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Jacquard Loom

A Co-operative Project by Faye Jacobs

Lang Pioneer Village Museum, located in the County of Peterborough, was established in 1967 to celebrate the rural history of the area. An original, mid-19th century Jacquard loom with two Jacquard heads was donated to the Museum in 1973 by Dini Moes. The original loom frame with one of the heads has been restored and, to maintain its integrity, is used for display only. In order to have a working Jacquard loom for demonstration and weaving, the second loom head was mounted onto a replica loom. The Peterborough Handweavers and Spinners formed a core part of the Jacquard Loom Leadership Team. Their “weaving expertise was invaluable and necessary,” stated Laurie Siblock, Assistant Manager of Lang Pioneer Village Museum.

The Jacquard loom is a specialised loom, invented in 1804 by Joseph Marie Jacquard, a silk-weaver from Lyon, France. Though Jacquard was not the first to use a chain of punched cards to control the weaving process, he was the first to be successful at it, and for this he was recognised by Napoleon and given a lifelong pension. The punched cards control the weaving process, each card corresponding to one row of the design, enabling an ordinary weaver to produce beautiful patterns such as brocade, damask and matelassé. The Jacquard head is

just one of the components of the loom.

In 2004, Didier Schwartz, a master weaver and loom builder, conducted meticulous restoration of the display Jacquard loom. He also built the new replica loom frame out of 60-year old British Columbia fir and attached the second Jacquard head that had been donated to the museum along with the original loom. Didier then taught the production team, composed of members of the Peterborough Handweavers and Spinners Guild and Lang Pioneer Village Staff, how to harness the loom. The S.W. Lowry Weaver Shop and Jacquard Loom Interpretive Centre opened at the Museum in 2011. The building is a reproduction of a late 19th century weaver shop and houses the two Jacquard looms, and the two and four harness barn looms along with many artifacts and weavings from the Lang collection. In July 2013, Didier was contracted by the museum to teach a working group of weavers to prepare the replica Jacquard loom for weaving, demonstrations, education and interpretation.

There were many steps and challenges involved in harnessing and preparing the replica Jacquard loom for weaving. The following highlights a number of the steps along with photos of the journey:

1. The punched cards that sit on a metal structure

fixed to the loom frame were ordered, based on the pattern found on punched cards that were donated with the original loom and Jacquard heads. These 216 cards had to be hand laced together to create a continuous chain of cards. Basia Baklinski, conservator from the Lang staff, tackled this portion with the exactness of a master.

2. Next, climbing to the top of the loom where the head sits, Faye Jacobs tied 136 waxed cords, knotted so they would not pull through the holes in the top trap board, then passed

down through the second trap board and threaded through horizontal rods. When activated by the treadle, the horizontal rods press against the next punched card in the sequence. If there is a hole, the rod passes through the hole thus raising that warp thread which opens the shed to create the pattern.

3. Parallel to this activity, a team headed by Lois Watson prepared 1088 lingos (30 g lead weights). One cord was looped through the lingo, slid on a mail (eye) and an overhand

Faye Jacobs and Didier Schwartz starting at the top
Credit: Jacquard Loom Leadership Team





Top: Team preparing lingos - **Credit:** Lois Watson



Bottom: Cross point with centre point border - **Credit:** Faye Jacobs



Centre: Jo Harris, one of many who warped the Jacquard loom

Credit: Faye Jacobs

knot was tied. Then the second cord was threaded through the top of the mail. Both ends of the cords were brought together and threaded through one of the 272 holes on one of the four wooden journals. A secure bead was placed on the cord with an overhand knot so that the cord did not slide back through the journal. These cords with mails and lingos were used in place of heddles. Everything was tied and weighted precisely with all the eyes of the mails lining up so the warp threads for the woven cloth could pass through them evenly.

4. The upper cords from the head were tied onto a new set of long cords that were doubled and threaded in a pattern called a cross point with a centre point border to the left. Each end of these cords was then tied to the cords with the knot

and bead on top of the journals making a total of 1,088 cord ends tied over the four journals.

If this process sounds complicated, that is because it was. It was a big learning curve, not only for the Lang staff, but also for the Peterborough Handweavers and Spinners who already began the process with considerable weaving experience. But finally, the replica Jacquard loom and head were harnessed and ready for the warp.

This whole process took about one year. Many people from numerous disciplines and communities came together to make this happen. In July of 2014, members of the Museum Jacquard Team came together with experts on Jacquard looms and complex weaving. Richard and

Chris Jeryan, weavers from The Henry Ford (museum), complex weaver Jette Vandermeiden and automation engineer Harry Vandermeiden offered their expertise on the final adjustments needed.

The vision of profiling Lang Pioneer Village Museum's rare Jacquard looms in the S.W. Lowry Weaver Shop and Jacquard Loom Interpretive Centre at Lang Pioneer Village is now a reality.

The Peterborough Handweavers and Spinner Guild and Lang Pioneer Village Museum staff, wish to thank the Ontario Handweavers and Spinners for financial support for the work of the members of the Peterborough Handweavers and Spinners on the project. They also wish to thank the many individuals who lent their expertise, knowledge and time to bringing the Jacquard looms, a rare piece of

local history with international importance, to life.

To learn more about the Jacquard Loom Project, come visit us and attend the Jacquard loom ribbon-cutting ceremony at the Festival of Textiles on Saturday, August 15, 2015 at Lang Pioneer Village Museum.

Jacquard Leadership Team:

- Karen Jopling, Operations Manager, Lang Pioneer Village Museum
- Audrey Caryi, Museum Specialist, Lang Pioneer Village Museum
- Faye Jacobs, weaver and Jacquard loom specialist
- Lois Watson, weaver and researcher of Samuel Lowry
- Wendy Cooper, weaver and fibre events organiser, and former curator of the Handweaving



Above Right: Noor Iqbal and Faye Jacobs checking on a slipped knot - **Credit:** Jacquard Loom Leadership Team

Museum and Arts Center in Clayton, N.Y.

- Laurie Siblock, Assistant Manager, Lang Pioneer Village Museum
- Basia Baklinski, Conservator, Lang Pioneer Village Museum
- Julia Gregory, Lead Interpreter, Lang Pioneer Village Museum
- Rhonda Akey – Interpreter and Collection Intern, Lang Pioneer Village Museum
- Marie Magee – weaving interpreter
- Graham Varrin, Facilities Coordinator, Lang Pioneer Village Museum

Peterborough Handweavers and Spinners Guild participants:

Faye Jacobs, Wendy Cooper, Lois Watson, Marie Alexander, Penny Boyd, Beverly

Clark, Judy Denny, Kathleen Elaschuk, Carol Erwin, Jo Harris, Marie Magee, Samantha Price and Krystyna Perron.

Other Participants:

- Kim Bushby, Great Pine Ridge Fibre Arts Guild
- Lyn McGowen, Workworth Guild
- Astrid Nordholt, Great Pine Ridge Fibre Arts Guild
- Noor Iqbal, Alberta Handweavers
- Lois Wyndham, Huronia Handweavers
- Hope Mill Engineers, who volunteered technical expertise, led by Jack Crowther and Bob Rehder.

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Don't miss the following textile event:

Festival of Textiles
Saturday, August 15 ~ 10 am to 4 pm

Featuring demonstrations and displays by local guilds working in textile traditions and a ribbon-cutting ceremony for our replica Jacquard loom!

GPS: 104 Lang Road, Keene 705-295-6694 1-866-289-LANG (5264)

www.langpioneervillage.ca