with or without lids in 5/8-qt. to 4-qt. sizes.

**SAUCE POTS-** have two side handles, 2-qt. to 20-qt sizes.

**SKILLETS-** also called fry pans. Have one long handle, broad bottoms, shallow sidewalls. Come 6" to 12" diameters, round or square, regular or sauté (with curved flaring sides) shapes, with or without lids.

**DUTCH OVENS-** like sauce pots only made of heavier gauge metal. May be used on burner or in oven for slow cooking or braising meats.

**KETTLES-** 8-qt. to 16-qt. covered utensils with bail handle.

**GRIDDLES-** have one long handle, two side handles or bail handle, wide bottoms, shallow sidewalls; are round, square or oblong.

**TEA KETTLES-** have curved or bail handles, 6-cup to 5 qt. capacity. Conventional or whistling. "Whistlers" have flip-up spout covers and trigger handles.

heat for a prolonged time; extreme high temperatures may cause the porcelain to melt.

Better grades of porcelainized cookware are seamless. Price differences can be traced to thickness of metal, number of coats of porcelain, design and color, and accessories such as nonbroil over covers and heat resistant plastic handles.

Ceramic coatings are clay based and applied to metal in much the same way as porcelain.

Either coating can be applied to steel, aluminum, stainless steel or cast iron after the pan has been formed. Both offer a hard, lustrous finish that normally will not scratch, rust, fade or peel. However, it may chip or crack if the pan is dropped.

Other finishes for metal cookware include:

Anodized—layer of aluminum oxide electrochemically applied to sheet aluminum; is stain resistant. Color finish can be applied by soaking in color bath.

Brite—polished and buffed finish.

Enamel (acrylic, alkyd, epoxy, polyurethane)—organic material baked onto interior or exterior of aluminum or stainless steel. In variety of colors.

Plated—layer of chrome, copper or brass plated onto aluminum or stainless steel.

Satin—dull finish; speeds heat absorption. Applied by brushing.

Silkscreen—porcelain or acrylic paste forced through design on screen and baked on exterior surface.

Sunray—interior finish. Applied by rotating pan over light abrasive, like sandpaper.

Synthetic finishes may fade from prolonged subjection to high heat or after repeated washing with dishwasher detergent. An anodized finish can be permanently damaged by soaking in strong detergent or washing in a dishwasher.

### Enamelware

Enamelware is slightly different from porcelainized cookware in that it is coated completely—inside and out—with porcelain enamel.

The coating can be applied to steel, stainless steel and cast iron. The porcelain is applied after utensil is formed to create a smooth nonporous surface. In normal use, these pans are not affected by aging, heat, humidity or food acids, and therefore can be used for cooking, baking, roasting, serving and storing.

Less-expensive enamelware may chip or scratch easily, but better-quality utensils have heavier coatings and are more chip resistant.

## GLASS COOKWARE

Heat resistant glass and glass-ceramic cooking utensils also fill the need for an attractive dish that can be used for mixing, cooking, serving and storing.

Major selling points are attractiveness, one dish convenience, a nonporous surface that does not stain, absorb food flavors or hold food odors. There is little danger of warping, bending, denting, discoloring or pitting, but they may break. Ordinary dishwashing will clean these utensils.

## WHAT IS OVENWARE?

*Ovenware includes baking pans, roasters and other pans used in the oven. Food is baked or roasted by absorbing heat from the surrounding air. Combines with conduction where food touches its container. Basic to this category:*

**CAKE PANS-** round, square or oblong with slightly tapered sides. May have loose bottom for layer cakes or movable cutter bar to help remove cake. Angel food or bundt pans are circular, have high, tapered sides and tubular stem. Loose-bottom pans may have groove to catch overflow of batter.

**PIE PANS-** round pans with flared sides. May have rim to catch excess juice.

**COOKIE SHEETS-** flat, rectangular pan with one, two or three open sides.

**BREAD OR LOAF PANS-** narrow, deep rectangular pans with flared sides.

**MUFFIN PANS-** also used for cupcakes. Oblong or rectangular tray-like pan with 6 or 12 individual cups.

**ROASTING PANS-** open or covered, round, rectangular or oval, some with lifting rack. Sizes range from 12" to 18". Generally, 12 to 16-lb. Fowl, 18-lb. Roast or 16 to 20-lb. Ham requires 16" roaster; 16 to 22-lb. Fowl, 25-lb. Roast or 20 to 25-lb. Ham requires 18" roaster. "Roasting pan" is open; "roaster" is covered pan.

**BROILING PANS-** large flat pans. Perforated top lets fat from meat drip into tray below.

The American National Standards Institute has established size measurements for layer cake, loaf cake, tubed cake pans, pie pans, muffin pans and roasting pans. Most manufacturers show sized or dimensions on the label or stamp or imprint them on the outside bottom of the pan.

There should be at least one inch of space between all sides of bakeware and the sides of the oven; ovenware should be sold according to inside measurements of the customer's oven.

## Glass Ceramic

Although glass ceramic pans can be used for range top cooking, they are better suited for baking, broiling or roasting. They are slow heat conductors, but because they hold heat longer than metal, overall cooking time is about the same.

Glass ceramic cookware designed especially for range top cooking has integral handles of the same material so they stay comfortable to the touch on top of the range and will not melt or warp when used in ovens. Transparent, tinted glass ceramic range top cookware can be used on gas or electric ranges as well as in conventional or microwave ovens and under broilers for browning.

Glass ceramic cookware can be used for storage, too; it is not affected by temperature changes and can go from refrigerator to oven safely.

## Heat Resistant Glass

Heat resistant glass is like glass ceramic in that it can be used for storing, cooking and serving. Some pieces can be used on the range, while others are suitable only for the oven. Manufacturer's labels usually include recommended usage.

Those designed for baking can be taken from refrigerator and put into a preheated oven. However, heat resistant glass range top products cannot be taken directly from refrigerator to range top—the temperature change and direct contact with heat may cause them to break.

Sudden cooling may be detrimental to heat resistant glass items—they should not be put in water while still hot.

When glass or glass-ceramic dishes are used for baking, oven temperature should be reduced by at least 25°.

## MICROWAVE COOKWARE

Microwave has emerged in a variety of materials—glass, glass ceramic, plastic and paper. Some cookware specifically for microwave ovens can also be refrigerated, frozen and used in conventional ovens.

Many consumers may not want to or cannot invest in a whole new set of cookware and will want to know which articles they already have can be used in the ovens.

When talking to customers, whether selling them microwave or telling them which cookware they can use in their microwaves, it's important to stress that they know their particular model—its limitations, features and operation—and follow its manufacturer's instructions and suggestions.

A simple test to determine if a dish is microwave safe is to place the dish in question in the microwave along with a cup of cold water in a known microwave safe item. Microwave on high (100 percent) power for one minute. If the water has heated and the dish has remained cool, it's microwave safe. If the dish tested has gotten warm or hot, it should not be used in the microwave oven.

A container used in microwave cooking must allow microwaves to pass through both it and the food. Contrary to popular belief, some metal can be used in microwave cooking; its reflective properties can even help protect food which might overheat in some areas.

Aluminum foil for shielding, small skewers and shallow food convenience trays can be used in microwave ovens; however,

### WHAT CAN YOU USE TO COOK FOOD IN YOUR MICROWAVE?

TYPE OF UTENSILS/DISHES	MICROWAVE OVEN	CONVENTIONAL OVEN	TOP OF RANGE	BROILER	FREEZER	DISHWASHER
Heat Resistant Glass (without metal parts or decoration)	Yes	Yes	Yes	No	Yes	Yes
Glass-Ceramic (without metal or plastic parts)	Yes	Yes	Yes	Yes	Yes	Yes
Pottery Earthenware Stoneware Fine China/Porcelain	*	*	No	No	*	*
Paper**	Yes (short time)	No	No	No	Yes	No (not re-usable)
Plastics	Yes*	Yes*	No	No	*	*
Metal Cookware/Bakeware	No	*	Yes	*	Yes	*
Metal Decorations on Glassware Dinnerware	No*	*	*	*	*	*
Dinnerware Glazed	No	Yes	No	No	Yes	Yes
Unglazed Glass Dinnerware	Yes	Yes	No	No	Yes	Yes
Crystal/Cut Glass Antique Glassware	No	No	No	No	Not Recommended	*
Microwave Browning Dish	Yes	No	No	No	No	Yes

\*See Manufacturer's Directions

\*\* Does not include paper products manufactured for microwave ovens

Some microwave dishes use metal parts for shielding and are safe for microwave use.

metal should be kept at least 1" away from oven walls, and deep trays and metal pans aren't suitable. Foil lined cartons shield food completely, and don't heat food at all.

Generally speaking, shallow containers produce better results than deep ones; round shapes tend to be better than square or rectangular ones. Microwaves travel in straight lines, bouncing around the oven in irregular patterns. Therefore, sharp corners allow more exposure to microwave energy so the food in these areas dries out before the center is cooked.

Plastics for the most part are transparent to microwave energy and are ideal for microwave use. A variety of plastics is available, and the quality of the plastic in microwave ovenware has much to do with its safety. "Engineered" plastic (heavy duty industrial grade) is not only more expensive than many plastics, it's likely to damage a microwave oven.

The Society of Plastics Industry is developing test methods for manufacturers of plastic cookware to use as guidelines in evaluating the durability and safety of their products. Heavy duty plastic microwave cookware that is not harmful to microwaves comes in a variety of shapes and sizes—from casserole dishes to muffin pans. Some of this cookware also can be used in conventional ovens at low temperatures.

It's a good idea to check with the manufacturers of the microwave ovens you sell for the brand or type of microwave ovenware they suggest.

In general, plastics are stain resistant, break resistant and freezable, but the combined production of steam and hot fans in microwave ovens can distort some of the less-durable plastics.

Those labeled to withstand boiling water, or as dishwasher safe, are often recommended for microwave use because they can take the heat of food for short reheating and thawing periods without melting or distorting. For true cooking, exotic resins like PBT, TPX, etc., have 350° to 450° melting points.

Melamine dishes are usually limited to one or two minutes of cooking time by most oven manufacturers, if they're recommended at all, because they can become very hot and scorch or crack.

Wood and natural materials such as straw are usually limited to one or two minutes of cooking time by most manufacturers of microwave ovens. The inherent or soaked-up moisture and fats in wood can absorb the microwaves and cause the wood to heat, resulting in drying, cracking or scorching.

Ceramics, including pottery and earthenware, are suitable for use in microwave ovens, but oven manufacturers recommend that they be tested first. Some ingredients that absorb microwave energy and heat rapidly to a high temperature are present in some ceramic dishes. Large amounts of these particles can result in the dish overheating and breaking.

Glass cookware is identified as heat resistant or nonheat resistant, while most glass ceramic cookware is classified as glazed or unglazed. Most manufacturers recommend the use of heat resistant glass or glass ceramic cookware for microwave cooking.

Nonheat resistant glass dishes are not treated to withstand the extreme and uneven heat normal in microwave cooking; i.e., the glass remains cool while food gets hot; the hot food then transfers heat at the points where it touches the glass, causing uneven heating in the glass that leads to breakage for nonheat resistant glasses.

Glazed glass ceramic dishes are not recommended for microwave oven use. The glazes contain relatively high percentages of ingredients which absorb microwave energy, causing the dishes to heat rapidly to high temperatures. This may result in breakage or could cause burns or spills if they are picked up without potholders or oven mitts by someone not expecting the dish or cup itself to be hot.

Heat resistant and unglazed glass-ceramic ovenware is highly recommended for use by both ovenware and microwave-oven manufacturers because they are nonporous and cannot absorb moisture of food.

## **WATERLESS COOKWARE**

Waterless cookware describes a heavy gauge pan with tight fitting cover that requires only a small quantity of liquid—either added by the cook or present in the food itself. Low heat is of utmost importance for food cooked by steam rather than by water.

Use the following three points to sell waterless cookware:

1. Metal pans are formed with graduated thickness that, at a low temperature, spreads heat throughout the pan, although only a small area may come in direct contact with the food. Heat reaches food from all directions.
2. Rims and covers are made so that a ring of moisture forms in the crevice between cover flange and inside rim. This seals pan lid to the body and seals steam, moisture, flavors and odors inside pan. Covers are heavy enough that they won't be pushed up by steam collecting inside.
3. The pans are self basting. Steam forms in the pan, rises to the lid and falls back again and again into the food to keep it moist and juicy. No basting or stirring is necessary if the lid is not lifted. This only lets moisture escape and prolongs cooking time.

## **CLAY COOKWARE**

The porous nature of terra cotta cookware allows for unique cooking methods. The cookware can be submersed in cold water prior to use; the clay absorbs the moisture which is then slowly released during cooking. If used dry, the food produces a thin, crisp crust because of moisture lost to the clay.

The cookware can be used in conventional, microwave and convection ovens. They are available in a variety of shapes from lasagna pans to muffin pans. Accessory items, such as wine coolers, are also available.

## **PRESSURE COOKERS AND FRYERS**

Slightly different from other range top ware are pressure cookers and pressure fryers. Both specialize in fast cooking and retention of natural flavors, vitamins and colors of fruits and vegetables.

Pressure cookers have steam tight covers that permit steam pressure of 5 to 15 lbs. Average size is 4 qt. capacity, but larger sizes (up to 22 qt.) are available. Foods cook under steam pressure three to 10 times faster than in ordinary pans. Flavors do not evaporate into the air or drown in water because cooking is done with no air and a small amount of water.

An important selling point is how economical pressure cookers are. First are fuel savings because a whole meal-meat and vegetables—can be cooked in one pan on one burner. Second are grocery costs. Pressure cooking will tenderize less tender—and cheaper—cuts of meat.

If your customers have large gardens, point out that cookers with a selective 5-, 10-, 15-lb. control double as pressure canners and provide (according to the U.S. Department of Agriculture) the only safe way to can low acid foods.

Because of construction features, steam venting and pressure-control devices on pressure cookers differ according to the manufacturer. Read instruction sheets with those you sell. Be thoroughly familiar with them to tell customers how to use a pressure cooker.

Low-pressure fryers fry foods in oil under pressure in about one third of the time of conventional frying. Designed especially for pressure frying, these cookers maintain a pressure level around 5 to 6 lbs. per square inch. For proper browning and pressure frying, the oil should reach a temperature of 350° F. Available in 4 and 6 qt. capacities, a pressure fryer features a pressure regulator, vent tube, safety vent and clamp to hold the lid on. Check manufacturer information for complete construction features as well as proper use and care instructions. Although pressure frying cannot be done in a conventional pressure cooker, regular pressure cooking can be done in pressure fryers.

## **NONSTICK FINISHES**

Easy cleanup . . . cooking with less oil . . . moderate prices—all reasons why consumers buy products with nonstick finishes.

Because DuPont's Teflon and SilverStone finishes are most widely known, information here deals with them. Other nonstick finishes include Fluon, made by ICI America, Inc.; Halon, made by Allied Corp.; Debron, and T Fal.

## **TEFLON TFE FINISHES**

Teflon TFE nonstick finishes are referred to in the plural because the application process involves two coats: a primer with adhesive properties and a top coat of enamel containing color.

Teflon II coatings are scratch resistant and can be used with smooth edged metal kitchen tools; they are available on all kinds of utensil—range top cookware, some small appliances and bakeware—and can be applied to aluminum, stainless-steel, cast iron and glass cookware, both electric and nonelectric.

Only those items bearing the Teflon II Certification Mark meet DuPont's standards of hard based application and can be considered scratch resistant.

Teflon S, another nonstick finish manufactured by DuPont, is used on products such as steam irons, garden tools, range hoods and drill bits; it is not used on cooking utensils.

Certain other finishes, such as Tuftram, have a hard material added to the Teflon; but according to DuPont, the surface, although harder, loses some of its nonstick properties.

### **What Will Teflon Do?**

When Teflon is applied to cookware, it produces a nonstick surface that reduces cleaning time and effort because food will not stick and burned on residue comes off with ordinary dishwashing.

This same nonstick property makes it possible to cook without grease or cooking oils.

But Teflon is not a miracle covering. It won't keep food from burning if the pan gets too hot. It won't replace the flavor that cooking oil gives food, but neither will it substitute a foreign flavor or endanger health.

### **How to Use Teflon**

While it isn't necessary to use cooking oils, in some instances it is recommended. As a general rule, follow the recipe—especially for baked foods. The nonstick finish assures that the finished product will come out of the pan cleanly and completely.

A new Teflon coated pan should be washed, rinsed, dried and conditioned before it is used. Conditioning means covering the surface lightly with cooking oil, and this is particularly important for frying pans, grills and bakeware, except angel food pans. (If an angel food pan has been greased for any reason, the Teflon coating should be cleaned by rubbing vinegar or lemon juice over the entire surface, then washed thoroughly in hot suds, rinsed and dried.)

No matter what the base material, Teflon coated frying pans and grills should be preheated. Medium to medium high heat is best for aluminum and low to medium heat is best for porcelain enameled pans. High heat, above 450°, should be avoided because (1) food may burn and (2) the Teflon coating may discolor. Discoloring will not destroy the

## PLASTICS GLOSSARY

**ACRYLIC**- warm to touch. Available in translucent, transparent and opaque colors. Resists sharp blows, but scratches easily. Can be damaged by perfume, gasoline, cleaning fluid, etc. Has slow burning rate; will not flash ignite.

**ACRYLONITRILE**- rigid material with high resistance to heat, breaking and shattering. Can be crystal, transparent or opaque.

**COPOLYMER**- the process of combining two plastics-such as polyethylene or polypropylene- into a heavy duty plastic used in trash and garbage cans.

**EXPANDED STYRENE**- lightweight foam material used for all-plastic picnic jugs, ice chest, etc. Good insulator. Can be punctured; when too light or thin is subject to fairly easy breakage.

**HIGH-DENSITY POLYETHYLENE**- high resistance to heat; is slightly translucent and more rigid than ordinary polyethylene. Resists sub-zero freezer temperatures without cracking or becoming brittle, dishwasher safe.

**HIGH-IMPACT POLYSTYRENE**- much stronger than ordinary polystyrene. Also rigid with lustrous finish. Breakage under normal usage is rare.

**MELAMINE**- thermosetting plastic used mostly in dinnerware and for handles of some kitchen tools. Is mar-resistant and virtually unbreakable. Impervious to detergents, cleaning fluids, alcohol. Dishwasher safe.

**NYLON**- rigid thermoplastic material with glossy surface; almost unbreakable and resist heat and cold. Can be boiled but not scoured. Will ignite if it comes in contact with open flame.

**PHENOLIC**- thermosetting plastic with good resistance to heat. Used for handles on cooking pans, etc. Can be boiled.

**POLYTHYLENE**- lightweight, thermoplastic that feels waxy; is resistant to chemicals and moisture and flexible enough to squeeze. Won't stiffen or become brittle from cold; resistant to chipping, crushing and peeling, but will not last with abrasive cleaning or sterilizing.

**POLYPROPYLENE**- in some formulations is among the strongest plastics available. Rigid, lustrous, heat-resistant and boil-proof.

**POLYSTYRENE**- rigid or semi-rigid thermoplastic with satiny smooth or textured finish. Shatter-proof; resists most foods, drinks, household acids and oils. Burns if subjected to direct flame. Can be used for containers, molded products and sheet material. Occasional contact with boiling water won't hurt it, but repeated immersions are not recommended. Unlimited range of transparent, translucent and opaque colors.

**THERMOSET POLYESTER**- rigid plastic used mostly in higher-quality microwave cookware. Withstands heat up to 400 F. Boil-proof and stain-resistant.

**UREA**- heat-and scratch-resistant thermosetting plastic. Not affected by detergents, cleaning fluids, alcohol. Comes in a wide range of colors.

**VINYL**- soft, pliable and resilient thermoplastic that resists stains; won't peel or become "gummy" like rubber. Abrasive cleaners and direct heat are harmful. Can also be a rigid material.

nonstick quality, but the pan's appearance will suffer.

Although food will not stick to Teflon finishes, grease may build up and cause stains and discoloring. Minor stains are normal and do not harm surface, but large stains, caused by improper cleaning or overheating, may result in the loss of nonstick property.

These stains and coloration can be partially removed or reduced by simmering any of the following solutions 15-20 minutes in the stained pan:

1. 3 Tbsp. oxygen bleach and one tsp. liquid dish detergent in one cup water.
2. 3 Tbsp. automatic dishwasher detergent in one cup water. Wash, rinse, dry and again condition with shortening or cooking oil.

Proper cleaning involves washing the pan with a soft cloth or sponge in hot water and detergent after each use and periodically scrubbing the surface with a plastic or rubber scrubber. A plastic-mesh dishpad or rubber scraper will

remove a stubborn spot, but steel wool or scouring powder should never be used. Nylon, plastic, wooden or rubber utensils are preferred. Metal utensils can be used with care, but do not cut in the pan.

Automatic dishwashing will not harm Teflon surface, but may discolor the undercoated outside of the pan. When rinse water beads and runs off, Teflon surface is clean.

## SILVERSTONE

Manufactured by DuPont, SilverStone is a nonstick finish developed for heavy gauge aluminum cookware.

Applied in a three coat system and baked on at 800° F, SilverStone has a smoother cooking surface than Teflon and is more resistant to scratching, peeling and chipping.

Cookware with SilverStone can be used in ovens with temperatures up to 350° F. The temperature limit is to protect the handles. It should not be used under a broiler.

Its care and use is the same as for Teflon II.

SilverStone Supra has most of the same properties as regular SilverStone coatings, but is more abuse resistant than earlier SilverStone. The Supra line costs

about 20 percent more at retail than the regular SilverStone coated items.

## Plastics

Quality plastics have a definite place in housewares sales, and consumers who buy them are demanding and discriminating.

Most plastic housewares are either thermoplastic or thermosetting plastic.

With so many different plastics in use, you must be able to explain the differences in terms of proper use and care as well as the quality features that make the difference in price.

## Thermoplastics

Kitchen storage items and food-preparation utensils are examples of thermoplastics which include rigid or flexible

## WHAT IS RANGE-TOP WARE?

*Range-top ware includes items used on top of the stove that come in direct contact with heat. Food is cooked by conduction- transfer of heat through pan to food. Basic to this category are:*

**SAUCEPANS-** have one long handle, come with or without lids in 5/8-qt. to 4-qt. sizes.

**SAUCE POTS-** have two side handles, 2-qt. to 20-qt sizes.

**SKILLETS-** also called fry pans. Have one long handle, broad bottoms, shallow sidewalls. Come 6" to 12" diameters, round or square, regular or sauté (with curved flaring sides) shapes, with or without lids.

**DUTCH OVENS-** like sauce pots only made of heavier gauge metal. May be used on burner or in oven for slow cooking or braising meats.

**KETTLES-** 8-qt. to 16-qt. covered utensils with bail handle.

**GRIDDLES-** have one long handle, two side handles or bail handle, wide bottoms, shallow side-walls; are round, square or oblong.

**TEA KETTLES-** have curved or bail handles, 6-cup to 5 qt. capacity. Conventional or whistling. "Whistlers" have flip-up spout covers and trigger handles.

polyethylene, nylon, vinyl and acrylics.

In the manufacturing process, heat and pressure are applied to dry materials in a mold. The finished product melts when resubjected to heat, making thermoplastics unsuitable for cooking utensils.

In fact, these items should never be left near an open flame of a hot stove where they may come in contact with direct heat. However, containers made of "boilable plastic" can be taken directly from the freezer and dropped into boiling water.

Some thermoplastics are rugged enough to withstand severe weather extremes and the constant battering that trash and garbage cans take. These are found in plastic cans that are lighter weight than good metal cans and won't crack, dent, warp or rust.

### Thermosetting Plastics

During manufacturing, thermosetting plastics become hard and brittle with the application of heat and pressure. The product retains its rigid form regardless of subsequent applications of heat. Melamine, phenolic, urea, plastic laminated and fiberglass reinforced materials are made this way.

Thermosetting plastics are primarily used for appliance knobs and handles, bottle caps, radio and TV cabinets, laminated countertops and melamine dinnerware. Probably the most familiar use is for heat resistant handles on metal cookware.

Although thermosetting plastics are not affected by moderate heat, you should warn your customers not to inadvertently leave a detachable pot handle or melamine dinner plate near intense or direct heat. While they will not melt like thermoplastic, they may warp.

### Care Pointers

Plastics—even the best—should be washed with a mild soap or nonabrasive cleaner. Abrasive cleaners and scouring pads may permanently mar the finish. Solvents and liquid cleaners may

etch the finish of some plastics, notably polystyrenes.

Today, many plastics are "boilproof" or safe for washing in an automatic dishwasher, but tell your customer to read the manufacturer's fact tag or label before washing the item.

### Marks of Quality

Quality in plastic housewares may be more difficult to distinguish than in some other lines. There's no gauge to go by, but there are differences.

Virgin plastic is one big quality difference. Less expensive products may be made from reclaimed plastic,

which may dry out and crack—virgin plastic won't. Better quality is apparent in weight of the item and thickness of walls, sides and bottoms. Also, look for a snug seal in lids.

## Tableware

Knowledge of interior decorating themes is as vital to selling tableware as is how it will be used. Read consumer shelter magazines for decorating tips and trade magazines for product availability and new trends.

Combine that information with the product knowledge and selling pointers included here and you'll be able to sell anything in the tableware line.

### Selling Tips

The prime selling tip for any kind of tableware is find out what it will be used for. Then let the following facts guide you in your recommendations:

Melamine or lightweight glass ceramic dinnerware is good for everyday use. Neither breaks easily.

Earthenware or stoneware is a step up from melamine.

Moderately priced glass tumblers are frequently made from heat treated glass. This means they won't break with normal treatment.

Thermal tumblers are virtually unbreakable, so they are often used for children's dinnerware.

Stainless-steel flatware offers attractive styling and easy care.

Chrome plated ware is pretty to look at, practical and requires minimal care. Makes a nice, moderately priced gift.

## DINNERWARE

### Ceramic Dinnerware

Ceramic is a word that applies to the process of making



clay vessels and to the finished products, including china and porcelain.

Certain signs indicate inferior china—inspect your stock so you find them before your customer does.

Major trouble signs are:

Thick areas called puddles in plates and saucers. They show up when piece is held up to light.

Blisters, pitting, bumps or waviness in glaze. It should reflect light evenly.

Rough edges on bottom of plate or rim of cup.

Crack in glaze indicating weakness where handles are joined to body.

Black or brown speck, gray sheen or dull color.

Breaks in decoration.

Two other forms of pottery are earthenware and stoneware. Stoneware is harder than earthenware and both are heavier and harder than porcelain—the harder the pottery, the less readily will it break.

Glass dinnerware may be made of pressed or more durable laminated glass. Pressed-glass dinnerware is usually transparent and may be clear or tinted. Laminated glass provides considerably more rugged dinnerware in white or tinted body colors and a range of decorations.

### **Melamine Dinnerware**

Melamine is a thermosetting plastic that is heat resistant, rigid and virtually indestructible. (See section on Plastics for characteristics and care of melamine.) It produces lightweight, colorful dinnerware that stands up under relatively hard use. An independent testing agency has discovered certain quality defects that may show up in melamine dinnerware, regardless of price. Before you display or sell a set, check it for the following problems.

Scuffs, scratches, cracks, dents, pinholes, pits, blisters, wrinkles, chips, chalking, dull spots, “orange-peel” surfaces.

Patterns off center or wrinkles at edges because underlay is too large for plate.

Cup handles badly attached or mold marks not burnished properly.

Bases of dinner plates or serving platters warped so they don't stand solidly.

### **GLASSWARE**

As with any product, glassware comes in varying qualities.

Lime glass is used for machine made glassware. It resists scratches but does not have the sparkle or tone of crystal.

Crystal is made from lead or flint glass that produces a brilliant jewel like glass and produces a clear, musical note when gently tapped.

Most better-quality glass is made by blowing or pressing.

Blown glass is fed into molds and shaped by compressed air. Pressed glass is manufactured by pouring molten glass into precast forms and pressing it into shape. If a block mold is used, the item will have no seam; with a hinge mold, the finished piece will have a seam.

Among characteristics common to all glasswares are strength, durability and resistance to heat and acids. Heat treating increases resistance to breaking. To avoid breakage, glassware should not be subjected to extreme temperature changes.

In most stemware, the bowl is made separately and later attached to stem and foot. Pitcher handles are usually applied after the body is but while the glass is still hot.

Better-quality glassware is free of mold marks. Lower-quality tumblers frequently have two or three mold marks along upper portions, a thick rim or lip at the top and tiny air bubbles trapped in the walls.

Medium priced lines include colored and textured items.

### **Thermal Ware**

Insulated thermal items include tumblers, pitchers and casserole serving dishes. Although they cannot be categorized accurately as glassware, these pieces serve the same purpose. In addition to being lightweight and almost unbreakable, thermal ware offers an insulating characteristic that glass does not. Food or liquid put in these containers will stay hot or cold for long periods.

Better thermal ware has double walled construction with a glass or plastic inner lining, an insulating space between the linings and an unbreakable plastic outer jacket sealed to the inner lining at the top. The outer jacket gives the ware its decorative value.

### **FLATWARE**

Stainless-steel flatware patterns are diverse and attractive.

Lower-quality stainless-steel flatware is lightweight, may break under stress and has a dull finish. It may be made of an alloy instead of pure stainless steel, and handles may not be fastened on securely.

Better stainless steel is heavier, has a uniform high glass mirror finish which retains without polishing, has no rough spots (especially on fork tines) and is pure stainless steel. Forks and spoons are one piece and knife blades are attached to handles so securely there is little danger of their coming apart. Most knife handles are hollow and many blades are tempered steel.

### **CHROME PLATED WARE**

Most pieces of chrome plated ware are serving dishes and accessories that look like silver but won't tarnish. The chrome may pick up fingerprints, but they come off with soap and water. Under no circumstances should chrome plating be scoured—the surface will scratch.

Lower cost items frequently have only a thin coating of chrome which may scratch or chip, leaving the base metal exposed to rust.

Better pieces are stamped from sheet brass or steel, engraved or embossed (if a pattern is desired), formed and smoothed into finished shape. Then they're plated, first with nickel, then with chrome. This process eliminates rough spots or imperfections.

## Cutlery

Surveys have indicated that American consumers use kitchen knives an average of 10,000 times a year. This means that selling quality, higher priced kitchen knives, as well as shears and scissors, should remain profitable, especially if salespeople are well informed on the item's proper use, care, features and price comparisons.

### KNIVES

Knives are sold singly or in sets, but it is best and usually more economical to recommend a set. Also suggest a storage case or rack for the knives, as jostling in drawers increases the chance for chips in the blade and shortens the life of the knife.

Knives are made from steel, and generally, the more carbon in the steel, the better the blade will hold its edge.

Steels containing relatively high amounts of both chromium and carbon will hold an edge and resist stains, and are usually the most expensive. Carbon steel is a term commonly used to denote nonstainless knives.

Carbon steel is easier to resharpen than stainless steel, but it will rust and discolor more easily.

Quality of stainless-steel knives depends on the amount of carbon steel they contain. Cheaper ones are low carbon and can't be hardened or tempered, which means they won't hold a cutting edge and can't be sharpened satisfactorily.

More expensive high-carbon stainless-steel knives have a polished finish, a hardened and tempered cutting edge (some with tungsten coating), which retains its sharpness for a long time and can be sharpened when necessary.

No matter how good the knife, it will become dull with time, when the edge "turns" as a result of coming into contact with hard surfaces.

To stand up to heavy use, better-quality knives should have properly fitting handles and high-quality, stain resistant blades. Better-quality knife blades are manufactured

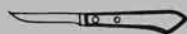
### TYPES OF KNIVES



**BREAD KNIFE**- long, wide blade with serrated edge for ripping food apart rather than cutting. Used for cutting light density foods such as bread.



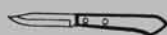
**BUTCHER KNIFE**- (6"-12", sharp broad blade, straight edge)- cuts, separates, dices and trims raw meats, fish and poultry; can be used as cleaver to open lobsters or chop through bones and joints.



**CLASSIC GROUND PARING KNIFE**- (3")- dices, slices, peels fruits and vegetables; finely slices or slivers olives, etc., for fancy salads.



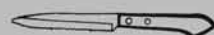
**CLEAVER**- splits, chops, pounds, dices or slices. Back of cleaver can be used to pound meat.



**CLIP-POINT PARING KNIFE**- (3")- general kitchen use for peeling, paring, skinning, seeding and pitting fruits and vegetables.



**CHEESE SLICER**- split-tip blade slices easily through cheeses.



**COOK'S UTILITY KNIFE**- (5", scalloped edge)- cuts sandwich fillings; trims and cuts large vegetables; removes kernels from corn-on-the-cob.



**CURVED CITRUS KNIFE**- (double serrated blade)- cuts and loosens citrus fruit sections.

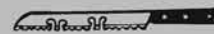


**FISH FILLETING KNIFE**- (8")- flexible blade skins, bones, fillets fish.



**FRENCH COOK KNIFE** (8")- chops, dices, cleans onions, celery, peppers, etc.: carves hot roasts; slices sandwich loaves; sections corn-on-the-cob; cuts noodles; disjoints raw chicken.

**FROZEN FOOD SLICER**- special serrated edge cuts through frozen vegetables and meats (including large cuts).



**LARGE SLICER**- (9", scalloped edge)- slices ham, sausages, cold roasts, rolls, angel food cake, bread.



**ROAST CARVER** (8", scalloped edge)- carves round and boneless roasts, raw roasts, cheeses, melons.



**ROAST CARVER** (9", straight of scalloped edge)- carves and slices roasts, steaks, whole hams, leg-of-lamb, turkey, raw chicken, melons



**SPREADER**- broad, rounded, paddle-like blade for spreading soft sandwich fillings.



**STEAK KNIFE**- pointed tip, scalloped edge; can also have rounded tip and/or carving edge.



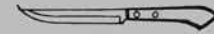
**STEAK AND POULTRY SLICER** (7-1/2", scalloped edge)- cuts ham, cold roasts, fowl, steaks, bread and cakes.



**TRIMMING KNIFE**- long, narrow blade. Used for "boning" or "trimming" ham bone, leg-of-lamb, roasts, etc.



**UTILITY KNIFE** (5")- slices, cuts or cores fruits and vegetables; trims meats.



**UTILITY SLICER** (6", scalloped edge)- slices steaks, roasts, hams, leg-of-lamb, cold meat, fruits, peppers; fillets fish; dissects poultry.



*(Note: Generally recommend a wide blade for roasts and a narrow blade for cold meat or fowl.)*

through a process that can be broken down into four basic steps:

1. Hardening—heating blades at high temperature.
2. Quenching—rapid cooling of red hot blade in oil, water or salts.
3. Tempering—reducing the brittleness quenching causes by reheating slowly at a lower temperature. Tempered steel produces an edge that stays sharp longer and is less likely to break under strain.
4. Grinding—forming the cutting edge.

## Grinding

Knives are flat, hollow or taper ground, beginning at the back of the blade and working toward the edge. The blade may retain visible grinding marks and this can have an effect on service or blade life of stainless-steel blades. The smoother the finish on nonstainless blades, the more resistant they are to corrosion.

A flat-ground knife resembles a thin wedge, thickest part at the back slanting in a smooth V shape to cutting edge. These knives are usually heavier than hollow ground and may have a broader cutting edge.

Hollow-ground knives have a concave area (or indentation) on each side gradually reducing thickness of blade to a razor sharp cutting edge. The slant (or grinding) begins about midway on the blade. Another version is concave grinding which begins closer to the back and grinds the blade thinner.

Flat-ground edges become thicker with sharpening; hollow-ground edges remain thinner as they are ground back toward the back of the blade.

Taper-ground knives have an additional grind which eliminates a shoulder, giving an even, more uniform and smooth taper. This minimizes the blade's resistance as it cuts, making it seem sharper.

Thickness of a knife blade also helps determine a quality product. Better small knives, such as parers, will be .062 gauge steel; utility and light slicing knives will be .085; and heavy slicing knives, butcher knives and cook's knives are generally .100 gauge steel or heavier.

## Edges

V edging produces a straight carving edge. It is so called because a cross section of the blade shows a perfect V shape with the wide part at the back and point at the edge.

Cannell or rolled edging is modified V edging. The blade is ground like a V edge to within 1/32" of the edge, and then rolled. This produces a broader cutting edge like that used for butcher knives.

Two other kinds of edges—scalloped and serrated—are used for sawing or cutting hard to cut foods. The scalloped

edge is a wavy edge with broad valleys between points. A serrated edge is similar to scalloped, but the teeth are much finer and closer together.

Scalloped edge requires a sweeping cutting motion and produces a clean cut necessary for meat. The advantage of the scalloped edge is that the points prevent the insides of the arcs from being dulled on the cutting surface. Serrated edges take short strokes and are inclined to tear the food; they are best for hot bread.

The two last types of edges are honed and polished. Honed, found on a majority of household cutlery, is accomplished by grinding steel down to a cutting edge on a honing wheel. The polished edge is applied by "polishing" on a felt wheel after honing; it is extremely sharp and delicate.

## Handles

Most handles are wood, with higher priced knives having rosewood handles. Other better knives have walnut, beech, maple or high-quality plastic handles.

Handle construction is important. The knife must be balanced properly, the handle must be attractive and it must be made from a material that won't split, crack or chip. Right and left handled contour grip handles are also available.

A properly balanced knife has its greatest weight in the handle end. When the knife is held loosely in the hand, the blade should hang comfortably. This is especially important with long bladed knives.

The tang—the portion of the blade extending into the handle—is attached by riveting, friction or cementing. Whichever method is used, the handle should be attached so it won't come under strain.

Tangs are full, half, round or flat. Full and half tangs are riveted in the handle; round tangs are cemented; flat tangs are friction held, sometimes with a pin driven through the end. A handle with a half tang has two rivets only and isn't as strong as one with a full, three rivet tang. Better knives are constructed with no crevices to gather food where blade attaches to handle.

Cemented and friction held handles are common among the less-expensive knives, although a round tang with a bolster may be found on fine carving knives, and professional carbon steel knives may have friction held handles.

The biggest problem with friction held handles is that they may loosen and come off if they get wet. Dishwashers are especially hard on them.

## Knife Care

For a knife to perform its best, here are a few pointers to suggest to customers.

1. Use the knife for what it was intended. Don't try cutting wire with a carving knife.
2. Store knives individually. Keep them in a cutlery rack, partitioned box or in the cardboard sleeves the manufacturer puts on them. Knocking or scraping together in a drawer can dull or chip the edge.
3. Cut on a slicing board. It protects kitchen work surfaces and may retard edge dulling.
4. Wash and dry after each use, by hand unless manufacturer tag indicates it can be washed in an automatic dishwasher.
5. Keep blade away from direct heat.

## SHEARS AND SCISSORS

Shears and scissors may look alike, but they differ in length, construction and use. They are made in both right and left handed models, and since 10 percent of all humans are left handed, it's worthwhile stocking a few left handed models.

Shears measure 6" to 14", have one round handle for

thumb and one oblong handle for two or more fingers and are used for heavy cutting tasks.

Scissors measure 3" to 6", have two small matching ring handles and are used for light cutting jobs.

Shears and scissors are made from one of four methods:

















Cast-made from molten metal cast in a form. Cannot be tempered, set or satisfactorily resharpened. Are brittle and will break easily. Often fitted with rivet instead of screw.

Cold pressed steel-made from pressed steel and are relatively soft. Do not hold sharp edge.

Hot forged steel-made of one piece hardened and tempered steel. Superior to cast and cold pressed shears. Useful for barbering and light household work. Heavy duty forged shears will cut carpet and leather for shoes.

Inlaid-blade section made of high-carbon crucible steel welded to malleable steel frame and fitted with screw. Blades are hard enough for most household jobs. Present little danger of breaking and can be resharpened if necessary.

### SCISSORS AND SHEARS

	<b>SCISSORS</b>	
	<b>BUTTONHOLE SCISSORS</b> - small scissors with adjustable screw and notched blade for cutting buttonholes of different lengths.	
	<b>EMBROIDERY SCISSORS</b> - blades have sharp points. Used for fine needlework.	
	<b>GENERAL USE SCISSOR</b> - one rounded and one pointed blade. Length varies from 3" to 6".	
	<b>MANICURE SCISSORS</b> - cuticle scissors have two sharp-pointed curved blades; nail scissors have two short heavy blades.	
	<b>POCKET OR SCHOOL SCISSORS</b> - two blunt points for safe carrying.	
	<b>SEWING SCISSORS</b> - also called light trimmers; for lighter work like darning, ripping and millinery projects.	
	<b>THREAD SNIPS</b> - unique shape, different from other scissors or shears. Are lightweight and designed to fit into palm of hand. Can be used on thread, fabric, ribbon, fish nets, string, light wire, harness ties, electronic filament, film, etc.	
	<b>SHEARS</b>	
	<b>BARBER'S SHEARS</b> - used for cutting hair. Unlike other shears, have equal-size handles.	
	<b>BENT TRIMMERS</b> - handles are bent slightly upward to cut dressmaking or other materials that must lie flat.	
	<b>KITCHEN SHEARS</b> - long shank gives added leverage for heavy cutting. Top blade is serrated. Can be used to cut light wire, linoleum or rope as well as for food preparation. Some have notched grip for unscrewing jar caps and hook for opening beverage bottles. Some have decorator-colored handles.	
	<b>PAPER SHEARS</b> - also called desk, stationer's, blueprint, editor's, advertising, banker's or paper hanger's shears. Have long, swinging blades (up to 16" long) that cut straight edges in large sheets of paper. Paper hanger's shears usually have wider blades and larger finger holes.	
	<b>PINKING SHEARS</b> - meshing teeth cut regular zig-zag edge. Important in dressmaking because they leave nonraveling edge. Can be used on plastics and synthetics. Some have ball-bearing pivot to cut with less effort.	
	<b>POULTRY SHEARS</b> - wide, long, curved blades. Some have ordinary shear handles; others have long-straight handles. Specifically designed for preparation of chicken, turkey or other fowl.	
	<b>SCALLOPING SHEARS</b> - similar to pinking shears. Used for finishing seams in dressmaking; also for cutting decorative edges on felt, suede, chamois, leatherette, oil cloth, plastic.	
	<b>STRAIGHT TRIMMERS</b> - general purpose household or dressmaking shears.	
	<b>TAILOR'S SHEARS</b> - long blades that cut from point to point. Handles are bowed and shaped to fit the hand.	

## METHODS OF HOME CANNING

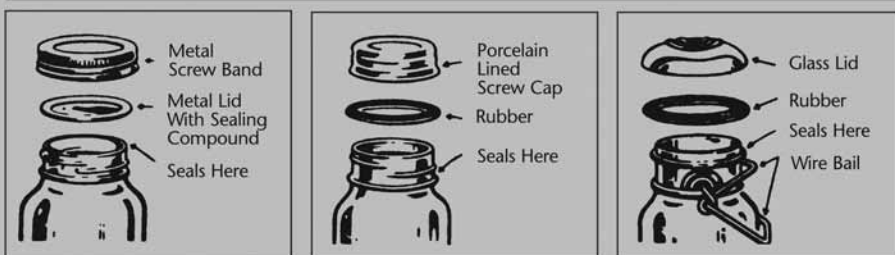
**OPEN KETTLE-** Food is cooked in an ordinary kettle or pot, then packed into hot sterilized jars and sealed without processing. Use only for jams and jellies. It is unsafe for canning other food.

**WATER BATH-** Food is processed in jars at boiling temperature (212°F.) in a large covered pot or kettle with a rack and deep enough for the water to cover the tops of the jars one or two inches without boiling over. Use only for acid foods: fruits, tomatoes and sauerkraut, or for processing pickles, jams and jellies. It is unsafe for canning low-acid foods.

**PRESSURE COOKER-** Food is processed in jars at 5lbs. (228°F.) or 10 lbs. (240°F.) pressure in a steam-tight covered cooker with a rack, and fitted with a pressure control or gauge. Use at 10 lbs. for low-acid foods: meat, poultry, seafood and all vegetables except tomatoes and sauerkraut. Use at 5 lbs. for acid foods like fruits, tomatoes and sauerkraut.

### HOW TO SELECT JARS AND LIDS

Always use standard Mason jars made for home canning. These will have the manufacturer's name blown in the glass. Do not use "one trip" commercial jars. Choose one of the lids illustrated. Be sure to follow manufacturer's directions for using each lid.



A. A flat metal lid with sealing compound and a metal screw band, which fits any standard Mason jar.

B. A Porcelain-lined zinc cap with shoulder rubber ring, to fit a standard Mason jar.

C. A wire-bail type with glass lid and rubber ring.

Half pints are processed the same as pints. One and one-half pints are processed the same as quarts. The U.S. Department of Agriculture does not recommend canning fruits, vegetables, meat and seafood in half-gallon jars.

### Quality Features

The best shears have blades of equal hardness and are set so that one blade cannot cut into the other, which impairs smooth operation and eventually damages one or both blades. They are fitted with a screw that can be adjusted and repaired if it gets loose or worn. Some can be snapped apart for cleaning of individual blades.

Lower-quality shears are made of cast iron or steel and may break. Blades will not hold an edge for long and require frequent although unsatisfactory sharpening. They may be of unequal hardness so that the harder blade will damage the softer one.

Some have a rivet assembly, which cannot be repaired if rivet gets loose, and when this happens, there is no way to maintain proper blade stress. Handle rings may be rough and cause scratches or blisters.

### Scissor and Shear Care

Taking proper care of shears and scissors keeps them in better working condition longer. Keep them dry, oil them occasionally around the screw and frequently remove lint and dirt from cutting edges. If they are kitchen tools

(used with food), wash and dry them thoroughly. Follow manufacturer's instructions and file them for future reference.

## Food Preparation

As interest in backyard gardening grows, so does the market for canning and freezing supplies. It's a matter of economics—how else to make the most of a bountiful harvest than to make it last through the whole year?

Canning is a very broad term. There are three types of canning: water bath for processing acid foods (fruits, tomatoes, pickles, relishes) at 212° F; steam pressure canning for processing low acid foods (most vegetables, meats, soups) at 240° F; and open kettle (for jellies only) which involves simply cooking and pouring into sterilized jars. In addition to kettles, water-bath canners and steam canners, some customers will want a blancher to scald foods, especially fresh corn and soups.

In addition to jars and lids, customers will be needing paraffin, timers, choppers, strainers, food presses, ladles, long handled tongs, jar and freezer-bag labels and markers,

funnels, jar wrenches, jelly strainers, jar lifters, pea shellers and corn cutters.

Some people prefer freezing because the process is easier. You can freeze a greater variety of foods than you are able to can and some contend that foods taste more like they're fresh from the garden than after canning. However, maximum storage time for frozen fruits and vegetables is 8-12 months—less than for canned goods.

The latest home preservation process is dehydration, which dries food at a constant temperature of 120° F without burning it. A special dehydrator accommodates 18-20 lbs. of food at a time. Properly stored, dried foods will keep for years in a minimum amount of space and their nutrient value is preserved.

## Miscellaneous Housewares

### STORAGE UNITS

Turntables, racks, shelves, bins and drawers are particularly efficient for storing smaller items. Also useful are the door and wall units that organize larger items.

Turntables are 10½" to 21" in diameter, single or double tier, some with lidded plastic containers or bin like sides and partitions up to 7" deep.

They are useful in cabinets and cupboards to hold containers of food or cleaning agents—almost any hard to store item. Because they rotate on steel ball bearings at the touch of a finger, it is easy to pick out whatever is needed without reaching around or moving jars that might be in the way.

Caddies may be one, two or three tiers, but each tier is compartmentalized or slotted to hold various sized and shaped objects.

Caddies not only hold small, easily misplaced items for storage, but can be carried around so contents are at hand when needed.

Storage drawers can be hung over a work counter or fastened under overhead cabinets where they slide out and tilt down. Some drawers are designed to hold just about anything while others are especially for baked goods.

### **Closet Storage**

Closet storage systems are the newest additions to the closet storage hardware group. Systems can be sold as a package, for definite types of storage and space requirements, or by the piece to let consumers build their own storage units.

Most storage systems are made up of different racks, poles and shelves, to help make use of "dead" closet space—above and below shelves, the backs of doors, etc. Racks and shelves are usually vinyl coated wire, with protected tips for no snag use. Quality features include heavy-gauge wire for holding heavy loads without bending, and expandability. Look for units that allow customers to add on to the system as needs grow. Part of the advantage of carrying organizing items individually as well as in systems, is allowing the customer more flexibility in using the items, and offering add ons to the systems in the future.

Storage products offer another advantage—they are useful in all rooms of the house. Both the individual pieces and the system can be used in laundry rooms, garages, basements, kitchens and offices. Some items are designed to serve specific purposes, such as belt and tie racks, while others, such as undershelf bins, shelving systems and hooks, can be put to use anywhere.

Another traditional storage idea, taken one step further, is growing in popularity—corrugated cardboard and plastic storage units. While cardboard and plastic are not recommended for rugged use, the different boxes and furniture designed from them serve well for light use. Traditional furniture such as dressers and chests of drawers, are now made of cardboard, and plastic has entered the sweater box, hat box and organizer category as well. These materials are also popular for underbed storage units.

## **WOODENWARE**

If you're looking for a specialty line, look at woodenware.

Most likely candidates for starting inventory include salt and pepper grinders, spice racks, salad sets, planters, ash trays, magazine racks, towel racks, shadow boxes, cup-and-saucer racks, wall shelves and wall-cabinet bars.

Woodenware takes special handling and here's where product knowledge comes in handy. A few tips on proper care given to your customer will save a ruined piece of woodenware and a dissatisfied customer:

1. Store in a dry place.
2. Don't soak in water.
3. Wash in warm suds after use, rinse and thoroughly dry immediately.
4. Discard cracked woodenware; it can become a breeding place for bacteria.
5. Remove surface stains by light rubbing (with the grain) with soapy steel wool pad and rinse.
6. Scratched surface can be restored by removing old finish with sandpaper and rubbing with mixture of mineral oil and powdered pumice.

## **COOKING THERMOMETERS**

### **Meat Thermometers**

Meat thermometers are useful for cooking on an outdoor grill or rotisserie where heat is not regulated, although they are more generally used for roasting.

Cooking times in cookbooks are only approximations; the size and cut of meat or temperature when put in the oven greatly affect cooking time. A meat thermometer accurately measures when the meat is done.

Point of thermometer shaft must be inserted in the center of the thickest part of the meat, away from fat and bone. Thermometer usually registers room temperature when inserted; if temperature drops when inserted, meat is not completely thawed and may require additional cooking time. When thermometer registers temperature called for in the recipe, meat is done.

Some meat thermometers have two pointers—one to be preset for desired temperature, the other to register actual temperature. When both pointers are together, meat is done.

Temperature range: 130° F to 190° F.

### **Candy/Deep Fry Thermometers**

Although designed to gauge temperature of candy and cake icings, candy thermometers can be used for many stove top cooking jobs including deep frying and cooking jellies. This thermometer must be clamped on the side of a pan so that stem almost touches bottom of pan or at least 2" of stem are submerged in contents. It will register

exact cooking temperature.

Oil that is too hot will burn the outside of food while the inside isn't cooked, and oil not hot enough will be absorbed by food. A candy/deep-fry thermometer will ensure proper oil temperature.

Temperature range: 50° F to 400° F.

### **Oven Thermometers**

Oven temperature varies from front to back, side to side and shelf to shelf depending on distance from heating element. Movable oven thermometers give exact temperature at a specific spot in the oven.

Oven thermometers are column or dial models. Column thermometers are likely to register a more accurate temperature, but dial models are easier to read. Column variety can be washed in soapy water, but moisture may leak into and damage a dial thermometer.

Temperature range: 100° F to 600° F.

### **Refrigerator Freezer Thermometers**

Refrigerator freezer thermometers give accurate reading of temperature inside refrigerator or freezer—a particularly important piece of information in knowing whether freezer is cold enough (0° F to -20° F) to keep food frozen. If used in refrigerator, there should be one thermometer in the shelf section and one in the freezer compartment.

## **HOUSEHOLD SCALES**

Kitchen scales are accurate enough to give rough weights in preparation of food or to show grossly short weighted food purchases. Better scales are accurate to within one ounce, and have weighing capacity high enough for large roasts and fowl. Markings are graduated by ounces and pounds. For most accurate readings, food should be placed in the center of the scale platform so it is properly balanced.

To see if pointer is registering correctly, press empty scale platform lightly with fingers, lift hand and see where pointer settles. If it stops somewhere other than on zero, it is out of adjustment. Most scales have a zero adjustment lever or knob to bring pointer back to zero when it gets off register.

Dietetic scales are smaller, more accurate versions of kitchen scales. They usually measure in both ounces and grams and weigh up to 16 oz., with 1/2-oz. graduations. Accuracy is of utmost importance.

### **NONELECTRIC CAN OPENERS**

#### **Hand Can Openers**

A clamp on can opener clamps on the edge of the can so a cutting wheel pierces the lid. A gear, attached to a butterfly handle, rotates the can, shearing off the lid.

The main disadvantage is that the rotating gear may slip. Reclamping may cause jamming, which makes turning

butterfly handle difficult. This, in turn, frequently leads to spilling contents of the can.

Clamp on openers will open all sizes and shapes of cans, but are difficult to clean properly.

Deluxe hand can openers are chrome plated, die cast aluminum. Some have magnetic lid catchers and coated or wooden handles for hand comfort.

### **Wall Can Openers**

Lever can opener has a lever on top that raises steel cutter wheel (sometimes nylon lined) for the can to be inserted. Lowering the lever pierces can lid, and turning a handle rotates can and cuts off lid.

Single-action opener has no lever, but a rotating handle operates cutter wheel for piercing and cutting the lid.

Deluxe models have a magnetic lid lifter which holds the severed lid and keeps it from falling back into the can, a bottle opener or bottle opener/knife sharpener attachment. Some cutting wheels can be removed for thorough cleaning.

Wall can openers usually leave a smoother can edge than hand openers.

## **TIMERS**

Some cooking timers are dial setting devices that will measure any amount of time up to one hour. They tick off seconds and a bell rings when time is up. They have metal or plastic housings. Some are digital and work off batteries; they can be set to run as long as 24 hours.

Other household timers can be attached to appliances to turn them on and off. Some only start appliance or turn it off after it has been running an hour or so; others can be set to turn appliance on, let it run for a preset period and turn it off.

Another type of household timer governs lights. Once set, it will turn the lights on and off each day at the same time until reset or unplugged. Some of these will operate appliances as well. Some can be set for multiple on off cycles or variable timer periods.

## **FOOD PREPARATION**

Utensils necessary for food preparation, such as gelatin molds, mixing bowls, measuring cups and spoons, colanders, juicers, beverage servers and refrigerator dishes, are made of aluminum, stainless steel, glass or plastic.

Metal mixing bowls and measuring cups and spoons are lightweight, nonbreakable and nonrusting. Finishes are stain resistant, nonsmudging and do not impart metallic taste to food.

Glass mixing bowls and measuring cups are made from heavy, break resistant or tempered heat resistant glass. Although most items can be used for storing food in a

refrigerator or for baking, they should not be taken directly from refrigerator and put in a hot oven—and they should never be used on top of the stove.

Measuring graduations are visible both inside and outside a cup or bowl. Metal containers have measure marks stamped into walls while marks are molded into glass.

Unbreakable plastic mixing bowls may come with a large handle for easy gripping and a rubber ring around the base to anchor the bowl in place. Some beverage pitchers offer three position lids—pouring, screening ice and closed. Some measuring cups and food-keeper containers are transparent and tinted for quick content identification.

Following recent food trends, manufacturers have come out with small, manual gadgets to fix specialty foods.

Pasta makers are a good example. Most consist of rollers and several cutting edges, adjustable to make different types of pasta. Some include drying racks and other accessories, and some are even decorated to complement certain table serving sets.

Hand cranked ice cream makers are back in style, with a few changes. Most manual ice cream makers make only a pint or a quart. They are made of plastic, and other types of frozen desserts can also be made in them.

## **PANTRYWARE**

Pantryware includes modern counterparts of the storage containers found in an old fashioned pantry—canisters, breadboxes, cake-cover sets, almost any kind of small, portable storage item.

Materials are plastic, ceramic, stoneware, metal plated steel or vinyl clad steel.

Canister sets (usually four containers in graduated sizes for flour, sugar, coffee and tea) come in a variety of styles; containers can be freestanding, stacked, grouped in a rack, housed in a cabinet, stacked on a turntable or combined with a breadbox.

Some paper dispensers hold one roll of paper, while others hold three—paper toweling, waxed paper and aluminum foil.

The simplest kind consists of a roller to hold the paper and let it pull off easily, perhaps with a serrated cutting edge. Deluxe models dispense as much paper as desired, cut it off on a concealed cutter and retract the excess. All can be wall mounted, but some are designed to be fastened under an overhead kitchen cabinet.

## **SELF ADHESIVE COVERINGS**

Decorative vinyl coverings are no longer limited to use as shelf liners or as color spots around kitchen or bath. Wider rolls and heavier weights, plus an almost unlimited range of colors, patterns, woodgrains, metal tones and textures, suit them for many home decorating uses including wall covering.

The narrower (18") lighter-weight vinyls are most often stocked in housewares departments. The wider, heavy-gauge (6, 7 and 8 mil.) vinyls are usually considered decorating products.

Most vinyl coverings adhere instantly when a protective backing is stripped off; however, one type can be removed and repositioned and becomes permanent after several minutes in one position. They should not shrink after application so the seam where the two pieces meet should not spread.

The 18"-wide rolls usually hold 25 yds. of vinyl which is sold in 6' and 12' packages.

If you are selling roll vinyl by the yard, you'll need to know how to estimate proper amount. One running yard equals 4½ sq. ft. of covering. Find out from your customer the square footage of the area to be covered and divide that by 4½ for the number of yards needed.

Other shelf liners include paper, vinyl and plastic roll goods. They are either nonadhesive, or have a very light adhesive so they lie flat on the shelf, forming a protective lining for the shelf.

## **WEATHER INSTRUMENTS**

Indoor or outdoor thermometers register only temperature where they are located. Most outdoor thermometers come with suction cups or mounting brackets to hold them to window or window frame where they can be seen through the window.

Indoor outdoor thermometers register both temperatures. They mount inside the house with a capillary tube that extends outside.

Minimum maximum thermometers register low and high temperatures. Indicators inside the thermometer tube are positioned by movement of mercury to show minimum and maximum temperatures since previous setting. Homeowner can move temperature indicators with reset magnet on outside of thermometer whenever he wishes.

These are the three most common household weather thermometers. Special ones include those for use in autos (suction or magnet mounted, visor mounted or antenna mounted), water temperature thermometers, swimming-pool thermometers, bath, classroom and dairy thermometers.

Barometers measure atmospheric pressure and indicate possible changes in weather. Based on the principle that a column of mercury at sea level reaches a maximum height of 30", barometers operate on a spring that registers atmospheric pressure ranging from 28" to 31" on a dial. Because the 30" figure is accurate only at sea level, a barometer may register 31" in good weather, depending on the altitude where it is located (atmospheric pressure decreases with rise in altitude). High readings mean good weather; low readings (around 28" or 29") mean changing or stormy weather. Most barometers have dual pointers—one to register atmospheric pressure, the other to be hand



set to show change in pressure.

Hygrometers are also called humidity guides because, obviously, they measure humidity. They only measure it—they don't control it as do humidistats. They register from 1 to 100 representing the percentage of moisture in the air.

Other weather instruments often carried in hardware stores and home centers are rain gauges and wind compasses (also called anemometers) to measure rainfall and wind velocity. Although weather instruments are primarily functional, like almost everything else in a home, they have become decorator items as well.

Simple thermometers have highly styled metal cases or brightly colored mounting boards. Thermometers, barometers, and hygrometers are combined into home or office "weather stations" set in wood mounting. Some manufacturers also make matched pairs of the three weather instruments in one case and a clock in another. Other versions also include a weatherband radio to pick up continuous weather reports.

These combinations are more expensive than single pieces, but they make excellent gift suggestions.

## Household Furniture

Household furniture, much of it ready to assemble (RTA) for easy transporting, fills a need for attractive, lightweight, conveniently stored tables, chairs and stools for informal living and entertaining, and can bring big ticket, layaway or credit sales.

With plated steel legs, padded seats, colored or woodgrain vinyl tops and styles to go with any home decorating plan, these pieces can become a permanent household item or, if space demands, can be stored and used only when needed.

Generally, household furniture frames are made of tubular steel with one of three finishes (in order of durability)—chrome plated, brass plated or painted. Legs should be capped with rubber or plastic tips or plastic glides. Tabletops or shelves many have woodgrain metal finishes or colorful, washable, stain resistant coverings. Chair seats and backrests can be padded with foam rubber or wood fiber and covered with washable vinyl or an easy care fabric.

### FOLDING CHAIRS AND TABLES

Some chairs have Y fold structure, like that of card-table chairs. Quality chairs, however, look like living room or family-room chairs when set up. Seats are about 16" square and 17" to 18" from the floor. With either construction, chairs nest for storage.

Tables formerly were braced, but now many are made of painted tubular steel with leg locks and vinyl tips or glides and stain resistant vinyl tops. Better tables are 40" in diameter or 35" square, 27½" or 28" high.

### TRAY TABLES

Tray tables have tubular steel legs that are usually chrome or brass finish with rubber or vinyl tips if legs are straight; tips are not necessary if legs are formed in a "U" shape from a single continuous piece of tubing.

Tops vary in size and shape, but most are made of painted steel or fiberglass. Better models have fabric in fiberglass and woodgrain patterns.

All units fold for storage, and more expensive sets come in wheeled storage racks. Some high-end table sets are made of wood, with natural wood finishes.

### UTILITY TABLES AND SERVING CARTS

The difference between utility tables and serving carts is that tables are multishelved for storage and have small casters. The carts have a more decorative finish, handles and large casters or rubber tired wheels.

Shelf surfaces of utility tables are normally steel painted in kitchen colors. Better models have larger, stronger shelves, stronger chrome plated tubular steel legs and frequently have built in electrical outlets.

Shelves of serving carts can be removed to be used as trays. Some carts have drop leaves or other adjustments to convert them to buffet carts. Better carts have woodgrain shelves and brass finished frames or enameled finish.

Serving carts are versatile and may double as bookshelves or plant stands. Many utility and serving carts will fold down neatly for compact storage.

### STOOLS

No matter what particular use the stool has, tubular steel legs will have chrome, brass or painted finish, be spread at the base for stability and capped with plastic tips or glides to protect floors. Occasionally, frames are made of lightweight wrought iron. Seats and backs are padded and vinyl covered in decorator colors. Some lines are made of fiberglass, wood or rattan and better models have leather seat pads.

#### Step Stools

Step stools are a combination of a two step ladder and a kitchen stool. The two steps provide enough lift to reach high cabinets, shelves or curtain rods, and chair seat is right height for sit down ironing or working at kitchen bar or sink.

With some stools, seat lifts up for access to the steps, while on other models steps swing out. Those with swing out steps must be designed so that steps stay in place under seat when stool is moved.

Most step stools have a backrest, which serves a dual purpose—support and comfort when used as a chair and as a steadying device when used as a small ladder.

Most models fold up for compact storing.

## Bar and Counter Stools

Bar and counter stools are generally used at breakfast or basement bars. Normal seat height is 17" or 24" for breakfast bars and 30" for basement bars. Better pedestal stools adjust to various heights to suit specific needs.

Most models have backrests and footrests (usually chrome plated) for comfort, with adjustable footrests on better stools. Almost all have swivel seats, better ones with nylon or ball bearings. Promotional lines frequently have unstable rotation devices.

## Bath Stools

The most important feature of a bath stool is strength and a widespread base to reduce danger of tipping. Legs have chrome, brass or painted surfaces and should be capped with rubber or plastic tips. Frame construction may be wire or steel tubing, but tubing is stronger.

Upholstery must be durable and water resistant, preferably washable vinyl. Styling varies from modern round stools to stools with backs and vanity types.

## Juvenile Furniture

Some of the most popular juvenile furniture resembles adult furniture, just downsized. But unlike its adult counterpart, special quality features are a must in juvenile furniture. Durability, for instance, is of major concern. Safety is another. Highchairs, tables, baby furniture, dressers and desks must be able to take the abuse a young child can dish out. Check for doweled joints on baby furniture made of hardwood.

When selling highchairs, cribs and security gates, make sure bars are spaced so that the child cannot get his/her head wedged between them.

Easy cleanup is another consideration with juvenile furniture. Food, paint, crayons and other materials should not stain the furniture's finish.

Car seats are becoming hot items, partly through growing public concern over traffic safety and partly because most states have made them mandatory for children under a certain age or size.

Quality features in baby and toddler car seats include heavy padding, water and stainproof covering, easy belt attachment and detachment and sturdy construction that will withstand severe impact. Higher end seats will usually be adjustable to fit a growing child, so the parent does not have to buy several car seats as the child gets bigger.

Booster chairs or seats are legal in some states for toddlers. The booster seat allows the child to use the regular seat belt by boosting his height so the belt fits in the correct position. Check your state's regulations pertaining to car seats. Be able to recite them to customers and recommend the right seat for all age children.

Seats should not have decorations or accessories protruding from them that might injure a child in an accident.

## Bath Accessories

Bath accessories need creative merchandising to reach greatest sales potential. Because decor is as important in the bath as in any other room in the home, "in-use," or "total-effect" displays are a big plus in selling bath accessories.

This means grouping bath products as they are used by the homeowner rather than as they are listed on your inventory sheet. It means cutting across departmental lines into housewares, hardware, plumbing and electrical.

The products described here are those narrowly defined as nonelectric housewares.

## HAMPERS

Hampers come in many colors and finishes, made of several materials including wicker, vinyl and wood.

Proper ventilation is necessary to keep damp clothes and towels from mildewing. A fiber or wicker hamper, coated to resist splintering and warping, offers good ventilation, while others have padded tops.

## BATH SCALES

Quality is the important selling feature for bath scales. Several points immediately identify a good scale:

1. Weighing mechanism is reliable, long lasting and accurate. Digital scales offer extreme accuracy plus easy reading.
2. Bottom is fully enclosed to keep dirt out of mechanism.
3. It doesn't rattle when turned over or handled.
4. It has a smooth finish that cannot be damaged by kicks or scuffs.
5. It has a zero adjustment lever or screw to reset scale on zero if it gets out of adjustment.

Lower-priced scales are likely to have a baked enamel or plastic finish. Although these finishes are popular because of the color possibilities, they are more vulnerable to chipping and breakage.

## Electronic Bathroom Scales

Electronic scales work similarly to mechanical scales but weight is shown in LED or fiber optic numbers. Most require batteries and are activated when weight is placed on them.

## ACCESSORIES

Accessories include bathtub and shower mats and caddies, adhesive safety appliques, bath and shower grab bars, bowl brush sets, wastebaskets, soap dishes, towel bars and

rings, tumbler holders, tissue holders, robe hooks, screens and space saver shelves.

Because these items must not rust, they are usually made of ceramic, hard rubber, chrome-plated steel, brass, plastic, or chrome and plastic combinations.

Many bath accessories, like soap dishes, towel bars and tissue holders, can be recessed into the wall or surface mounted.

### **Quality Features**

Weight and finish are quality signs in metal accessories. Less-expensive fittings are stamped and will have rough finishes. Better-quality fittings have thicker bars, rings, etc., with a mirror finish free of imperfections.

Number of metal coatings also signals quality. An inner coating of nickel provides durability while an outer coating of chrome gives the item its gleaming finish. Others have a triple coating—first copper, then nickel, finally chrome.

Quality differences in plastic accessories are more difficult to recognize. Inexpensive items are thinner and lighter weight. Some reclaimed plastic will crack and chip with age. Occasionally, rough edges or mold marks indicate less than top quality.

Good plastic accessories have smooth corner surfaces and will feel like they are made of substantial material.