Using mathematical induction, one may show that

\[ F_{4n} = \sum_{k=1}^{n} L_{4k-2} \quad n = 1, 2, \ldots \]

If we apply the well-known arithmetic-geometric inequality to the unequal positive numbers \( L_2, L_6, L_{10}, \ldots, L_{4n-2} \), we obtain for \( n = 2, 3, \ldots, \)

\[ \frac{F_{4n}}{n} = \frac{\sum_{k=1}^{n} L_{4k-2}}{n} = \frac{n \sqrt{L_2 L_6 L_{10} \cdots L_{4n-2}}}{n} \]

which is the desired inequality.

*Also solved by Douglas Lind and the proposer.*

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The article appeared in Feb., 1965. H. H. Ferns

CORRECTION Volume 3, Number 1
Page 26, line 10 from bottom of page

\[ V_{7, 3} + V_{7, 4} + V_{7, 5} = F_8 + F_7 = F_6 = 8 \]

Page 27, lines 4 and 5

\[ \begin{align*}
F_2 + F_4 + F_6 + \ldots + F_n &= F_{n+1} - 1 \quad (n \text{ even}) \\
F_3 + F_5 + F_7 + \ldots + F_n &= F_{n+1} - 1 \quad (n \text{ odd})
\end{align*} \]

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CORRECTION Volume 3, Number 1
Page 40, Equation (81), the R.H.S. should have an additional term

\[ - \sqrt{2} F_{v+2} \]