Proximate Oscillation

PLATE V.

PROXIMATE AND DIFFERENTIAL OSCILLATIONS.

When 25 pendulums are arranged and oscillated to represent the different musical ratios in their natural marshalling, they will all meet at 1 when 64 of the highest is counted. This plate is intended to show that there are two kinds of meeting and passing of the pendulums in swinging out these various ratios. In the ratio of 8:9 the divergence goes on increasing from the beginning to the middle of the period, and then the motion is reversed, and the difference decreases until they meet to begin a new period. This may be called the *differential* way. In the ratio of 45:64 there is an example of what may be called the ***proximate* way**. In this kind of oscillations meet and pass very near to each other at certain points during the period. In 45:64 there are 18 **proximate meetings**; and then they exactly meet at one for the new start. This last of the ratios, the one which finished the system, is just as if we had gone back to the beginning and taken two of the simplest ratios, [Scientific Basis and Build of Music, page 105]