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We investigate the hyperbolicity preserving properties of linear operators $T : \mathbb{R}[x] \rightarrow \mathbb{R}[x]$ of the form $T[P_n(x)] = p(n)P_n(x)$ where P_n denotes the n th Legendre polynomial and p is a given real polynomial. Following the ideas of P. Brändén and E. Ottergren, we apply the classical multiplier sequence $\{1, 0, 0, 0, \dots\}$ to the symbol $G_T(x, y) = \sum (-1)^n T(x^n) y^n / n!$. This leads to conditions which must be satisfied by the coefficients of the interpolating polynomial p in the case where the corresponding operator T is hyperbolicity preserving. As an application of our results, we demonstrate that a large number of classical multiplier sequences are not multiplier sequences for the Legendre basis. (Received September 22, 2015)