ABSTRACT. Given an irrational number α and a positive integer m, the distinct fractional parts of $\alpha, 2\alpha, \cdots, m\alpha$ determine a partition of the interval $[0,1]$. Defining $d_\alpha(m)$ and $d'_\alpha(m)$ to be the maximum and minimum lengths, respectively, of the subintervals of the partition corresponding to the integer m, it is shown that the sequence $\left(\dfrac{d_\alpha(m)}{d'_\alpha(m)}\right)_{m=1}^{\infty}$ is bounded if and only if α is of constant type. (The proof of this assertion is based on the continued fraction expansion of irrational numbers.)