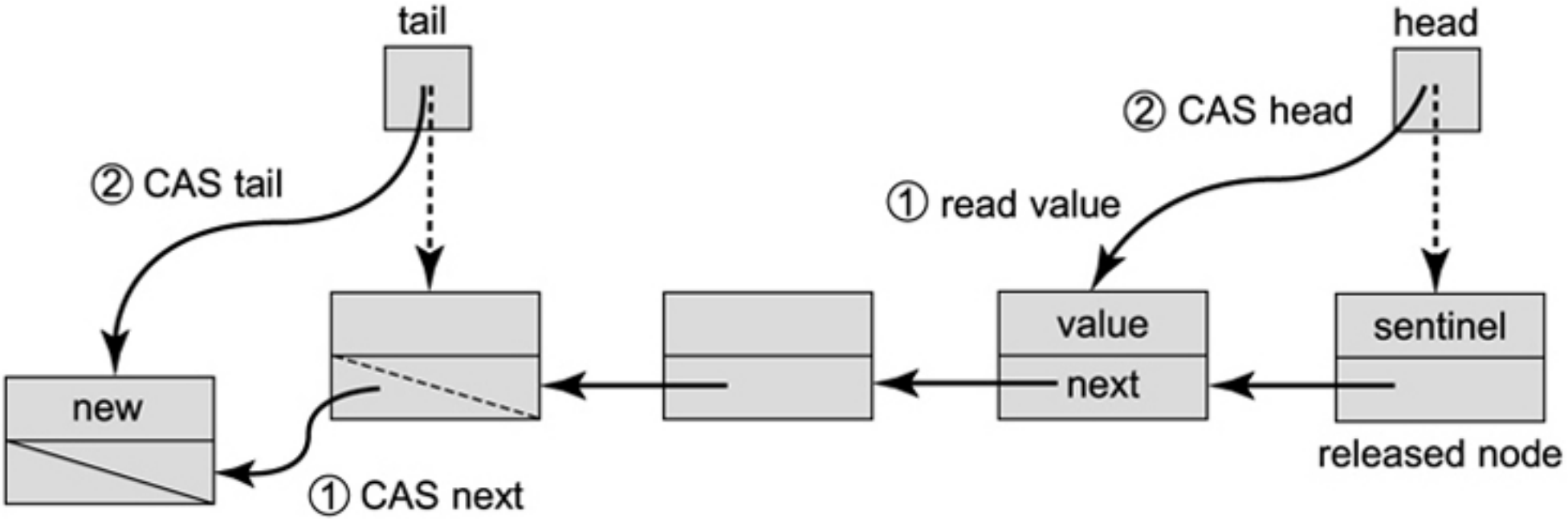

FIGURE 10.13 The enq() and deq() methods of the LockFreeQueue. The enq() method is lazy: a node is inserted into the queue in two steps. First, a compareAndSet() call changes the next field of the node referenced by the queue's tail from *null* to the new node. Then a compareAndSet() call advances tail itself to refer to the new node. An item is removed from the queue by checking that the sentinel has a successor, and then calling compareAndSet() to redirect head from the current sentinel to its successor, making the latter the new sentinel. The item removed is the one referred to by the new sentinel. Both enq() and deq() methods help complete unfinished tail updates.