Let $A$ be an $n$-by-$n$ matrix with complex coefficients. The numerical range of $A$, denoted $W(A)$, is the range of the map $x \mapsto \langle Ax, x \rangle$ from the unit sphere in $\mathbb{C}^n$ to $\mathbb{C}$. The set $W(A)$ is a compact, convex subset of the complex plane which contains the eigenvalues of $A$. We will give a classification of the shapes which $W(A)$ can take for doubly-stochastic 4-by-4 matrices $A$. In addition, we will apply numerical ranges to solve a question about the maximal compression of some $n$-by-$n$ matrices. (Received September 15, 2014)