

it with little obliquity in tropical regions, while their incidence on those near the poles is always very oblique, and during the half of each year null ; it is obvious that its surface must be very unequally warmed. The cook, to use a homely illustration, knows full well that, however good her fire, the two ends of her joint will be under-roasted when the middle is done brown ; unless she apply a couple of concave reflectors on her spit to throw some of the lateral heat upon them. As a matter of fact, no one needs to be told that it is so ; and that the intertropical regions of the globe are very hot, and the polar, habitually very cold. The average annual temperature at the equator is about  $84^{\circ}$  Fahr., while in the colder regions near the North Pole it is as low as  $5^{\circ}$  Fahr., or  $27^{\circ}$  below freezing. The difference would be much greater were there no sea, or even were the whole surface initially moist soil. Whatever that initial moisture, it would soon *dry off* from the warmer portions, to settle down in snow or hoar frost on the colder ; after which the dried portions would grow hotter and hotter. Every one knows what a cooling power there is in the evaporation of water. So long as a vestige of moisture were present, the temperature of the soil could never, at all events exceed, however it might fall short of, that of boiling water : but when once completely dried off, there would no longer be a limit to the possible increase of temperature ; since there would then be no circulation or return of moisture to the part once dried. How this circulation is kept up under the existing circumstances is what we must now explain : and first of all how it