

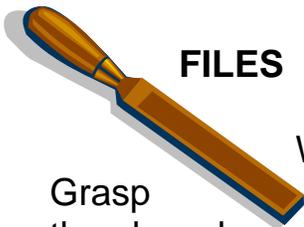
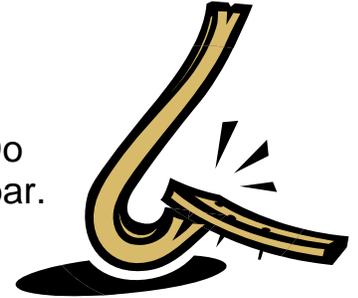
## Hand Tools

Many accidents and injuries can be avoided by keeping your tools in good condition and using them collectively. It is a good rule to inspect your tools before and after using them, looking for defects that could cause an injury.

Defective tools should be returned so that they can be repaired or replaced.

### CROWBARS

Use a crowbar for prying, but select the correct size for the job. Do not try to increase the leverage by using a length of pipe or iron bar.



### FILES

Grasp  
thumb and

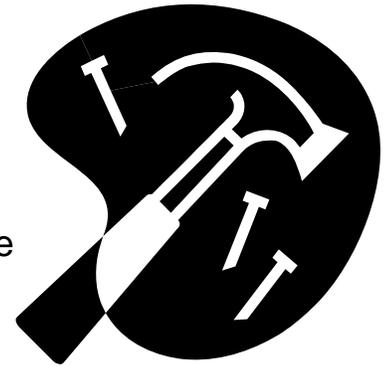
When using a file, have secure footing before applying pressure. Grasp the file with one hand and guide the point of the file with the forefinger of the other hand.

Use a vise to secure the material being filed, and use an offset handle if it is available. Clean a file with a file card, not by striking it against another piece of metal, tool particles can fly off. Equip the file with an approved handle.

### HAMMERS

When replacing hammer handles, make sure they fit the hammer head. Wedge the handle securely in the head and make sure that it is free of splinters and cracks.

Never strike hardened steel surfaces with a steel hammer. Use a soft metal hammer or one with a plastic, wood or rawhide head. Always wear safety glasses to protect your eyes from flying chips, nail heads or scale.



Inspect sledge hammers carefully at regular intervals for split handles and loose or chipped heads. Use riveting hammers for sheet steel, carpenter or claw hammers for driving and pulling nails, and ball-peen hammers for metal work.

## SCREWDRIVERS

When driving screw into wall objects, hold the objects in a vise. When performing electrical work, never use a screwdriver with a haft that extends all the way through the handle.



Pay particular attention to the tip size when selecting screwdriver; the tip should fit snugly in the slot of the screw. Do not use a twisted screwdriver tip because it could slip and cause an injury. Never use a screwdriver as a punch, wedge, pinch bar, pry or chisel.



## PLIERS

Apply pressure directly across the line of cut when using pliers. Never substitute a plier for a wrench or a hammer because pliers chew up nut and bolt heads. In addition, pliers cannot grip nut or bolt securely.

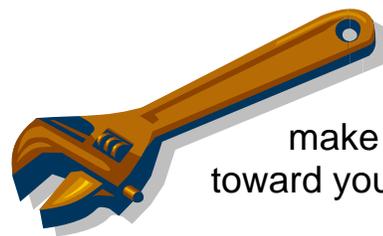
Electricians should use hand-insulating grips. Make sure the protective covering is free of crack, holes or broken pieces.

Hold the coil or length of wire securely in a vise when cutting it with plier. Hold the open end of the wire with your free hand to prevent the cut-off end from flying. If a vise unavailable, kneel on the floor and hold the wire with one foot.

Always wear safety glasses when cutting wire.

## WRENCHES

When placing an adjustable wrench on a nut, the adjustable jaw face you; then pull the wrench socket wrenches for hard-to-reach places.



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Never use a pipe wrench on nuts because the corner of the nuts or bolts are likely to break the teeth of the wrench jaws, making it unsafe for future use.

Manufacturers make wrench of different sizes, so the amount of leverage obtained with the wrench handle is the maximum application; it is unsafe to add more leverage with a length of pipe, for example.