

ARE you a "hobbyist," model maker, or master of a metal-working trade? Then you're one who recognizes the absolute need of good tools to do good work. There's little difference between the cost of hit-or-miss-quality files and Nicholson (or Black Diamond) Files. But there's a world of difference in results—and satisfaction!

Push a Nicholson double-cut flat file across a piece of metal that needs a lot of stock removal, and see it bite in like a hungry pup's fangs whitening down a bone. See, too, how it holds to the line like a keen-edged skate-runner! All due to exclusive (patented) serrated tooth construction*—and to Nicholson's tough hardness and other superfine qualities! Or, lay a Nicholson single-cut mill File onto a piece of precision work and note its sweet-cutting performance!

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*Special-type serrations (left) give Nicholson and Black Diamond File teeth successive new cutting edges—assuring longer cutting efficiency. Ordinary file teeth shown at right.



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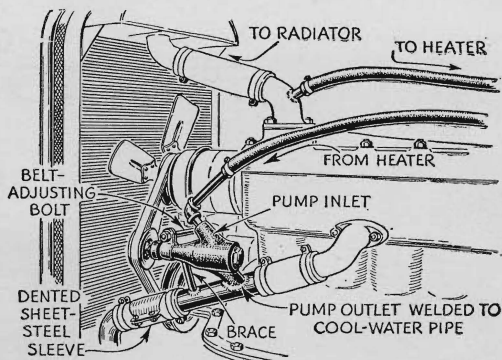
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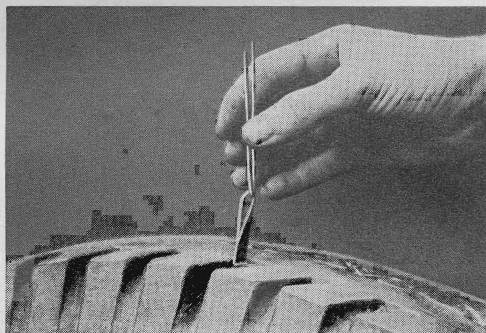
FILES

FOR EVERY PURPOSE



Hot-Water-Heater System Uses Separate Pump

IN SOME cars having a thermosiphon water-cooling system, a hot-water heater can be made to work by installing a water pump as shown above. I purchased a second-hand automobile water pump, removed the outlet and intake extensions, and welded the outlet pipe to the car-radiator intake pipe. A small nipple was then welded to the pump intake and the hose from the car heater attached. A supporting piece of iron was next welded between the pump and the cold-water pipe for the sake of rigidity, and a V-type pulley substituted for the flat-type on the pump, over which the fan belt runs to drive the pump shaft. To increase efficiency, a thermostat was placed in the upper radiator-hose connection.—L. J. L.



Strips of Rubber Plug Holes in Tire Casings

NAIL holes in a tire casing can be sealed with a strip of inner-tube rubber cut thin at the center and wider than the hole at the ends. Sanded and then saturated with rubber cement, the strip is pulled through the hole with a loop of thin wire, stretching it into place. Trim the projecting ends, and place a patch over the inside.—A. H. V.