you can DO it

COOPERATIVE EXTENSION SERVICE

Departments of
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ELECTRICAL REPAIRS YOU CAN DO

Electrical appliances are very useful in the home but one loose wire can make an appliance useless. One of the common causes for not working is a bad plug. Usually the problem is at the plug where the wire has been bent many times through use.

Before you begin be sure the lamp is disconnected from the wall plug. Figure 1

- Cut off the old plug plus 1 inch of cord.(a)
- Split the insulation 2 inches to separate wires (b)
- Strip insulation from 1/2 inch of each tip, then scrape wire until bright (without nicking it).
- Tie an underwriter's knot and pull wire back into plug (c)
- Form a loop on each wire so it curls clockwise around its terminal (d)
- Tighten terminals to hold wires securely
- Put insulation disc over prongs (e)

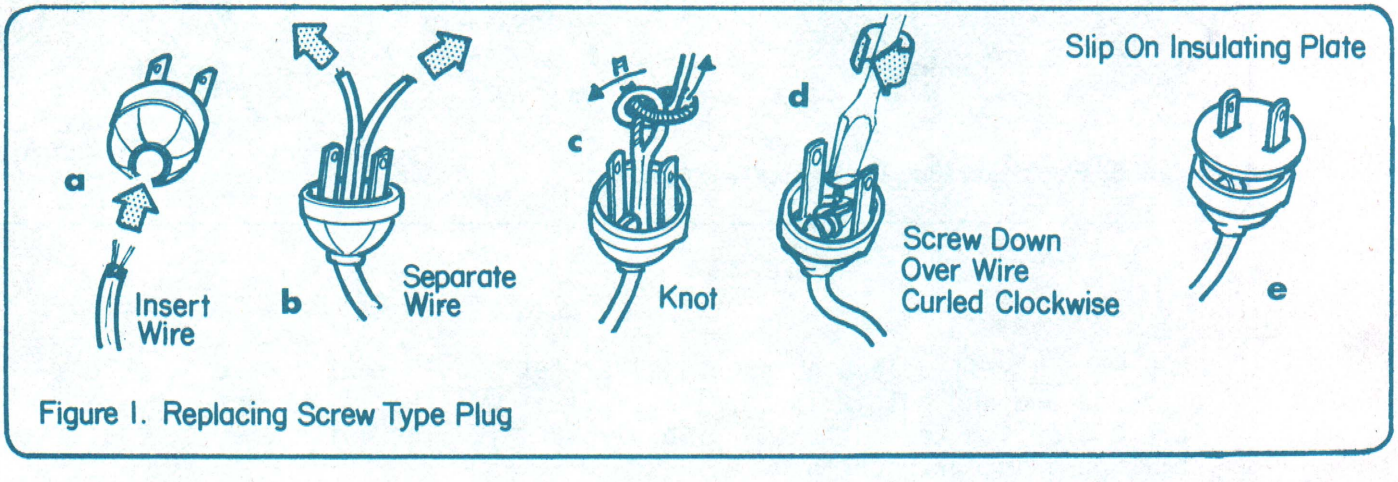

Figure 1. Replacing Screw Type Plug

REMEMBER!!! Be sure none of the little strands from one wire touch the other wire or you will have sparks when you plug it in.

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James S. Boyd, Professor, Agricultural Engineering Department, October, 1974

A new plug (clamp type) is easy to use. Figure 2

- Cut wire off clean (a)
- Press the two prongs together and remove from plug
- Thread wire through plug and into prong assembly (b)
- Press the prongs down and push back into plug (c)

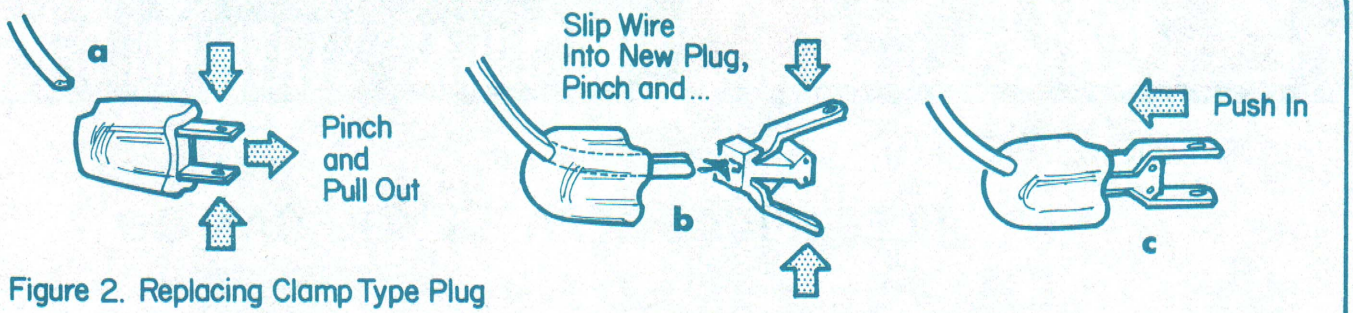

Figure 2. Replacing Clamp Type Plug

Plugs on heating appliances have a different type of plug.

To replace the end that plugs into the appliance: Figure 3

- Cut off the old plug plus 1 inch of cord
- Separate the halves of the new plug (a)
- Strip insulation far enough to make hooks fit around the terminals
- Secure the contacts by tightening terminal screws (b)
- Screw or clasp the halves of the plug together (c)

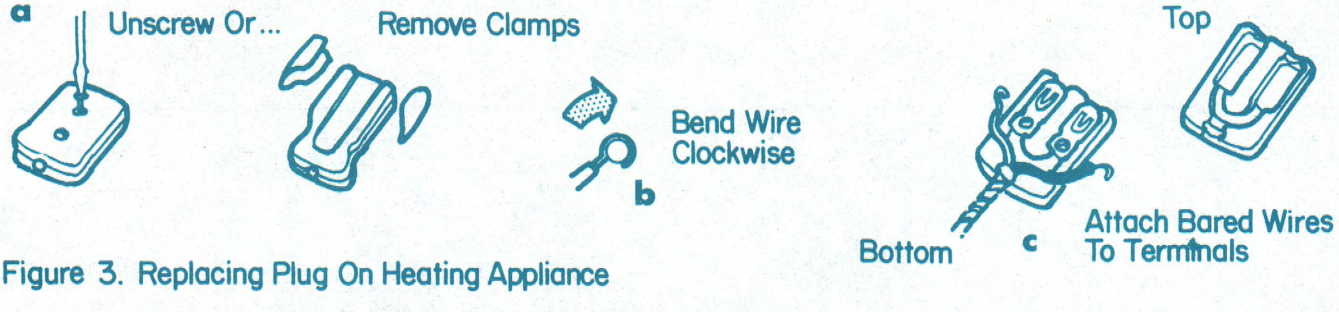

Figure 3. Replacing Plug On Heating Appliance

SWITCHES

Lamp Switch - If a lamp goes out, first get a bulb that you see lighted or a new one and put it in the lamp. If it will not light when you turn the switch the switch is probably faulty. The switch may be chain pull, push in, or knob turn.

- Disconnect lamp from wall plug
- Press on the side of the "top" with your thumb and lift it and the insulator off Figure 4
- Loosen the little screw on the side of the "bottom" and slide it down the wire
- Remove the wires from either side of the switch by turning counter clockwise

° If wire has burned off cut, strip, and reattach as described previously

° If old wire is stiff from age, replace it with new wire

° If switch is the fault, take it to the hardware store and get one like it to install

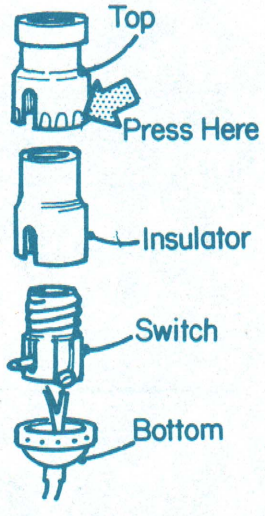

Figure 4.
Repairing Lamp Bulb Socket

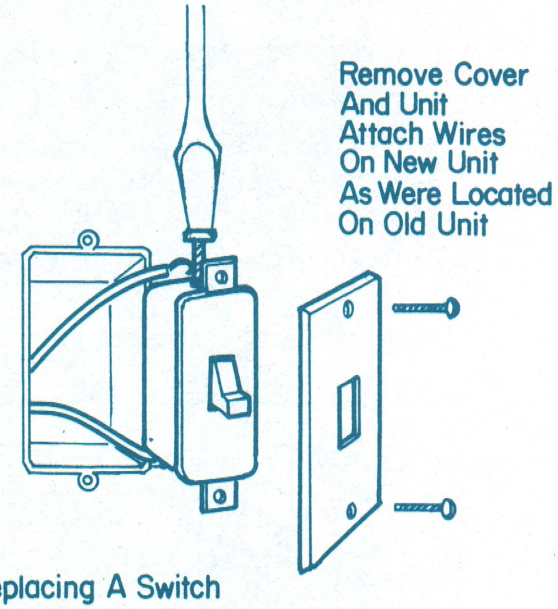

Figure 5. Replacing A Switch

Wall Switch - When the light is out, first replace the bulb with one you know will light. With the new bulb in the socket turn on the switch. If light doesn't go on, check the fuse box in the basement. If fuses are all good the problem is probably the switch.

° Purchase a switch

(a) If the light can be turned on from two different wall switches buy a "2-way switch"

(b) If only one switch turns on light, buy a "regular switch"

° Remove fuse or flip circuit breaker, usually found in the basement

° Unscrew and remove face plate Figure 5

° Unscrew top and bottom mounting screw and pull switch out

° Loosen terminal screws on the side or end of the switch and remove switch

° Connect new switch to wires. Hook wires in a clockwise direction around screws so wires will wrap around screw when it is tightened. The black wire should go to the brass colored screw and the white wire to the silvery colored screw

° Assemble the switch doing above steps in reverse order

Wall Outlets

These are what you plug everything into and only rarely cause trouble. Sometimes they get loose and only need tightening.

To replace:

- Remove fuse or trip circuit breaker for particular room of the house Test to be sure you have the correct circuit by plugging a lamp into the receptacle.
- Unscrew and remove face plate
- Unscrew mounting screws at top and bottom and pull unit out
- Notice how wires are connected and connect them to the new unit the same way. All white wires are connected to the side with a silvery color and the black wires to the brassy terminals.
- A green grounding might be connected on newer systems so be sure to reconnect this wire also
- Reassemble the outlet doing steps above in reverse order

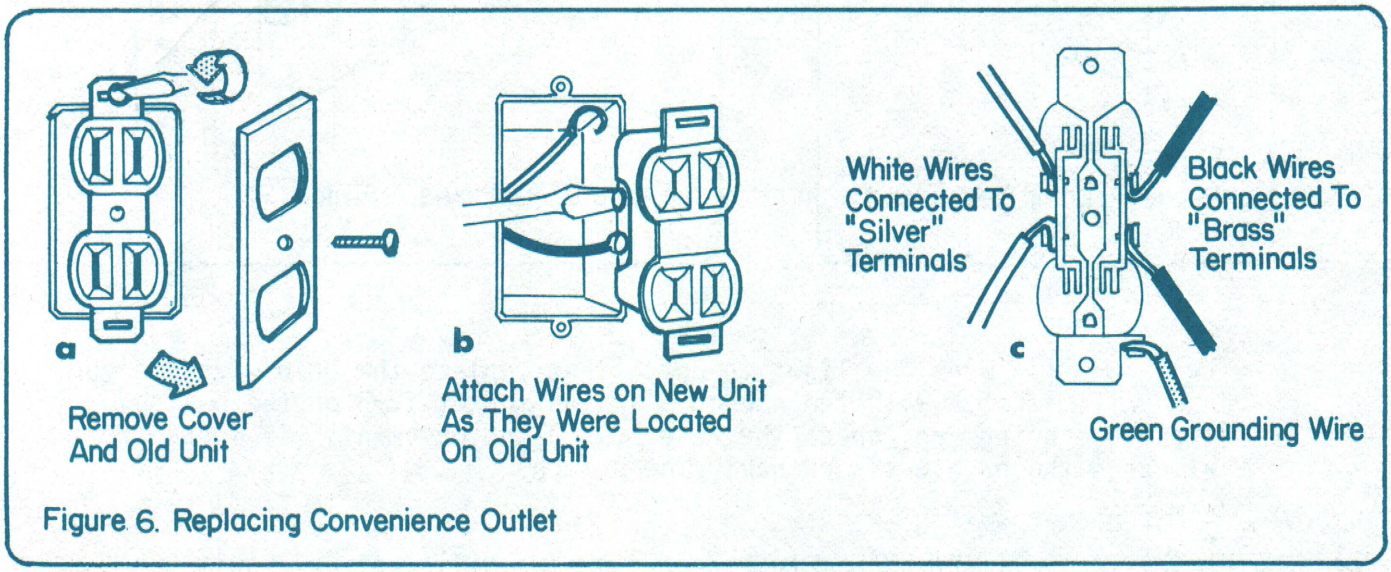

Figure 6. Replacing Convenience Outlet

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