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? WHY THE WEATHER ? Mailed December 10, 1931

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THE DUTCH WEATHER GLASS

The Dutch weather glass is shaped much like a teapot, but it is made of transparent glass and has a ring at the top for hanging it from a hook. At one side, attached near the bottom, is a slender upright spout. This is open at the end, but the glass is otherwise airtight. Changes in atmospheric pressure cause the water to rise and fall in the spout, which is sometimes etched with a scale for measuring these variations. Thus the device operates on the principle of the ordinary barometer, but its indications are exactly the reverse. A fall of the liquid column points, in a general way, to fair weather and a rise to stormy weather.

The obvious defect of this device is that it is affected by temperature as well as pressure. When the temperature rises, the air confined in the glass receptacle expands and forces water up the spout, and when the temperature falls the reverse happens. An old-fashioned scientific instrument called the "sympiesometer" worked in much the same way as the Dutch weather glass, but it had an attachment for adjusting its scale so as to make allowance for temperature effects.

The errors arising from this cause are not very great at sea, where temperatures remain comparatively uniform, and this simple device has been used to some extent on shipboard as a substitute for a barometer; in fact, some old sailors are said to "swear by it." Under the name of the "clipper-ship weather glass" the instrument has recently appeared in opticians' shops in this country.

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