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? WHY THE WEATHER ?

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MEASURING WIND

The commonest instrument for measuring the speed of the wind is the Robinson anemometer, consisting of three or four hemispherical metal cups at the ends of arms that turn on a vertical axis. The cups travel less than half as fast as the wind, and the relation between their speed and that of the wind is variable, but there are rules for computing the latter from the former. The movement of the cups is shown by a dial and is, in many cases, registered by a pen connected electrically with the instrument.

Measuring wind is not a particularly satisfactory process. In the first place, no simple measurement can take account of all the rapid fluctuations -- gusts and lulls -- that are characteristic of most winds. In the second place, the strength of a wind nearly always increases with height above the ground, so that two anemometers located side by side but at different heights give quite different readings. At many weather stations the anemometers are placed at a great height in order to escape the screening effect of surrounding buildings. This plan has the disadvantage of making their average readings considerably in excess of those that would be obtained in an open location near the ground.

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