

1. Record Nr.	UNISA996466728803316
Autore	Hazell Paul J.
Titolo	The story of the gun : history, science, and impact on society // Paul J. Hazell
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-73652-0
Descrizione fisica	1 online resource (200 pages)
Collana	Springer Praxis Bks.
Disciplina	683.4009
Soggetti	Firearms - History
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Acknowledgements -- Contents -- 1 The Birth of the Gun -- 1.1 So How Did We Get Here? -- 1.2 Beginnings-A Brief History of Gun Developments -- 1.3 Proliferation -- 1.4 The Naval Revolution -- 1.4.1 Turret Development -- References -- 2 How Guns Work -- 2.1 Principia -- 2.1.1 Newton's First Law of Motion -- 2.1.2 Newton's Second Law of Motion -- 2.1.3 Newton's Third Law of Motion -- 2.2 From Guns to Rockets -- 2.3 The Burn -- 2.4 Let Us Talk About Recoil -- 2.4.1 Muzzle Brakes -- 2.5 The Evolution of Rapid Fire and Automatic Operation -- 2.6 Automatic Versus Semi-automatic -- 2.7 Cartridge Evolution -- 2.8 Bolts -- 2.9 Breeches -- References -- 3 Fast Guns -- 3.1 Why Faster? -- 3.2 Limits with Conventional Guns -- 3.3 Lessons from World War II -- 3.4 From Single-Stage to Two-Stage -- 3.5 And Even to Three Stages -- 3.6 Explosive Guns -- 3.7 Electric Guns -- 3.8 Electrothermal Guns -- 3.9 Explosively Formed Projectiles -- 3.10 Metal Storm -- References -- 4 Big Guns -- 4.1 Medieval Siege Weapons -- 4.2 Is Bigger Really Better? -- 4.3 The Last of the BIG Muzzle-Loaders -- 4.4 Big Bertha -- 4.5 Long Range Artillery and the Paris Gun -- 4.6 Railway Guns -- 4.7 The German V3 -- 4.8 Atomic Annie-280 mm Calibre -- 4.9 The Space Gun -- 4.9.1 Projects HARP and SHARP -- 4.10 Project Babylon (Saddam Hussein's Supergun) -- 4.11 Howitzers -- 4.12 Coriolis -- References -- 5 Making a Gun -- 5.1 Bespoke Home-Made Shooters -- 5.2 Mass Production -- 5.2.1 A Brief History of Steel -- 5.2.2 The Nature of Steel -- 5.2.3 Carbon

Limits -- 5.3 Coping with the Pressure -- 5.4 Making a Gun Barrel --
5.5 Avoiding Gun Wear -- 5.6 The Old, the Odd, and the Outstanding
-- References -- 6 Propellants and Explosives -- 6.1 Why Do
Propellants Function? -- 6.2 The Development of Propellant -- 6.3
Caseless Ammunition -- 6.4 Don't Breathe in!
6.5 Liquid Propellant Guns -- 6.6 Explosives -- 6.6.1 Unintended
Detonation -- References -- 7 The Evolution of Projectile Design -- 7.1
The History of the Bullet -- 7.2 The Role of the Bullet -- 7.3 The Role
of the Jacket -- 7.4 Soft Bullets -- 7.5 Hard Bullets -- 7.6 Long
Projectiles -- 7.7 Explosive Projectiles -- 7.8 The Science of Exterior
Ballistics -- 7.8.1 The Magnus Effect -- 7.8.2 Projectile Drag -- 7.8.3
And Underwater? -- References -- 8 The Science of Terminal Ballistics
-- 8.1 The Basics -- 8.2 Is Firing Guns into the Air Safe? -- 8.3 The
Science of Wounding -- 8.3.1 Low-Velocity Projectiles Do not Cause
Serious Injury -- 8.3.2 Kinetic Energy Transfer Is to Be Viewed
as a Wounding Mechanism -- 8.3.3 Overemphasis of the Effects
of the Sonic Pressure Wave -- 8.3.4 Spheres Assumed to Be a Valid
Model for All Projectiles -- 8.3.5 Animals of 10-20 kg Assumed to Be
Valid Models for Humans -- 8.3.6 Use of Tissue Simulants
with Unproved Equivalence to Living Tissue -- 8.4 Stopping Power --
8.5 Tumbling Bullets (During Penetration) -- 8.6 How to Penetrate
Armour -- 8.7 Soft Armour -- 8.8 Hard Armour -- 8.9 Complex
Armour -- 8.10 Reactive Armour -- References -- 9 Gun Ownership
and Gun Control -- 9.1 The Scope of the Gun Problem in the USA --
9.1.1 The Second Amendment -- 9.2 Mass Shootings -- 9.2.1 Mental
Health Issues -- 9.2.2 Bump Stocks -- 9.2.3 The Odd Relationship
Between Mass Shootings and Stock Prices -- 9.3 Is Gun Ownership
Harmful? -- 9.3.1 More People Are Killed by Hands and Feet, Knives,
Hammers, Medical Malpractice -- 9.3.2 More Guns Reduce Burglary
Rates -- 9.3.3 To Stop a Bad Guy with a Gun It Takes a Good Guy
with a Gun -- 9.3.4 Gun Ownership in the Home Correlates with Gun-
Induced Suicide -- 9.3.5 Restricting Access to Guns Would Lead to Less
'Spur of the Moment' Crimes -- 9.4 So, What Is the Solution? -- 9.4.1
Pre-purchase Tests.
9.4.2 Gun Buy-Back Schemes and Amnesties -- 9.4.3 Smart Guns --
9.4.4 The Last Word -- References -- Glossary -- Index.
