

Penetration of Rifle Bullet.

Material	Maximum Penetration.	Remarks.
Steel plate, best hard	$\frac{1}{8}$ inch ...	At 30 yards normal to plate.
Steel plate, ordinary mild or wrought iron	$\frac{1}{4}$ inch ...	$\frac{1}{8}$ inch is proof at less than 600 yards, unless the plate is set at a slope of $\frac{1}{4}$, when $\frac{1}{8}$ inch is proof at 250 yards.
Shingle	6 inches ...	Not larger than 1 inch ring gauge.
Coal, hard	9 inches.	
Brickwork, cement mortar	9 inches ...	150 rounds concentrated on one spot will breach a 9-inch brick wall at 200 yds.
Chalk	15 inches.	
Brickwork, lime mortar	14 inches ...	9-inch brick wall at 200 yards.
Sand, confined between boards, or in sandbags	18 inches ...	Very high velocity bullets have less penetration in sand at short than at medium ranges.
Earth, free from stones (unrammed)	40 inches ...	Ramming earth reduces its resisting power.
Soft wood—e.g., fir with grain	58 inches ...	Penetration of brickwork and timber is less at short than at medium ranges.
Hard wood—e.g., oak with grain	38 inches.	
Clay	60 inches ...	Varies greatly. This is the maximum for greasy clay.
Dry turf and peat	80 inches.	

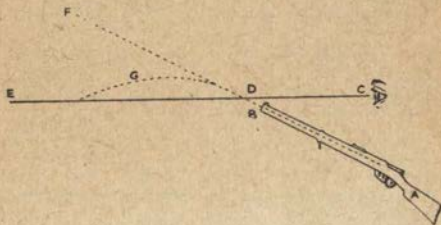
Rifle Definitions.

Axis of the Barrel (AB) is an imaginary line following the centre of the bore from the breech to muzzle.

Line of Sight (CDE) is a straight line passing through the sight and the point you aim at.

Line of Fire (BE) is a line joining the muzzle of the rifle and the target.

Line of Departure (BF) is the direction of the bullet on leaving the muzzle.



The Trajectory (DGE).—The curved line travelled by the bullet in its flight.

The Culminating Point (G) is the greatest height above the line of sight to which the bullet rises in its flight; this is reached at a point a little beyond half the distance to which the bullet travels.

The First Catch is that point where the bullet has descended sufficiently to strike the head of a man, whether mounted, kneeling, standing, lying, etc.