

June 9

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
Mentions:

COMMON EVIDENCES OF AIR PRESSURE

Although we live at the bottom of a sea of air, subject to a pressure of about 15 lbs. on every square inch of our surface, we are generally unaware of this considerable pressure because it is exerted in all directions. The pressure of air above an object is balanced by the pressure of air below; similarly outside pressures are balanced by the pressure of air inside. Dr. S. S. Visher of Indiana University has pointed out in discussing common evidences of atmospheric pressure that most such evidences are due to local differences in pressure. The rate of evaporation and the temperature at which water boils, however, are affected by general pressure changes.

Many evidences of local pressure difference may be cited. All wind is a motion of air due to differences in pressure. Pressure allows the fly to walk on the ceiling, holding on by the suction cups on its feet. Decrease in pressure inside a hot fruit jar as it cools causes the lid to be held down tightly by the air above. Conversely, in a warm room the high pressure inside a jar of ice-water will sometimes raise the cover slightly allowing some of the cold dense air within to push out. The siphon, the self-filling fountain pen, the soda fountain straw, the vacuum cleaner, the player piano, are all devices dependent upon atmospheric pressure. Even sound waves in the air are but small, rapid variations in pressure.

(Tomorrow: Spring Temperatures of 1924)

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