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? WHY THE WEATHER ?

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ERRORS OF ANEROID BAROMETERS

The familiar aneroid barometer, though an extremely useful instrument, is subject to many defects and errors, and is never altogether trustworthy unless its readings are freqeuntly checked by comparison with a good mercurial barometer. An aneroid should be handled with care. Violent knocks and shaking are almost sure to shift the various links and levers in their joints, with the result of changing the position of the index.

A universal error of aneroids is known as "creeping". After a recent large fall of pressure - such as occurs, for example, when the instrument is used aboard aircraft for measuring altitude - the barometer will, though under a really constant pressure, show a small spurious further fall, which in the course of an hour may amount to one or two per cent. of the previous fall. A similar slow movement of the index in the opposite direction occurs after a large increase in pressure.

In many aneroids some of the joints are too tight, so that the index does not move freely. A test for this condition is to tap the instrument on the side or bottom. If the joints are perfectly free, the index hand will jump away and then return quickly with a vibratory movement to its original position. If they are too tight, the index will in some cases not respond to slight knocks, or will do so without any vibratory movement, or, upon being disturbed, will move a little but not return to its original position.

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