

GUNS GO TO SEA

[by John H. Lienhard](#)

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Today, artillery goes to sea. The University of Houston's College of Engineering presents this series about the machines that make our civilization run, and the people whose ingenuity created them.

The first clear record of a primitive European cannon is in a manuscript from AD 1327. The first major battle involving firearms was fought at Crécy in 1346.

Now historians try to figure out when gunpowder took to the sea. They have trouble. Down through the 1300's we find references to firearms, but they're elusive and shadowy. For one thing, it's hard to date those old manuscripts.

We also have trouble with Medieval terminology in many areas. For example, it's hard to find the switch from water clocks to mechanical clocks in old documents. Clock makers used names of old clock parts for parts in the new clocks.

The same problem dogs us when we read about weapons. When we read about an arcubus on shipboard, does it mean a gun? The word has also been applied to crossbows - even to longbows.

By the late 1300s we find solid references to firearms on ships. But now we have to wonder: Are these really naval weapons, or are ships simply transporting artillery for armies?

It all begins to sort out by the early 1400s. In 1411 a military writer tells us that naval vessels should greet attacking ships "ryght well with gode bombardes." It's pretty clear that artillery is now a part of naval tactics.

The Dukes of Burgundy in Central France honed the cutting edge of the new weaponry. From 1362 until 1477 they created the finest of the murderous new firearms.

Here's the inventory of a Burgundian galley. The date is 1445. It carries 5 cannons. They're 4 feet long and fire 4-inch shot. It carries two other mounted guns and 12 hand-held guns.

The cannons are a surprise. They appear to be breech-loaders with interchangeable chambers. The chambers can be rotated to avoid overheating. Now that's very fancy technology for 1445.

In 1445, Gutenberg was creating his new printing press. Leonardo da Vinci was born eight years later. The new means of human slaughter was being perfected right on the threshold of the Renaissance.

Firearms played counterpoint to the shining age of art and the expansion of human vision. And I wonder if some unwritten law of compensation might not dictate the action of inventive minds.

So guns ceased to be a shadow accompaniment to war. It was during the glorious Renaissance that they became part and parcel of war -- on land, on sea, and in the mythology of our strange rituals of human contention.

I'm John Lienhard, at the University of Houston, where we're interested in the way inventive minds work.

(Theme music)

Devries, K.R., A 1445 Reference to Shipboard Artillery. *Technology and Culture*, Vol. 34, No. 4, October 1990. pp. 818-829.