- Coffee
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- Streaming Audio & Online Music
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REPLACING A FAUCET

From "Complete Fix-It" episode CFI-105

• Print Version ▸▸
• Email to a friend ▸▸

Note: Illustration A, Illustration B, Illustration C, Illustration D, Illustration E, Illustration F, Illustration G, Illustration H available using

Sometimes it's less trouble and not much more expensive to replace a faucet than it is to fix it.

Tip: Wrap the wrench

• The Healthy Home
• Activity Board
• Repairing a Gutter
• Landscaping Basics
• Floating Floor
• Etched Glass Vase
• Waterproof Basement
• UV Air Sanitizer
• Replacement Windows
• Mosaic-Tiled Mirror
• Self-Watering Planter
• Installing Vinyl Flooring
• Hand-Painted Glasses
• Choose Washer/Dryer

Fireplace
Floor Coverings
Furniture
Handles, Knobs & Hinges
Help on the Homefront
Home Energy Efficiency
Home Office
Homeowner in Process
House Exterior
Indoor Pests
Kitchens
Lighting
Outdoor Equipment
Outdoor Structures
Painting
Plumbing
Safety
Sports-Related Additions
Staining
Stairs
Storage
Tools
Utility Room
Walls & Ceilings
Windows

BEST OF HOME IMPROVEMENT

- DIY Lighting

Materials:

Replacement faucet (prices vary)
Plumber's putty
Masking tape
Silicone caulk
Scrubbing pad or steel wool
Adjustable rench
Basin wrench
Putty knife
Rags and old towels

Removing the Supply Tubes

1. Shut off the water to the old faucet and open the faucet to relieve pressure inside it. Use towels to make the work space under the sink as comfortable as possible.

2. You will probably have six nuts to loosen. Use a taped adjustable wrench to loosen the coupling nuts at the shutoff valves, and a basin wrench to loosen the coupling nuts and the lock nuts attached to the faucet (**illustration A**, click above to view).

3. If you have rigid supply tubes, remove them very carefully; one wrong twist and they will be kinked beyond repair.

Preparing the Sink

1. Once the supply tubes are removed, remove the lock nuts and carefully lift the faucet out.

2. Protect the sink with masking tape, then scrape away any old putty with a putty knife (**illustration B**, click above to view). Scour off any remaining putty residue using fine steel wool or a fine abrasive pad.

Dropping In the New Faucet

1. Single-lever and two handle faucets are available for three-hole bathroom sinks with the outer holes spaced 4 inches apart, and kitchen sinks with 6- or 8-inch spacing.

2. Feed the spray hose and supply tubes, if any, through their holes. If you have copper supply tubes (**illustration C**, click above to view), take care not to kink them.

with masking tape to keep it from damaging the finish on the faucet.

The basin wrench makes it easier to work in tight spaces.

- Tile Backsplash
- Laundry Care Tips
- Hand-Painted Bowls
- Driving Safety
- Prepare for Vacation
- Maintain Garage Door
- Clean and Healthy Pet
- Disinfect Bathroom
- Romance Kit
- Wiper Blades
- Curb Appeal
- Garage Storage
- Transport Equipment
- Undermount Sink
- Organizing Your Pantry
- Holiday Decorating
- Estimating Flooring
- Family Scrapbook
- Childproofing
- Relaxation Nook
- Ice Candle
- Selecting a Tent
- Wine Rack
- Bathroom Makeover
- Selecting Doors
- Replacing a Toilet
- Changing Spark Plugs
- Maintain Cabinets
- Refreshing a Door

3. Some faucets require you to bed the faucet's mounting plate in a continuous rope of plumber's putty; others come with a gasket. Push the faucet into position on the putty, or position the gasket carefully. Many plumbers prefer to use silicone caulk rather than putty, and some put a little bead of silicone around the perimeter of the gasket to improve the seal.

Tightening the Sink Connections

1. Have a helper hold the faucet in the correct position above while you work below.

2. If your new faucet has lock nuts for each tailpiece (**illustration D**, click above to view), just slip the nuts on and tighten with a basin wrench. (Tighten a plastic lock nut by hand.)

3. For the type shown (**illustration E**, click above to view), slip the flange onto the threaded mounting stud or the tailpiece. Thread a lock nut onto the stud and tighten with a basin wrench. Thread a second lock nut onto the sprayer hose tailpiece and tighten it in the same way.

4. Scrape away excess putty from around the mounting plate. If you used silicone, wipe it up with a vinegar soaked paper towel before it dries.

Attaching the Supply Tubes

1. Cut the tubes with a tubing cutter, and use a tubing bender to reshape the tubes without kinking them (**illustration F**, click above to view). Use a tube cutter to make any cuts. Make sure the tubing goes straight into the shutoff valve with no abrupt bends. Slide a top coupling nut, bottom coupling nut, and compression ring onto the tube, slip the tube into the valve, and tighten the bottom nut over the ring. Fit the top of the tube against the faucet tailpiece and tighten the top nut.

2. Flexible supply lines are easier to install; just twist on the coupling nuts. Purchase one that will fit your shutoff valve (either 1/2 or 3/8 inch). At the faucet tailpiece you may need to place a washer in the large coupling nut (**illustration G**, click above to view); some flexible tubes come with washers already installed.

3. Turn on the shutoff valves. If there are any leaks, tighten the leaky coupling nut another quarter turn. Remove the aerator and run water for a minute to flush the lines.

Connecting the Hose

- Change Windowpane
- Fuel Efficiency
- Wallpapering

1. To attach a spray hose, screw its coupling nut onto the stub-out behind the supply tubes (**illustration H**, click above to view). Tighten the nut with a basin wrench.

2. To check the installation, unscrew the aerator on the faucet and on the sprayer. Turn on the water, slowly at first, and run it alternately through the faucet and the sprayer. If it leaks, tighten the coupling nuts another quarter-turn.

3. Run water full force for a minute to flush the lines, and replace the aerators.

Estimated Cost:

Supply lines = $8.58
Plumber's putty (4 oz.) = $1.15
Masking tape = $3.98
Silicone caulk = $4.46
Steel wool = $2.99
Total = $21.16

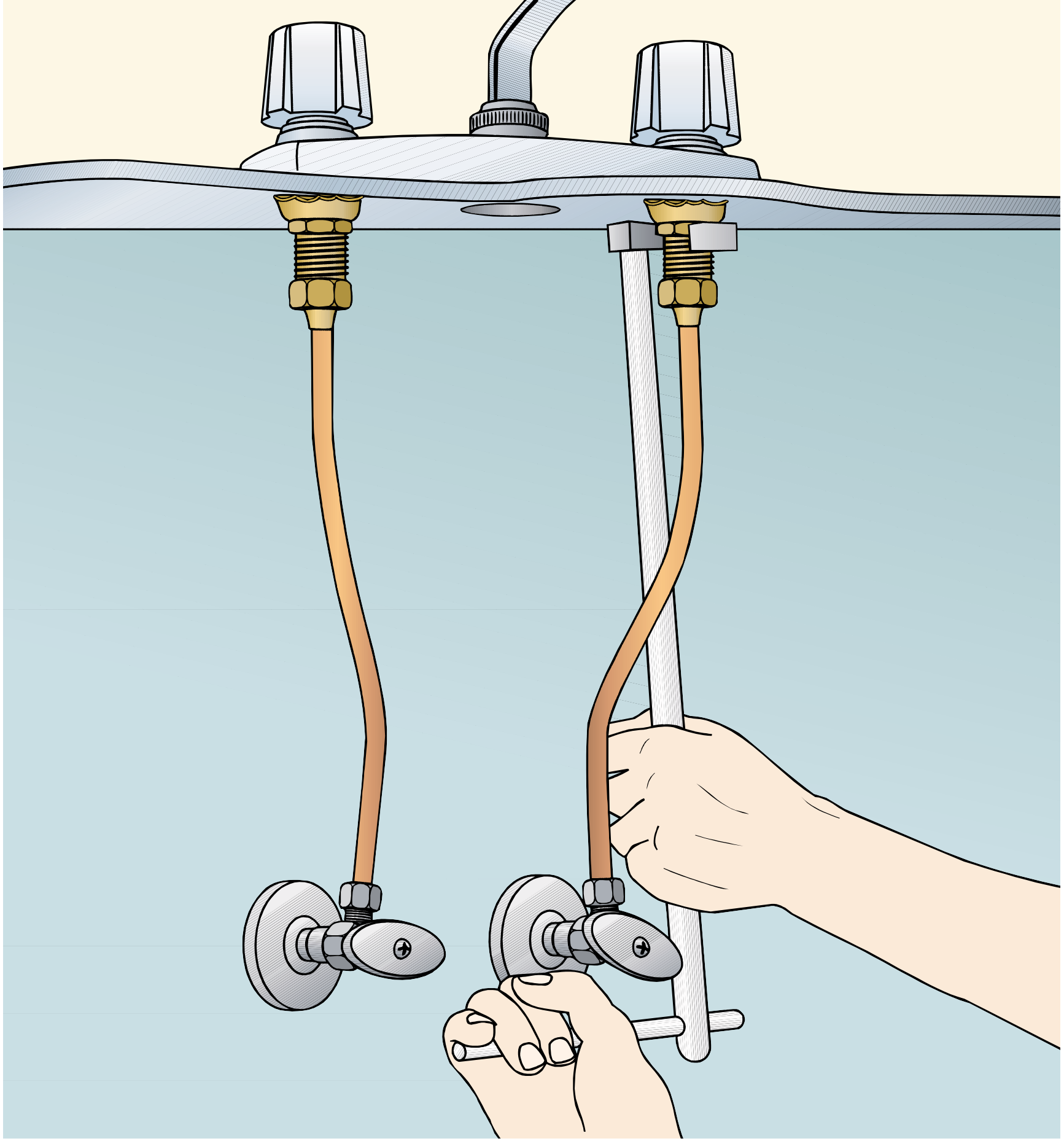
Note : The faucet used in this project, including sprayer, cost $70; the basin wrench cost $15, bringing the total cost of materials and tools to $106.16.

Note: To order the new *HGTV's Complete Fix-It* book, see Resources, below.

RESOURCES:
HGTV's Complete Fix-It
Author: HGTV

Click HERE to order *HGTV's Complete Fix-It* book.

ALSO IN THIS EPISODE:
- Replacing a Faucet
- House Call: Repairing a Gutter/Downspout
- Tip of the Day: Making Perfect Connections



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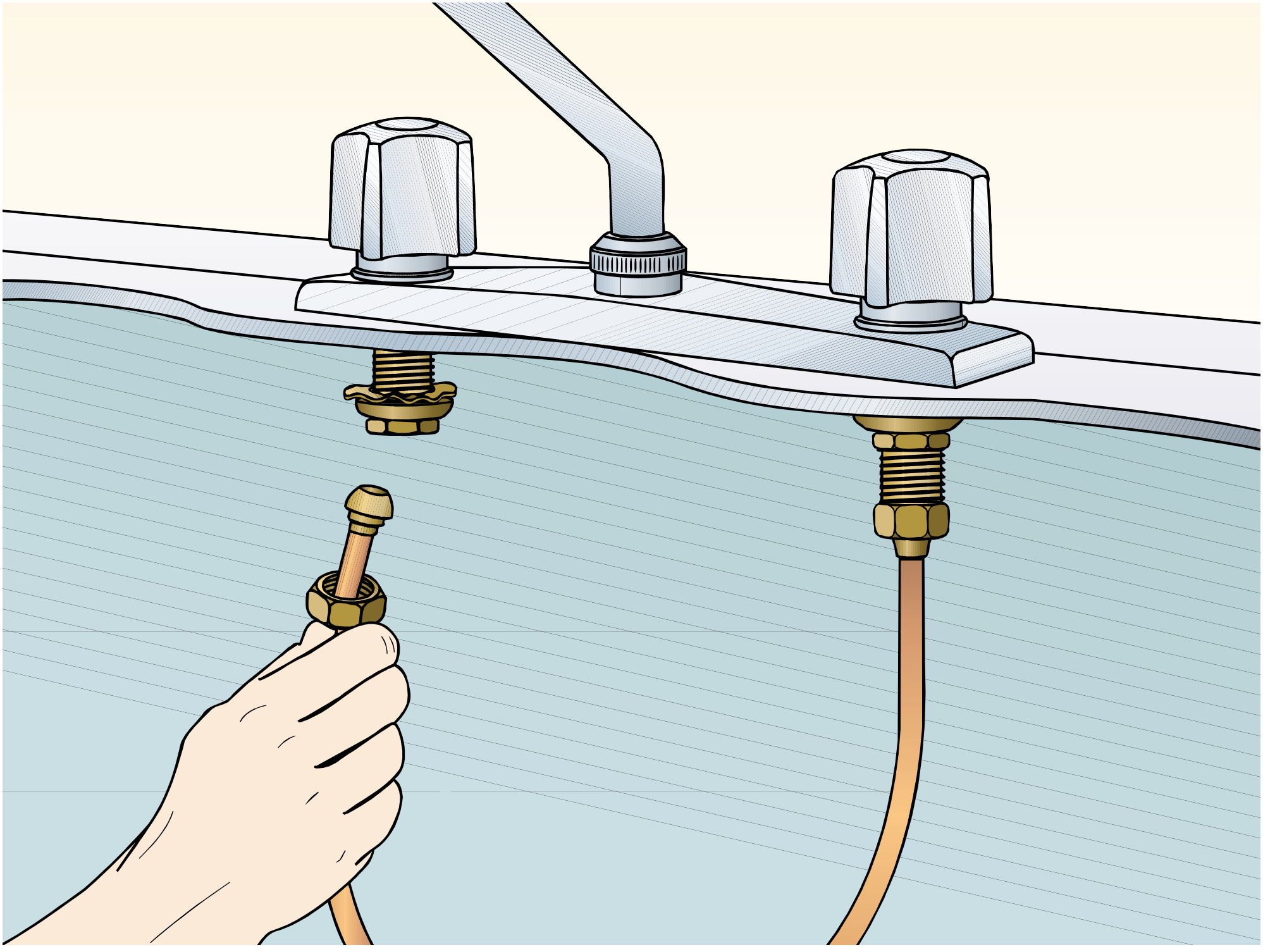

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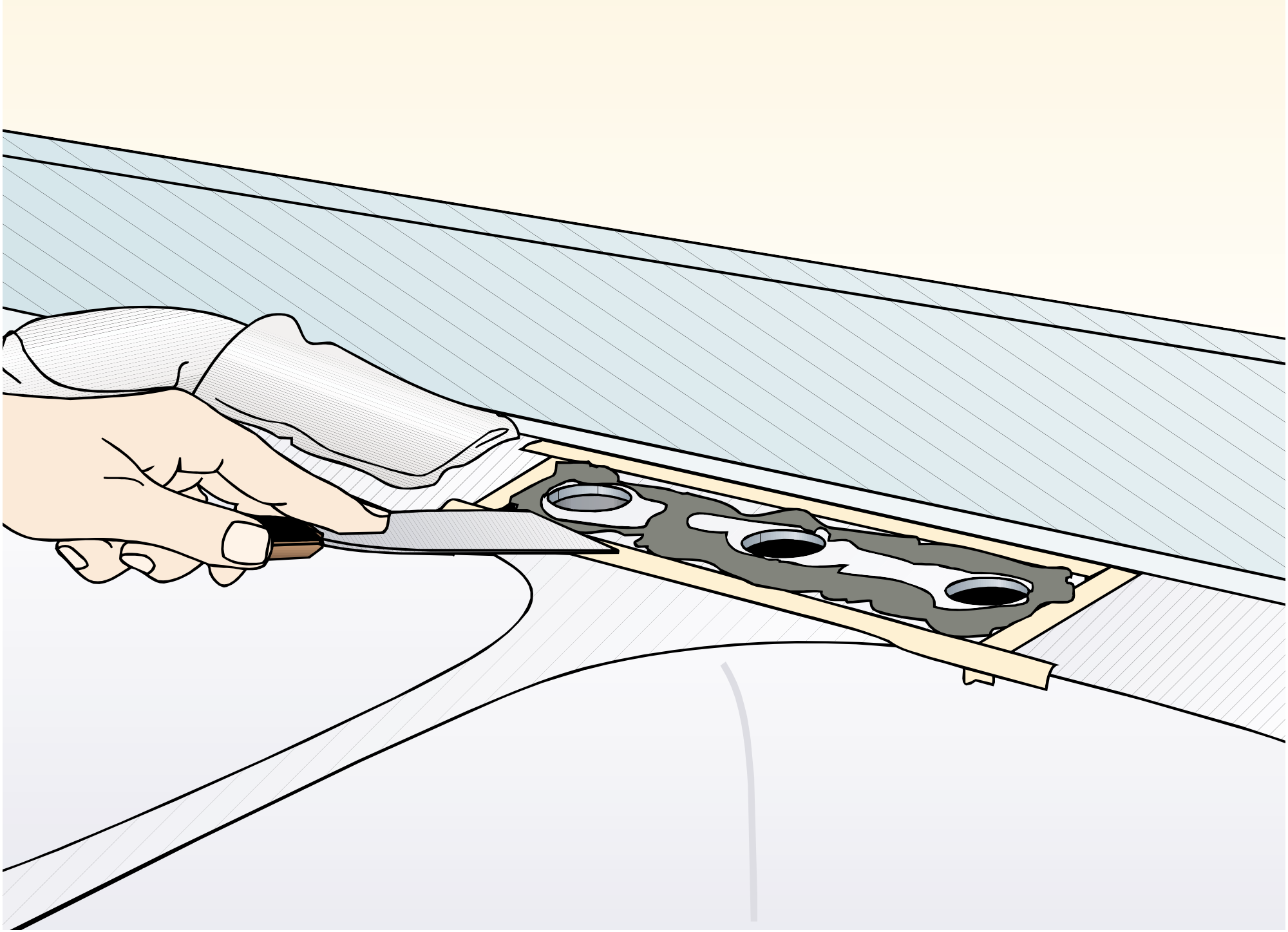

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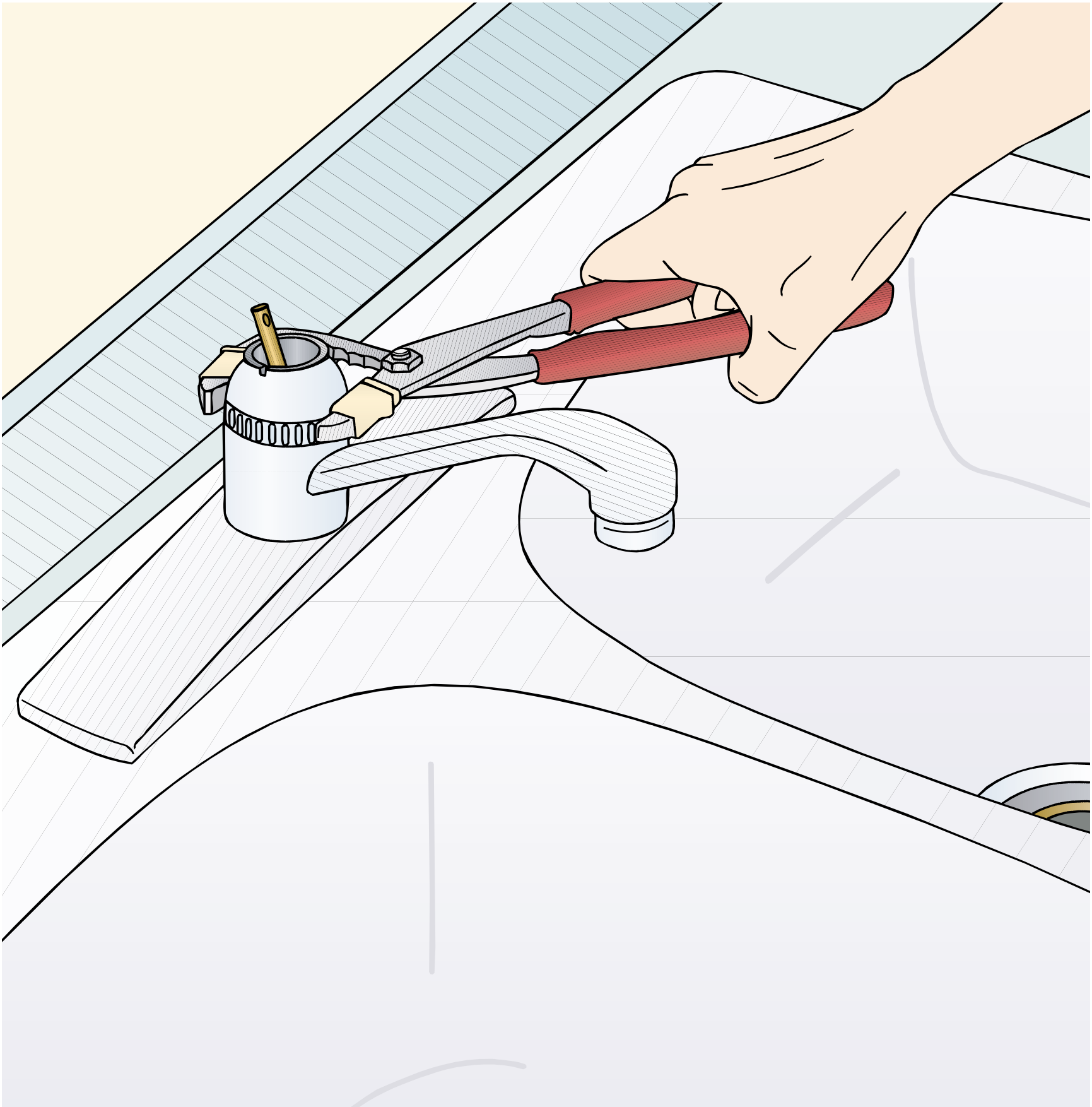

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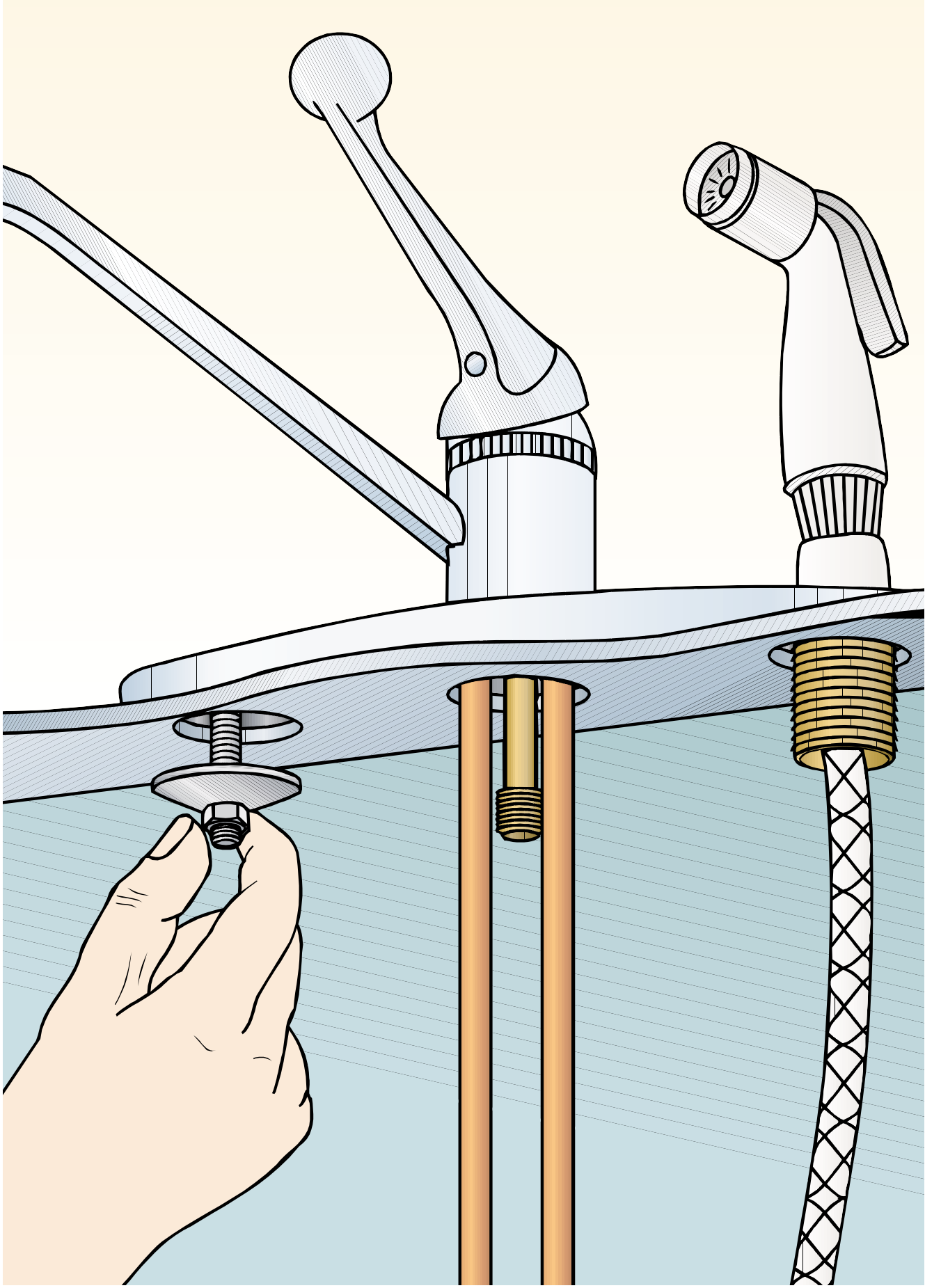

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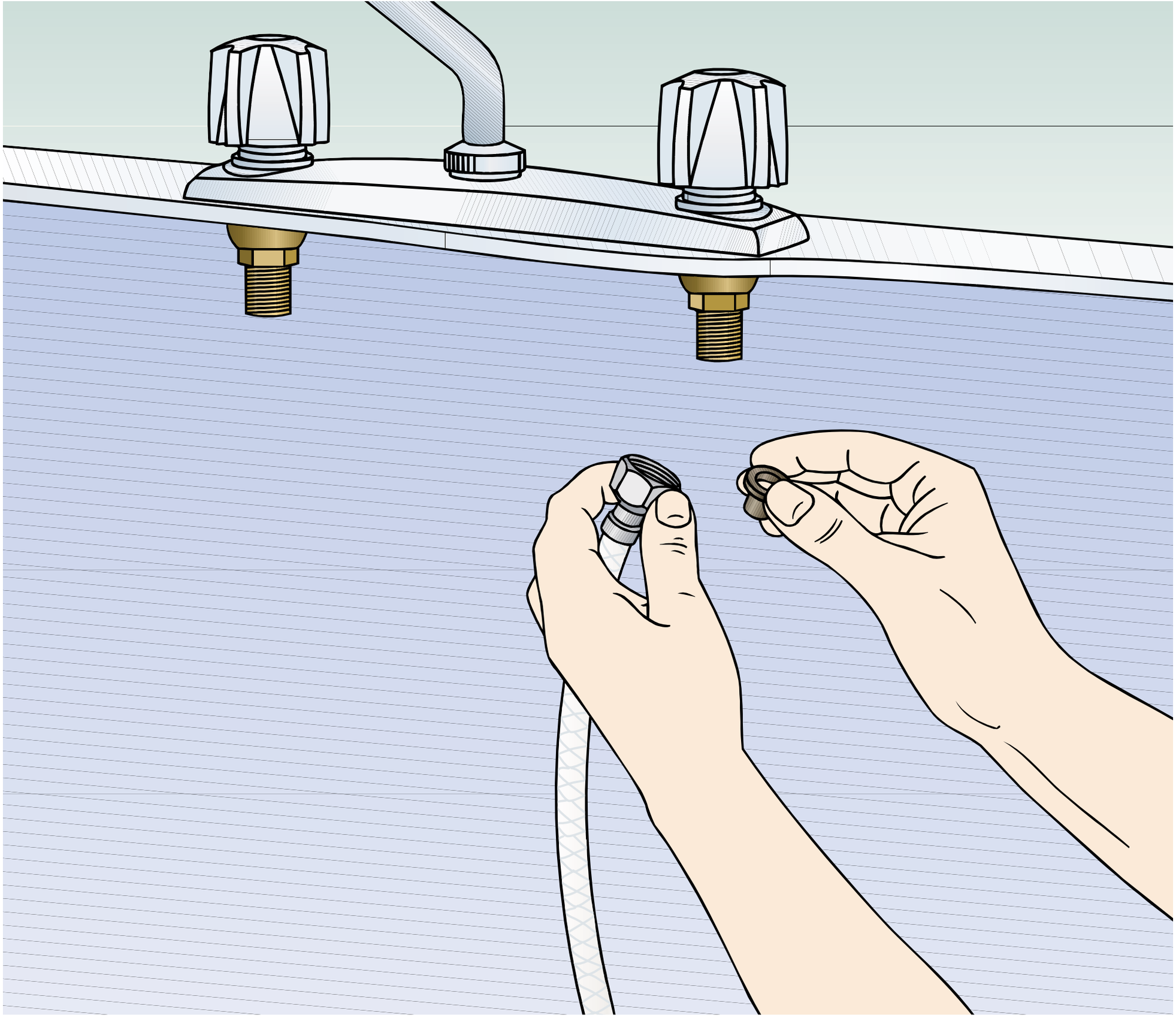

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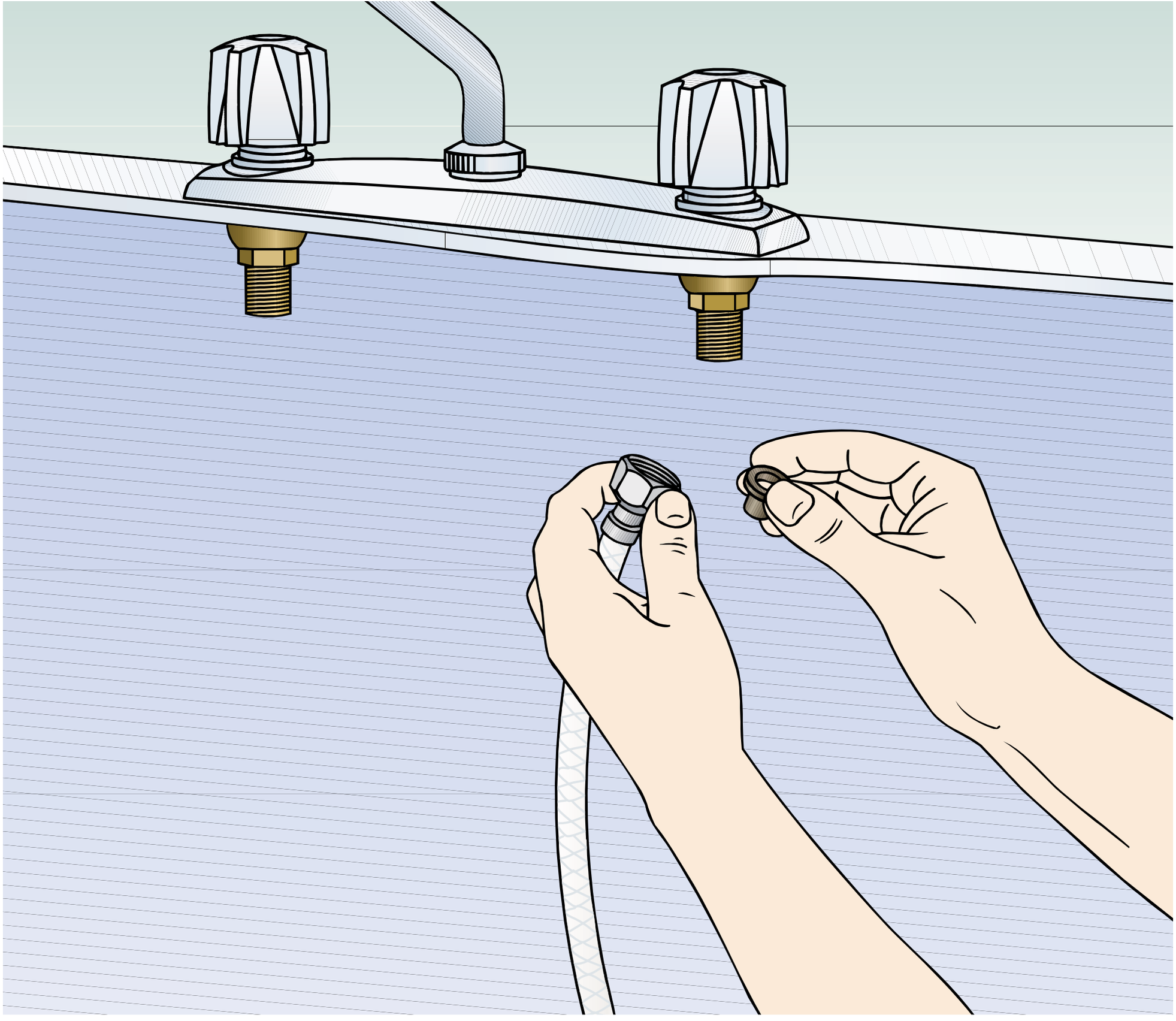

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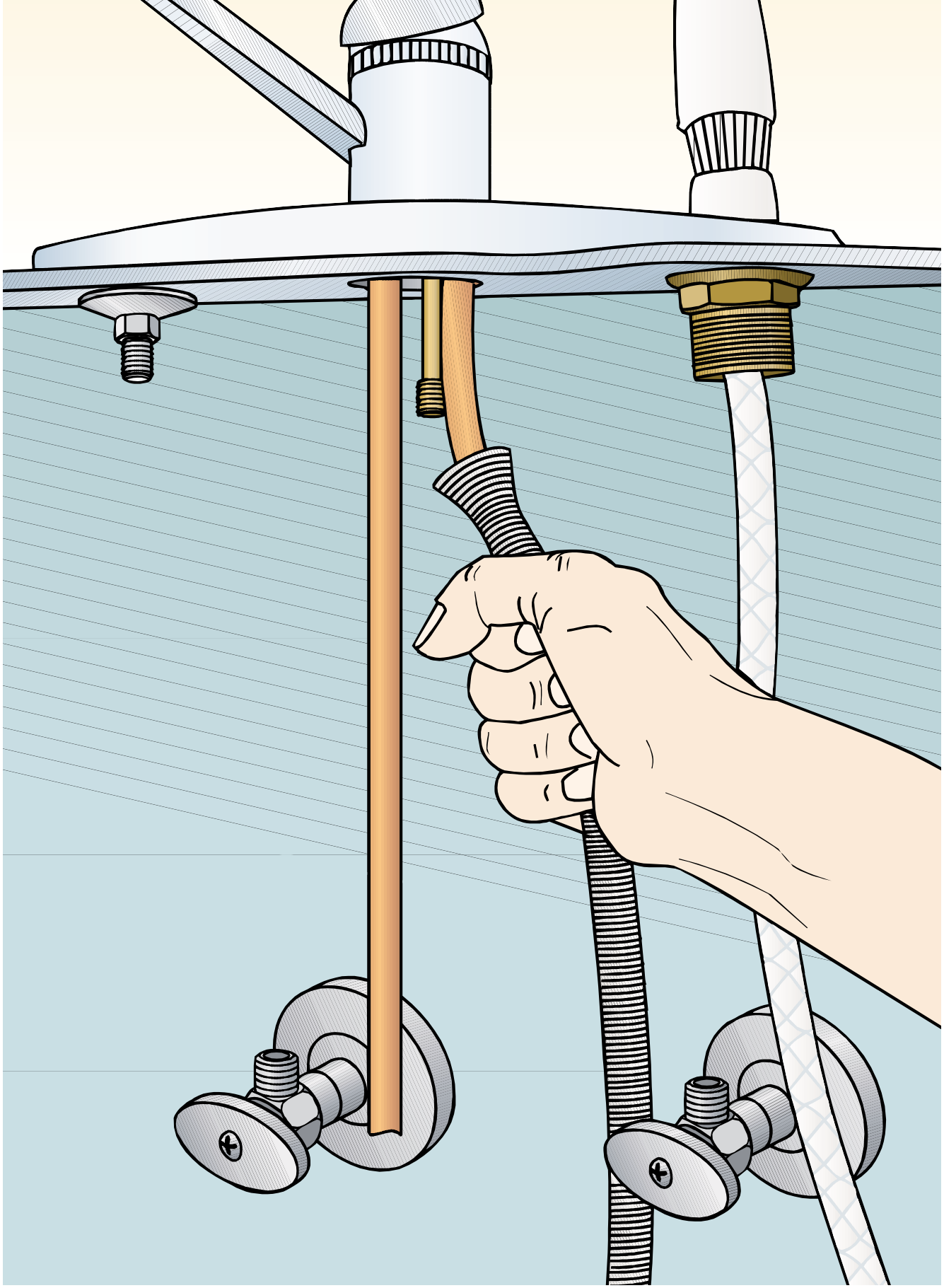

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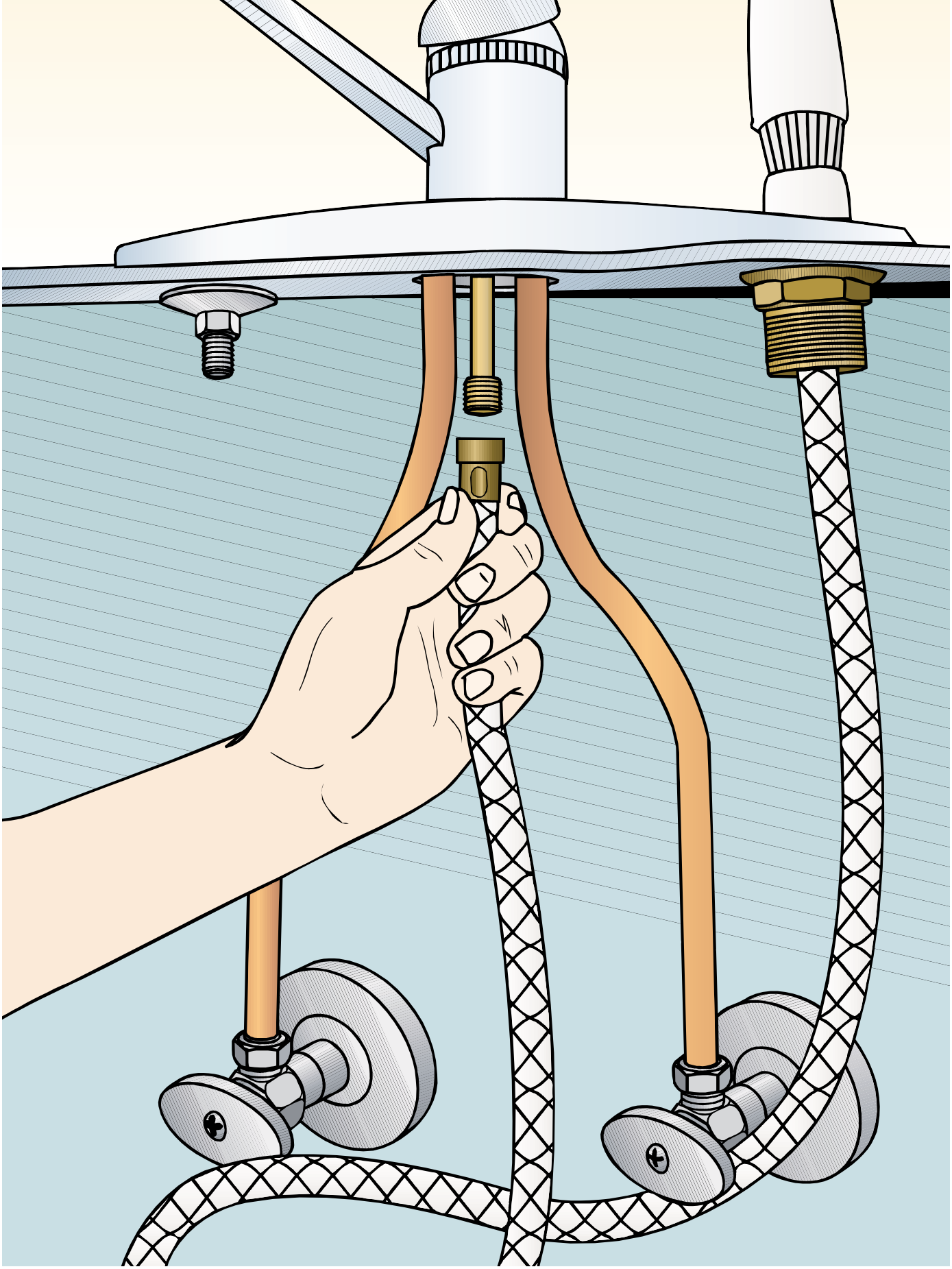

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Ask An EXPERT!™ Powered by IDEA LLC Wreaper™

ABOUT VALVES and FAUCETS

Introduction:

Because Ask An Expert frequently receives questions pertaining to repair or replacement of valves and faucets commonly found in residential applications, this article has been prepared, as a reference, to provide basic information about several of those devices. We hope the do-it-yourself homeowner may find this information useful in determining the nature and extent of some of the problems frequently found in their plumbing and hot water heating systems, as well as helpful when attempting to repair or replace such devices.

Because there are many types of valves and faucets, it is beyond the scope of the article to provide exhaustive descriptions of the materials and configurations found in every available type.

Water Supplies:

Almost all domestic, potable water supplies are from a distribution system owned, operated and serviced by a Public Utility, usually a City or County. In some rural, or remote, areas the water supply may be from a "drilled", deep well or a shallow "dug" well.

Occasionally, a source of "spring water" is used. City and County water supplies may be from rivers, lakes, reservoirs or deep wells. Such sources usually contain, among other things, air and a variety of minerals. Where deep wells are the source, sulfur may also be present. Sulfur is frequently found in domestic well water, but most well water supplies contain little, or no, air.

Air in domestic water supplies is both "beneficial" and an "annoyance".

Airless water, such as "distilled water" has an unpleasant taste. For this reason, Utilities with well water sources often incorporate a feature, in or near the holding reservoir, at the treatment plant, called an "aerator". The device resembles a large fountain that forces the water into the air, where it dissolves some of the air, and falls back into the reservoir. Small, rural, well water supplies rarely incorporate "aerator" devices and the water retains its unpleasant taste, sometimes amplified by the presence of sulfur.

In the past, many municipalities, enjoyed domestic water sources relatively free from most contaminants such as calcium and silicates. Users of those water supplies enjoyed relatively trouble free service from their valves and faucets, unless they abused them by over-tightening or other physical damage. That advantage has either become extinct, or is rapidly disappearing because the EPA (Environmental Protection Agency), in its infinite wisdom, now requires suppliers of domestic water that is inherently free of minerals to be mixed with other supply sources that contain such minerals. The excuse for this ruling is that, because pure mineral free water is an effective solvent, it MAY dissolve lead from a lead supply pipe to the residence (some still do exist) or from the solder in copper pipe system, installed before lead bearing solder was banned. The latter seems most unlikely.

Corrosion, or coating of valve and faucet parts, due to the presence of minerals in water supplies, is a major source of deterioration and malfunction of those devices. Water that is high in mineral content is known as "hard water." The effectiveness of soap is greatly impaired by "hard Water", but detergents are affected to a lesser degree. The result of all this is a thriving "water softener" business in nearly every part of the United States, more costs and more maintenance problems to plague the home owner.

Air in water enhances its taste. It can also create problems in plumbing systems if it is not properly taken into account in the design of such systems. Domestic hot water heating systems are the most vulnerable. When water, containing air is heated, most, or all, of the air will be released because cold water can dissolve more air than hot water can. If

the released air is permitted to remain in the heating piping system, air bubbles will form and be carried to a portion of the system higher than the boiler. When an air bubble forms in a horizontal pipe, circulation will cease because the circulators, used to move water in the system, are not pumps and cannot force the air bubble along in the system.

Hot water heating systems should always be equipped with an "expansion tank." The purpose of that tank is twofold. The water in a hot water heating system expands when heated and any air that it contains is released. The expansion tank, located well above the boiler, allows the heated water, which would otherwise cause excess pressure on the system, to expand into it, compressing the air in the tank. At the same time, air released from the heated water, migrates to the expansion tank. The expansion tank, at start up, should not contain more than half of its volume of water. The principle involved is that air, as a gas, can be compressed but liquid water cannot.

An additional measure, to assure proper operation of a hot water heating system, is to install one or more manual, or automatic, "air vents" at the highest point(s) in the heating system.

Normally, air present in a domestic water supply does not create a problem at the water heater because the water is not heated excessively and the water is being continually removed and replaced from the heater tank. The air in the hot water is normally released when hot water is drawn from a faucet.

If the water supply to a fixture is shut off and a portion of the supply pipe drains while a valve or faucet is replaced, air will enter the empty pipe. When the repair is completed and the water supply is restored, that air will be expelled, in loud bursts, from the nearest faucet. This should persist for only a few moments and is remedied by running a quantity of water from the faucet.

A simple experiment that will reveal how air is dissolved in and released from water can be performed as follows: Fill a glass with very hot water from a domestic hot water faucet. Observe how the water seems

"milky" with many minute bubbles of air rising to the top of the glass. This is because the air is being expelled from the hot water when the pressure it was under is lowered. Soon, all the air will escape and the water will become clear. This is an illustration of what happens within a supply piping system, unseen.

Valves:
A valve might be defined as "a mechanical device by which the flow of liquid, gas or other loose material may be started, stopped, or regulated by a movable part that opens, closes, or partially obstructs, one or more of its ports or passageways." The function of valves, as applied to the control of liquids and gas, is the main thrust of this article.

The subject of valves is addressed in two broad categories, which are industrial valves, addressed only briefly, and those used in domestic plumbing and heating systems. Because the purpose of the article is to provide a basic knowledge of valves found in domestic plumbing and hot water heating systems, those devices are addressed most extensively.

Valves used in industrial applications are available in a wide variety of sizes, types, patterns and materials. The term "pattern" refers to the manner in which the valve is intended to be connected into a piping system. Thus, a "screwed pattern" means that the valve has a female threaded inlet and outlet to be installed in a threaded pipe system. A "flanged pattern" means that the valve has a flange on its inlet and outlet sides. The flanges are attached to mating flanges on the ends of the pipes of the system in which the valve is installed, by means of four or more bolts and nuts. Various types of gasket materials are used between the flanges to prevent leaking. Flanged valves are most often used in systems where high temperature and/or pressure is present.

Many industrial valves are made of cast iron, but stainless steel, brass and forged steel are commonly used, as well. In high temperature and pressure situations (over 125 psi) industrial valves are usually made of forged steel, or stainless steel, in a flanged pattern.

The designation of a valve usually indicates the service for which it is

intended. For example: a (brand name), "Screwed, King Clip Gate Valve, 125 psi, W.O.G." means that the valve is a threaded cast iron gate valve for pressures up to 125 psi and is suitable for use with water, oil, or gas. "King Clip" is a designation of how the valve is assembled.

The bonnet, stem housing and packing gland, in this case, being attached to the body of the valve by means of a "U-shaped Clip" with threaded ends and hex nuts. These bonnets, as is true of all valve bonnets, have openings through which the stem rises, called a "packing gland" that utilizes various kinds of packing materials, or washers, to prevent leakage around the stem.

Valve Types:
In general, fewer types of valves are necessary to meet the demands of domestic plumbing and hot water heating systems than are required for industrial applications. The majority of domestic valves are made of cast brass, bronze, or drawn red copper. A few, more specialized types, are furnished in cast iron and, more rarely, stainless steel. Drawn red copper valves are the most economical and for that reason, as well as ease of installation, are commonly used in domestic water distribution systems. These valves are always furnished in a "sweat" (or solder) pattern. The two most commonly used "types" of valves, found in domestic plumbing and heating systems are "gate" valves and "globe" valves.

Gate valves are intended for use in situations where the valve is normally either open or closed. They usually have a cast brass, bronze, or drawn copper body with a disk-shaped, machined and slightly tapered, "gate" attached to the stem. In the closed position, the "gate" fits snugly into a machined, slightly tapered, "slot" in the valve body. The assembly is held together by a "bonnet" which is screwed to the valve body. The "bonnet" has a round aperture through which the stem rises and contains a "packing gland" to prevent leaking around the stem. The packing may be either a neoprene washer or graphite and mica coated packing material, referred to as "string packing".

About the only repair that can be made for a malfunctioning gate valve is to tighten the nut on the packing gland, or repack it, if a leak develops. Repair parts for other portions of gate valves are not

generally available. If such a valve fails to completely shut off the flow of a liquid, or if the gate becomes detached from the stem, it should be replaced. Gate valves are not suitable for use in situations where the regulation of flow, or "throttling", is required because vibration, due to liquid, or gas, flow through the valve, can (and does) cause the gate to rise or lower in its chamber. This action results in an increased, or decreased flow through the valve, effectively defeating its intended purpose. Flow through a gate valve can normally be in either direction.

Globe valves are intended for use in situations where flow control (throttling) is required. They usually have a cast brass, bronze, or drawn copper body. A globe valve's internal configuration is very different from that of a gate valve. The valve body incorporates two passageways, an inlet passageway that enters, horizontally, into the lower portion of the body and an outlet passageway that exits, horizontally, from the upper portion of the body. The two chambers are separated by a machined port, or "seat" into which a round, machined "plug", attached to the valve stem, fits when the valve is closed. Both the seat and the plug are slightly tapered to provide a watertight seal, when the valve is closed. Flow through this port is vertical. The valve assembly is held together in essentially the same fashion as that used for a gate valve with a screwed bonnet, packing gland and nut. Because of its configuration and the way the stem is threaded in the bonnet, the plug in a globe valve will not normally change position relative to the seat due to flowing liquid, or gas. Also, because of its configuration, a globe valve must be installed in a piping system with the inlet and outlet properly oriented. Most globe valves have a small, raised arrow on the side of the casting, or an inscribed arrow on the body of a drawn copper valve, that indicates the proper direction of flow.

A somewhat unique valve, known as a "street valve", is used mainly to accommodate special situations. It has a female threaded inlet, a male threaded outlet and may be either a gate or globe type. Street valves are available in cast iron, brass, bronze and stainless steel. They are most often used in industrial applications.

In domestic plumbing and hot water heating systems, gate, globe and

other types of valves, whether cast or drawn, are usually found in "sweat" (solder) patterns, where the valve is attached to the piping system by means of a soldered joint. On occasion, where a specialized device may be used in the system, screwed valves or fittings (usually cast bronze) may be required.

One valve that should always be installed in the water supply risers to the various fixtures is known as a "stop valve". When the water supply to the fixture is from the wall, an "angle stop" is used. When the supply pipe is from the floor, an "in-line stop" is used. These valves are usually modified types of "needle valves", or "globe valves." Needle valves usually have cast bodies with a machined, conical port/seat combination into which a cone-shaped, machined plug, that remotely resembles a "needle" fits when the valve is closed. Stop valves have the usual hex nut bonnet cap and packing gland using a neoprene washer. Stop valves handles are usually oval-shaped, pressed metal. These valves may have threaded inlets and compression outlets, or compression inlets and outlets. They are most often finished in chrome plating, but are sometimes available in a bronze, or polished brass finish.

Another useful type of valve, frequently found in industrial applications, but less often in domestic applications, is called a "plug" valve. Plug valves usually have cast iron bodies, but are available in cast bronze, as well. When used in industrial applications, plug valves are available in both "screwed" and "flanged" patterns. In domestic use, "screwed" patterns are the norm. The body of these valves incorporates a machined, vertical cylinder, with a port on its inlet and outlet sides, the ports open into inlet and outlet passageways in the valve body. A machined, cylindrical "plug", with a horizontal port that mates with those in the cylinder, fits snugly into the body cylinder and is equipped with a stem that terminates above the valve bonnet in a square or oblong "nut" that requires a wrench for its operation. Plug valves usually provide a positive shut off, great durability and trouble free, service. In domestic applications, these valves are most often used as shut off valves in gas supply lines to domestic water heaters, furnaces, gas-fired boilers, or other appliances requiring a gas supply. They are also found at the Utility Company's meter. For these services, cast iron valves should always be used. Brass or bronze valves are not

recommended for service in natural gas lines because hydrogen sulfide in the natural gas will react chemically with brass or bronze. Plug type valves are also used as shut off valves at domestic water meters. In such installations, they are either copper or bronze.

Special Purpose Valves:
Better domestic hot water heating systems always employ a special type of valve referred to as a "solenoid" or "zone" valve for temperature regulation in the several rooms, or areas, of the house. These valves usually have cast brass, or a combination of cast and drawn brass bodies. The valve itself resembles a "plug type" of valve with the "plug" operating in a cylindrical port either vertically or rotating. The "plug" is usually spring loaded to be normally closed. Operation of a solenoid with a vertical rising stem is by means of an electro-magnetic coil that surrounds the stem, causing it to rise when the coil is activated. In a zone valve with a rotating plug, the stem is gear operated and rotates when a small electric motor is energized. Normal operation of these valves consists of the coil, or motor, being activated when the thermostat for a particular zone calls for heat.

A common type of special purpose valve is known as a "Ball-Cock" or a "Fill Valve". It is a lever-type valve, one form of which is found in every domestic water closet with a "tank". For many years these valves were always an integral part of a cast bronze standpipe, about 11 inches high, within the tank of the water closet. The standpipe was mounted in the tank with its tailpiece (similar to tailpieces found on faucets) installed in an opening in the tank bottom, at the left side. It was held in place by a friction washer and mounting nuts and connected to the water supply tube by a coupling nut.

The valve itself was a machined, inverted cone-shaped, port at the top of the standpipe tube with a mating, conical plug attached to a rod with a ball-float on its end. The float rod could be bent to provide a measure of adjustment of the volume of water in the tank. When the closet was flushed, the water level in the tank would drop, followed by the ball-float. The falling float caused the valve to open, by lever action, through the attachment rod. When the tank filled, the float would rise and close the valve, again through its lever action.

Because of the relative simplicity of these lever valves, they normally functioned for many years, mostly trouble free. Most problems were due to a leaking ball or corrosion of the valve seat and plug. Over time, these valves have undergone many modifications, most of which have been intended to improve their operation, render them more trouble free and decrease their cost. Not all of such changes have served the intended purpose well.

Valves with bronze standpipes are still available as are similar valves made entirely of plastic, for the most part, nylon. An innovative valve assembly with a plastic standpipe and a plastic float wrapped around it, adjusted for height by means of a clamp on a wire rod, has mostly replaced the standpipe assembly, at least in most "repair kits." Because of the configuration of these assemblies an "anti-siphon" feature has been added and the assembly is usually called an "Adjustable Anti-Siphon Ball Cock."

Manufacturers of fixtures, for the most part, continue to install some form of the standpipe, ball-float-lever valve assemblies in new water closets. In addition to several other modifications, some form of plastic has, almost totally, replaced the more expensive bronze in current lever valve assemblies.

Check valves are special purpose valves most often found in industrial applications. The function of a check valve is to prevent reverse flow of a liquid or gas when flow in the intended direction is interrupted for whatever reason. When used in vertical piping, they are usually "ball-check" valves and are most often installed to prevent "back-flow" of a gas. When used in horizontal piping, they are usually "swing-check" valves and serve to prevent "back-flow" of liquids in most applications.

Ball-check valves have cast bodies of brass, or other metal, suitable for the service intended. Usually, they are in a screwed pattern, with a machined, cup-shaped, ported seat into which a highly polished ball, made of stainless steel, monel metal or sometimes brass, fits snugly when the valve is closed. Flow of gas in the intended direction causes the ball to rise allowing gas to flow through the device relatively

unrestricted. If normal flow is interrupted and back-pressure tends to cause reverse flow, the ball is forced into the seat, effectively closing the valve and preventing flow in the opposite direction.

Swing-check valves usually have bodies of cast iron, brass, or other metal, suited to the intended service. Depending upon their size, they are available in either a screwed, or flanged pattern. The internal configuration resembles a gate valve, but the gate is hinged at its top to swing open when liquid is flowing in the intended direction and close tightly against a machined seat to prevent flow in the reverse direction, which is sometimes referred to as "back-flow."

Large (4 inch or 6 inch) swing-check valves, referred to as a "back-flow preventer", are sometimes used in residential sewer systems to prevent "back-flow" from the city sewer system into the domestic waste water system in situations where the city sewer becomes overloaded during heavy rainfall. These valves are most often found in systems where the house sewer exits below a basement floor. In these applications, the valve usually has an additional, vertical rising gate attached to a gear operated stem with a wheel handle that can be closed manually if the swing gate fails to close properly for whatever reason. These valves do require frequent inspection and maintenance to assure proper operation in emergency situations.

Small size "back-flow preventer" valves are usually required, or at least recommended, by local plumbing codes in situations where domestic water supply pipes are connected to a lawn sprinkler system. They function in much the same fashion as a swing-check valve and are intended to prevent contamination of the domestic water supply in the event of a "back-flow", or reverse pressure from one or more sprinkler circuits, when the pressure in the domestic supply drops significantly, for any reason.

About Valves & Faucets - Part II

Faucets:
Most often, a faucet is a form of globe type valve, equipped with a spout especially configured to deliver water in a specific fixture. Faucets usually have a cast body with a machined base and "tail pieces" designed to facilitate attachment to the fixture and connection to the domestic hot and cold water supply piping. Faucets are available in a wide variety of configurations and finishes calculated more to please the eye, than to enhance their operation. Elegant design and high cost are not necessarily indictors of quality.

A special type of "faucet", still in relatively common use, is know as a "sill cock", or it is sometimes referred to as a "hose bib." These devices are found in almost every home. They may be made of cast brass, or even cast grey iron. They have an outlet spout with hose threads for attachment of a garden hose. Some "sill cocks", in houses with basements, are simply attached to a water pipe that extend through the wall just above grade. These installations are usually equipped with a shut off valve with a small drain plug, inside the house. Shutting off the water supply and opening the drain plug usually prevents freezing of the sill cock in winter, provided that the "sill cock" is also left open to facilitate its drainage.

A more convenient type of sill cock, called a "frost proof" valve is also available. It can be used in installations with or without basements. The device is simply a modified globe type valve, in an elongated body, with a long stem. With the valve seat located in the warmer interior of the building, freezing is usually precluded. When the valve is closed, any water remaining in the spout will normally drain out, unless a hose is left attached to it. Most freeze-ups of "frost-proof" sill cocks are caused by allowing a garden hose to remain attached to the valve in freezing weather.

Faucets are essential to the operation of most domestic plumbing fixtures. Manufacturers of plumbing fixtures usually refer to faucets, pop-up drains, drain strainers, tail pieces and either "P" or "S" traps, as "Plumbing Brass."

Plumbing fixtures, most often found in homes, are "kitchen sinks",

"lavatories" (sometimes also referred to as a sink) "bath tubs", "water closets" and, occasionally, a single or double basin "laundry tub", formerly referred to as a "laundry tray."

Kitchen sinks are usually available in stainless steel, porcelain enameled cast iron, enameled pressed steel and vitreous china. Lavatories are generally available, made of cultured marble, vitreous china and porcelain enameled cast iron or pressed steel. Bathtubs are available made of porcelain enameled cast iron, enameled steel and cultured marble. A recent innovation in bathtub manufacture is the use of a cast material marketed as "Americast" by American Standard. It is claimed to be more durable than cast iron at half the weight. Water closets are (and should be) made of vitreous china. All of these fixtures are available in a wide range of styles and colors.

The configuration of a particular fixture, as well as the material from which it is made, will often dictate the type of faucet, or faucets, that can be successfully used with it.

Better faucets normally have bodies of cast brass or bronze. A few economy types have bodies of cast grey iron or other metal. Regardless of the material from which they are made, faucets are always plated to enhance their appearance and increase their resistance to corrosion and staining.

Typical finishes found on faucets, regardless of the particular type, range from rough chrome, to highly polished chrome plating, polished brass, polished or satin bronze and even silver or gold. Some, more recent, offerings are porcelain enameled, either white or in color.

In general, faucets made by fixture manufacturers, such as American Standard, Kohler Company, Eljer and Crane Company, as well as those marketed under brand names like Delta, Moen and Price Pfister, among others, may usually be considered as high quality devices. As is true with many things, plumbing brass is available from a given manufacturer in a range from "economy" to "high end". Often, "high end" devices and their corresponding higher cost, reflect "elegance of design" and "finish", more than a superior mechanism.

Bathtubs and shower stalls are usually equipped with devices that resemble valves more than faucets. They may consist of two valves connected by a header (usually concealed) that is connected to a spout and/or a riser to a shower head. When found in tub-shower combinations, such supply valves are usually connected to normally route water to the tub spout, which incorporates a lift-type, valve, called a "diverter." When lifted, the diverter shuts off the water supply to the tub spout and routes it to the shower riser. On rare occasions, a third valve is used to direct the temperature regulated water flow to the shower riser. Even more rarely, a second set of two valves are installed for the express purpose of directing water to a shower riser. In shower stall (cabinet) as well as some tub-shower installations, balancing valves are often used. Balancing valves are cartridge type valves with lever, or ball-shaped, handles. Manually rotating the handle adjusts the water temperature to suit the user. In certain "special" installations, balancing valves may be thermostatically controlled to deliver the water to the shower head at a consistent, predetermined temperature.

Faucets for lavatories and kitchen sinks are normally available in one of three basic configurations. For lavatories, these are either two separate faucets, one each for hot and cold water, a single faucet with two valve handles and a single faucet with either one lever, or ball-type handle. The handles found on these faucets are available in an almost infinite variety of material, style and finish. Faucets for Kitchen sinks are now most often equipped with a swing spout and have either two supply valves or a single, lever handle. In applications, where two valves are employed, they are modified globe-type valves with machined seats and plugs equipped with hard rubber or neoprene, replaceable washers. Many kitchen faucets include some type of spray attachment, some more recent versions of which are "pull-out" extensions of the spout. Faucets with a single handle are easily the most popular. Like lavatory faucets, kitchen faucets are available in various finishes with polished chrome being the most popular. A wide choice of handle styles, spout configurations and other accessories, is available to the consumer, as well.

Single faucets are a modified type of globe valve with an ornamental

spout of some sort. The spout may be a simple, straightforward device, or it may be an elaborately elegant configuration. In either instance, the intended purpose is the same. To deliver water, in regulated quantity to the fixture to which it is attached. While single faucets usually serve the purpose of delivering water to the basin well, tempering must be accomplished by the balancing of hot and cold water in the basin because a single faucet will deliver only hot or cold water, depending upon which system it is connected to. This inconvenience was probably a contributing factor when manufacturers began to develop the, now popular, single handle, or two handle, faucet.

Single faucets usually incorporate a neoprene, or hard rubber, replaceable washer on the stem which mates with the seat to form a water-tight closure. Closing such faucets gently, using just enough pressure to effect a seal, will prolong the life of the washer.

Most faucet leaks are the result of closing them too tightly. If a leaking faucet is closed excessively tight, even the seat may be damaged causing a simple repair to become more difficult.

Perhaps, because balancing hot and cold water was patently inconvenient with single faucets and the nuisance of their repair had become a major source of annoyance to home-owners, albeit most of which may have been caused by their own negligence, or ignorance, manufacturers developed a single handle, balancing (or mixing) valve type of faucet. Some form of a single handle faucet has since become the "norm" for most kitchen sinks and many lavatories. These faucets have undergone many modifications, improvements and embellishments since their inception. The configuration of these devices is such that it is almost impossible for the user to shut them off too tightly.

Single handle faucets, whether with lever or ball-type handles, normally incorporate a cartridge either cylindrical or ball-shaped, with a stem to which the handle is attached. The cartridge seats snugly into a mating, machined body cavity, either cylindrical or cup-shaped. Hot and cold water supplies from the tail pieces to the cartridge is through machined ports in the cavity, which are equipped with small, spring loaded, neoprene washers. The cartridges have mating inlet ports and an

outlet port that mates (or aligns) with the faucet spout, when the faucet is opened. The spout port is also equipped with a small, spring loaded, neoprene washer. Cartridges found on most faucets are made of a hard plastic or nylon. Better faucets incorporate stainless steel cartridges.

Because abuse of this type of faucet by turning it off too tightly is almost impossible, leaking is rare and is almost always due to wear over an extended period of time. Some minerals and other impurities found in certain city water supplies, can cause the neoprene washers to harden or deteriorate, or cause the valve ports and the cartridge to become coated with calcareous material. When such faucets do leak, repair is almost as easy as the replacement of washers in single faucets.

Repairing Leaking Faucets:
The following are outlines of procedures that may be followed to repair leaking faucets. Unless the do-it-yourself homeowner possesses a basic knowledge of plumbing fixtures, valves and faucets, the repair or replacement of the more sophisticated devices may best be left to a professional.

Single Faucets:
When single faucets leak, the cause is most often abuse (turning them off too tightly), ordinary wear, or corrosion from water impurities. In any case, repair is easily effected by removing the handle and unscrewing the bonnet and the stem. With the stem in hand, the defective washer is easily replaced with a new one of the proper size. Washers for such faucets are widely available in packages of assorted sizes at hardware stores and other outlets where plumbing accessories are sold.

To replace worn or damaged washers, shut off the water supply to the fixture at the stop valve(s), remove the handle and unscrew the bonnet. When the valve stem is removed the defective washer can be easily removed and replaced with a new one of the proper size. Remove any particles of the old washer or other dirt from the seat and its port. Some care should be taken to install the washer tightly in its channel on the stem. If the washer becomes detached from the stem, reduced, or complete stoppage of water flow will result. Before reassembling the

faucet, inspect the seat for nicks, burrs, or other damage that may prevent the new washer from creating a perfect seal with the seat. If the seat displays moderately severe damage, reaming it with a special tool may restore its integrity. This operation requires considerable skill and may be best left to a professional. A faucet with a badly damaged, or corroded seat, from whatever cause, should be replaced.

The procedure described above applies to the replacement of washers in most two handle lavatory, bathtub and kitchen sink faucets even if they have a single spout.

In an effort to create a "fool proof" faucet that would eliminate, or discourage, closing the faucet too tightly, the Crane Company, in the late 1940s invented the "Dial-Eze" faucet. This device incorporated a cartridge type seat-plug assembly that possessed greatly extended longevity if not abused. To help prevent over tightening, the handles were almost smooth, ball shaped devices with very small "ears". These faucets were available for lavatories, kitchen sinks and bathtubs. Human nature being what it is, users did find ways to damage them by turning them off tightly and the "Dial-Eze" faucet has met with only limited success. The cartridge, when damaged, can readily be replaced by almost anyone. It is not always available at hardware stores and the like.

Single Handle Faucets:
Repair of most single handle faucets is almost as easy as replacing washers in single faucets. Such repair is done by first turning off the water supply at both stop valves found on most fixtures, then open the faucet to relieve residual pressure on the system. Remove the handle (usually accomplished by popping off the plastic cover plate to access a small brass screw that holds the handle in place). With some lever handles on kitchen sink, or lavatory faucets, the handle is held in place by an "Allen set-screw". A hex "Allen wrench", of the proper size, is necessary to loosen the screw to remove the lever handle. When the handle has been removed, the bonnet of the faucet will be accessible. The bonnet is usually a hemisphere shape, and has a lightly grooved ring at its base. Cover this ring with a piece of old toweling, or other soft material, to protect the finish from damage and gently unscrew the bonnet (counterclockwise) with a water pump, or other, suitable pliers.

With the bonnet removed, the cartridge can be lifted from the valve body. Use care so as to avoid allowing dirt or washer material to enter the ports of the valve. To guarantee the use of an exact replacement for the cartridge, take the old one to a plumbing supply outlet, Ace Hardware, True Value Hardware, or other source, where the sales person can provide an exact replacement cartridge, complete with a new gasket for the bonnet. An accompanying packet should be obtained that contains new washers and small springs to be installed in the small valve ports. Ask An Expert strongly recommends replacing all such cartridges with those made of stainless steel.

Installation of the new cartridge is the reverse of the disassembly. Install new springs and gaskets in the valve body ports. Use care to properly orient the cartridge ports with those of the valve body. Install the new gasket for the bonnet and tighten it just enough to prevent leaking. Some pressure will be required to insert the cartridge fully into the cavity due to the new washers and springs. Reinstall the faucet handle tightly and replace the plastic cap with the "hot-cold", "on-off" designation thereon. Turning the water on at the stop valves will complete the operation. If all has been done properly, there will be no leaks, but valve operation will be a bit more stiff than previously.

Repairing or Replacing Faulty Valves:
When a leak develops at the packing gland of most valves used in domestic situations, a simple tightening of the packing nut usually "cures the problem". If the nut is already quite tight, replacing the washer or other packing material may be required. Care should always be exercised when tightening packing nuts. Over tightening the nut will create undue friction on the stem and make operation of the valve difficult, as well as damage the packing washer.

When globe or gate type valves, or needle stop valves, in water supply circuit situations, fail to close tightly, or more rarely, fail to open completely, repair is usually difficult or impossible to accomplish. In such instances, replacement of the valve is most often the only effective remedy.

Replacing a defective valve in an existing copper piping system usually requires cutting the pipe on one or both sides of the valve. When the defective valve has been removed, a short length of pipe and a "sweat pattern" coupling are used to insert the new valve into the system. The pipe, where new joints are to be made, should be cleaned with emery cloth until bright. The female opening of couplings and valves should be reamed with a wire brush device, as well. Paste solder flux should be applied to the cleaned male pipe before inserting it into the valve, coupling, or other fitting. When the assembly has been completed and the joints are secure and complete with no binding, the joints must be soldered with a suitable acid core solder. Heat can be applied to the joint, by means of a propane torch, until it becomes just hot enough to cause the solder to "flow" when applied to the edge of the joint. Heat should continue to be applied until solder has completely filled the joint, with a small amount of overfill, and the flux starts to "brown." This operation requires a certain amount of skill and understanding of the principles that are involved. If this seems to be beyond the capability of the average do-it-yourself homeowner, the services of a licensed professional plumber should be obtained.

All faucets have threaded "tailpieces" configured to accept flexible supply riser tubes. The normal spacing of these tailpieces for single or two handle, single spout faucets for use on lavatories, is four inches or, more rarely, eight inches, to correspond to normal spacing of the holes found in the fixture. Single faucets have similar "tailpieces" as well, but spacing is determined by the holes in the fixture. Swinging spout faucets intended for use with kitchen sinks have similar "tailpieces", and are normally spaced at eight inches on centers.

It is folly for anyone to attempt to punch, or drill, holes in either kitchen sinks or lavatories to accommodate faucets different than those intended for installation in that particular fixture. Damage to the fixture finish will be the almost certain result.

When purchasing a new faucet, one should be certain that the centering of the tailpieces, and any accessories, matches the holes in the fixture on which it is to be installed.

Before a new faucet can be installed, the old device must be removed. This is best accomplished by shutting off the water supply at the two stop valves, remove the supply tubes, the mounting nuts and friction washer from the existing faucet. Then gently lift the faucet off the deck (or rim) of the fixture. Use care, if the old plumber's putty is stuck to the fixture, to avoid damaging the finish. Bumping the faucet with the heel of the hand will usually loosen it. Then remove all old putty, soap scum, or other dirt.

To install a new faucet, whether on a kitchen sink or a bathroom lavatory, first apply a one quarter inch bead of plumber's putty around the base of the faucet, or install the soft rubber gasket, if supplied with the faucet. If installation is on a cultured marble lavatory, and no soft rubber gasket is supplied, use silicone caulk in lieu of plumber's putty. Insert the faucet tailpieces into the sink, or lavatory, openings. Position the faucet so that the base is parallel to the back edge of the fixture. Press the faucet down to make sure the putty, caulk, or gasket, forms a good seal.

Screw the metal friction washers and the mounting nuts onto the tailpieces, then tighten them with a basin wrench or water-pump pliers. Wipe away excess putty, or caulk, around the faucet base.

Connect the flexible supply tubes to the faucet tailpieces. Tighten the coupling nuts with a basin wrench or water-pump pliers.

Attach the supply tubes to the stop valves, using compression fittings. Hand tighten the nuts, then give them an extra wrench. If necessary, hold the valve with another wrench while you tighten the fittings. On a lavatory so equipped, connect the pop-up drain lever assembly.

Caution:
If the intended user of this information has any doubts or is not absolutely clear on any detail of such a project before proceeding, it is strongly recommended that a licensed plumber be contacted. The services of a professional may well preclude the occurrence of physical damage to one's person, a plumbing fixture, or the premises.

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Kitchen inspection description

SECTION A: TEMPERATURE CONTROL
Fridge temperatures Fridges ought to be at <+8°C, but it is good practice to maintain fridges at <5°C. **Freezer temperatures** Fridges ought to be at <-18°C. **Hot holding of food** Hot holding of food ought to be maintained at >+63°C (discard food if kept below +63°C for loner than 2 hours). **Cold holding of food** Cold holding of food ought to be maintained at <+8°C (discard food if kept above +8°C for loner than 4 hours). **Undercounter/walk in fridge temperature records kept up date** Records must be completed daily according to BLUE PUDDING food production protocols of all undercounter and walk in fridges. **Thermometers in correct working order** All thermometers kept in kitchen areas must be in correct working order and calibrated monthly. **Blast chiller records kept up date**

Records must be completed daily according to BLUE PUDDING food production protocols for all foods placed within the blast chiller.

Cooking time/temperature records kept up date

Records must be completed daily according to BLUE PUDDING food production protocols for each batch of cooked food.

SECTION B: FOOD STORAGE

Food covered in correct containers with lids

Containers must be easily cleanable, free from damage, and suitable for the purpose.

Correct food labelling

All food must be labelled with the correct labels when in fridges for storage.

Stock rotation control

All foodstuffs displaying an older use by date must be used first. Daily checks should be carried out on all short life perishable foods in refrigerators and weekly examination of other foods. Remember the rule: "First in - first out"!

Raw/cooked separation in refrigerators

Always store raw meat on the bottom shelving. Never store raw and cooked products together in a refrigerator unless products are fully contained or covered to prevent cross contamination.

SECTION C: FOOD HANDLING/PERSONAL HYGIENE

Food deliveries/dispatch covered

All food deliveries/dispatches should be covered or placed in suitable containers.

Correct use of colour coded chopping boards

Ensure that all staff is aware of the correct colour coded chopping boards in use and that the correct boards are used at all times. Ensure that chopping boards are in a good state of repair and can be easily cleaned/disinfected.

Sanitizer use during preparation

Ensure frequent sanitation of food contact surfaces both before and after use. Ensure frequent sanitation of all hand contact surfaces.

Raw/cooked separated during food preparation

Cross contamination must be avoided. The preparation of raw materials must be in areas physically separated from cooking and post cooking areas. If in same preparation area, all surfaces and equipment should be thoroughly disinfected before use, and surfaces sanitised. Wash/change gloves before handling food or equipment, after using the toilet, in between handling raw and cooked food and after handling waste.

Equipment washed and disinfected

All equipment must be thoroughly cleaned and disinfected prior to and after each separate use, and in between contact with raw and cooked products.

Frequent hand washing

Wash hands before and after handling food or equipment, after using the toilet, in between handling raw and cooked food and after handling waste. Ensure that they are adequate numbers of wash hands signs in the kitchen area.

Hair tidy

Hair must be tidy and long hair must be tied back. If hair is loose, it must be placed in a hair net.

No unhygienic habits

Food handlers must have an absence of skin infections, clean hands, and short fingernails and no evidence of nail biting. Staff is prohibited from eating in the kitchen unless for tasting purposes only.

Disposable gloves used as appropriate

Change gloves before and after handling food or equipment and in between handling raw and cooked food.

Clean uniform

All staff should display clean uniforms.

Uniform satisfactory

Uniform should be for the purpose intended.

Minimal jewellery

The only rings allowed to be worn by food handlers are wedding bands. The only earrings allowed in the food preparation areas are back less sleeper type earrings.

Clean non slip shoes

All staff must be wearing clean non-slip shoes.

No outdoor clothing

No staff member or visitor should enter a food preparation area unless wearing suitable protective clothing. No outdoor clothing or garments such as keys should be stored in food preparation areas/drawers and cupboards.

Frequent bathing

All staff should ensure excellent personal hygiene routines.

SECTION D: MAINTENANCE OF STRUCTURE

Walls

Must be in good condition, easy to clean and where necessary disinfect. Free from ingrained dirt/grime. In case of repairs required contact technical services and ensure corrective action is carried out to damaged walls.

Floors

Must be in good condition, easy to clean and where necessary disinfect. Allow for adequate drainage. Free from ingrained dirt/grime. In case of repairs required contact technical services and ensure corrective action is carries out to

damaged flooring.

Doors

Must be in good condition, easy to clean and where necessary disinfect. Free from ingrained dirt/grime. In case of repairs required contact technical services and ensure corrective action is carries out to damaged doors.

Ceilings

Must be constructed and finished to prevent the accumulation of dirt and reduced growth of undesirable moulds. In case of repairs required contact technical services and ensure corrective action is carried out to damaged ceilings.

Shelving

Ensure all shelving is free from accumulation of dirt. Ensure shelving is in good condition and cleaned and disinfected frequently.

Lighting

All lighting should be in correct working order to ensure that all employees can identify hazards and carry out tasks correctly. Adequate lighting also enables areas, which may require cleaning.

Ventilation

Ensure that all extraction units are in correct working order and that extraction ducts are clean and free from dust/grime. Contact cleaning services and ensure corrective cleaning action is carried out.

Skirtings

Skirtings must be clean and seals intact. Contact technical service in case of repairs required.

Switches/sockets

Ensure that all switches and sockets are in correct working order and in good repair. Contact cleaning services in case of repairs required.

Work surfaces

Ensure that all food contact surfaces are clean and in good repair.

Drainage

Drainage must be kept clean and in good working order/repair. It must be free from leaks and blockages. Ensure that all drainage channels and grease traps are regularly inspected and cleaned as frequently as necessary. Contact cleaning services and ensure corrective cleaning action is carried out.

SECTION E: MAINTENANCE OF EQUIPMENT

Food Use Sink

Clean

Ensure food sinks are cleaned, disinfected, and rinsed thoroughly in between different food uses.

Correct usage

Ensure that food use sinks are only used for food use and not for and washing or washing of equipment.

Hot/cold water

Ensure all sinks have both hot and cold running water at all time. In case of required repairs, contact technical services and ensure corrective action is carried out to the hot/cold water taps.

Sign present

Good practice to display signs informing of food use sink only.

Disposable paper towels

Ensure that all paper towel dispensers are full at all times and that there are bins with foot operated lids in the surrounding area.

Hand wash basin

Clean and correct usage

Ensure food sinks are cleaned, disinfected, and rinsed thoroughly at the end of each day or as required.

Hot/cold water

Ensure all sinks have both hot and cold running water at all time. In case of required repairs, contact technical services and ensure corrective action is carried out to the hot/cold water taps.

Sign present

Good practice to display signs informing of hand wash basin only. No equipment or food use allowed.

Disposable paper towels

Ensure that all paper towel dispensers are full at all times and that there are bins with foot operated lids in the surrounding area.

Bacterial soap

Ensure that soap dispensers are full and in correct working order at all times.

Nailbrush if present in clean/good condition

Nailbrushes are vehicles of contamination and they should be cleaned and disinfected frequently and at the end of each day.

Ventilation

Canopy interior clean

Ensure that canopy is cleaned using correct cleaning chemicals and is free from a build up of grease/grime.

Canopy exterior clean

Ensure canopy is cleaned using correct cleaning chemicals and is free from a build up of grease/grime.

Filters clean

Ensure that filters are clean and in correct working order. Contact technical services or applicable ventilation engineer for

particular piece of equipment to renew/clean filters.

Adequate extraction

Ensure that the ventilation/extraction units are working and are used for their intended purpose.

Waste bins

Clean

Refuse must not be allowed to accumulate in a food room and should not be left overnight.

Foot operated lid

Employees must be reminded to close lids and wash hands immediately after handling waste.

Sufficient amount

Adequate number of bins provided for each area.

Dishwasher

Correct detergent

Employees must be informed what chemical should be used in machine dishwasher and the hazards associated with each chemical and provided with protective clothing for its usage.

Wash cycle 49°C - 60°C

Ensure that dishwashers are operating at the correct temperature using the dial on the front of the machine. Contact technical services should reading appear to be faulty.

Rinse 82°C - 88°C

Ensure that dishwashers are operating at the correct temperature using the dial on the front of the machine. Contact technical services should reading appear to be faulty.

Fridges

Seals satisfactory

Ensure that fridges are closed after use and that seals are in good condition. Contact technical services to repair damaged seals.

Clean interior

Ensure fridges are cleaned and disinfected daily, and that all shelving is free from dirt/grime.

Clean exterior

Ensure fridges are cleaned and disinfected daily.

Clean handles

Ensure that hand contact surfaces are cleaned and sanitised as frequently as possible to prevent cross contamination.

Defrosted regularly

Ensure that the defrost cycles are in correct working order.

Freezers

Seals satisfactory

Ensure that freezers are closed after use and that seals are in good condition. Contact technical services to repair damaged seals.

Clean interior

Ensure freezers are cleaned and disinfected daily, and that all shelving is free from dirt/grime.

Clean exterior

Ensure freezers are cleaned and disinfected daily.

Clean handles

Ensure that hand contact surfaces are cleaned and sanitised as frequently as possible to prevent cross contamination.

Defrosted regularly

Ensure that the defrost cycles are in correct working order.

Microwave

Operable

Contact technical service if in need of repair.

Clean interior

Clean microwaves inside with sanitizer at the end of each day and in between use as appropriate.

Clean exterior

Clean microwaves outside with sanitizer at the end of each day and in between use as appropriate.

Grill/toaster

Operable

Contact technical service if in need of repair.

Clean/carbon free

Ensure that grills are cleaned with correct cleaning chemicals /equipment. For correct cleaning chemicals ask steward.

Counters

Clean

Ensure that counters are at all times clean and that glass displays are free from grease/grime. Contact stewarding for correct cleaning chemicals.

Sealed to wall

Ensure that all seals are in good condition. Contact technical services should seals need repairing/replacing.

Clean legs/wheels

Ensure that wheels are tuned and cleaned frequently and that legs of counters are cleaned at the end of each day and as required using detergent and warm water and sanitizer.

Post mix gun

Clean

Ensure that post mix gun is clean.

Nozzle soaked daily

Soak nozzle in warm water and detergent daily and as required between uses.

Motor housing clean

Clean motor housing with sanitizer at the end of each day and as required.

Coffee machine

Operable

Contact technical service if in need of repair.

Clean facing controls

Clean facing controls with sanitizer at the end of each day and as required.

Clean behind/below unit

Tilt coffee machines and clean debris from behind and below them. Sanitize behind and below.

Bain maries

Operable

Contact technical service if in need of repair.

Clean interior

Clean bain maries inside with sanitizer at the end of each day and in between use as appropriate.

Clean exterior

Clean bain maries outside with sanitizer at the end of each day and in between use as appropriate.

Milk fridges

Clean interior

Clean milk fridges inside with sanitizer at the end of each day and in between use as appropriate.

Clean exterior

Clean milk fridges outside with sanitizer at the end of each day and in between use as appropriate.

Clean dispense

Clean dispense by removing and washing with detergent and hot water and then sanitising.

Defrost regularly

As required.

SECTION F: COSHH

Fully aware of COSHH requirements under the Food Safety Policy

Read and understood/implemented required action.

Fully aware of non food safe chemical requirements under the Food Safety Policy

Read and understood/implemented required action.

Safety data sheets

Safety data sheets accessible in nearby vicinity (i.e. chefs office.)

Correct dilution/use of chemicals

Understanding the correct dilutions foe chemical use and putting this into practice.

Staff aware of risks

Staff informed of chemical hazards and correct usage of chemicals. Contact stewarding for correct usage.

Chemical storage correct

Store all chemicals away from food preparation areas.

Chemicals stored in correct containers

Chemicals should be stored in manufacturers containers where possible. If not possible due to size of concentrated

container, place in a safe and suitable container for that chemical.

Correct labelling of chemicals in containers

No chemicals should be stored in unlabelled containers. All containers must display what chemical and chemical name/safety data number is contained within the bottle.

Use of correct personal protective equipment for use with specific chemicals

Staff provided with personal protective clothing, which must be worn.

SECTION G: CLEANING

Schedules/records kept and up to date

If schedules in use

Correct use of chemicals

Aware of correct chemicals form stewarding and put this into use.

Equipment stored correctly

All cleaning equipment to be stored in correct rooms/cupboards.

Buckets emptied when not in use

Buckets emptied and disinfected at the end of each day. Buckets left empty when not in use.

Mops disinfected

Mops disinfected to the end of each day.

Brushes/pans clean

Clean pans and brushes at the end of each day or where necessary.

Clean as you go in action

Evidence of floor cleaning and regular use of sanitizers.

SECTION H: MANAGEMENT DUTIES

Corrective action/reliability

Ensure that all potential problems are acted upon as soon as they are identified. This will include notifying the relevant person, such as engineers/food safety etc.

Provision of up to date HACCP information

Intermediate food hygiene course for managers, chefs

All chefs/managers and supervisors should attend the intermediate food hygiene course.

Temperature logs

Ensure that temperature logs are completed and ready for collection every week.

Pest control

Understanding correct procedure for reporting signs of infestation.

First aid box accessible

Ensure that everyone knows where the first aid box is within the locality of where they work.

Blue waterproof plasters

Ensure that the first aid box is always replenished should items be used.

1st aider location

Ensure that everyone is aware where to find a first aider or doctor.

Basic food hygiene

All food preparation staff has to have induction training and to be nominated for basic food hygiene training.

Equipment training complete for each staff member

Ensure that hazard analysis and methods of use for each piece of equipment used in the kitchens has been completed, and that each staff member has been trained to use each piece of equipment.

Training records kept for courses attended

Records must be kept for all food preparation staff of courses attended and dates including COSHH training.

COSHH

All employees handling and using chemicals must receive COSHH training by the stewarding department.

RESULTS

SCORE ACHIEVED DIVIDED BY TOTAL SCORE AVAILABLE

Tech Terms

Please click and browse with an initial letter.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Many terms, such as escutcheon, have a specific meaning in plumbing. Look up your term here for a helpful boost in the right direction.

Seat wrench

Tool to resurface a worn valve seat. Stops leaks by providing a smooth sealing surface. Applies only to older compression style faucets.

Self-closing

Commercial lavatory faucet that flows water for a set time after the handle is pushed or turned. Sometimes referred to as a metering faucet. KOHLER self-closing faucets are an economical, water-saving investment.

Self-rimming

Style of lavatory which includes an integral rolled and finished rim that is placed directly over the countertop opening. The sculptured rim of Kohler's self-rimming Chenille lavatory makes it a focal point on any countertop.

Sensor field

The operating range of the touchless faucet. The sensor detects the presence of objects within this range.

Service procedure

Component assembly and disassembly instructions. Generally

intended for repairing a damaged or defective component.

Service sink

Deep fixed basin, supplied with hot and cold water, which is used for rinsing of mops, disposal of cleaning water, or washing clothes and other household items. Kohler's Whitby service sink may be ordered with optional wire rim guard.

Service sink faucet

Commercial grade faucet used on a service or utility sink. KOHLER polished chrome service sink faucets are triple-plated to withstand years of use. Some include additional hardware for wall-mount installation and/or supplementary accessories for specific tasks. All KOHLER service sink faucets are designed with lever handles for ADA compliance.

Shower arm

Shower trim component that delivers water to the showerhead. Usually 1/2" NPT, the shower arm connects showerhead and water supply line behind a finished wall of the shower enclosure.

Shower ell

Plumbing elbow into which threads the shower arm. It is secured to the wall framing. The vertical water supply pipe from the bath/shower valve connects to the shower ell inlet.

Shower supply elbow

Plumbing elbow into which threads the shower arm. It is secured to the wall framing. The vertical water supply pipe from the bath/shower valve connect to the shower ell inlet.

Showerhead

Device that delivers water in a showering space. It may have an adjustable spray feature and a valve for regulating the flow of water from the shower. The MasterShower 3-way showerhead from KOHLER delivers 2.5 gallons per minute and allows you to select a pulsating, soft-aerated or full-flow spray.

Shroud

Color-matched component beneath a wall-mount lavatory which covers the drain outlet for aesthetic purposes. Kohler's color-coordinated P-trap shrouds provide added protection while

complementing the lavatory's design.

Shut-off valve
A device to provide local cut-off of water supply to a plumbing faucet or fixture during replacement or service. Also referred to as a stop valve. May also refer to the main shut-off valve of a building or floor.

Side outlet
A faucet valve body configuration in which the outlet is on the side of the valve body and the inlet is at an end of the valve body.

Single basin
Term used to describe a sink comprised of a single compartment. If you use a dishwasher, you may prefer a large single-basin kitchen sink for other tasks.

Single-control
Type of faucet that has one handle to control both water temperature and water volume. KOHLER's single-control Avatar faucet may be ordered with a choice of front, left or right handle location, depending on the user's preference.

Single-hole
One hole drilling positioned in the center of a sink or lavatory faucet ledge providing for installation of a single-control faucet.

Single-hole faucet
Faucet which installs into a single fixture hole. The center mount Fairfax lavatory faucet combines clean, contemporary lines with convenient single-control operation.

Sink (kitchen)
Any of a variety of fixtures used as a method of personal expression and for entertaining, food preparation, and dish washing. May contain one or more basins, which may be of varying heights.

Sink compartment
Flat bottom fixture used in the kitchen for cleaning dishes and in connection with food preparation. KOHLER offers a wide array of sinks with a number of sink compartments to suit individual needs and tastes. KOHLER kitchen sinks with large, deep sink compartments accommodate large pots and pans.

Siphon
Suction that occurs in a trapway as a toilet is filled with outgoing water and waste. An effective siphon is critical to an efficient flush.

Siphon break
The point in a toilet flush when air is re-introduced into the trapway, "breaking" the siphonic action. The siphon break is usually heard as a deep gurgling at the end of the flush.

Siphon jet
Efficient flushing design having a siphoning trapway at the rear of the bowl, integral flushing rim and jet. KOHLER gravity-fed toilets are designed with powerful siphon jets, or front rim jets, and a 2" wide glazed trapway to provide an efficient flush.

Siphoning
The suction or pulling effect that takes place in the trapway of a toilet as it is filled with outgoing water and waste. An effective siphon is critical to an effective flush for any toilet.

Slide bar

Type of shower component designed for the attachment of a handshower. The mounting bracket can be adjusted at different heights to accommodate individual preference.

Slip-resistant
Textured finish found on the bottom of whirlpool baths, bathtubs and shower modules. The textured finish provides an added measure of safety for the bather. A patterned Safeguard finish is offered on every KOHLER Cast Iron whirlpool.

Snaking
Using an auger or snake to clear a drain or trap.

Soap/lotion dispenser
Accessory that holds liquid soap or lotion. May be installed in a predrilled sink hole or through a 1" max. thickness countertop.

Soil pipe
Large diameter pipe to carry waste from drains and toilets.

Soil stack
A vertical pipe through which toilet waste and other plumbing system discharge flows.

Solenoid
Coil of wire in a long cylinder that when carrying a current

resembles a bar magnet so that a movable core is drawn into the coil when a current flows.

Solenoid valve
An electrically-activated mechanical valve that opens and closes when electric power is applied to it. The solenoid valve turns the Touchless faucet water flow on and off.

Solvent weld
To join a plastic tube to a plastic fitting by use of a solvent-type cement.

Spline adapter
Device sometimes required to form a mating connection between the splines of a valve stem and the splines inside a faucet handle.

Spout
Delivers water from the faucet valve to the sink, lavatory or bath. It is usually solid brass or die cast, chromium plated. Many of Kohler's kitchen sink faucets offer extra long spouts to ensure adequate reach into the sink basin.

Spout height
Vertical measurement from the base of the faucet to the tallest point of the spout reach.

Spout length
Horizontal measurement from the center of the spout/shank to the center of the aerator.

Spud
Connector or coupling between the water supply pipe and bottom part of the ballcock assembly in a toilet tank. The all-brass assembly of the spuds found on KOHLER toilets make them extremely durable.

Spun glass
Lavatory material made from soda lime glass. Air bubbles formed during the casting process work with naturally occurring pigments

to give Kohler's spun glass Vessels a somewhat irregular, yet invitingly tactile, surface.

Square
The alignment of two surfaces at right angles (90 degrees) to each other. Also the tool used to measure this alignment.

Square handle
Type of faucet handle with a square shape.

Stainless steel
Material used in the manufacture of kitchen sinks. Sheet metal is drawn into a shape that has a degree of depth. Additional press operations include punching of faucet holes and forming of fixture rims. Kohler's stainless steel sinks offer exceptionally deep basins and are available in mirror or satin finishes.

Standard faucet
Type of commercial faucet that is operated similar to a residential faucet. The user is in complete control of volume and temperature adjustment.

Stem
Valve stem. The portion of a valve to which the handle attaches. Rotation of the valve stem turns the valve against a sealing surface to control the flow of water.

Stop
Shut-off valve. A device to provide local cut-off of water supply to a plumbing faucet or fixture during replacement or service.

Stop valve

Shut-off valve. A device to provide local cut-off of water supply to a plumbing faucet or fixture during replacement or service.

Stopper
Refers to a part which stops the flow of water in a fixture. Usually refers to a bath, lavatory, or sink stopper. Also used to refer to the flapper in a toilet. A bath, lavatory, or sink stopper usually contains an O-ring or gasket which must be clean and in good condition to provide an effective seal. Vandal-resistant stoppers are removable only by partially disconnecting the lift linkage in the drain line.

Stopper linkage
Lift linkage. Faucet component that opens the pop-up drain in a lavatory when the lift rod is depressed. When rod is lifted, the drain closes so the lavatory will retain water.

Stopper seal
A bath, lavatory, or sink stopper usually contains an O-ring or gasket which must be clean and in good condition to provide an effective seal.

Strainer
Sink drain fitting consisting of a strainer body attached to the drain opening and a removable basket. Also called a duostrainer. KOHLER offers strainers in metal and colored finishes to match or complement the color of the kitchen sink.

Strap wrench
A wrench which uses a tightenable strap instead of jaws. Typically used to secure threaded parts which are irregularly shaped and plated, such as a shower arm or a spout. It must be clean for scratching to be avoided.

Street ell
An elbow joint with a hub on one end. Used to make an angled connection between pipe or tubing and a fitting with a hub.

Suction
Process of exerting a force upon a solid, liquid or gas by reason of reduced air pressure over part of its surface.

Suction cover
Cover piece for whirlpool suction assembly.

Suite
Grouping of bathroom fixtures with complementary design lines. The clean lines and curved planes of Folio suite offer a contemporary look. KOHLER suites offer coordinated fixtures, faucets and accessories to bring continuity to any decor.

Supplies
The pipes and valves which supply water to a faucet. Also refers to short connecting tubing or hoses between the faucet and the shut-off valve.

Supply stop
Shut-off valve. The valve providing on/off water supply control just before a fixture or a faucet.

Supply tube
Short connecting tubing or hoses between the faucet and the shut-off valve.

Sweat fitting
A plumbing fitting for soldered connection to copper pipe or tubing.

Sweating
Connecting joints between copper pipe and fittings with plumbing solder.

Swing spout
Spout style that allows user to move or "swing" position of spout to where it's needed. It is primarily found in kitchen and entertainment sink applications. KOHLER swing spouts offer added convenience for food preparation or for large pots or containers.

Swinger spout attachment
Component attached to the spout of certain KOHLER kitchen sink faucets. It directs water in a full-circle with smooth ball-joint swiveling action and easily adjusts from stream to spray.

System Basic
KOHLER whirlpools in this category offer a solid value for homeowners who want the superior function of a KOHLER whirlpool with basic features. Constructed of durable cast acrylic, System Basic whirlpools are offered in sizes to fit most standard installations.

System I bath whirlpools
KOHLER whirlpools in this category provide soothing benefits of customized hydro-massage at a value price. Factory-installed, color-matched Flexjet whirlpool jets are fully adjustable. A broad range of styles and shapes expand design possibilities.

System II bath whirlpools
KOHLER whirlpools in this category enhance the hydro-massage experience with added comfort and control. Standard in-line heaters maintain warm water for long periods of time. Two-speed pumps present the option of a vigorous stream or gentle flow. Constructed of premium quality materials such as KOHLER Cast Iron, they provide a lifetime of performance and beauty.

System III bath whirlpools
KOHLER whirlpools in this category combine leading edge design and technology to deliver maximum whirlpool features. Features such as a Neckjet pillow and the KOHLER exclusive Bodyssage backjet system offer added massage for full-body relaxation. Variable flow controls precisely adjust the intensity of the water action to suit personal needs.