

P A L L A S A R M A T A.

Military Essays  
Of the ANCIENT  
GRECIAN,  
ROMAN,  
AND  
MODERN  
ART of WAR.

Written in the Years 1670 and 1671.

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By Sir JAMES TURNER, Knight.

I do not directly find the time of the Harquebusses invention, but you may suppose (since they were so rare in France a hundred and fifty years ago, as appears by *Montuc's* relation, they were not known a hundred and sixty years after their mother Gunpowders birth. But long before the death of that same King *Francis the first*, mention'd by *Montuc*, the Harquebus was become more common in France, and the number of the Harquebussiers was mightily increased; for of those seven French Legions which I told you were instituted by that King, and which consisted of forty and two thousand Combatants, twelve thousand were appointed to be Harquebussiers, and so in process of time the Harquebus encroach'd so fast on both the Long and Cross-bow, that it chac'd them both out of all our European Armies.

The Harque-bus

About that time when the Emperour *Charles the Fifth* and his Brother *Ferdinand* Encamped with a numerous Army of Christians near *Vienna* in *Austria* on the banks of the River *Danube*, expecting the coming of *Sultan Soliman*, the Christian Infantry consisted of eighty thousand, sixty thousand whereof were Pikemen, or those who carried long Staves, and twenty thousand were Harquebussiers.

Among the heavy armed, the *Bohemians* were observ'd to carry Javelins, at the one end of which was tyed fast a Mace of Iron (it was tyed with a short chain of Iron) the Mace was one foot and a half long, wherewith (saith *Polo Giovio*) these *Bohemians* could give so strong blows that they could fell men (though in never so strong Armour) stark dead. Our Author was an eye-witness, but the *Turk* were wiser at that time than to come within their reach, for *Soliman* march'd back.

Now room for the Musket, and room it hath largely gotten, for it hath banish'd from the light armed Foot, Darts, Slings, Long-bows, Cross-bows, Musket bat- and the Harquebusses too: Our present Militia acknowledging no other Weapon for the light armed Infantry, but the Musket and the Sword; and this last I have seen sometimes laid aside for a time, that it might not impede the managing the Musket by its Embarras. And indeed when Musketeers have spent their Powder, and come to blows, the Butt-end of their Musket may do an enemy more hurt than these despicable Swords, which most Musketeers wear at their sides. In such Medleys Knives whose blades are one foot long, made both for cutting and thrusting, (the haft being made to fill the bore of the Musket) will do more execution than either Sword, or Butt of Musket.

Most think that this Hand-gun of a Musket was never used till the Siege of *Rheginon*, in the year 1520, little more than a hundred and fifty years ago, and used. I doubt much, if it be so old, and assuredly if it be, it hath spent forty years of its age before it learned to speak, for about the year 1560, some Muskets were mixed with Harquebusses, and but a few of them too, till practice made them so numerous, that no other Guns were used by the Foot. The longer a Musket is (so it be manageable) the better, for she shoots the further, and the stronger, her Chamber being able to contain the more Powder; and experience daily teacheth what advantage a long Musket hath of a short one. Fifty years ago the Calibre of the Musket was ordain'd by most Princes, particularly by the Estates of *Holland* to receive a Bullet, whereof ten were to be cast of one pound of Lead; that hath not been thought convenient since, and therefore most allow twelve balls of one pound of Lead for a Musket. In the year 1657, the King of *Denmark* agreed with five Colonels of us to furnish our Regiments with Muskets of a bore to receive a ball, whereof fourteen should go to one pound of Lead. I confess this bore was too small for a Musket. A Musket requires the half weight of her ball in fine Powder, and two thirds of common Powder, that is one pound of fine Powder to two pounds of Lead, and two pounds of ordinary powder for three pounds of Lead.

Musket-Rests were used a long time, and in some places are yet, to easè the Musketeers in discharging their Guns, and when they stood Centinel. But in the late Expeditions in most places of *Christendom*, they have been found more troublesome than helpful, a Musketeer in any sudden occasion not being well able to do his duty with Musket, Sword, and Rest, especially if you give him a *Swedish* Feather to manage with them. *Bockler* the Engineer speaks of an Instrument that might serve for both Rest and Feather, and such perhaps would be very useful.

Its Charge of Powder:

Musket-Rests are worn out.