Example of latching actions in holistic indexing. It depicts latching actions during concurrent processing of two user queries and a holistic worker thread (HW). HW cracks a random piece. Red box indicates a write latch. Green box indicates a read latch. Grey boxes indicate pieces that are free to be refined by holistic worker threads.

(a)
Q1 and Q2 arrive concurrently
HW runs in the background

(b)
Q1 cracks P1
Q2 cracks P2
HW cracks P3

(c)
Results

(d)
Q3 and Q4 arrive concurrently
HW *tries* to crack P2.1

(e)
Q3 cracks P1.1
Q4 cracks P2.1
Finally,
HW cracks P3.2

(f)
Results