

Hira-Karakuri: The Basic Matchlock Mechanism

The *hira-karakuri* is the most basic matchlock design. The mainspring of a *hira-karakuri* lock is a simple, U-shaped length of metal, usually iron or brass, that is mounted on the exterior of the gun's lock plate. The spring and serpentine arm are kept under tension by a lever called a "sear," which connects to the trigger. Pulling the trigger releases the sear, freeing the gun's serpentine arm to snap down onto the priming pan. The burning match cord ignites the priming powder, and the priming powder ignites the main charge inside the barrel, expelling the musket ball.

Most guns used in the sixteenth century had *hira-karakuri* locks. The locks were simple and relatively cheap to make, but their springs tended to weaken with repeated use.