

nor at the bottom of the water, but nearly in the middle of its depth, being pressed by the action of its weight at its surface, and by the re-action from the bottom. Still more, if a river has acquired a great rapidity, it will not only preserve it in passing a level country, but even surmount an eminence without spreading much on either side, or at least without causing any great inundation.

We might be inclined to think that bridges, locks, and other obstacles raised on rivers, considerably diminishes the celerity of the water's course; nevertheless that occasions but little difference. Water rises on meeting with any obstacle, and having surmounted it, the elevation causes it to act with more rapidity in its fall, so that in fact it suffers little or no diminution in its celerity, by these seeming retardments. Sinuosities, projections, and islands, also but very little diminish the velocity of the course of rivers. A considerable diminution is produced by the sinking of the water, and, on the contrary, its augmentation increases its velocity; thus if a river is shallow the stream passes slowly along, and if deep with a proportionate rapidity.