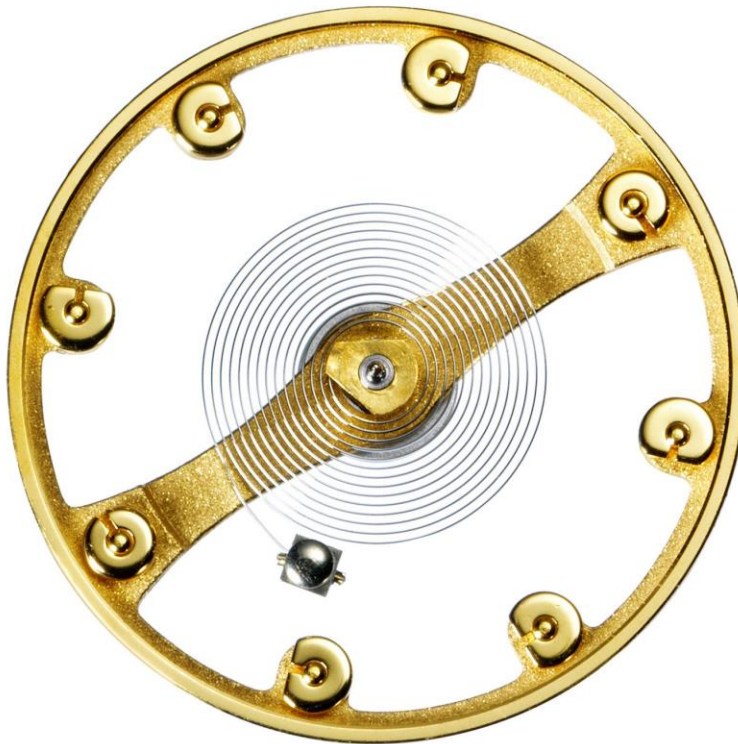


The Gyromax balance, developed by Patek Philippe in the mid-20th century, is an innovative design that allows for precise regulation of a watch's timing without the need for a traditional regulator. This balance wheel features turnable weights, known as collets, which are recessed into the rim of the wheel. By adjusting these weights, watchmakers can fine-tune the watch's rate and ensure optimal performance.

### Understanding the Gyromax Balance



Traditional balance wheels often use screws on the outer rim to adjust timing. In contrast, the Gyromax balance incorporates small, rotatable weights positioned on pins within recesses around the rim. Each weight has a cutout, making one side heavier. When the heavier side is oriented towards the center, the balance wheel's moment of inertia decreases, causing it to oscillate faster. Conversely, positioning the heavier side outward increases the moment of inertia, slowing the oscillation. This design not only facilitates precise timing

adjustments but also reduces air resistance, enhancing the watch's overall efficiency.

To regulate a Gyromax balance:

1. **Identify the Weights:** Locate the turnable weights (collets) on the balance wheel's rim.
2. **Adjusting Rate:**
  - Rotate opposing pairs of weights equally.
  - Turning the heavier side inward (towards the center) increases the rate (watch runs faster).
  - Turning the heavier side outward (away from the center) decreases the rate (watch runs slower).

### 3. Adjusting Poise:

- Rotate individual weights to balance the wheel.
- Ensure the mass is evenly distributed to maintain consistent oscillation.

