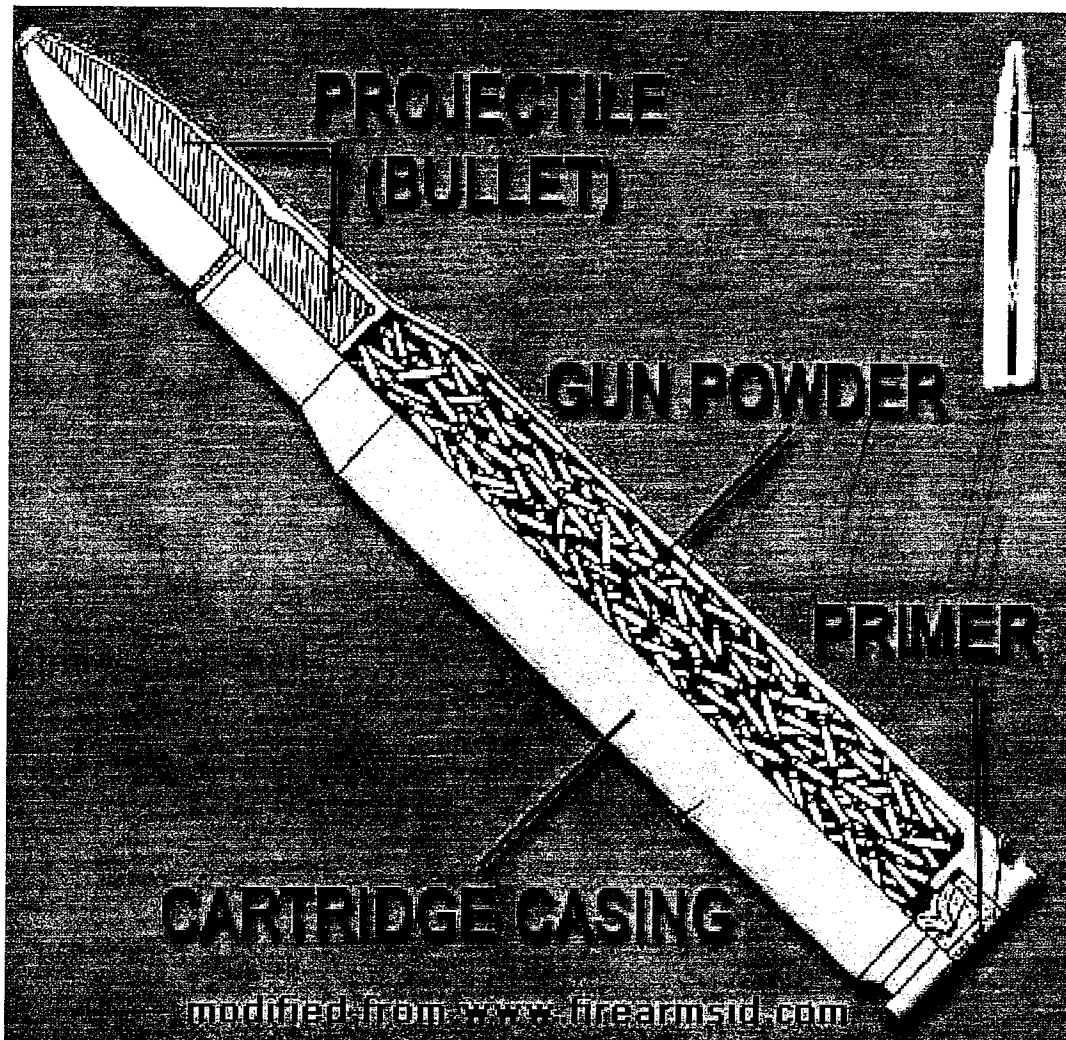


## Bullets and Shells



**Bullet** – For the purpose of discussion here, a bullet will be defined as the projectile that is loaded into a cartridge and fired from a firearm. Bullets are available in various shapes, e.g., hollow point, and weights (measured in grains). See the cartridge diagram above.

**Cartridge** – This is a self-contained unit that includes an outer casing, projectile (bullet), propellant (gunpowder), and primer (source of ignition). Only the projectile is fired from the gun. The remainder of the spent cartridge is ejected from the weapon.

## **Bullets and Shells**

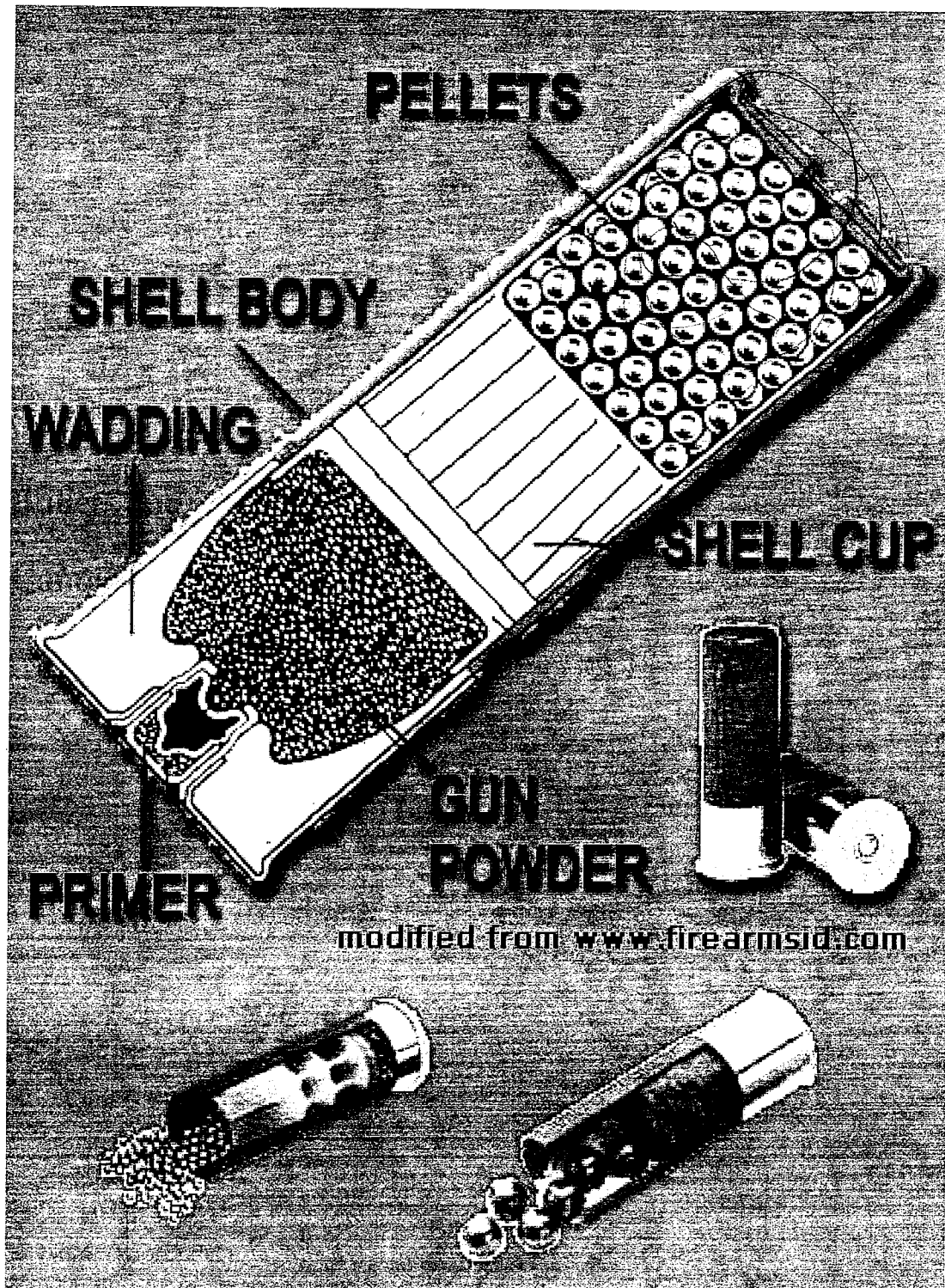
**Cartridge casing** – This component of the cartridge is usually composed of brass and can be vital in linking a weapon to a specific case. The cartridge ejection mechanisms of rifles leave characteristic marks that are analogous to the human fingerprint.

**Primer** – The primer fits into the butt of the cartridge casing or shotgun shell. When the trigger is pulled on a firearm, a firing pin is slammed into the primer. This collision causes the primer to explode and ignite the gunpowder. The force of the explosion is directed down the barrel to propel the projectile out of the muzzle. As with the marks on the cartridge casing, the location of the firing pin impression on the face of the primer can be distinctive for a specific weapon.

**Jacket** – The metal covering over a bullet that overlies a core of different consistency. Jackets are used to manipulate the degree of deformation that occurs upon impact.

## Bullets and Shells

### Components of a Shotgun Shell



**Shotgun pellets** – Shotgun pellets vary in size from 1.27 mm birdshot to 9.14 mm buckshot. The large diameter pellets are used to hunt larger game such as deer.

## **Bullets and Shells**

Shotgun pellets may be made from lead, steel, and various alloys. As mentioned above, lead birdshot has been declared illegal in waterfowl hunting.

**Shot cup** – A shot cup is a plastic sleeve that is loaded into a shotgun shell prior to the projectiles. The cup holds the projectiles and facilitates their uniform discharge from the barrel. The shot cup falls away when a shell is discharged. Cup sizes are specific for different gauge shells.

**Wadding** – Wadding is the material placed between the propellant and the projectile. It is used in shotgun shells and muzzleloader-type firearms to distribute force on the projectile. Today, the wadding and shot cup usually is formed into a single unit.

**Shot string** – As pellets are discharged from a shotgun, they spread out over distance. The area covered by the pellets varies according to distance from the target and what is referred to as the choke. The pattern of the pellets as they reach a target is referred to a shot string. An animal's location within the shot string will determine the number of pellets that strike it.

**Choke** - This term refers to the constriction at the end of the shotgun barrel. The extent of the choke affects the spread of the pellets following discharge from the barrel, thus manipulating the shot string.

**Slug** – Slugs are another type of projectile that may be loaded into shotgun shells. There are two basic types, the Foster (right) and Sabot slugs (left). Foster slugs are

## Bullets and Shells

grooved so that they rifle when fired through a smooth-bore shotgun. Sabot slugs are discharged with a polyurethane sleeve. Slugs primarily are used to hunt bigger game.

