Figure 2-13: Single-pole, single-throw switch schematic

This kind of switch is like a drawbridge: electricity (cars) can't get from one side to the other when the arrow on the diagram (the bridge) is up. This is easy to see on the old-fashioned *knife switches*, shown in Figure 2-14 and often featured in cheesy science fiction movies. Knife switches are still used for things like electrical disconnect boxes, but these days they're usually hidden inside protective containers to make it harder for you to fry yourself.

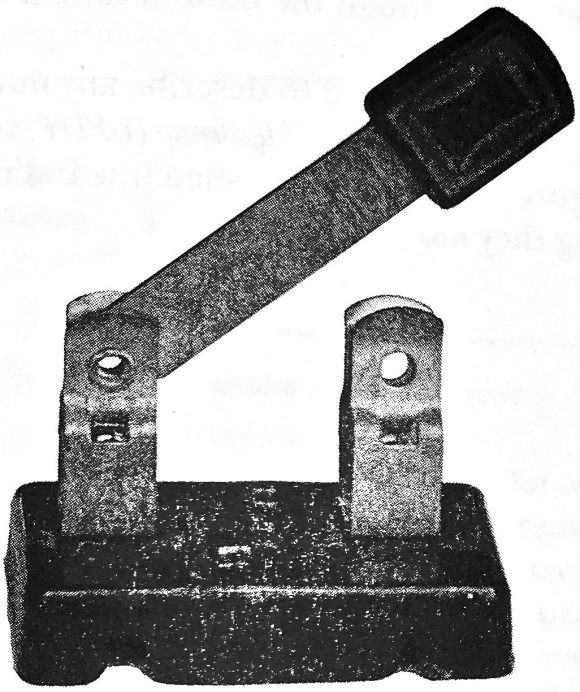

Figure 2-14: Single-pole, single-throw knife switch

Figures 2-13 and 2-14 both show *single-pole, single-throw (SPST)* switches. A *pole* is the number of switches connected together that move together. Our water valves in the preceding section were single pole; we could make a *double-pole* valve by welding a bar between the handles on a pair of valves so that they both move together when you move the bar. Switches and valves can have any number of poles. *Single-throw* means that there's only one point of contact: something can be either turned on or off, but not one thing off and another on at the same time. To do that, we'd need a *single-pole, double-throw (SPDT)* device. Figure 2-15 shows the symbol for such a beast.

Figure 2-15: SPDT switch schematic