sheer force, not only on the main gear tires, but also on the nosewheel. Tight turns force the nosewheel to flex, scuffing the sidewall area and causing the tire to go out of balance. This is one of the primary causes of nosewheel shimmy and greatly reduces tire life.

Tight turns also put unnecessary stress on tire casing, beads, and sidewalls. They produce flat spots, which put the tire out of balance and cause it to thump and the airplane to bounce while taxiing. Tight turns on gravel can cause a piece of stone to screw into the tire and puncture it. Often, because of the nature of the puncture, the flat tire isn't discovered until the next trip to the airport, such as the aircraft shown in Figure 10-5. If a tight turn is impossible to avoid, allow the tire that is inside the turn to make as large an arc as possible to minimize potential damage.

Inflation Pressure

Always keep tires inflated to the value specified in the pilot's operating handbook (POH) rather than the tire manufacturer's specifications. While this may sound contrary to the

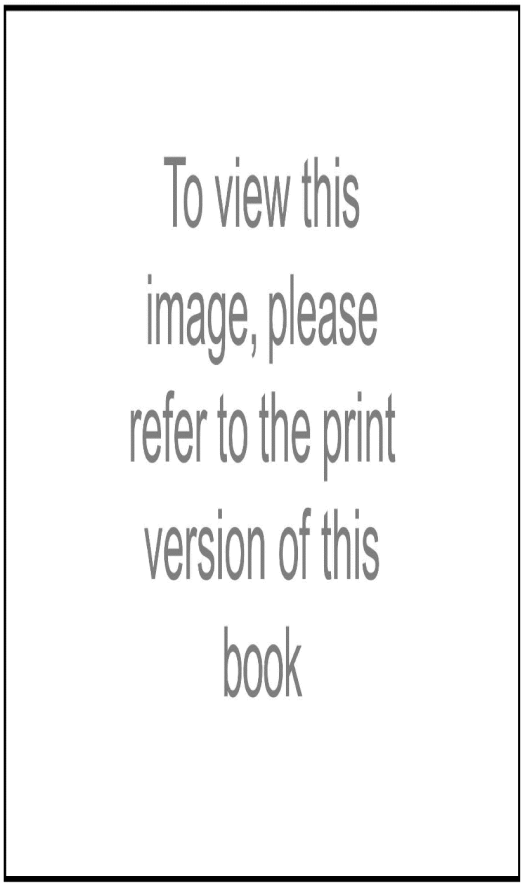

Fig. 10-5. *Pivoting turns on gravel can lead to flat tires.*