The First Three Hundred Years Of Small Arms
(1326 – 1626)

By Stephen C. Small, Ph.D.
Agenda

• Background
• East or West?
• Users
• Firearms
• Adaptation
• Battle
• Learning
• Clockwork
• C. 1626
• Historical Lessons?
• Q & A
Background
Medieval Europe
Chronology

- 1348-50: Black Plague
- 1337-1453: Hundred Years War
- 1431: Joan of Arc burned
- 1492: New World
- Popes in Avignon, 1309-1417
- Chaucer (c. 1340-1400)
- Lorenzo de' Medici (1449-92)
- Gutenberg (c. 1400-68)

20-year increments
Chronology

00 - 1510 - 1520 - 1530 - 1540 - 1550 - 1560 - 1570 - 1580 - 1590 - 1600

- 1517  
  Luther: 95 Theses

- 1543  
  Copernicus' theory

- 1545-47  
  Council of Trent

1588  
  Def. of Spanish Armada

Henry VIII, r. 1509-47

Luther (1483-1546)

Michaelangelo (1475-1564)

Leonardo da Vinci (1452-1519)

Cervantes (1547-1616)

Elizabeth I, r. 1558-1603

Shakespeare (1564-1616)
East or West?
Devil’s Powder
Inventor of the Firearm?
c. 1313

“Devised by the devil himself, a pipe of iron, loaded with powder”
Users
User Status at Risk

"To be soaked in one's own sweat and blood, that I call the true bath of honor"

- Henry of Laon
The Hand-Held Weapons
Firearms
Medieval Bell Makers
The First Firearm?

c. 1326
The First Small Arm System?
C. 1350

Man firing an arquebus
Ammunition

“...a thunderer which shot balls the size of apples”
Small Arms Ascendancy
Religion and Weaponry
Matchlocks
Snapping Matchlock
Adaptation

Man firing an arquebus
The Armored User

c. 1450
Melding Old and New
Hybrid Small Arms
Small Arms in Battle

Man firing an arquebus
Battle of Barnet
April 1471
Alfonso de Albuquerque
c. 1511
Battle of Pavia
February 1525
Battle of Pavia

Francis I and his Knights
Guesswork and Learning
Rifling

c. 1550
Weapons Analysis
c. 1599

PARADOXES
OF DEFENCE.

WHEREIN IS PROVED THE TRUE
grounds of Fight, to be in the short arm'd weapons,
and that the Short Sword hath advantage of the Long
Sword and long Rapier. And the weakness and imper-
fection of the Rapier fight is displayed, together with an
Admonition to the noble, ancient, virtuous, valiant,
and most brazen nation of Englishmen, to beware of false
teachers of Defence, and how they forfeit their own
natural fights, with a brief commendation of
the noble science of exercising of
Armes.

By George Silver, Gentlemen.

LONDON,
Printed for Edward Blount.
1599.
Small Arms Training

Man firing an arquebus
Clockwork Firearm

The Striker Arm is at the Safe position

Flash Pan Cover

Flash Pan

Flint

Striker Wheel
The Wheel-Lock
German Wheel-lock
Anti-Materiel
Rifle

Weight: 41.8 pounds
Length: 7 feet 6 inches
Caliber: 27mm
Repeating Firearms
Professionalism
Arms-makers

Guilds
c. 1626
Historical Lessons?

- Users sometimes got it wrong
- Old technologies give rise to the new
- Legacy systems linger on
Questions?
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