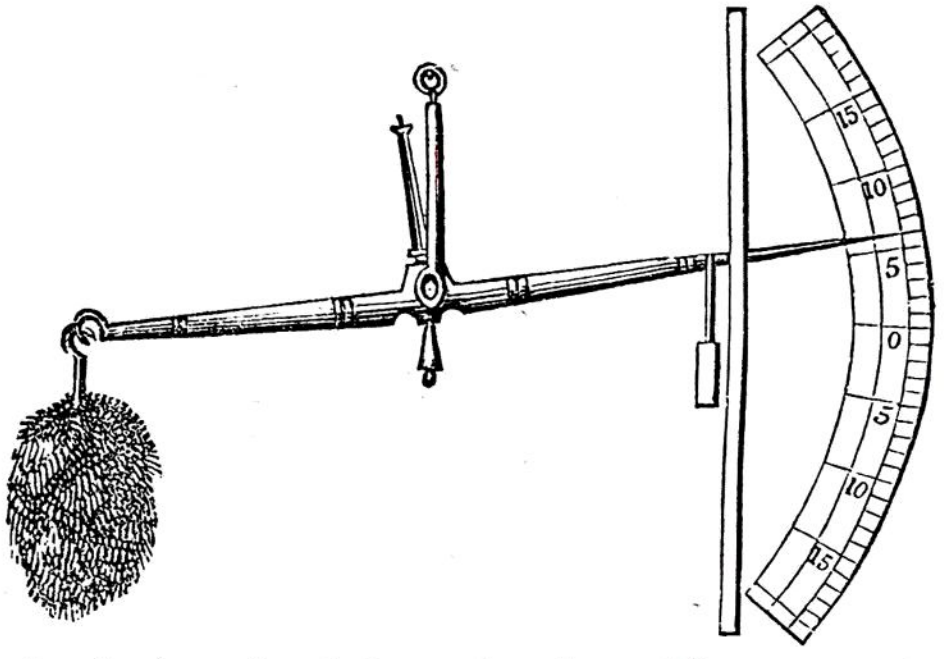
the proportional differences of aqueous vapour at distinct periods without estimating the weight of water contained in the atmosphere at the time of experiment. We have employed a little instrument of our own construction, which will measure, in grains, the weight of water contained in a given space, and consequently enable the observer to deduce the amount contained in a given extent of the atmosphere. It consists of an accurately balanced beam, to one end of which is attached a square foot of tissue paper, and to the other a scale-pan. These were adjusted under circumstances that prevented the interference of aqueous vapour, and it is always easy to ascertain by the instrument the relative proportions of vapour contained in a portion of air at different periods, or, with particular precautions, the quantity contained in the atmosphere itself.

A somewhat analogous instrument has been sometimes used by meteorologists, but this, as well as others, estimates the variation in degrees by angular motion and not by weight. It consists of a balance-beam, having a piece of sponge at one end,



and a slender rod or index at the other. The sponge, which may be rendered more hygrometric if steeped in pearlash and water, rapidly absorbs moisture from the air; and as its weight increases the index rises, and gives a proportional estimate of the vapour which may be present in the atmosphere.

The hygrometer invented by Mr. Daniells is more fre-