A002135 has the following interpretation given by Joel B. Lewis: "a(n) is the number of ways that a deck with 2 cards of each of n types may be dealt into n hands of 2 cards each, assuming that the order of the hands and the order of the cards in each hand are irrelevant." This is given in the OEIS as the number of terms in a symmetrical determinant: $a(n) = n\,a(n-1) - (n-1)\,(n-2)\,a(n-3)/2$.

A deal can be represented by a square integer matrix (l_{ij}) as follows. For $i > j$, let $l_{ij} = 0$. For each i, $l_{ii} = 1$ if there is a hand holding both cards of type i; otherwise $l_{ii} = 0$. For $i < j$, let $l_{ij} = 1$ if there is a hand holding cards of type i and j, 0 otherwise. By construction, this is an upper-triangular matrix (including the diagonal), and

$$\sum_{j=1}^{n}(l_{ji} + l_{ij}) = 2, \quad i = 1, ..., n \tag{1}$$

In fact, the sum $\sum_{j=1}^{n} l_{ji}$ is the number of hands containing card type i and any card of lower or the same type. The sum $\sum_{j=1}^{n} l_{ij}$ is the number of hands containing card type i and any card of higher or the same type. Note that hands holding both cards of the one type are counted twice. So the full double sum over i is the number of cards of type i, and this must be 2. The order of the hands and the order of the cards in each hand are irrelevant, as required.

This characterization of deals is the same as the characterization of the upper-triangular matrices representing central multivariate moments of order 2, that is, central moments of type $E[X_1^2 X_2^2 \cdots X_n^2 \mid \mu = 0, \Sigma]$ (Phillips, 2010). Therefore, the number of representations for these moments is equal to the number of ways the cards can be dealt into hands in the problem above. So the sequence of these counts is the same as sequence A002135.