



# Step Outdoors

## 2. Flatbow

A Flatbow is a bow with non-recurved, flat, relatively wide limbs that are approximately rectangular in cross-section. Most modern flatbows are otherwise similar to the classic longbow.



*Flatbow*

## 3. Shortbow

A shortbow is a shorter version of the longbow or flatbow design. While it is lighter and more maneuverable, it can be drawn less far, therefore stores less energy and hence has a shorter maximum range. Short bows were used for hunting by, among others, many West Coast American tribes and by South African Bushmen.

## 4. Recurve Bow

A recurve bow is the only class of bow that is shot at the Olympic Games. Its basic working principles are similar to that of a traditional longbow. Its defining feature is that the ends of the limbs curve forwards, which increases the power gained from the bow and smoothens the draw. Composite bows are recurved in form.



*Recurve Bow*

## 5. Compound Bow

A compound bow is designed to reduce the force that an archer must hold, yet increase the overall energy stored by the bow. Most compound designs use cams or elliptical wheels on the ends of the limbs to optimize the leverage exerted by the archer and to reduce the holding force of the bow at full draw in what is known as the "let-off".



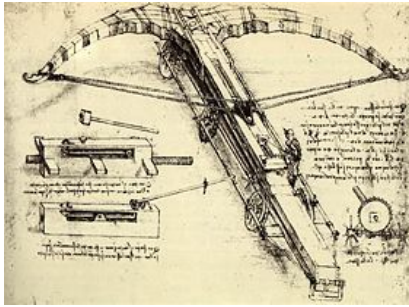
*Compound Bow*

# Step Outdoors

With less force required to hold a compound bow at full draw, the muscles take longer to fatigue, thus giving a compound archer more time to aim. A compound bow must be adjusted so that the let-off occurs at the correct draw length appropriate to the archer.

## 6. Crossbow

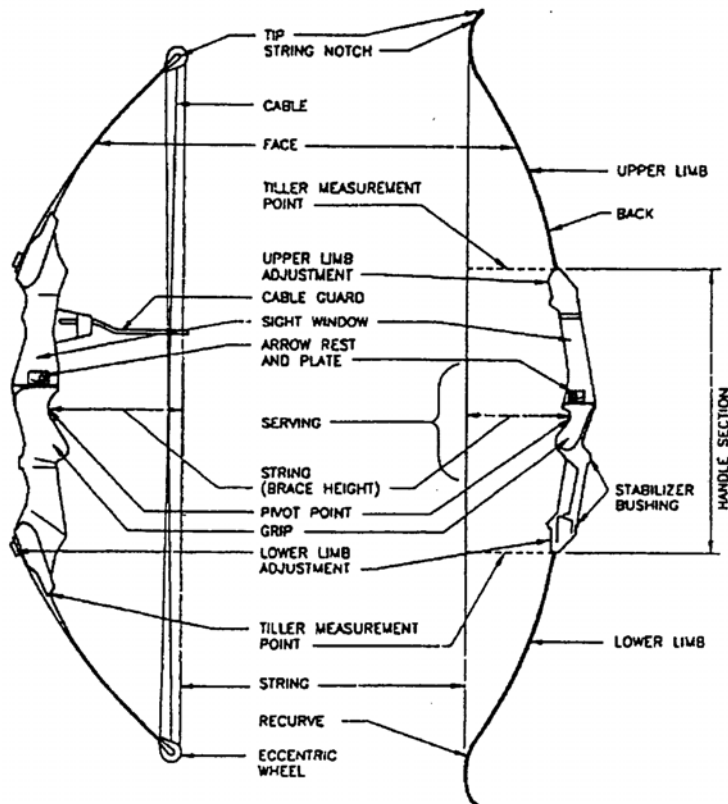
A crossbow is a variation on the general bow design. Instead of the limbs being held vertically, they are mounted horizontally on a stock much like that of a firearm. The limb design can either be compound or a recurve but the basic concept of shooting is the same. The string is pulled back either manually or with a windlass and locked into place. The string remains in this locked position, held solely through mechanical means until the energy stored in its limbs is released by a trigger mechanism, which launches the loaded arrow. The energy stored in the shortened limbs is comparable to the longbow but packed into a smaller design that is also much easier to aim. Crossbows shoot quarrels or bolts, which are shorter arrows than those usual for bows.



## Parts of a Bow

Compound Bow

Recurve Bow



# Step Outdoors

## ACTIVITY

Through discussion have participants identify the obvious differences between the various bow types and the parts of each bow.

## EXTENSION



Read an excerpt from the battle of Agincourt where the English archers turned the tide of battle because of the superiority of their weapons.

### The Battle of Agincourt

The battle was fought in the valley of Agincourt and that of Tramecourt, at the northern exit of which the army under d'Albret, Constable of France, has placed itself so as to bar the way to Calais. The night of 24 October was spent by the two armies on the ground, and the English had but little shelter from the heavy rain which fell. Early on the 25<sup>th</sup>, Henry deployed his army (now only 900 men-at-arms and 5,000 archers because of disease (mainly dysentery)). It is probable that the usual three "battles" were drawn up in line, each with its mounted knights and men-at-arms on the flanks and the dismounted men-at-arms in the centre. The English knights were clad in sturdy iron helmets and short-sleeved chain-mail tunics beneath studded leather vests, and were placed shoulder to shoulder four deep. The English archers being thrown forward in wedge-shaped salients with spikes in the ground to cause a horse charge to veer off, almost exactly as at the Battle of Crecy.

The French were arrayed in three great lines called "battles" with knights in each packed with 40 men deep. On each French flank were the mounted men-at-arms (2,200 in total, 1,100 on each flank), while the centre contained dismounted men-at-arms and the rear was made up of 9,000 mounted men-at-arms. Altogether, there were roughly 36,000 Frenchmen compared to 5,900 Englishmen.

An important factor in the battle was the terrain, which was very muddy from recent rains. This deep mud favored the English force because, once knocked to the ground, the heavily armoured French knights would find it very difficult to stand back up, eliminating the French knights as an effective force of arms.

# Step Outdoors

The mud was deep enough that more than one knight suffocated after being knocked into it. The deep mud also served to prevent the French artillery from taking part in the battle. The French crossbowmen were, as usual, relegated to the rear of the knights and men-at-arms.

For three hours after sunrise there was no fighting; then Henry, finding that the French would not advance, moved his army further into the defile. Near 400 yards from the French line the archers dug-in pointed wooden stakes called palings, at an angle, to ward off cavalry charges, and opened the engagement with a single flight of arrows. The French mounted men-at-arms charged to destroy the archers, only to be decimated and then driven back in confusion. The constable himself headed the leading line of dismounted men-at-arms, but weighed down by their armour and sinking deep into the mud with every step, they struggled to reach and engage the English men-at-arms. Wallowing in the mud, they were easy targets for the English bowmen. Once the French reached the English line it became worse: the French were far too closely packed to even lift their weapons to attack the enemy. The thin line of the defenders was pushed back and King Henry was almost beaten to the ground. But at this moment the archers, using hatchets, swords and other weapons, penetrated the gaps in the now disordered French, who could not cope with their un-armoured assailants, and were slaughtered or taken prisoner.

It has long been told that the famous "two-fingers salute" and/or "V sign" derives from the gestures of English archers, fighting at Agincourt. The myth claims that the French cut off two fingers on the right hand of captured archers and that the gesture was a sign of defiance by those who were not mutilated.

## REFERENCES

Types of bows: <http://en.wikipedia.org/>