

Hemp shrinks when wet ; and almost every one knows that if a hempen line be tightly stretched when in a wet state it will become lengthened and hang loosely when dry. If, on the contrary, the line be perfectly dry when stretched, it will if stout enough, contract on being wetted, with such force as, either to break, or pull out the hooks by which it is fastened. Hence a piece of common packthread becomes a hygrometer ; and if a weight be suspended to it and a graduated scale annexed, the contraction or expansion of the packthread will indicate the greater degree of humidity in the air.

The toy called the *weather-house*, which was formerly much in use, depends upon the same principle, and consists of a piece of catgut, which possesses the property of untwisting when it is moistened and twisting when it dries, the motion of the catgut being communicated to a circular piece of wood, on which the two little figures of a man and a woman are placed.

Other substances, as human hair, freely elongates by imbibing moisture, but recover their original length on drying. Though almost all bodies have the power of absorbing moisture from the atmosphere, in a greater or less degree, those only are dilated whose particles are moderately soft and yielding. This hygrometric property, therefore, belongs chiefly to organic substances ; such as wood, the bread of corn, whalebone, hair, and animal membranes. What is vulgarly termed the "washerwoman's finger," or a corrugation of the skin when the hands are employed in warm water, is nothing more than an enlargement of the skin by the moisture, which, being heated, penetrates, and throws it into folds.

Several philosophers have contrived hygrometers on this principle ; of which that of De Luc was, for a long time, considered the most perfect. It consisted of a piece of whalebone, cut across the grain which expanded considerably by wet and contracted equally by drying ; and, being stretched in a brass frame caused an index to move over a graduated scale. Nothing is more simple and efficacious than a mere strip of deal, prepared like De Luc's whalebone, by cutting it across the grain.