

## PRIMITIVE AND ANTIQUE LOOMS<sup>1</sup>

BY BEATRICE BAXTER RUYL

**P**RIMITIVE looms astonish one in the simplicity of their construction and their resemblance to antique looms, their basic relation to most complicated hand looms,—even to the power-driven looms.

All looms are operated by two principles: (1) the warp, a series of parallel reeds, rushes, grasses or threads, into which (2) the weft or filling is woven by covering alternate reeds or threads and in returning diving under the same alternate threads.

Primitive man laid his rushes on the ground, plaited other rushes into these and found the result a concrete thing of use to keep dampness away or cold out. And so the weaver was, who, watching nature and the animals, developed aids and accessories to more accurate results with more elaborate design.

One of the simplest forms of loom is found with the South Sea islanders, *i.e.*, two uprights tied together by a twisted thread. Into this thread is knotted raffia-like fringe, which forms a kilt or skirt. An Alaskan loom is similar. Two forked uprights driven into the ground support a crossbar over which flat rushes have been laid diagonally, and both ends being unattached it must require some skill to weave diagonally back and forth, although the weaver may walk around to the other side of this loom. A later form of loom in Alaska consists of two uprights and two crossbars, one at the top and one lower, over which a continuous warp is tied and woven like a roller towel. This garment is released from the loom by taking out the two crossbars, and with no sewing, no buttons, is just tied on about the waist or breast, and generally woven of gray with blue or

<sup>1</sup>Extracts from Mrs. Ruyl's lecture, delivered before the Club in February, 1918.

natural black stripes of wool or dog hair, quite rough in texture. A third Alaskan loom is of two uprights and top crossbar; the warp hanging though the lower end is bagged to keep the fringe fresh which finishes this ceremonial garment woven in sections of the design, which, painted on skin, hangs behind the warp. This form resembles a taller and wider loom of ancient Greece, the uprights of the latter being more slender and graceful, and the crossbars adjustable, the weaving turning back over the crossbar and the hanging warp threads weighted with bits of metal to make them taut and easier to handle.

The Greek lap loom consists of four bars like a picture frame over which the warp was strung from top to bottom and into which pictorial tapestry was woven, like the modern tapestry looms of Italy and France and Colonial times.

An interesting Egyptian loom is tied to the ceiling and to the floor, woven from the center up and from the center down. This has a batten to make the weaving closer and finer. Both this and another Egyptian loom at which two men might work, one on either side batting home the threads, and with the material wound around the lower beam, suggest the garment and rug looms of the southwestern Indians; of the Navajos especially, of which the uprights are generally trees with a straight crossbar between, from which swings another crossbar to give more play to the warp which is tied to this second beam and strung to one lying along the ground. This loom not only has the batten to make the texture firmer, and is woven from the lower beam up and from the upper beam down, but two crossbar twigs are laced into the warp to assist the weaver in running his long stick or bobbin carrying the filling through the warp without picking up each thread as every loom so far has had to do. The Navajo rug and garment warp threads are shorter than the filling threads, though generally it is the warp which is longer.

The Zuñi and Moki Indians have developed a loom on which they weave sashes and belts. The loom itself looks like a wide comb, the teeth of which are pierced in the center with a hole, through which one set of threads of warp are strung. Another set is strung between the teeth, the whole warp tied to a tree at one end and the belt of the weaver at the other end. By lifting the loom itself the shed is made to pass the filling through so the warp threads show, but not the filling thread. The hills

tribesmen of India have improved this form and have added a set of heddles operated by a crossbar above, thus introducing the same principle as the Colonial heddle, to assist in elaborating a design. The further end of the warp is attached to a crossbar, the crossbar to a rope which like a pulley goes over a hook in the tree and is wound about a stake near the hand of the weaver that he may let it out at will instead of creeping up on the warp as the material is finished, as the Zuñi and Hopi do. Instead of following the Zuñi way of attaching the actual warp to the belt of the weaver, the hills tribesmen and the women of the South Sea Islands wear a leather belt behind them to which the roller is attached, and the finished material is wound upon this.

The sash belting of the pre-Incas and Peruvians, woven on a loom like the loom of the Zuñi and Hopi Indians, often having twenty-eight heddles, showing infinite possible changes in the design, was the most complicated until the forms of the tapestry and Colonial looms were developed. The tapestry high warp, or Gobelin loom, is one on which the weavers work very slowly and see the wrong side of the design. The warp is extra tough and is hidden by the fine filling. The finer the filling the more exquisite the texture. With the low warp, as in Beauvais, the weaver sits over the frame and the design lies immediately under the frame, the bobbins lying over the work. Sometimes three or four weavers are seated side by side, weaving the same lengthwise yard.

The early Chinese wove on a loom not unlike the Swedish and Colonial looms, though it had no back beam around which the woven material could be wound, because the material was woven away from the weaver and stretched over a clothes-horse arrangement at the back of the loom, lying in folds on the floor.

In Colonial, Swedish, French and modern looms the weaving is wound about the front beam, the warp thread through a reed to keep the threads equidistant, through heddles to make a shedd. Two light crossbars keep the shedds distinct and firmly wound about the back beam. In intricate designs, as in the old diaper linen or bed coverlets, sometimes twelve sets of heddles attached to foot pedals automatically make the pattern.