Matchlock Mechanisms

Many of the earliest guns had very simple designs. They were fired by applying a flame directly to the gunpowder inside, typically through a small hole in the back of the barrel. This method was fine for stationary cannons but awkward for handheld weapons. Matchlocks made aiming and shooting easier through the addition of a spring-loaded arm called a "serpentine." The serpentine held a lit match cord; when the gunner pulled the trigger, the arm snapped forward and ignited a pan of priming powder. The flash set off the main gunpowder charge inside the barrel and fired the gun.

There are many variations on the basic matchlock design, and Japanese gunsmiths introduced their own innovations. As with many technologies, more complex versions had more features but could be expensive and difficult to maintain.

JPN	ENG
カラクリ火縄銃の機関部	Parts of a Matchlock Mechanism
点火した火縄をつけた火ばさみ	Serpentine with lit match cord
平からくり(レプリカ)	A basic hira-karakuri lock mechanism
カニの目かき内からくり(レプリカ)	An internally mounted <i>uchi-karakuri</i> lock mechanism
外記からくり(レプリカ)	A geki-karakuri lock mechanism with coiled spring
引き金	Trigger
地板	Lock plate
カニの目	"Crab eye" (<i>kani-no-me</i>)
火縄	Match cord
火ばさみ	Serpentine (holds the match cord)
胴金	Lock band
弾き金	Mainspring
火皿	Priming pan

火ぶた	Pan cover
平からくりの機構と作動の仕組み (←)	Movement of a <i>hira-karakuri</i> lock (\leftarrow)