The history of fortified castles (Some landmarks)

Definition

From the Latin *castellum,* the *fortified castle* is a fortified structure essentially built and inhabited by the nobility in the Middle Ages in Europe, the Middle East and Asia.

This term is generally considered to be the fortified place of residence of a holder of the right of ban, at the origin of a territorial district, mandate, castellany or town.

In contrast, this distinguishes it from:

- a *palace:* unfortified residence,

- a *fortification* or citadel : for public defense use.

However, many similarities exist between these different types of construction and the use of the term has varied over time and has been wrongly applied to structures as diverse as *fortified houses* or *castros.*
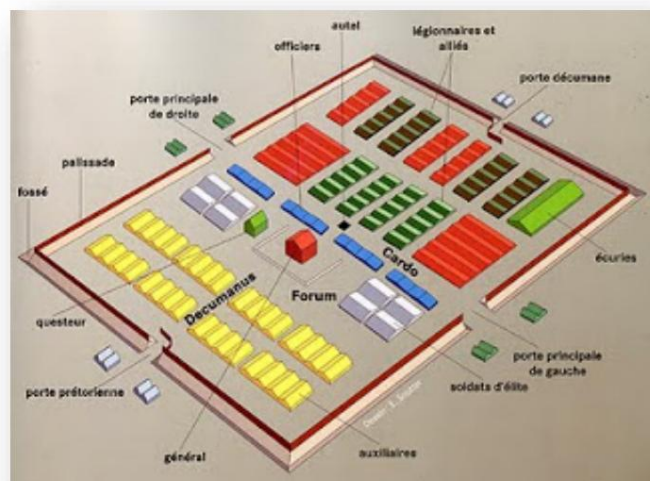
Origin

The first fortifications appear in the fertile crescent, the Indus valley, in Egypt and in China where the settlements were protected by great walls.

In Northern Europe, we had to wait until the Bronze Age (period of Protohistory, end of the 3rd millennium and 2nd millennium BC BC) to see the development of *castros* which multiplied in the Iron Age (850 – 450 BC).

Structures different from their eastern counterparts by favoring earth construction materials rather than stone.

1 Schematic plan of a Roman camp.

The *oppida* developed in the 2nd century BC. JC, they were effective until the use intensive use of siege engines and other siege techniques.

Roman fortifications, the *castra,* varied from the temporary construction of armies to countryside with permanent stone structures.

The fortified castle is a European innovation that appeared in the 9th century after the fall of the empire. Carolingian whose territory was divided between lords and princes.

The Edict of *Pîtres* or *Pistres,* capitulary promulgated by *Charles II the Bald* at the second of the four assemblies (councils) gathered in Pîtres under his reign between 861 and 869, encouraged the construction of fortresses to face the Scandinavian invasions.

Born in the 10th century in western France, in the 12th and 13th centuries in the German Empire, Eastern France and Italy, it disappeared in the 17th century with the development of modern States.

Role

The development of fortified castles around the year 1000 is linked to feudal society. The disappearance of the Carolingian state and the regionalization of powers, the transfer of sovereign authority to local powers (feudalization) caused insecurity linked to the rivalry of big owners and small chiefs.

The emergence of numerous regional and local authorities leads to the development of polices, of henchmen militarizing society and favoring the erection of numerous fortified places.

From the 10th to the 17th century, Europe bristled with castles symbolizing power over men and the earth. The stronger the territorial power, the fewer castles there are, the weaker it is, the more numerous there are.

Built by princes, counts and great dynasties, who exercised territorial authority, to control, through passive then active defense, the area surrounding them. It is also the center:

- administrative and symbols of their power (ostentatious role),

- their political power (seat of the chatelaine lordship),

- economic.

It is also used to control communication routes and the local population.
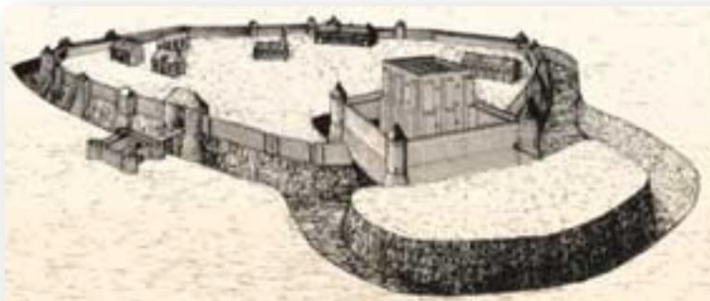
2 The castle at the beginning of the 13th century. reconstruction by Ch. Fouetillou Source : Normandy Museum.

Village lords enriched by war and functions (services rendered) also raised imposing constructions.

They serve as a means of monitoring elements important to the village such as: mills, ovens, presses, ponds or fertile lands and, some have a special enclosure for the local population.

The small lords are satisfied, most often, with a fortified house, a tower or a dwelling in a small enclosure.

3 Fortified house from the 11th century - The castle of Mont - Sazeray (Indre).

The appearance of fortified castles evolved in parallel with that of:

• military and siege techniques (poliorcetics),

• regions and the power of its owner.

The 9th century castle mound

The first fortified castle in history, it was built near water sources and large expanses of land for cultivation.

Simple wooden tower raised on a natural height or on a mound of artificial land. A ditch and a palisade surround it and protect it from external dangers. The first fortifications were located near forests to provide building timber needs.


4 Restitution of a feudal mound.

The castle motte or feudal motte second half of the 10th century – beginning of the 11th century.

The motte and the upper courtyard, an artificial mound 50 to 200 meters in diameter and a height of 10 to 60 meters, contain a Tower. Built in earth and wood by the lord's peasants, according to various plans, a plan was drawn on the ground then a ditch was dug, the debris of which was used to form an earthen rampart. The mound was raised by successive layers of materials brought by carts or on men's backs in baskets. The Tower, initially built of wood, included one or two levels where the reserves and the bedroom of the squire and his family were located.

Surrounded by a palisade built on an embankment and a ditch at the top, the entrance was via a removable bridge guarded by a door and a wooden tower. Subjected to bad weather (wood rot) and fires, it had the advantage of being able to be rebuilt quickly.
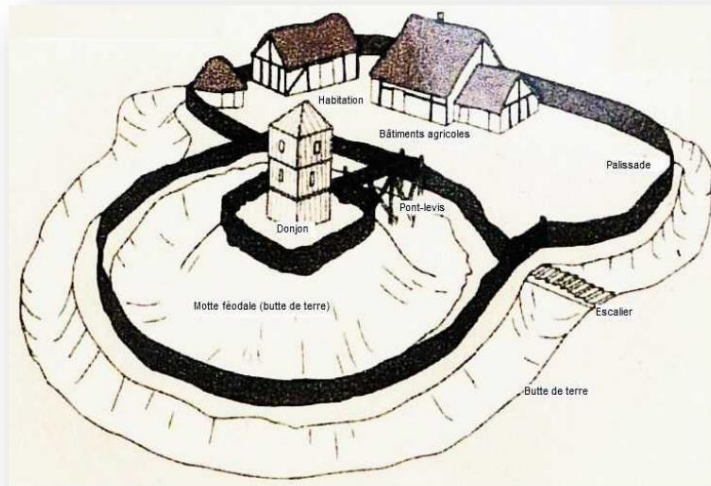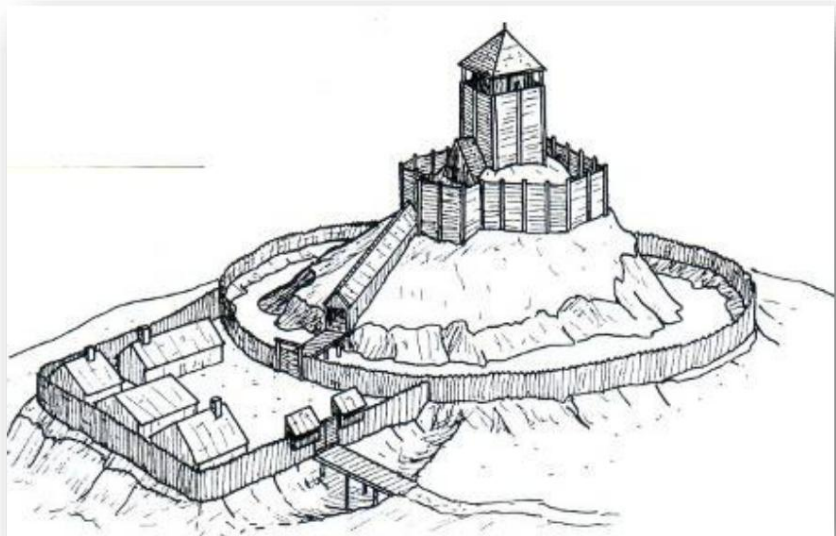

5 Reproduction of an 11th century castle mound.

The castle mound is included in a larger ensemble including at the foot of the mound a farmyard separated by a ditch. This farmyard included dwellings, stables, agricultural buildings and served as a refuge for the local population. Most of them have disappeared. The Bayeux tapestry is an iconographic source of prime importance for the knowledge of castle mounds.

The castle wall 10th – 12th century

It often occupies flat land on a rocky spur or promontory. A *porch tower* roughly protects the entrance.

The enclosure, preceded by moats or ditches, is made up of a palisade planted or not on an earthwork (earth removed from the ditch). Ovoid in shape, this fence protects a few buildings and shelters a mesnie

(household, family) aristocratic, sometimes a small peasant community.

The first castle of Caen, built by William the Conqueror, constitutes the finest Norman example. This type of fortification lasted until the 12th century.

6 Reconstruction of an 11th century castle enclosure.

11th century stone fortresses

Stone castles did not succeed the castle enclosure or the castle mound, the choice of material is essentially a function of the means of the sponsor. Still rare in the 10th century, they often correspond to a more or less modified Roman construction.

The use of stone concerns above all

dungeons. The first appeared in the Loire Valley at the end of the 10th century.

century, then they were adopted in   in Normandy,   in England and Germany during the 11th century.

In the Empire, in Italy and southern France, small towers of three or four levels could stand alone and serve as a refuge or lookout post.

7 Cliff Castle.

They were not   not

protected by a wall and they were built with mortar.

These transformations are the consequences of the Crusades. Castles in the Orient are built of stone.

The apogee of the 12th century fortified castle

It corresponds to the renaissance of the 12th century during which learned lords and knights rediscovered treatises on Roman military art. It is then sometimes referred to as *castle roman.*

- *foundations :* dug deeper, can reach the rocky basement and they
  are more resistant.

- *walls :* higher and thicker, they are blocked between 2 facings, 2 to 3 m thick on average, to resist fire
  from siege weapons (trebuchets, mangonels). The straight sections of wall can become oblique by
  widening like a fruit at the base (see glacis or embankment) to avoid undermining and cause objects
  thrown from curtain walls to ricochet back at the attacker. Hurds are installed at the top of the enclosures
  to defend the foot of the walls .

- *curtain wall :* it was equipped with flanking towers from 1160. These towers were initially rectangular,
  semi-circular or circular. More and more numerous and

Close together, circular towers resist mangonels better and leave no dead angle of fire. Topped with watchtowers or topped with conical roofs, they reduce the defensive function of the keep, while maintaining the symbol of seigniorial power. The buildings of the lower courtyard are grouped against the wall.

• *circular keep :* it became the rule after 1150. The lord and his family then lived in a more comfortable lordly home located against the interior of the enclosure.

• *loopholes :* they appeared at the end of the 12th century to facilitate crossbow shooting.

Wood remains used for additional defenses in particular: barbican, lists, bretèches, hourds.

8 Plan of a fortified castle.

The fortified castle in the 13th century

It has a double enclosure, the 2 ramparts create an intermediate space called lists. Turrets are built to eliminate blind spots. A walkway and a deeper ditch were built. The roofs were covered with lead and the floors replaced by stone vaults to avoid incendiary projectiles.

The castle is tighter and more geometric. Princes and kings surround their cities with walls.

9 A 13th century fortified castle

The end of the castle

Advances in artillery made the walls very vulnerable; from 1418 the use of iron balls, more destructive than stone balls, became widespread. The cannons from the end of the Hundred Years' War made it possible to accelerate sieges by opening breaches in the wall more effectively than the sap or the battering ram. In the 15th and 16th centuries, it continued to be adapted to the evolution of weaponry.

The top of the towers accommodates platforms where the cannons are installed. U-shaped or ship-shaped barbicans are built in front of the entrances. We widen the ditches which we defend with a sparrow. We multiply the Towers along the curtain wall, see we install false breeches.

It is still used in France during the Wars of Religion in the second half of the 16th century, but no new construction. Henry IV confirms his decline in

ordering the dismantling or the destruction of numerous fortresses to prevent them from serving as lairs for enemies of royal authority. It seems that in the 17th century the defense of the territory by a castle network was a thing of the past. THE


10 Plan of the citadel town of Cambrai in 1649.

Citadel cities are preferred to stop the adversary and above all, sovereigns rely more on *their human wall* made up of their army in battle. The fortified castle became obsolete, its owner then improved its residential function by replacing the drawbridges with fixed stone bridges. The buildings inside the courtyard have mullioned windows. A new, up-to-date building is being built.

Principles governing the construction of fortifications

- *Protection:* the fortification must protect the defenders against the attacker's projectiles and constitute an obstacle to the attack of the attackers. Hence the construction of thick walls protecting the besieged and ditches (more rarely moats) and palisades to slow down the besiegers. As a result, it is possible to spray the enemy with projectiles while remaining protected by their walls.

- *The depth of the defenses:* it allows us to continue to resist even if the aggressor has taken control of part of the place. Hence the construction of double or even triple enclosures and defensive spaces. Each line of defense is commanded by the next from the inside out.

- *Security of access:* doors are the weak point of a fortification since they create holes in the wall. Hence the birth of gate towers and then entrance gates.
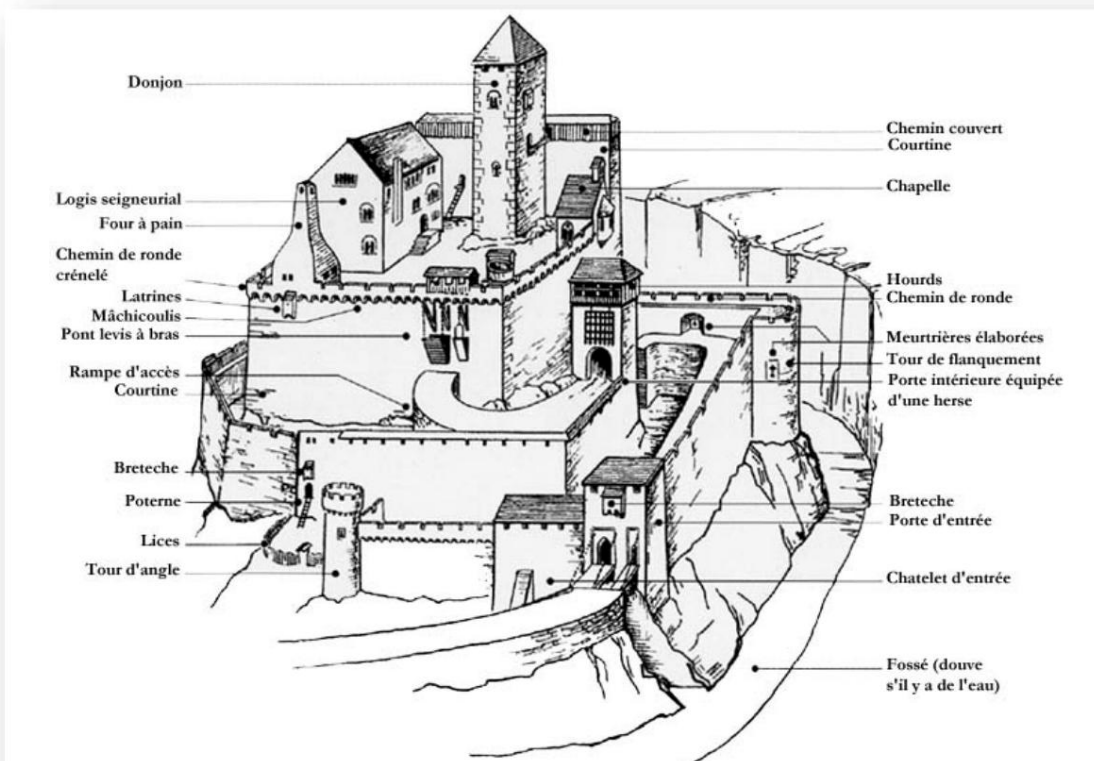
11 *Glossary of a fortified castle.*

• *Flanking:* need to cross the defenders' shots and views to limit blind spots as much as possible. Hence the projecting towers and the multiplication of archers.

Attack on a castle

• *The siege:* it starves and thirsts the besieged by controlling the entire perimeter of the enclosure. He requires many men and their regular supply.

• *Cross the walls:* the mobile tower or belfry allows attackers to be brought up to the height of the walls while protecting themselves during the assault. The unwieldy and very heavy ladder is rarely used.

• *Making a breach in the walls:* undermining consists of opening a breach in an enclosure. The sappers, protected under wooden galleries, dug and removed the stones from the wall to cause a collapse. Filling the moats with earth makes it possible to form a bridge allowing the walls to be attacked at the base.

• *The ram:* allows you to force doors.

Medieval artillery

Three classes of heavy weapons exist side by side: torsion weapons, pendulum weapons and finally fire arms.

Whatever the type of weapon used, the goal is to store energy and then suddenly release.

.TURTION ARMS : the Mechanical twisting of the parts will ensure energy storage.

Known in Europe since Antiquity, the Greeks and Romans already used them, they operate on the principle of the arc of which they take the general shape. Very large, the torque is obtained using a rope attached to both ends and
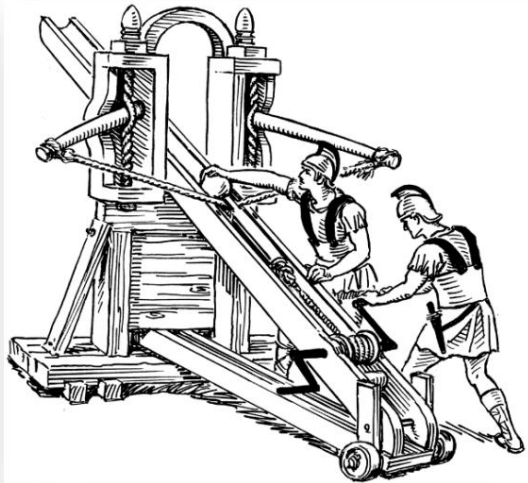
tensioned by a mechanical means such as a winch.
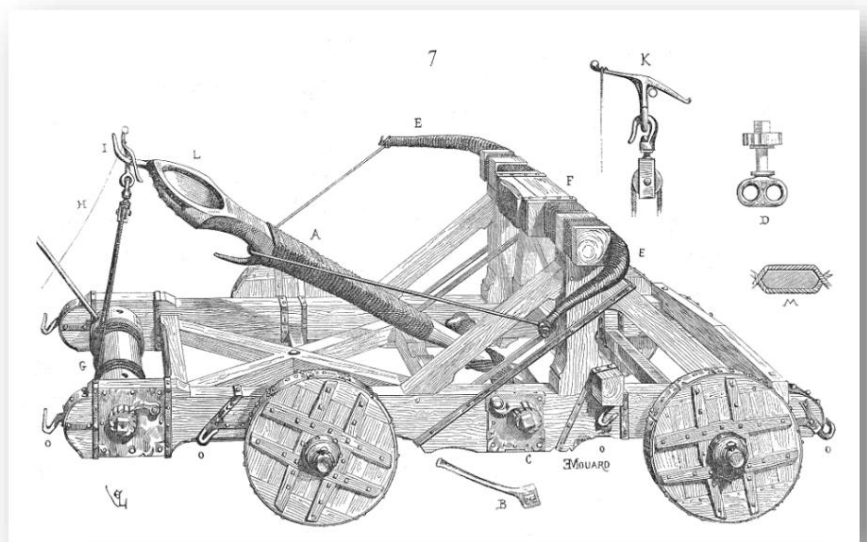
12 A ballista according to Violet le Duc.

These *catapults* are different depending on the type of projectile sent:

- **The ballista or heavy scorpion** sends flaming or non-flaming bolts then, with improvement, *the tower crossbow* replaces wood with metal as a material undergoing torsion.

- **The evening primrose or Greco-Roman triggerfish** sends cannonball type projectiles. The bowstring acts on a lever ending in a spoon in which the projectiles are placed.
This system was abandoned in the 13th century following technical progress.

13 Reconstruction of a Roman ballista.

SWINGING WEAPONS :

1. ARMES A TRACTION :

- **the perrière** (11th – 15th century) : the balance is made up of a long wooden beam called *a rod* at the end of which is attached a pocket in which the load to be sent is placed.

  It appeared in Europe around the 11th century, following the Crusades.

Range: 40 to 80 meters – Weight of the ball: 3 to 12 kg – Rate of fire: 1 per minute – Servants: 8 to 16
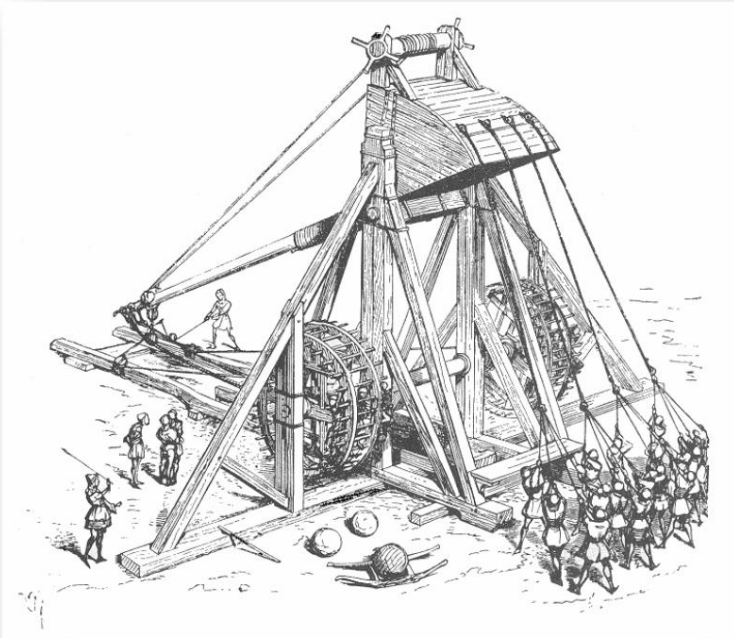
- **the breastwork** (12th – 15th century): the improvement of the perrière by the addition of a counterweight placed on the rod helps to accelerate the traction movement.

Range: 80 meters – Weight of the ball: 10 to 30 kg – Rate of fire: 1 per minute – Servants: 20

14 Reconstruction of a spit.

2. COUNTERWEIGHT WEAPONS:

15 Reproduction of a mangonel.

• the mangonel (12th – 15th century): at the beginning of the 12th century, the machine grew, the counterweight increased, human traction was no longer necessary to launch the projectile. It will be used to raise the counterweight before using the machine. When the counterweight is released, the projectile is ejected by leverage. We would later add winches called carrier wheels in which one or more men took to lift the counterweight called a hutch.

Range: 160 meters – Weight of the ball: up to 100 kg – Rate of fire: 2 per hour – Servants: more than 12.

16 Reproduction of a trebuchet.

• *the trebuchet* (12th century – 16th century) : the size of machines growing vibrations again,   THE caused by the counterweight placed on the balance affecting the precision of the shots and compromising the stability   And of the machine. The solution is to articulate the counterweight in relation to the rod. It was used until the 16th century as a siege weapon to destroy defense structures.

However,   on rate of fire and hand labor necessary for its operation

it is

do not allow it to be used in all conditions.

Range: 220 meters – Weight of the ball: 140 kg – Rate of fire: 1 to 2 per hour – Servants: 60
100.

• **the couillard or biffa** (14th-16th century) : smaller and more compact model than the trebuchet, it divides the counterweight in two on each side of the rod. Range: 180 meters – Weight of the ball: 30 to 80 kg – Rate of fire: 10 per hour – Servants: 4 to 8.

17 Reproduction of a coward.