**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.

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| **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 *uchi-karakuri* 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” (*kani-no-me*) |
| 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 *hira-karakuri* lock (←) |