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! WHY THE WEATHER ! Mailed October 7, 1927

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SOME UNUSUAL BAROMETERS

Liquids lighter than mercury have frequently been used for filling barometers. The lighter the liquid the higher it rises in the barometric tube with a given pressure of the atmosphere; hence some of these instruments have been of great size.

In the year 1646 Pascal and Petit set up a water barometer at Rouen. It was attached to the wall of a building and was 46 feet high. Luke Howard, the English meteorologist, used linseed oil in a barometer of the "siphon" pattern in 1801. In 1830 Professor Daniell constructed a water barometer for the Royal Society of London. A detailed description of this instrument was published in the "Philosophical Transaction". It was filled by boiling distilled water, which was forced up the tube by the pressure of steam in the boiler. The tube being sealed, the boiler then became the barometer-cistern, in which the water was covered to a depth of half an inch with castor oil to prevent evaporation. This barometer gradually deteriorated until it was found to read 7 inches of the water scale too low. It was destroyed in a fire at the Crystal Palace, near London, in 1866. Another water barometer was installed in the Tour Saint Jacques, Paris, in 1890.

J. B. Jordan constructed a glycerine barometer as early as 1873, and made one for Kew Observatory in 1894. A huge barometer filled with olive oil was one of the features of the exposition organized in memory of Torricelli at Faenza, Italy, in 1908.

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