TEXT TINA IGNELL PHOTO KADI PAJUPUU/BENGT ARNE IGNELL

Inventions

Estonian designer, textile artist and innovator Kadi Pajupuu sent us an email with images of a highly original piece of weaving, the like of which I have never seen. The first thing, she said, that came to mind as she cut it off the loom was: – Aha! A snakeskin! Naturally we just had to make the trip over and see how she had woven it.

THERE IS A VERY INTERESTING loom set up in Kadi Pajupuu's central Tallinn studio. One of the weaves on the loom is woven with a sliding reed, *RailReed,* consisting of sections of reeds that can be repositioned. This versatility, coupled with different setts in the reeds, produces special effects in the woven cloth. The technique is one she has worked up and developed for several years, refining and fine-tuning it. Right from the start she made use of ordinary cycle spokes, suitably sized, for their strength and reliability. The variation she showed us, however, has greater flexibility – whatever Kadi turns her hands and mind to undergoes constant development!

– I could also imagine this working on a more mechanical basis, so that the reed sections move according to a set pattern. It should be possible, with the help of somebody who can do the industrial bit. Though I haven't met that person yet.

The other weave is woven with several rigid heddles.

– I was pondering on how I could create twists and crossovers. I had in mind a clear picture of the end product, so I deconstructed it technically. I wanted to be able to move groups of warp ends and have greater flexibility.

– First of all, I needed the ends out of their fixed positions in a batten held reed. The rigid heddle was the solution.

She made contact with and enlisted the skills of a very competent loom- and loom equipment manufacturer. Ahti Parijõgi made Kadi a band rigid heddle with holes and slits large enough for her strong woollen yarns. The rigid heddles have evolved over time and with plenty of experimentation. They are now taller, narrower and lighter. Initially made of plastic, they are today also produced in a laser cut wood.

There is considerable potential for variation by combining warp ends that can be turned as well as woven straight. Like in the shawl that looks like a snakeskin, where the thick yarns are put in cabel clamps at the edges of the rigid heddles which can be opened and make the thick threads change places and float. Smart!

When she weave she uses the rigid heddles to beat the weft.

THE WEAVING THEN on the loom consisted of strong woollen yarn in both warp and weft. The wool is good and stays put in the weaving, she says. Earlier on, she tried out paper yarn but did not get the effect she was after. This thick woollen yarn also produces a slight bubbly quality between the dense sections and the empty spaces formed by turning warp ends. Something she likes.

She shows us a woollen yarn, designed and made by herself. Eight strands are twisted into a thick yarn that is put through a machine wash and fulled.

How many more possibilities might there be available to spinners, we wondered.

The loom itself was also developed according to how Kadi wanted it. All the parts are light and strong.

– The weaving I do is beaten down lightly so the loom doesn't need to be too weighty. And there is no knee bar, it only gets in the way.

She stand to weave and have adjusted the height accordingly. That also means

KADI PAJUPUU

EDUCATION
1981–86 Estonian Academy of Arts, textile art

MEMBERSHIP
Estonian Artists' Association
Estonian Textile Artists' Association

AWARDS AND DISTINCTIONS
(selected)
2010 For the sliding reed, Estonian Textile Artists' Association
2010 Silver medal, KIWIE, Korea International Women's Invention Exposition
Further reading, VM 3/10.
KADIPUU.BERTA.ME

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there is more space for doing the tie-up below the loom. And it has countermarch.

– I suspect that many people are too fixed in their ideas about how a loom should look; I always start from the view that it should function optimally for my requirements.

TO ACHIEVE HER ENDS, she gets help where it is available: from welders, carpenters, small industrial workshops, where different parts are produced that can then spark off ideas for further development. When looking for materials, she often goes to DIY stores. It's a matter, she says, of always keeping your eyes and mind open.

– There is so much that can be developed, once you drop the idea that everything has already been invented.

MANY OF THESE SOLUTIONS and new ideas come to her while she is working at the loom. She does need, she says, the tool or equipment to hand to see what it can do. Development of her equipment and the ways it can be used are areas she is very open to exploring in close collaboration with other weavers. Which is why protecting her inventions from being copied is not a major issue for her. She has applied for and had many of her solutions patented. Not to protect against copying so much as to make a point and get taken seriously.

A pre-requisite for development is that her ideas get taken in new directions. She readily shares them online, through courses or with other weavers.

– Just by discussing things with others I find new solutions. That's how development moves on.

She is teaching at Tartu Art College, the textile department there has been very supportive to her inventions. There she can find people to discuss revolutionary ideas about looms.

TEXTILE DESIGNER ANU SERGO is a skilled weaver, who appreciates and uses the RailReed. Kadi feels Anu has succeeded in drawing out the potential with stunning results.

– My own artistic expression is worked in completely different techniques and materials. This is really a development project I want to share and develop with a lot of other people. The important thing is daring to experiment and try things out. Mistakes and simple swatches also leads on to the next stage. These examples are what I take with me to different specialists to get help with solving the technical questions.

HEDDLES and their function are other areas which Kadi is in the process of investigating. Their function is to guide the thread. We all know from experience how fixed they are when we have made mistakes in the threading.

What if heddles could be made to open and close so that warp ends could be moved around freely?

She shows us a prototype she had made with the help of a plastic tube.

– I have an idea, she says. Now I just need to find the material and the technical solution.

Her experimental work often takes shape in the form of scarves. Partly because they are a good size, swatches that are too small don't tell you very much, and they can also be sold. One of her scarves has intriguing weftways patterns. Crammed and spaced stripes. Kadi tells us these came about quite simply by winding on beyond the range of the beater.

Something, which would be a mistake in most other cases, has become part of the design.

A while ago a new email came.

– Check out my latest idea – *Stepping Reed, (*sections of the reed is movable and create waves with the weft). She finish:

– Can't stop inventing! ∧

above / Kadi Pajupuu at her loom where she developes her weaving. The wooden rigid heddle led to the ones in the loom.
1 / In the "snakeskin" the thick yarn can be removed and float.
2 / Weaving by Anu Sergo using *RailReed.*
3 / Snakeskin scarf woven with rigid heddles.
4 / Weave made with *RailReed.*
5 / Sliding reed sections – *RailReed.*
6 / Different weaves made with *RailReed.*
7 / Experiment with openable heddles.


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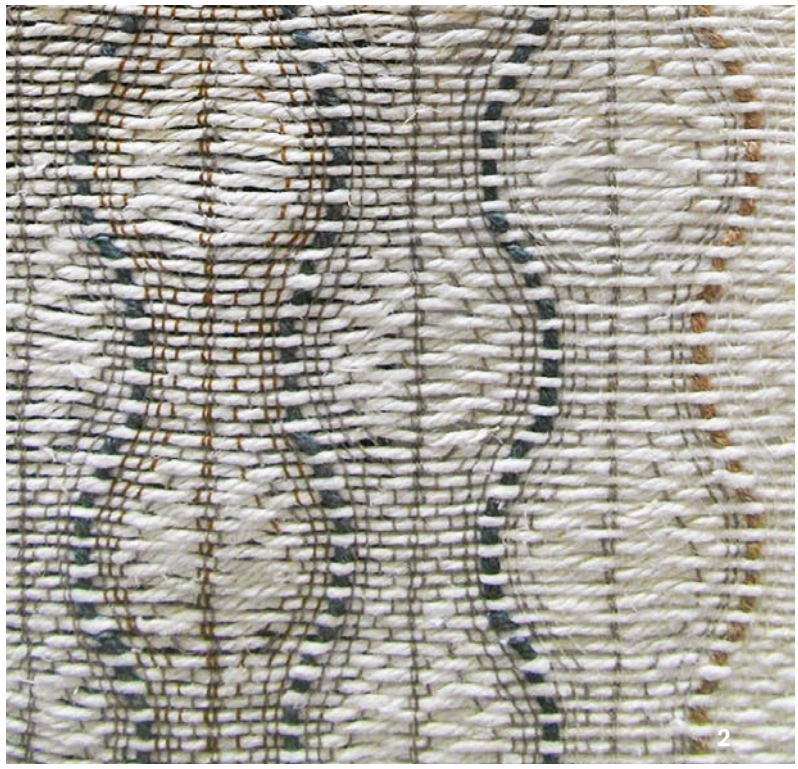
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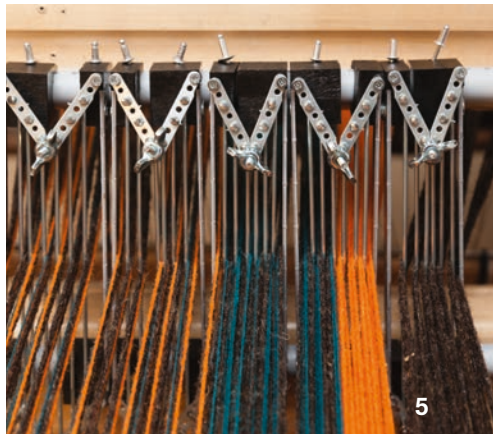
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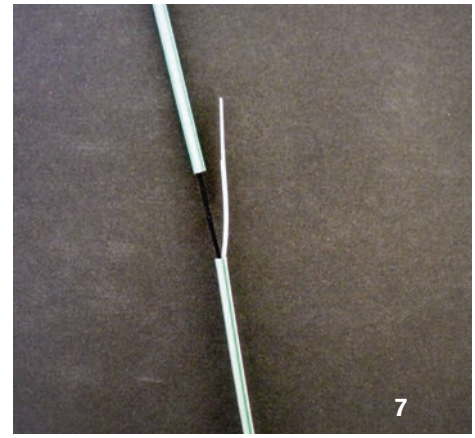
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