

circle of keys

Ramsay

PLATE XXIII. THE MATHEMATICAL AND TEMPERED SCALES.

This diagram shows pictorially the open in the spiral of the mathematical scales, in which, if written in sharps only, B# is seen a little, that is, a comma and the apotome minor, in advance of C, and as the first scale of the new cycle; for it is a violation of Nature's beautiful steps to call it a thirteenth scale of this order, since every scale in the order is 31 commas in advance of the preceding, whereas B# is only one comma and a small fraction in advance of C. If the scales be written in ♯s and ♮s for convenience of signature, then G# is seen a comma and apotome in advance of A♯; while the whole circle of keys advancing by fifths are each 31 commas in advance of the preceding. We may therefore cast utterly from us the idea of there being more than twelve mathematical scales, and view the so-called thirteenth as simply the first of a new round of the endless spiral of scales. There is, however, in this note a banner with the strange device, "Excelsior," for it leads us onward into ever-advancing regions of vibrations, and would at last bring us to the ultimate and invisible dynamic structure of the visible world. The tempered system of 12 keys, as in Fig. 1, is by causing the G# and A♯ to coalesce and be one, as the two D's are already literally one by Nature's own doing. [Scientific Basis and Build of Music, page 118]