Side-by-Side Nim

The following game is called Side-by-Side Nim. How to play: Place 7 counters as shown.
Players take turns removing counters. On your turn you may remove any single counter or any
two counters provided that they are side-by-side. This means two counters cannot be removed
on a turn if there is a counter or empty space between them. There is one exception; the 1st
player cannot start the game by taking the single counter in the middle leaving two piles of three
counters. The player that picks up the last counter wins the game. State the player that can
always win.

Represent a state of this game by a list of numbers. As the game is played, the counters become
separated into groups of counters that are side-by-side. Each number in the list will represent
how many counters remain in each group. By symmetry, write the larger numbers on the left.
This means the game starts in the state 7. With this representation the following portion of the
state diagram (representing all of the game openings) may help find the player that can always
win.