

CATAPULTS



What is a Catapult

- A catapult is a machine that stores energy then quickly releases this energy to fire a projectile.
- Is a generic name given to a weapon of war designed to hurl objects
 - Greek Fire
 - Bee Hives
 - (Biological) - Dead diseased animal carcasses
 - (Psychological) – Enemies dead bodies

- Heavy duty version of a sling shot
- A classic weapon appearing in many forms over the years
- Used until replaced by explosive based projectile weapons (cannons)
- **Size Matters**
 - To be a true catapult it must be bigger than a person

Origin of Catapults

- 4th Century BCE – China
- 6th Century AD – Arrived on European Battlefields
- 400 BC Syracuse (Greece)
 - Gastrophete
 - Ballista
 - Mangonel
- 6th Century AD – Traction Trebuchet (Bizzantine Armies)
- 1187 – Counterweight Trebuchet (Saladin)

Types of Catapults

- Catapults come in many different shapes and sizes
- They have evolved as the needs of armies have evolved

The Ballistas



- design was similar to a giant crossbow
- worked by using tension
- The word 'Ballista' is derived from the Greek word 'Ballistes' meaning to throw.

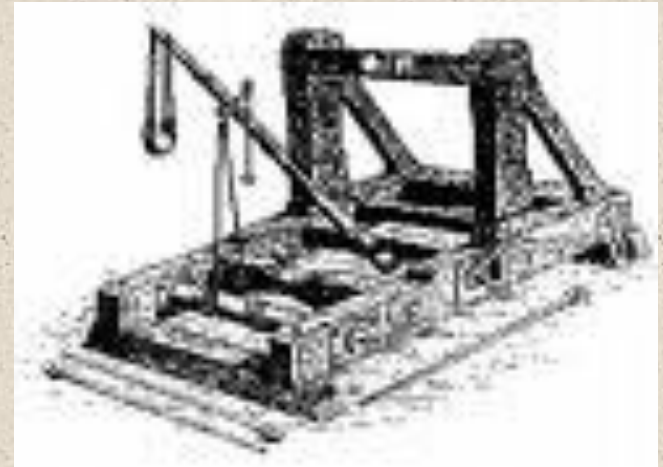
Springald

- The springald closely resembled a crossbow in function with a vertical springboard fixed at its lower end to a timber frame
- was a tension-driven device



The Mangonels

- Mangonels fired heavy projectiles from a bowl-shaped bucket at the end of its arm
- The Mangonel was used for aiming various missiles at castles, fortresses and cities
- Used Torsion



Mangonels

- This type of catapult was easy to construct and wheels were added to the design to ensure maneuverability
- The Mangonels were capable of firing projectiles up to 1,300 feet.

The Onager

- The Mangonel is also referred to as the Onager
- Missiles from the Onager catapults were originally thrown from a sling - the sling was later changed for a bowl-shaped bucket.
- The word Onager refers to a type of donkey, whose kicking motion and force were paralleled in the Mangonel and derives from the Greek word 'onagros' which means a wild _____(Rear End).

The Trebuchets



- Trebuchet is generally associated with throwing stones
- A Trebuchet could release up to 2000 stones in one day.
- Uses a counterweight which relies of gravity