have to be replaced. Then the cables in the wiring closet will quickly become a tangled mess.

The alternative is to put a wall jack in the wall at the user's end of the cable and connect the other end of the cable to a patch panel. Then the cable itself is completely contained within the walls and ceiling spaces. To connect a computer to the network, you plug one end of a patch cable (properly called a *station cable*) into the wall jack and plug the other end into the computer's network interface. In the wiring closet, you use a patch cable to connect the wall jack to the network hubs or switches. Figure 7-4 shows how this arrangement works.

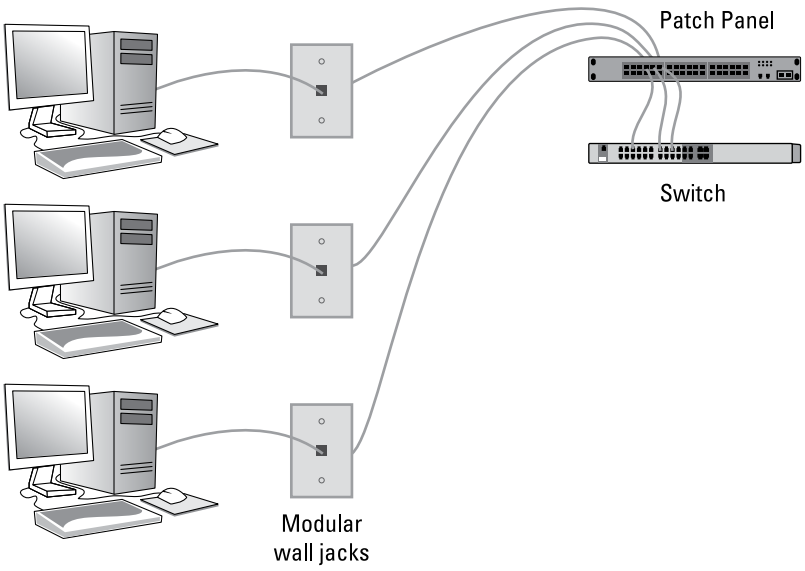

FIGURE 7-4: Using wall jacks and patch panels.

Connecting a twisted-pair cable to a wall jack or a patch panel is similar to connecting it to an RJ-45 plug. However, you don't usually need any special tools. Instead, the back of the jack has a set of slots that you lay each wire across. You then snap a removable cap over the top of the slots and press it down. This action forces the wires into the slots, where little metal blades pierce the insulation and establish the electrical contact.

TIP

When you connect the wire to a jack or a patch panel, be sure to untwist as little of the wire as possible. If you untwist too much of the wire, the signals that pass through the wire may become unreliable.