

Aircraft Instruments

There are four basic types of altimeter errors: scale, friction, mechanical, and hysteresis. Scale error is the result of the aneroids not responding uniformly to the local pressure difference. This type of error is irregular throughout the instrument's range and difficult to predict. A greater margin for altimeter error must be taken into account during high-altitude operations.

Friction error is inherent whenever there are moving parts. Most commonly, the 100-foot pointer will "hang up." This tends to be less of a problem in reciprocating-engine aircraft than in jets, because they vibrate sufficiently to prevent the pointer from sticking. Jets, which have smoother running engines and minimal vibration, use instrument panel vibrators to help overcome friction error.

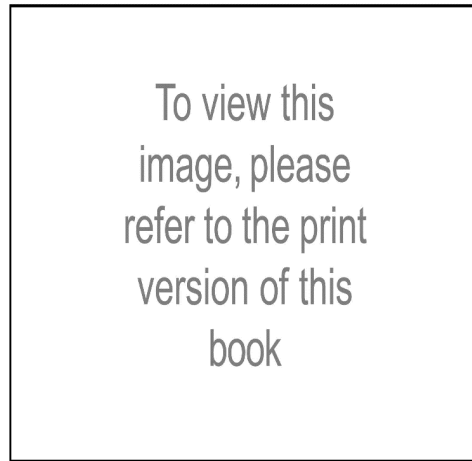


Fig. 2-5. *Drum-pointer altimeter.*

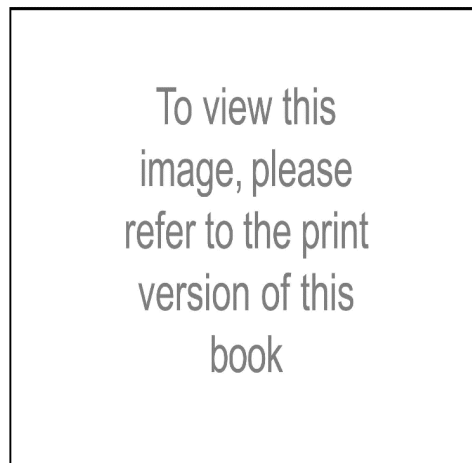


Fig. 2-6. *Counterpointer altimeter.*