Eearnehaw Spring Detent Chronometer Escapement

Moment of Unlocking

\( \alpha \): Escaping Angle of 36°

\( \beta \): Impulse Angle of 24°

\( \gamma \): Quescent \( \delta \) of Detent

\( \triangle \): Impulse Pallet = \( \Theta \): Unlocking Pallet

Point H: H: Wax Point of spring = -1.25 \( \Theta \): Escape Wheel

\( T \): 90° to \( \Theta \)

\( T \): 10° to \( T \): locking face of tooth

\( T \): 5° to \( T \): locking face of stone

\( \alpha \): Limit of locking of the stone

Locking stone is 1/18th of escape wheel \( \Theta \)

i.e. 9 mm Escape wheel = 0.5 mm locking stone

Unlocking Roller \( \Theta \) is = 0.45 Impulse Roller \( \Theta \)

Impulse Pallet = 0.26 mm

Unlocking Pallet = 0.24 mm

\( \alpha \): Impulse pallet face at moment of unlocking

\( \beta \): Unlocking Angle

\( \gamma \): Detent Discharge Angle

\( \Delta \): Tooth Space (24°)

At Drop Point:

- Impulse Pallet at \( \alpha \)
- Unlocking Pallet at \( \beta \)

\( \Phi \): 8.1581

6.6 mm