

The Weaving Process, from the Beginning

Weaving exists across the world in countless variations of material, pattern, and complexity, but all its iterations share a common approach: warp and weft threads. This involves overlapping vertical (warp) and horizontal (weft) threads in an alternating sequence.

In Japan, weaving began in the early Jomon period (7,200–5,400 years ago) with a simple cloth of woven ramie fibers. The kind produced in Tokamachi was called Echigo *angin*. The earliest weavers used a horizontal proto-loom that consisted of comb-like notches carved into a wooden beam. These notches helped hold in place the vertical warp threads, which were also weighed down at the ends with wooden cylinders. The weaver passed a horizontal thread through the warp threads and then used the cylinders to flip the warp over the weft, creating the weave.

Angin's more finely woven descendant, called Echigo *jofu*, appeared once weaving technology grew more advanced. The thread itself became finer as weavers discovered that twisting plant fibers on a spindle created a thinner, stronger thread. Additionally, the arrival of true looms around the second century BCE made the weaving itself faster and more efficient. The key difference was the use of heddles, rods inserted across the weft to lift a whole series of warp threads simultaneously and allow a thread-bearing shuttle to pass through.

From these humble beginnings, weaving in Tokamachi has evolved and expanded to include mechanized looms, fine-spun silks, and complex weaves that rely not only on the pattern of warp and weft but also on threads tightly twisted to produce an evenly rippled crepe.