```
1  public class HWQueue<T> {
2    AtomicReference<T>[] items;
3    AtomicInteger tail;
4    static final int CAPACITY = Integer.MAX_VALUE;
5
6    public HWQueue() {
7      items =(AtomicReference<T>[])Array.newInstance(AtomicReference.class,
8          CAPACITY);
9      for (int i = 0; i < items.length; i++) {
10       items[i] = new AtomicReference<T>(null);
11     }
12     tail = new AtomicInteger(0);
13   }
14   public void enq(T x) {
15     int i = tail.getAndIncrement();
16     items[i].set(x);
17   }
18   public T deq() {
19     while (true) {
20       int range = tail.get();
21       for (int i = 0; i < range; i++) {
22         T value = items[i].getAndSet(null);
23         if (value != null) {
24           return value;
25         }
26       }
27     }
28   }
29 }
```

FIGURE 3.14 Herlihy–Wing queue for Exercise 3.10.