of light, as well to darkness the most impenetrable. Even with the head immovable, it embraces a cone of observation of an angular extent of nearly 90° at the apex ; while, when the head itself is turned, which in virtue of the elastic medium uniting the cervical vertebræ, it can do, like unto the motion of a telescope on a "ball and socket" pivot or support ; the eye can be made to sweep the whole visible hemisphere, including the zenith and the nadir and even more than a hemi-sphere, when at a height above the earth's surface or from a balloon or mountain elevation.

The eye can expand or dilate, contract or shrink, changing by degrees in a way to prevent the effects of too sudden a transition from light to darkness or the contrary ; and in the same way as do the lungs and chest and in fact the whole system in ascending in a balloon and again descending, suit themselves to the varying pressure of the atmosphere ; or in passing through an air-lock from the normal pressure of the air to a pressure many times as great, or from greater to less as in the execution of foundation works under water and in tunneling.

These provisions in the animal structure, or human machine, may be assimilated to the springs and buffers in railway trains or more correctly to those of the Westinghouse or air break ; and thus can the human machine like any other piece of mechanism, work under varying stresses without shock or inconvenience to itself.

Every one must have noticed with almost stupefaction the variety of motion and adaptation of the mouth to the diverse requirements of articulation, mastication, elimination of what is to be rejected ; as in the throttling of the lips in the act of whistling, the discrimination between bone and flesh in feeding, the complex action of the teeth and lips and tongue in ferreting out the tiniest of fish bones, the minutest particle of gritty matter—the action of the cheeks at playing on a wind instrument or in blowing ; their contraction on inhaling the contained air, thereby creating a vacuum against which the outer air reacts in pressing forward both liquid and solid food into the cavity and toward the throat where the uvula, the while, acting as a " throttle valve " in closing the glottis or upper extremity of the larynx leading to the lungs, causes the food to pass along toward the œsophagus leading to the stomach, without the danger of its going the wrong way—the same action of the uvula recurring, during regurgitation, in pre-