ly by the channels of rivers and rivulets. And this routine of evaporation and rain, it is certain, keeps up a steady balance of accounts, since the high and low water matks, through successive centuries, remain the same in all places: so that, from the natural tendency of liquids to gain a state of equilibrium, and the various oceans communicating one with the other, it follows, the waters which cover the globe would remain in a state of undeviating height, were they not otherwise influenced by the expanding power of heat.

It is not to be supposed, the action of the sun on the waters in high latitudes produces the changes there, e.g. the English Channel. The sun's heat may be said to act as a percussive force, and to give a periodical stroke to the great bosom of the ocean over which the sun passes vertically. The changes of the water along the shores are the effects of the impulsion given to the central regions of the oceans; and the farther the shore, to a certain extent, the greater the change. Impulsion is adopted instead of swell, to render the idea more distinct. Each swell moves off in a wave; and, the greater range it takes, the higher the undulation. This will appear by dipping the hand in an oblong tub, full of water, nearer to one end than the other: the rise of the water will be considerably greater at the end most distant from the stroke. And this may account for the greater height of the tides in middle latitudes than near the line. The undulation is exhausted in its progress towards the poles.

EXPLANATION OF THE PHENOMENA OF THE TIDES.

The sun emits a perpetual flood of heat in all direc-

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