



Fig. 10-6. *Major components of aircraft brakes.*

disc is to provide a gripping surface for the two brake linings, which are mounted in the brake unit housing. The brake linings are mounted in such a manner that they will evenly apply pressure to both sides of the disc.

When your foot presses on a pedal, let's say the right one, the pressure is transmitted by the hydraulic fluid to the piston in the right brake housing. The piston responds to the increased pressure by pushing against a lining, which moves horizontally toward the disk. The lining causes friction by pushing against the brake disc, which in turn pushes against a stationary lining on the other side, causing yet more friction. Figure 10-9 shows the disk sandwiched between the linings. Not only does this provide twice the stopping power, but because of equal friction on both sides of the disc, it also causes even disc and lining wear. The whole process is nothing more than a sophisticated version of the bicycle hand brake.

Disc brakes are usually made of forged steel. For most airplanes (those that are flown regularly and not excessively exposed to a corrosive atmosphere), they are trouble free. To paraphrase a famous saying, however, "Steel will be steel," and there are some potentially significant problems.