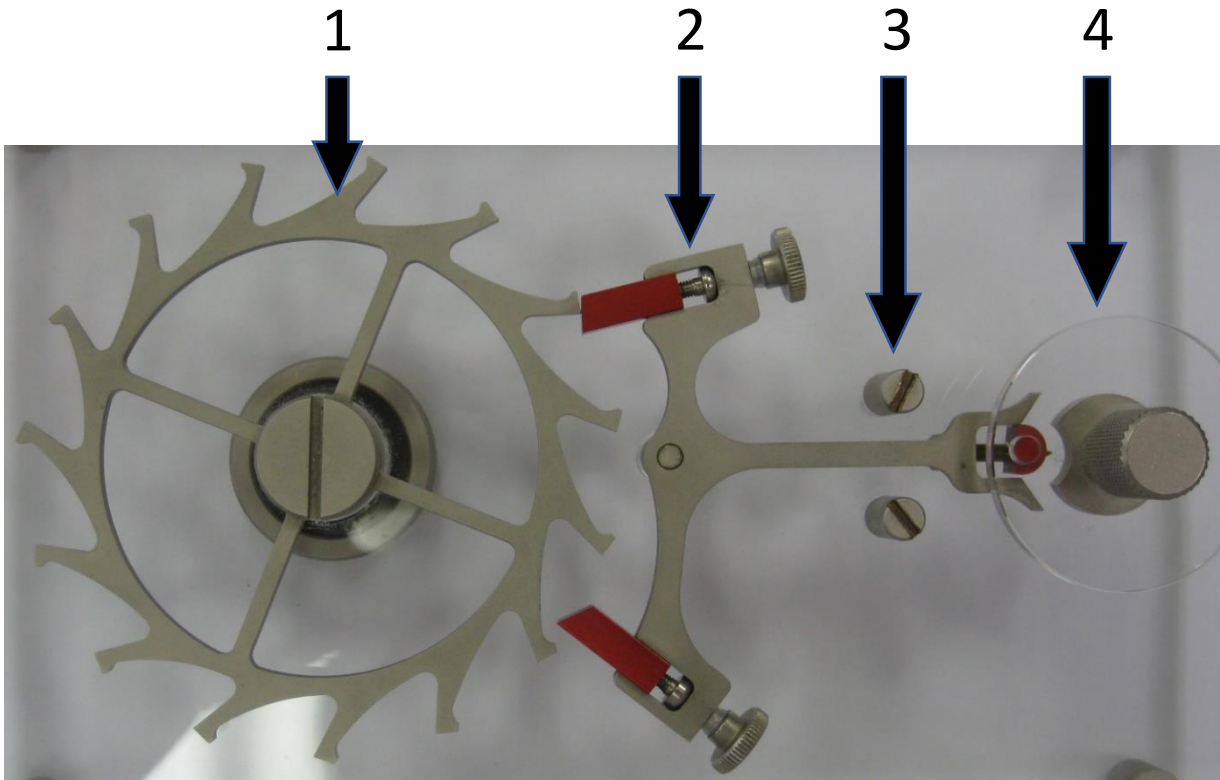
Definitions

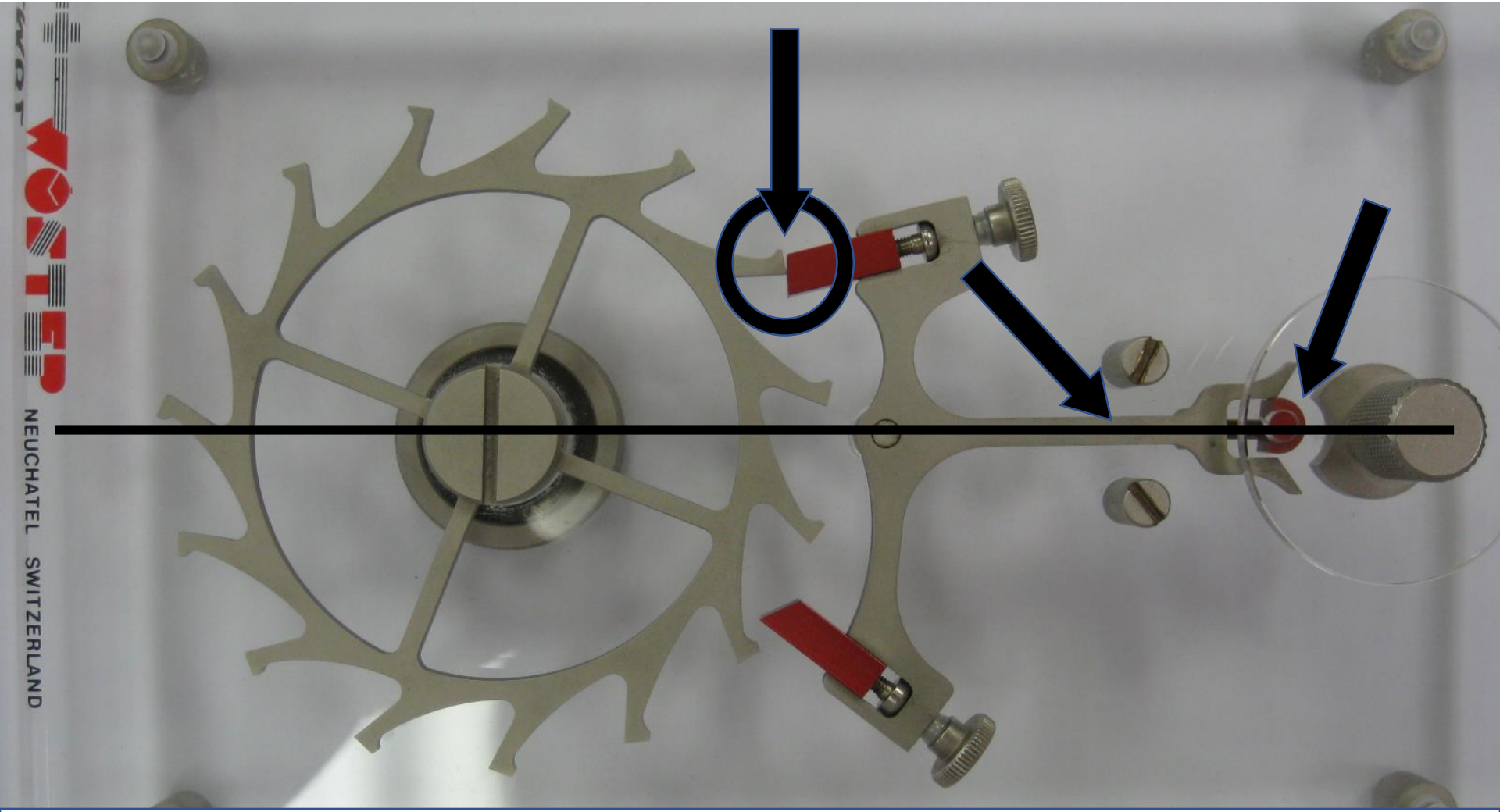
There are four components that technically make up the escapement. They are:

1. The **escape wheel** (with no pinion or arbor)
2. The **pallet fork** complete
3. The **banking pins**
4. The **roller table** (without the balance wheel)



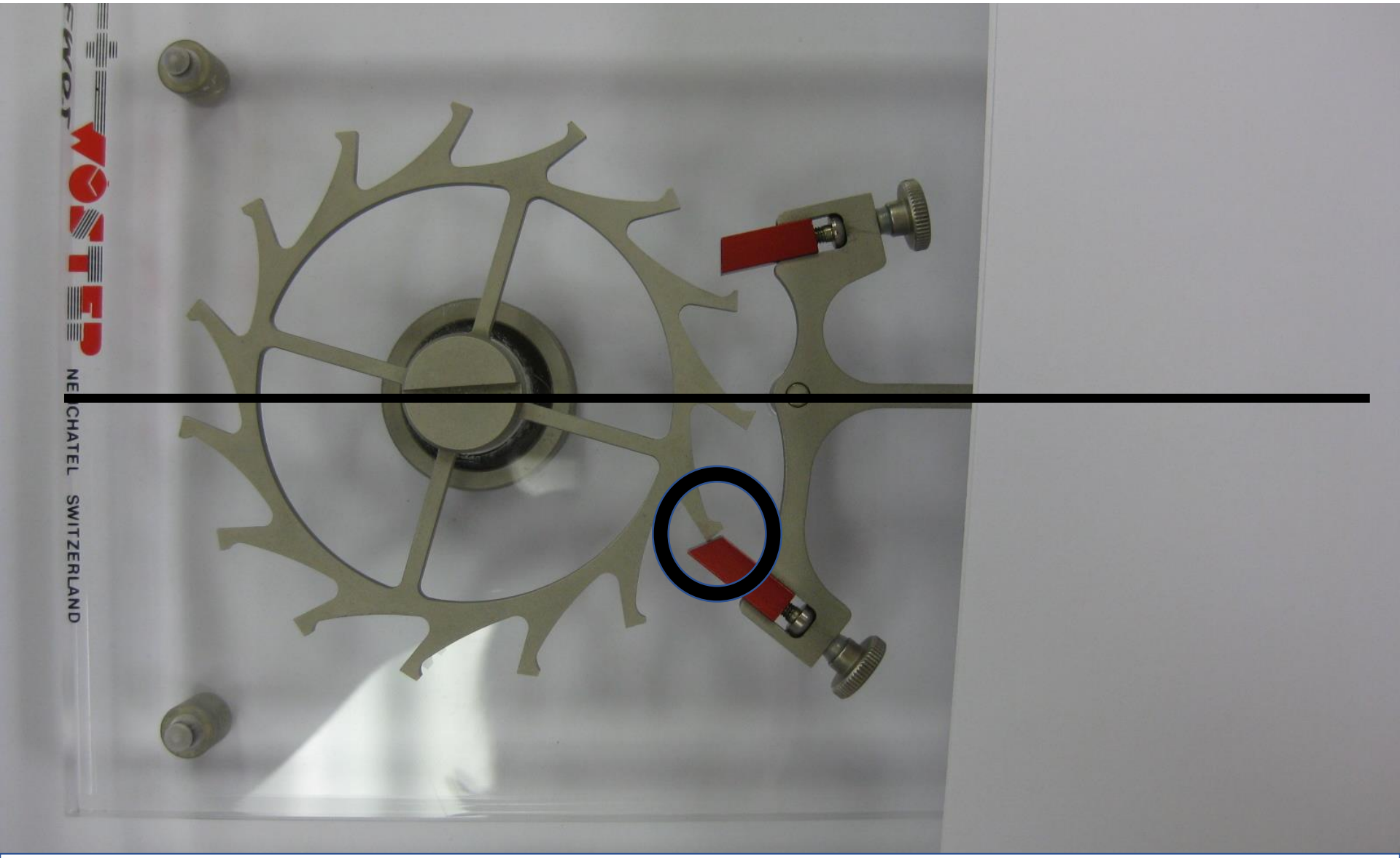
1. **Deadpoint** or **Line-of-centers** or **Position of rest**:

Is an alignment of escapement components based on this positioning.



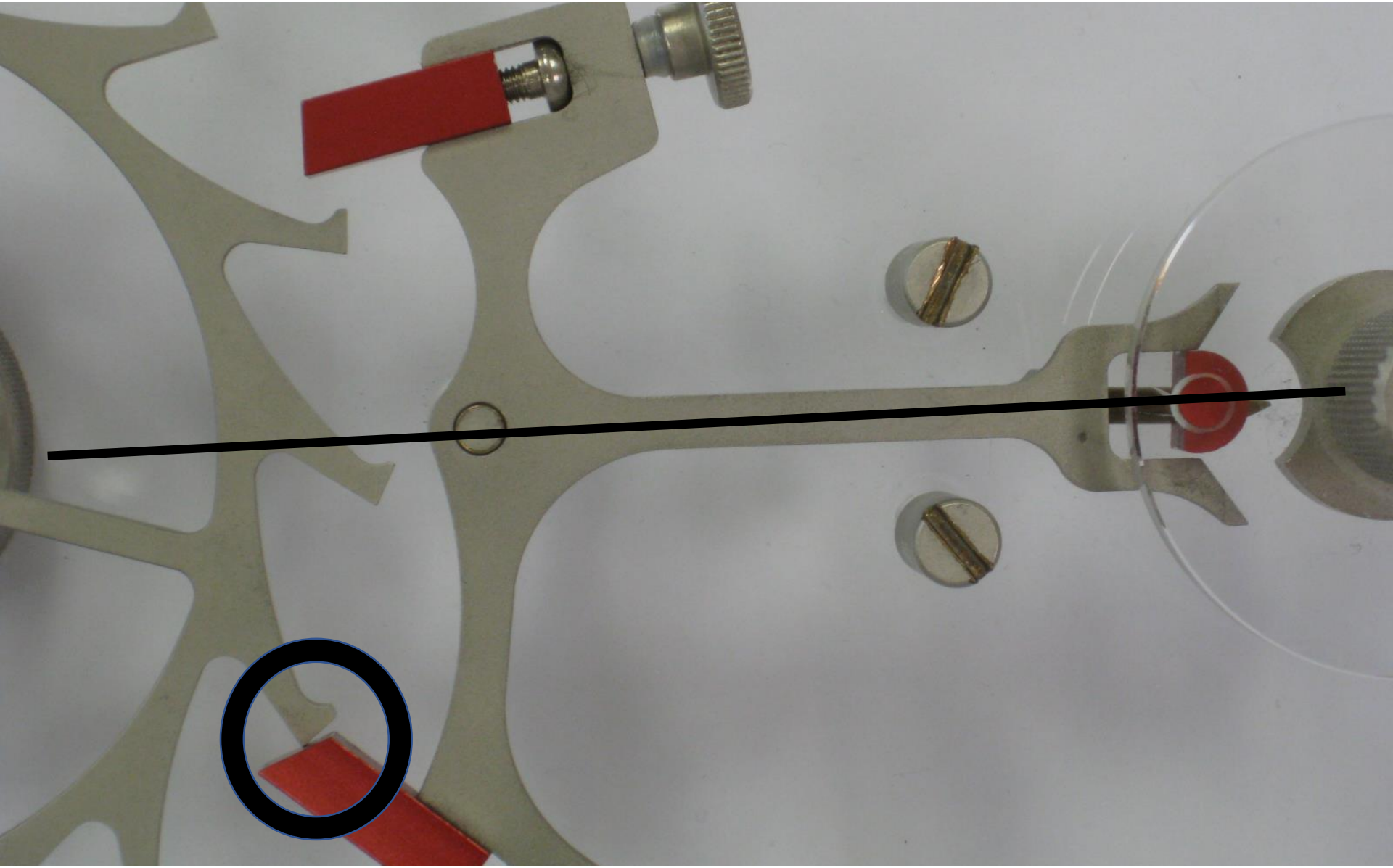
All of our escapement checks are based off of Deadpoint.

Definitions



You can use either jewel to identify the Deadpoint.

Definitions

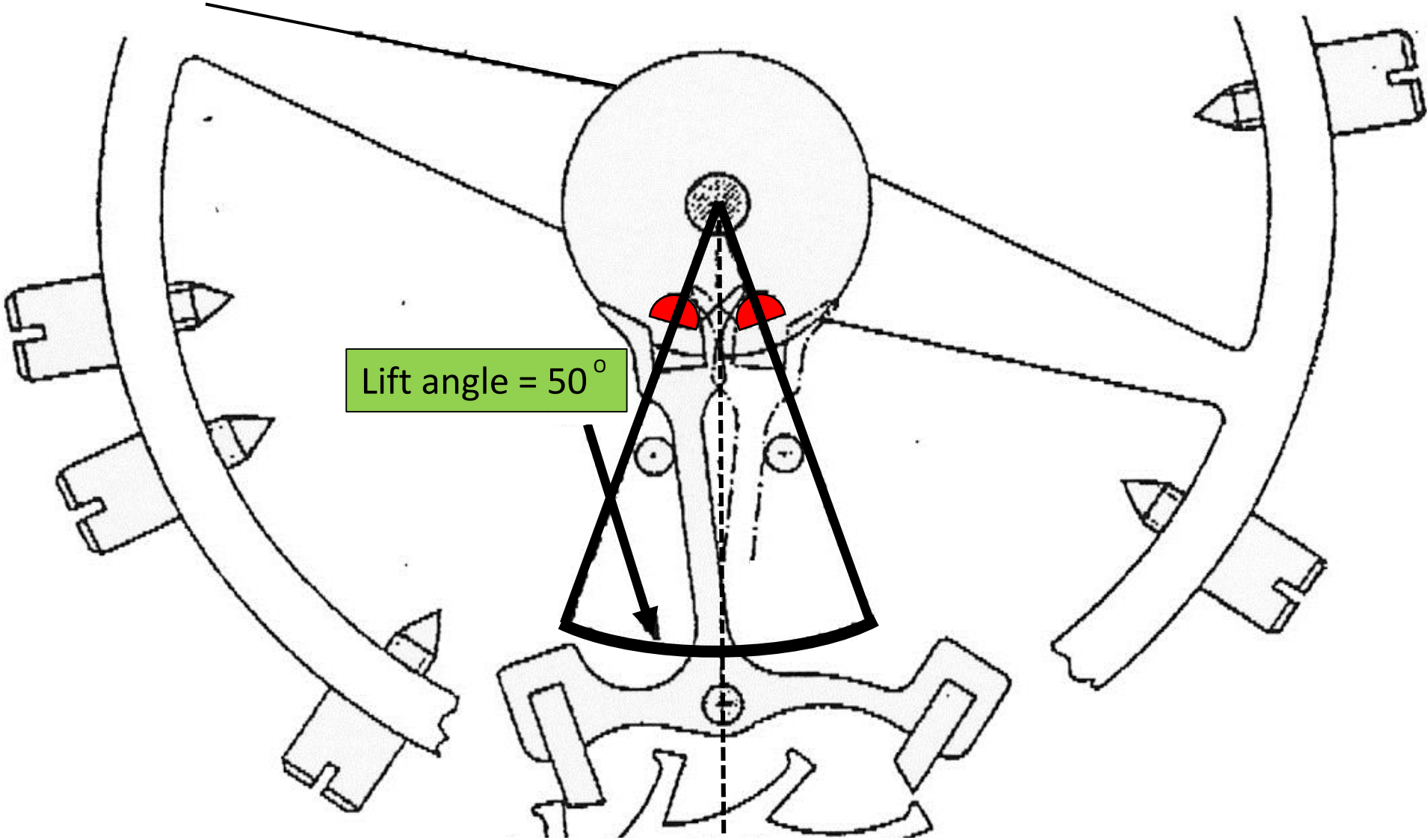


Knowing how to find DP is essential.

Definitions

Lift Angle:
Is the amount of angled distance between the first contact of the roller jewel to the fork slot (first escapement noise) until the last contact of the roller jewel with the fork slot (last noise is basically lever striking the banking) after an impulse as it exits out into its ascending supplementary arc.

The angle of lift occurs from the first contact of the roller jewel with the fork slot until the last contact after receiving an impulse.



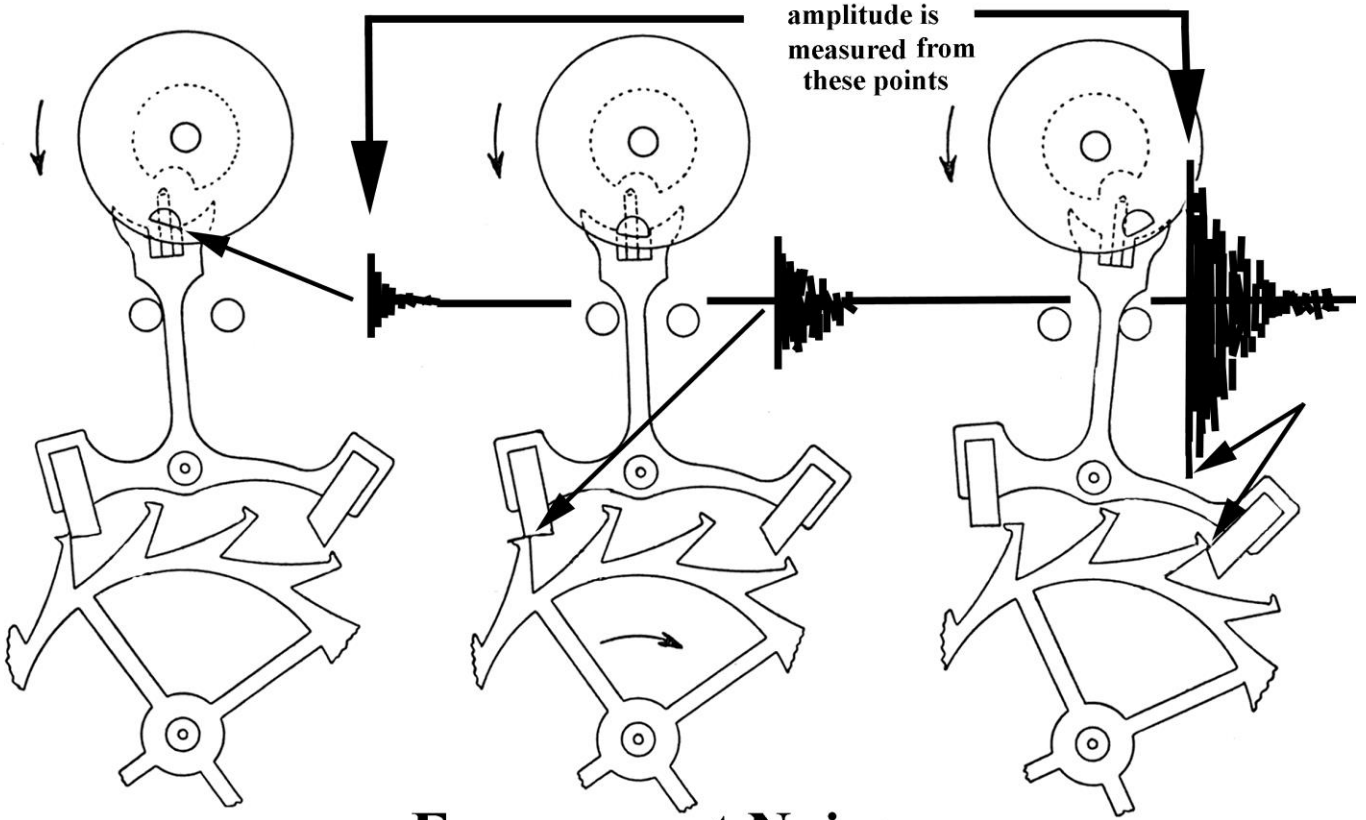
How the Lift Angle is Derived

Definitions

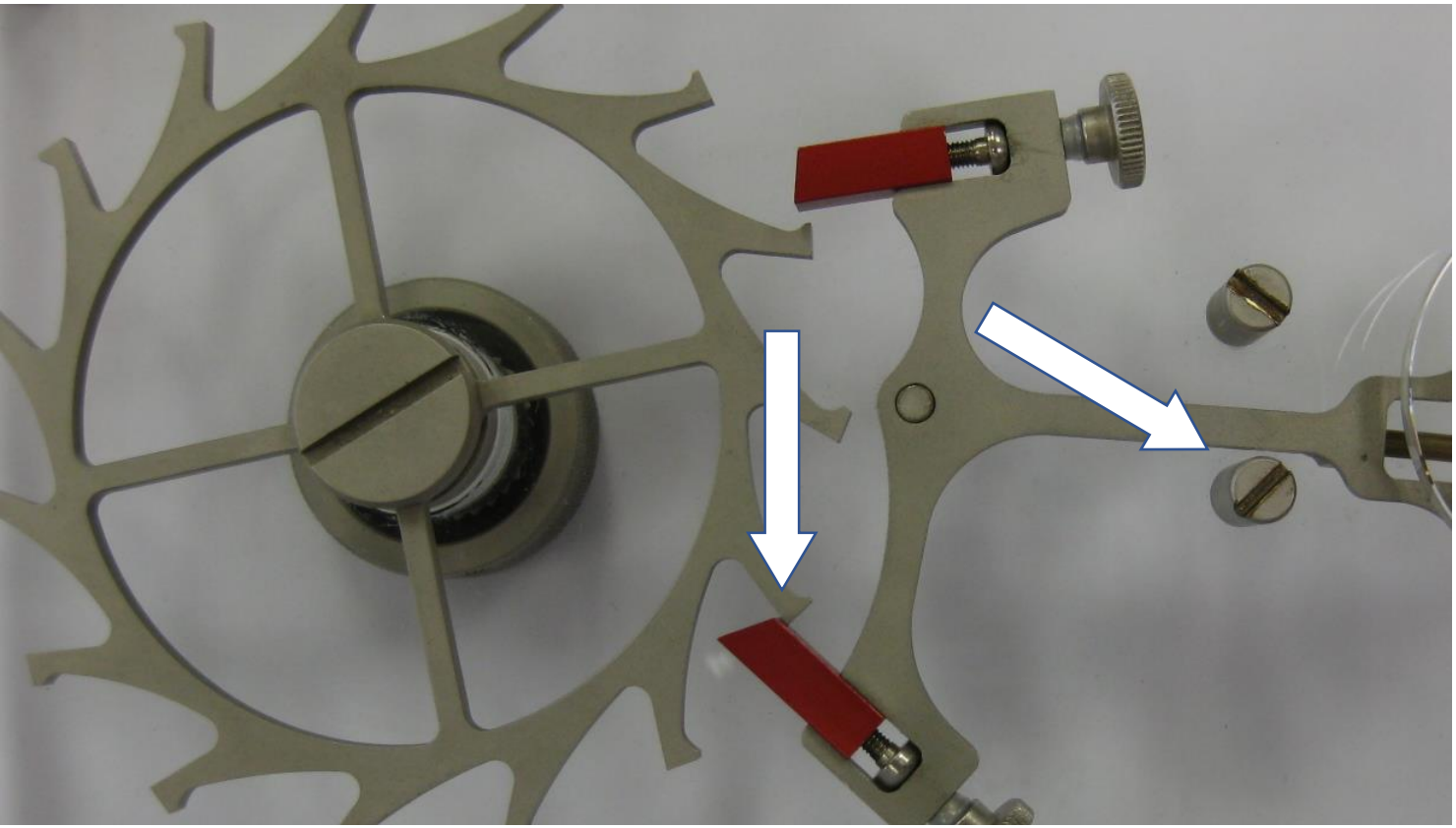
The **lift angle** of your movement, is an important piece of information for you to know.

The lift angle gives your timing machine the needed information to determine the correct amplitude of the balance wheel.

***Note: lift angles you are given may not always be absolute.



Definitions

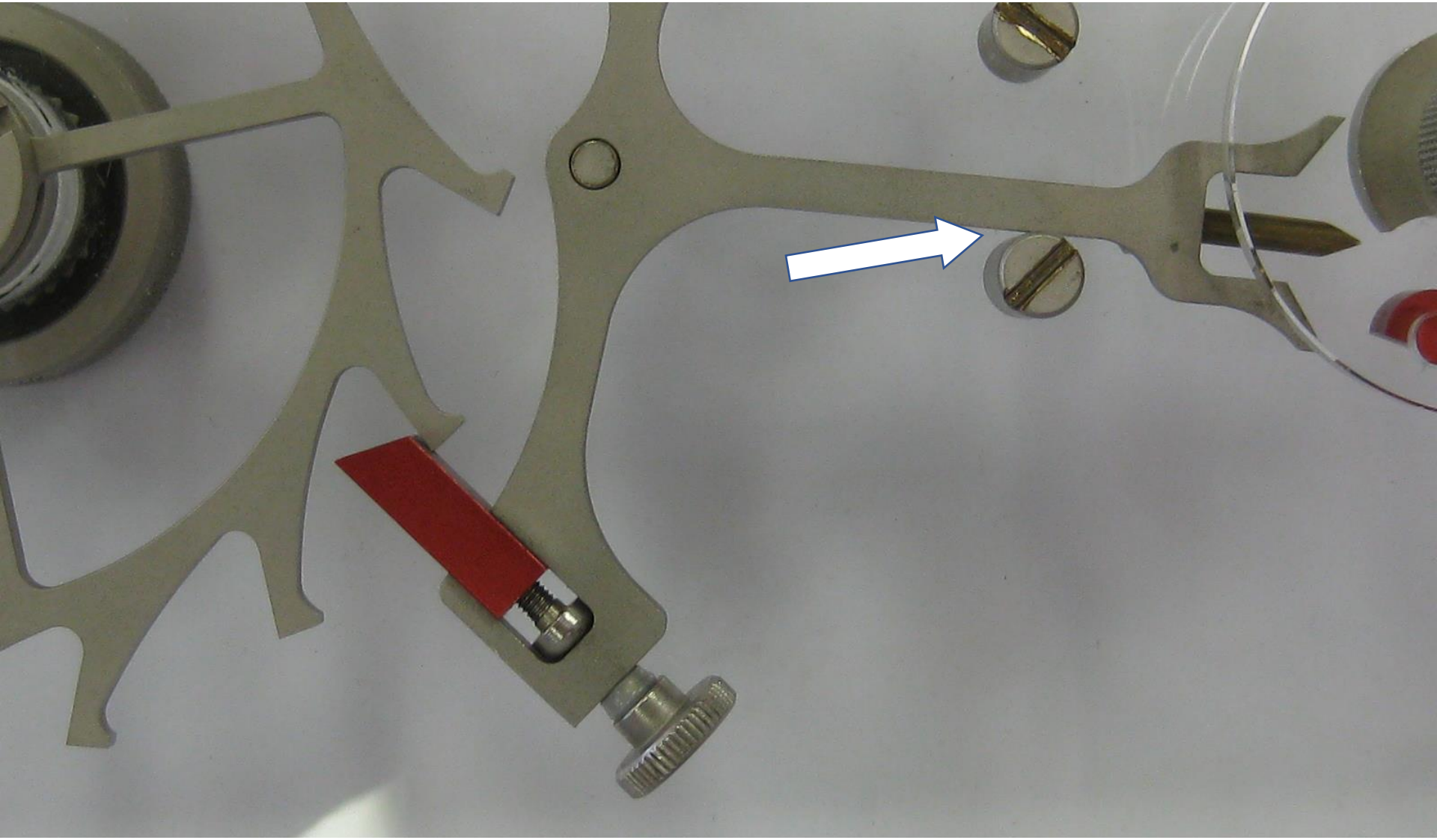


Drop:

Is the free rotation of the escape wheel.

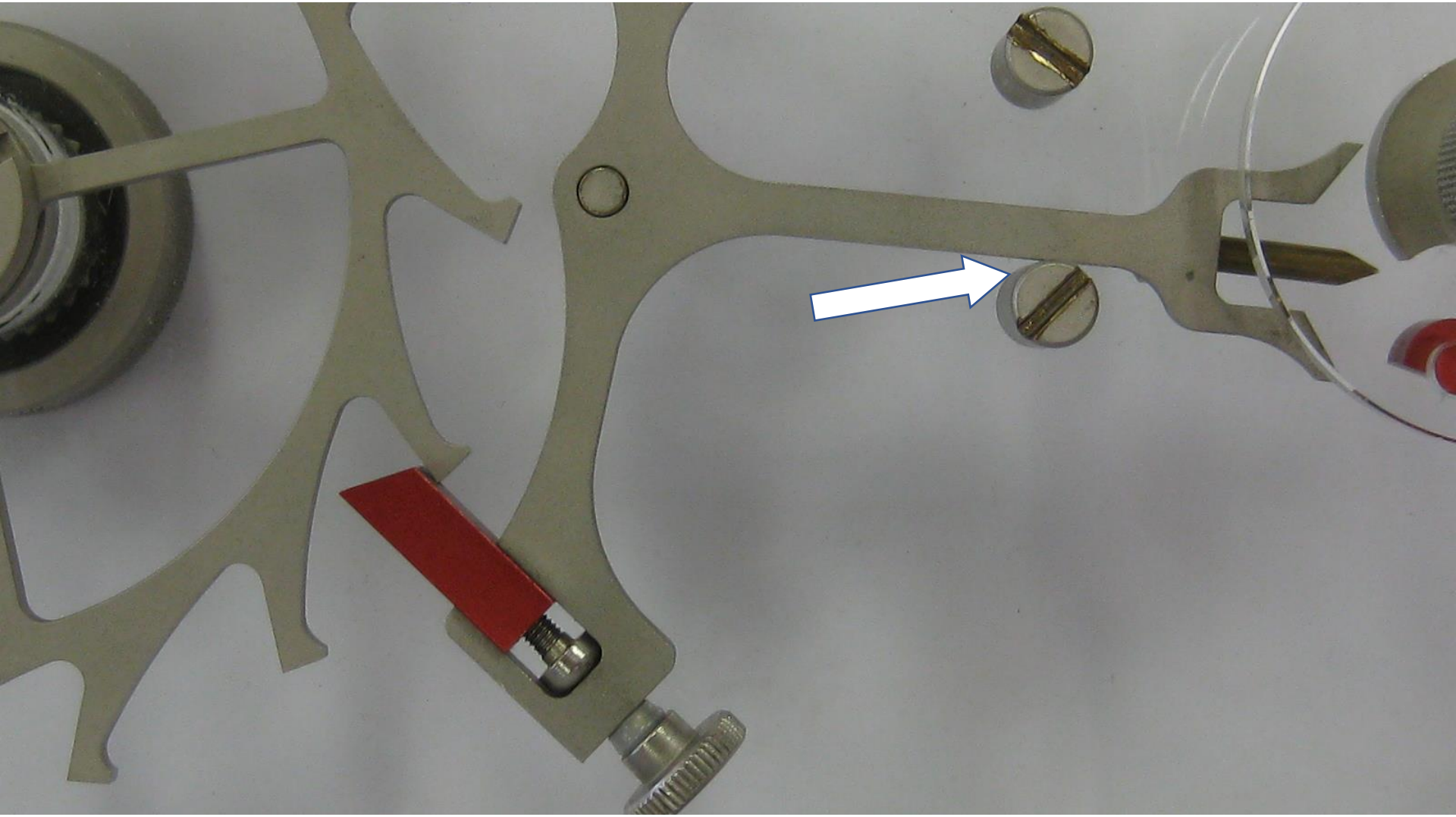
The point of **Drop** ends as the tooth strikes the pallet stone.
At that instance, it is now called "**Drop Lock**."
* Note: the lever of the PF is not touching the banking pins yet.

Definitions



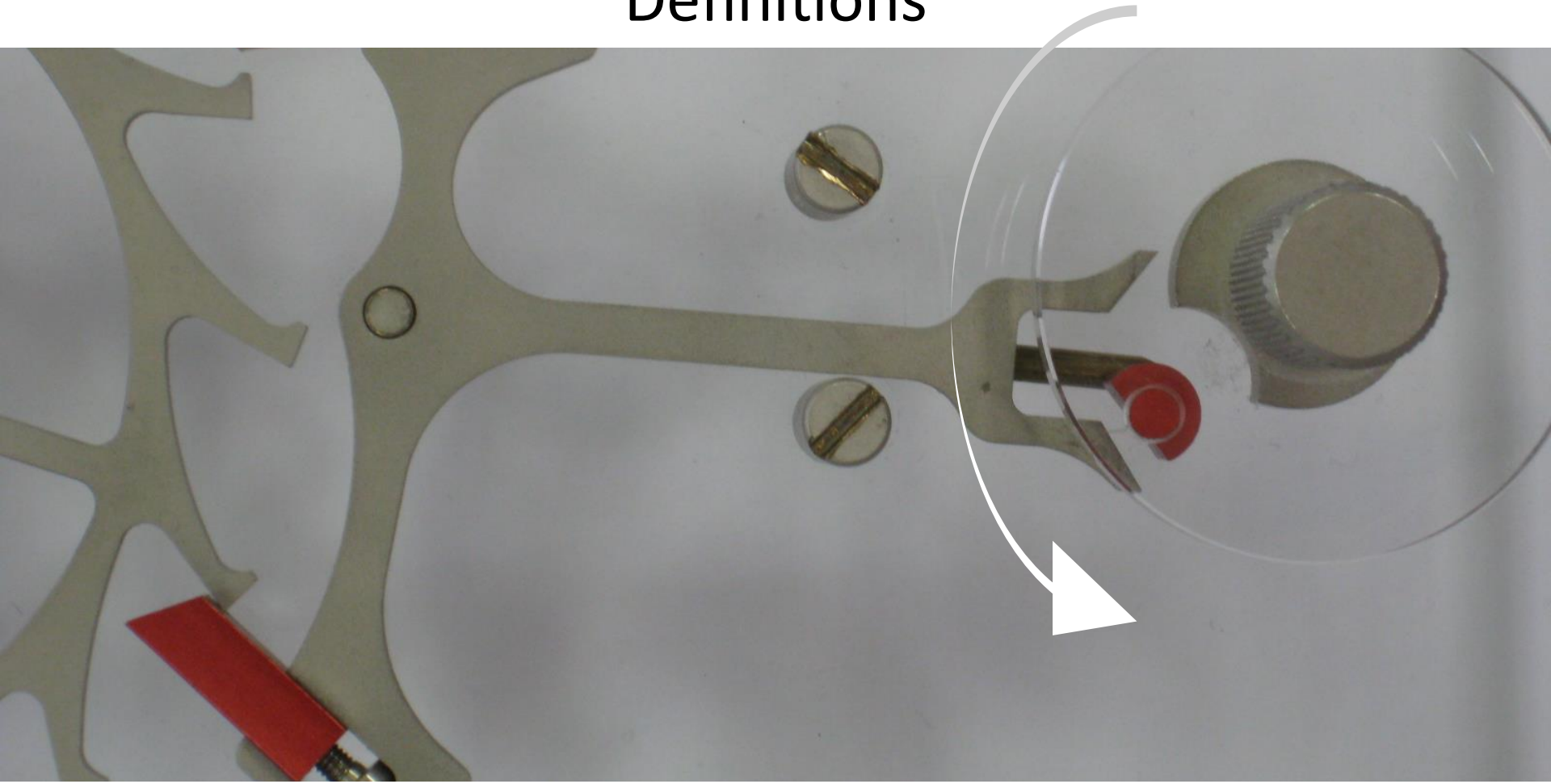
The continuation of the fork travel to the banking pins is called “**run to the banking**” or the old term was “**slide**.”

Definitions



Once the pallet is against the banking pins and the roller has exited the fork slot, the escapement is in a condition called "**Total Lock**"

Definitions



As the roller jewel continues-on its journey out of the fork slot, due to the impulse it just received, the roller jewel (along with the balance wheel) has become completely detached from the movement.
This is why the Swiss Lever Escapement is also referred to as a

Detached Lever Escapement.

Definitions

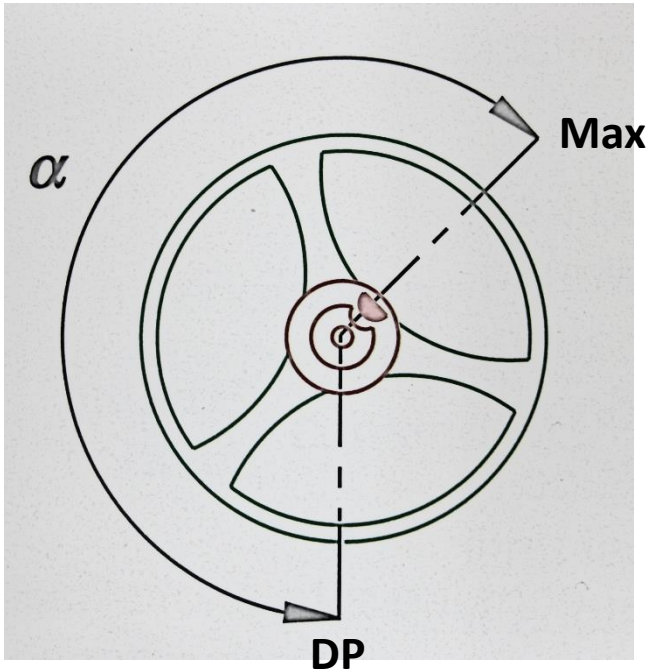
Swiss Lever Escapement is also known as the:

Detached Lever Escapement

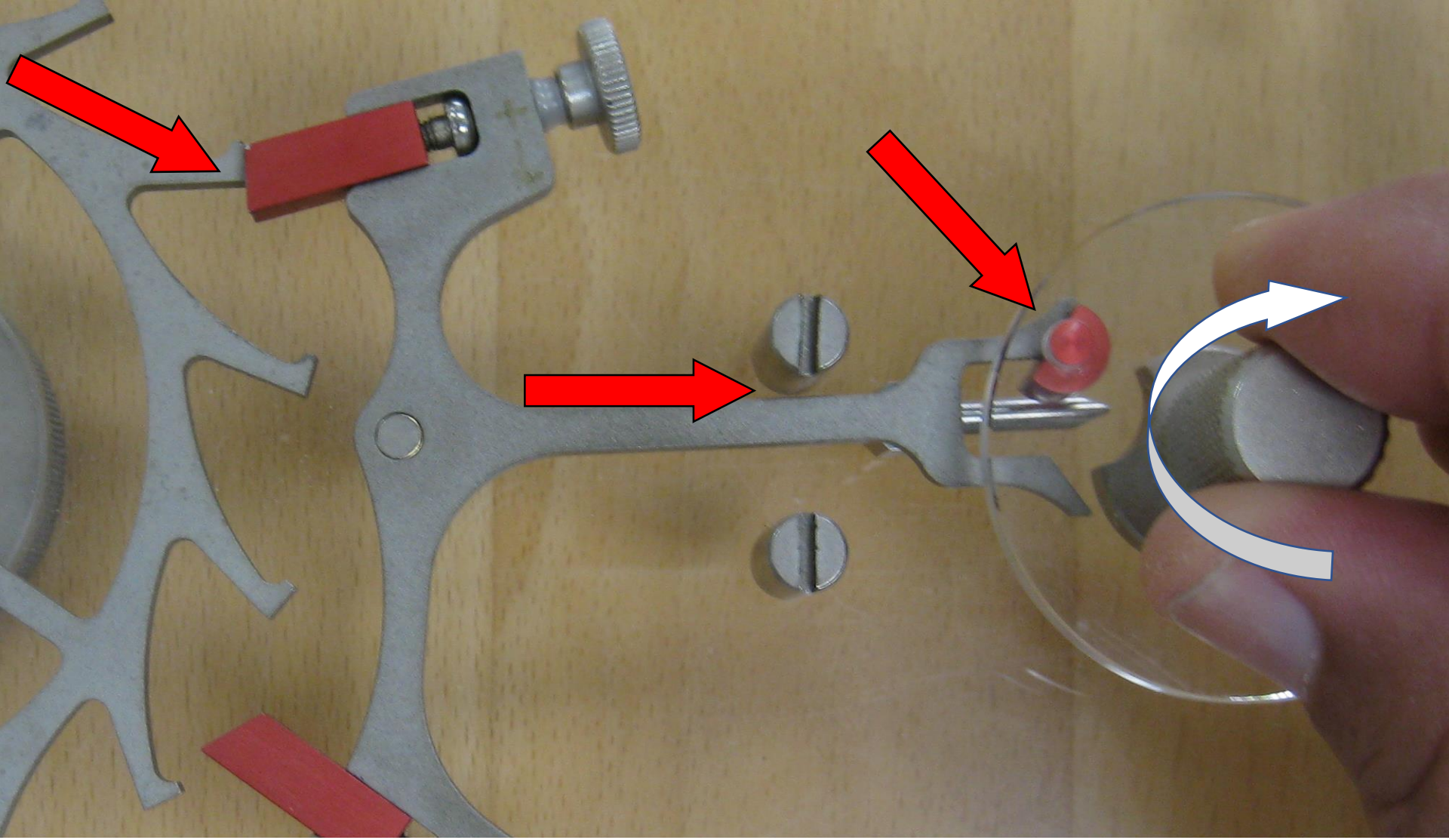
In this type of escapement, after an impulse, the escape wheel and pallet fork remain locked while the balance continues-on its way. This travel is called the ascending supplementary arc. At this point the balance or oscillator is completely detached from the rest of the watch. It remains completely free until the hairspring returns the balance (descending supplementary arc) back to the deadpoint where it reattaches or couples, at which the whole process begins again.

Definitions

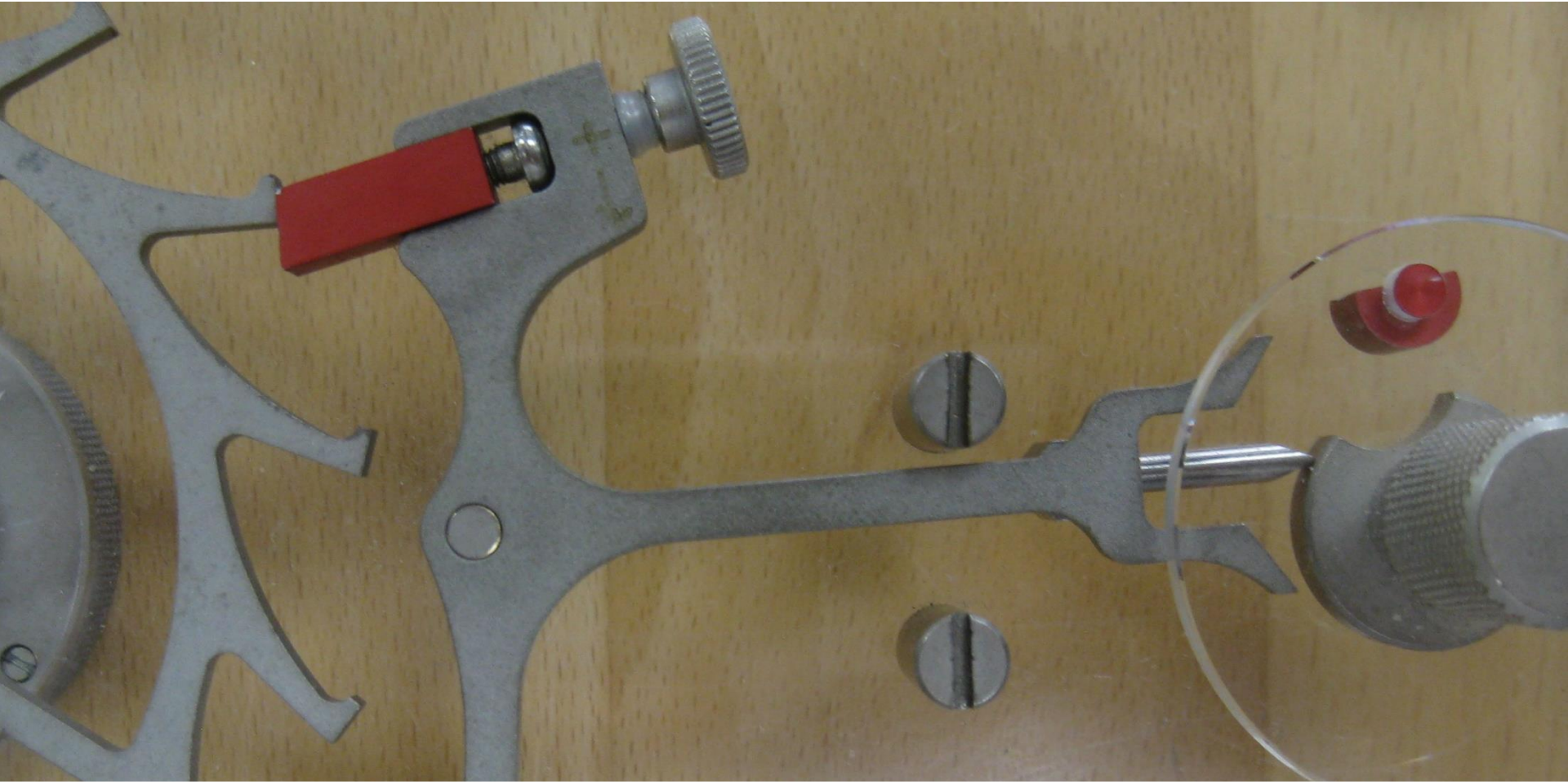
- **Amplitude:** (Starting with the roller jewel at deadpoint or position of rest) It is the maximum amount of displacement (travel) of the balance wheel after receiving an impulse, measured in degrees.



The effects of a pallet stone that is set too shallow and dropping onto the impulse plane.



The escape wheel tooth is set too shallow and is dropping onto the impulse plane. This prevents the pallet lever from being drawn to the banking pins. So the fork horn are exerting pressure on the roller as it tries to pass.



The amount of amplitude loss varies depending on how far up the impulse plane the tooth actually strikes the jewel. The angles of both the escape wheel tooth and the pallet stone also come into play. The further up the tooth strikes, the more pressure or friction that is being applied to the roller. The larger the pressure, the lower the amplitude. The effects can even be worse in certain vertical positions due to gravity.