

# mending concepts booklet

*Louise Ravnløkke & Iryna Kucher*

*This booklet has been made to provide an introduction at workshops as part of the research project Mending Concepts by Iryna Kucher and Louise Ravnløkke during Summer 2021 at Lab for Sustainability and Design, Design School Kolding.*

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## **MAKING MENDING – A JOYFUL FASHION ACTIVITY**

Experimenting with mending may be a joyful fashion activity. By playing with the expression of a mending project the durability of garments can be extended while also giving the possibility of bringing new life to the wardrobe.

The goal of ongoing design research is to directly impact the mending practice while advancing theory that will be of use to others. It is at the core of practice-based design research, which understands cognition not as an element located within the individual but rather as a process where learning, knowing, and context are co-constituted.

On these premises, the workshop intends to gain knowledge of the participants' understanding of mending practices and to test the mending spectrum, which potentially could allow the scalability of the practice on a domestic level.

The authors' approach to investigating scalability through design aims at understanding to what extent people want to engage with mending. Consequently, the study focuses on the growing number of people who want to engage in mending practices. The authors aim to raise the possibility of cultivating activities related to fashion, that engage people with their clothing in other ways than the most dominant market-driven approach, while simultaneously obtaining more knowledge on the possibilities and limitations of scalability.

## THE MENDING SPECTRUM

The mending spectrum is built upon the initial mapping of possible typologies of garments' damages, corresponding to the range of treatments, combining the techniques, materials, and colours. All the treatments are flexible in terms of aesthetics and finish, allow different scales of engagement with mending (from damage control to reconstructive mending), and can be facilitated by multi-functional mending tools.

The mending spectrum provides an overview of different approaches to mending garments. Before beginning a mending project, it is essential to make a diagnosis of the damage. For mending garments, it is about controlling the damage for it to not grow bigger – which can make it more difficult to repair. Building on being able to control the damage it is possible to depart the mending project in two directions: reconstructing what is damaged or taking a more decorative approach to repairing the damage. Reconstructive mending is about making the mending as invisible as possible. This can be done by using stitches, supportive patches on the backside of the fabric, or by using a technique such as reweaving. Reweaving is one of the techniques which requires a certain level of skill. Other mending techniques and concepts can be approached at more levels depending on the ambition of aesthetic expression. The mending spectrum indicates what mending technique and concept can result in a reconstructive or decorative outcome. Techniques and concepts as stitching, patching, and swiss darning can be taken in both reconstructive or decorative directions depending on the materials and aesthetics applied. This is to be explained further in the section describing the different mending techniques and concepts, as well as the topic of scaling aesthetics in domestic mending will be further explored and discussed in the workshop.

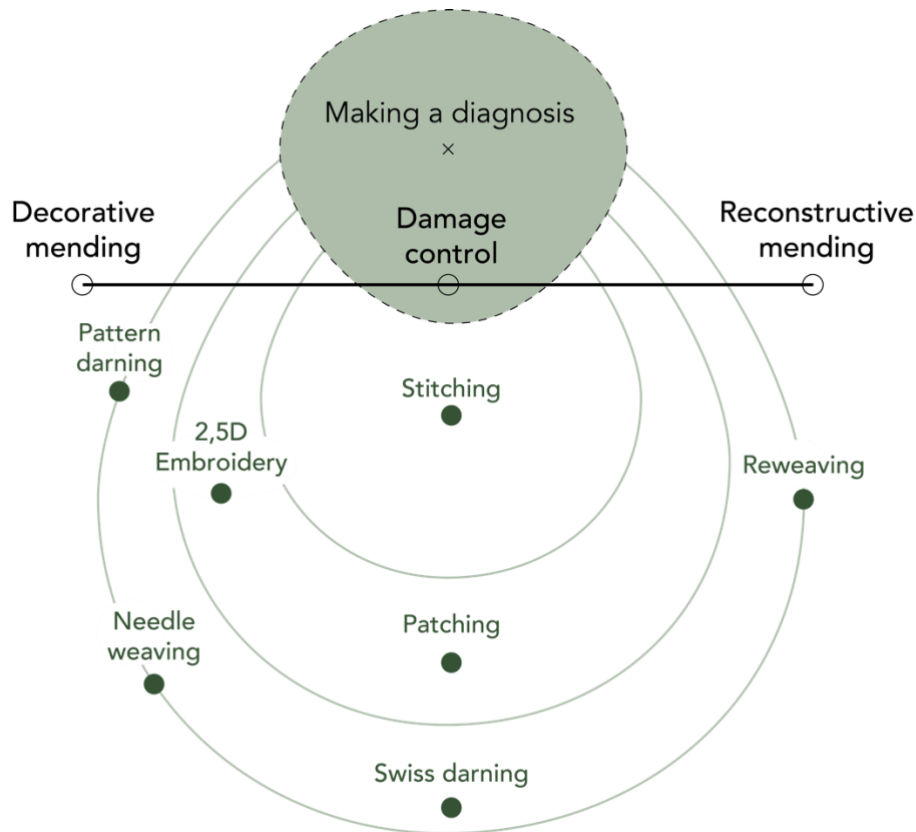


Fig. The mending spectrum

## DESCRIPTION OF MENDING TECHNIQUES AND CONCEPTS

This section gives a further description of the mentioned mending techniques and concepts supported by examples of how they can be applied. The mending techniques and concepts can be used in different ways depending on the damage type, size, number of damages, garment material, fabric construction etc. Furthermore, all techniques and concepts can be combined in a version that suits personal ambitions for skill level and the aesthetic expression of your mending project.

### Stitching

The basic stitches: running stitches, back stitch, blanket stitch, and whip stitch, can be used to support torn fabric, stitch a hole, fasten a supportive patch of fabric, etc. Stitches can be varied in length and tightness dependent on the material of the garment, the damage or the wanted expression of the mending project.

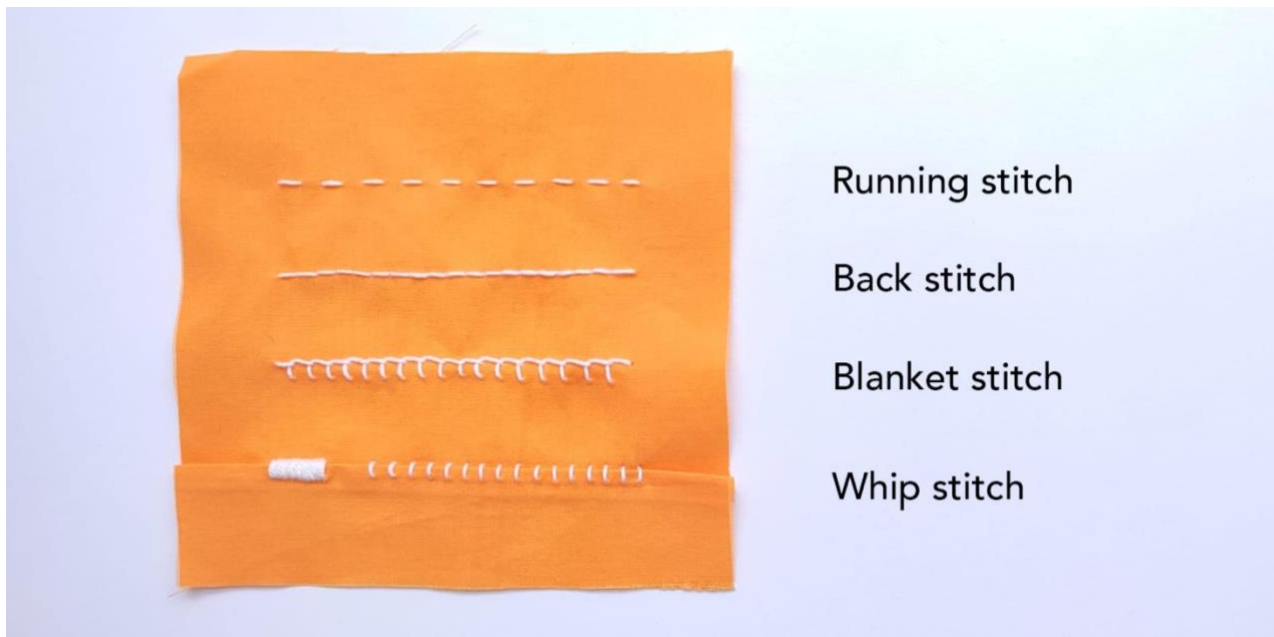


Fig. Examples of the 4 most common stitches for mending: running stitches, back stitch, blanket stitch, and whip stitch.



Fig. Mending of the small hole in knitted jumper using whip stitch and a darning mushroom. The result is seen in the lower image to the right.



*Fig. Mending of torn hemline in knitted jumper using a whip stitch. The result is seen in the lower two images.*

### **Patching**

Patching is a typology of repair which utilizes a piece of cloth or other material used to strengthen a torn or weak point. By choosing the material for the patch, it is important to focus on both the additional material for the patch and the material of the garment. They should have similar properties and weights. It can be useful to consider the thread count. Fabrics with higher thread counts are often thinner, softer, and more likely to last longer. If the materials are prone to fraying, the reinforcement of the edges should be taken into account.





*Fig. Mend of worn-out fabric on silk chamise using patching and running stitches in different colours and effect treads. The result is seen in the lower two images.*



*Fig. Mending of torn fabric on silk dress experimenting with patching in combination with running stitches and whip stitches with loose tread ends. The result is seen in the lower two images.*

## **2,5D Embroidery**

There are more than 400 types of different stitches from around the globe (<https://www.embroidery.rocksea.org>). Different stitches and associated hand embroideries are an eloquent blend of different histories, cultures and times. In the picture below, you can see some of the most common embroidery stitches: French knot, back whipped stitch, back woven stitch, pattern darning, sating stitch, chain stitch, and stem stitch. These examples can inspire you. But we also invite you to think about the cultural heritage of your country and integrate your mending project with stitches that represent you the most.



*Example of embroidery for mending*



*Example of embroidery as a part of decorative mending*



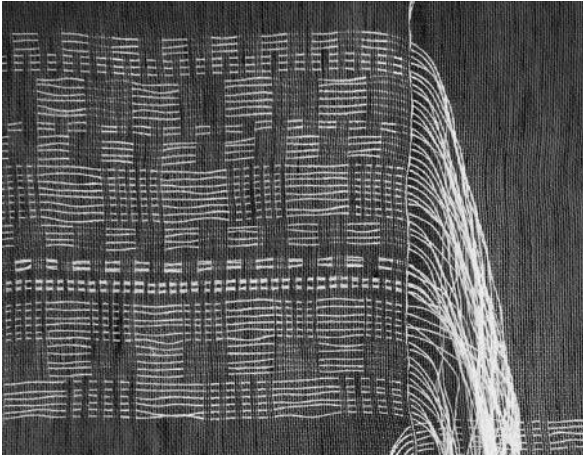
*Fig. Mending of worn-out fabric on silk chamise using patching in combination with running stitches and French knots in different colours and effect treads.*

**Pattern darning**

Pattern darning is a type of embroidery that uses parallel rows of straight stitches of different lengths to create a geometric design. It can be used to reinforce torn and worn garments or for covering the stains. By using the same thread of your garment, you can achieve more sophisticated and less visible mends.

The Japanese Kogin embroidery is an example of surface covering patterns that can be used for making pattern darning. Kogin embroidery is sewn from side to side over a selected number of threads – some running on the backside and some in the front. This technique supports the existing worn-out fabric or can be used to cover a selected area.

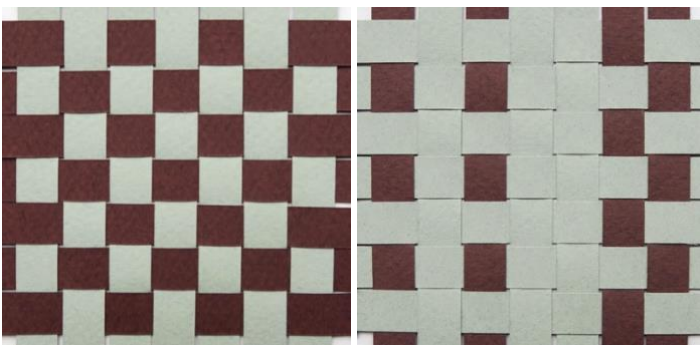
*Example of pattern darning – borrowed from world wide web*



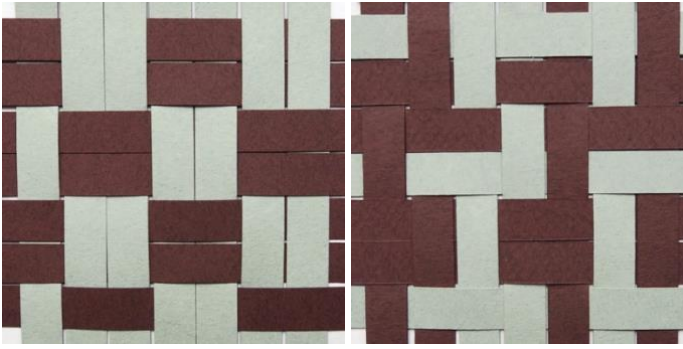
### **Needle weaving**

Needle weaving is a thread structure that creates a mesh across the fabric. A “loose weaving” of basic needle weaving appears as a grid, however, different weaving patterns can be a variation of this technique. It is very versatile and can be used for mending holes, tears, reinforcement, or covering stains. The execution of this mending treatment requires a darning or mushroom.

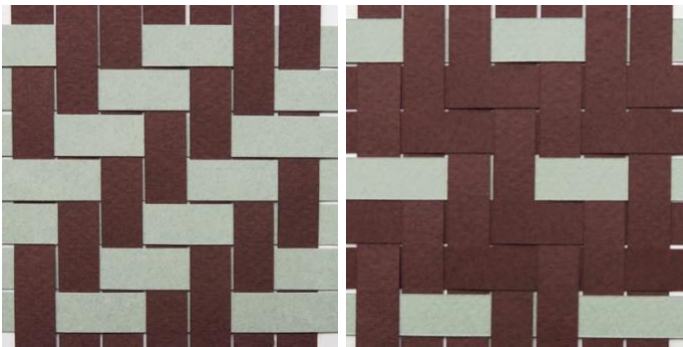
Needle weaving gives a possibility to advance skill level and complexity. For example, a beginner’s level can be plain weave, and advancing can be making a pattern of hopsacks or twill structure (see illustration).



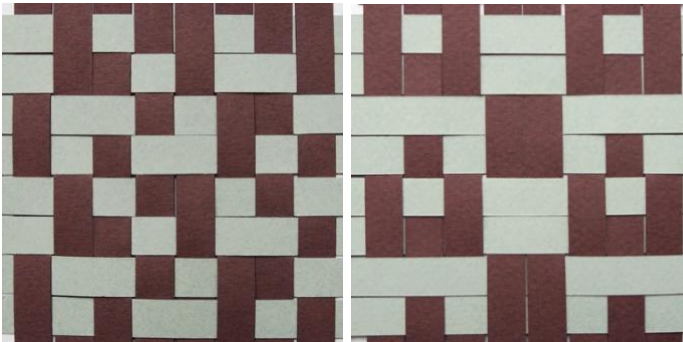
*Fig. Plain weave structure (left). Plain weave playing with colours (right). The most common and basic weave structure. A plain weave structure has the highest number of interfacing possible.*



*Fig. Hopsacks structure (left). Hopsacks structure playing with colours (right). Hopsacks is a variation of plain weave where two (or more) ends work together.*



*Fig. 2/2 Twill structure (left). 2-2 twill structure playing with colours (right). 2/2 Twill is a structure giving a diagonal effect in the fabric.*



*Fig. Examples of combining basic weave structures and play with colours.*

*Example of needle weaving mending a hole in a jumper (example with 1 and 2 colours)*

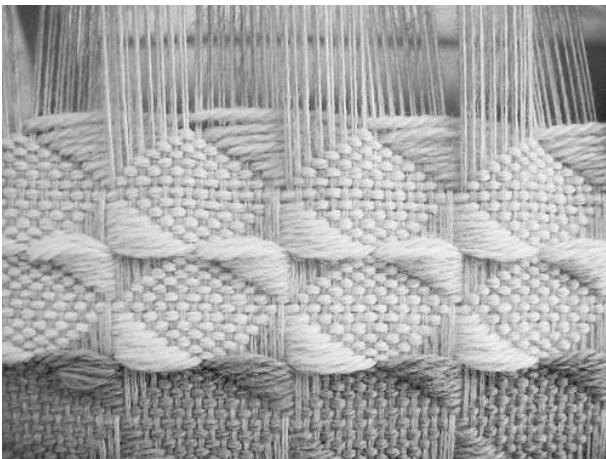






*Fig. Examples of combining plain weave using 1-coloured (lower left) and 2-coloured (lower right) mend.*

*Example of more advanced needle weaving – borrowed from world wide web.*



### **Swiss darning**

Swiss darning, also known as a duplicate stitch, is a great way to add small details to your knitting. It works by covering a stitch with an embroidery stitch of the same shape as the stitch beneath it.

Stitches can be made freestyle or with the assistance of a darning. A darning is a great tool when mending bigger holes. If the damage (wear or tear) has not yet become a hole, stitches can be made by following the course of the knitted loops.

*Example of swiss darning repairing a sock (example with 1 and 2 colours)*

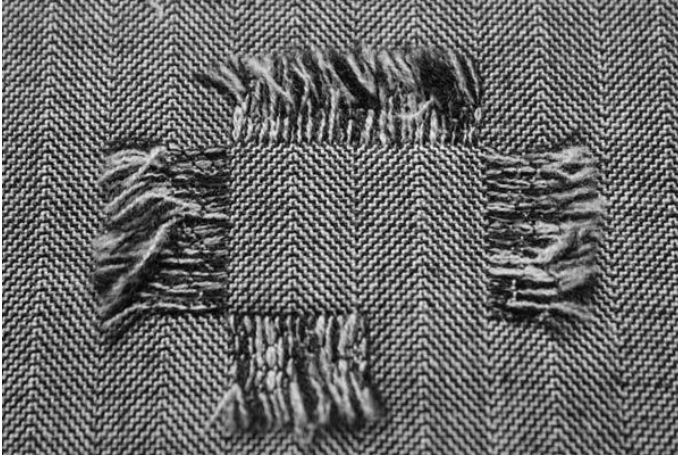




### **Reweaving**

Reweaving is a sophisticated mending method consisting in rebuilding the woven structure of a damaged garment. It requires a high level of preparation, experience and the material of the same thread of the garment. Usually, it is executed by professional repair services with the help of professional equipment and magnifying glass.

*Example of reweaving – borrowed from world wide web*



## MAKING A DIAGNOSIS

Making a diagnosis of your damaged garment will help you become more aware of what intervention is needed, and at the same time what the situation inspires for. You can use the questions as a guideline where your answers direct your mending project.

### Making a diagnosis step 1: Understanding the damage

- What type of damage does your garment have? (Hole, tear, tear and wear, stain)
- Is there more than one damaged area?
- What is/are the size(s)?
- Does/do the area(s) require another support material (for example fabric)?

Support from another material can be needed when holes are large or worn out. If another patching material is needed, you may consider the fabric to be close to the existing material – for example in relation to thickness and flexibility.

- What mending technique or concept do you find most relevant for the damage, and which one(s) inspires you to experiment with?

Different types of damage require different techniques. Your approach depends on the type of damage and your aims for the expression of the result. Likewise, can the construction of the garment fabric (knitted, woven or non-woven) make some techniques more relevant than others? For example, in terms of flexibility or structure. See the description of mending techniques and concepts for further guidance.

### Making a diagnosis step 2: Understanding your way of aesthetic expression

Mending projects can be made more or less expressive compared to your garment.

- What direction of expression would you like for the mending creation?
  - o Designed decoration
  - o Neutral reconstruction
- What do you find most appealing for this mending project?
  - o A contrast to the existing garment design?
  - o A supplement to the garment expression?
  - o Making the mending as neutral as possible?
- Which colours and materials would you choose for your mending project?

- (Take a look at the provided materials and make your preferred selection).

You may consider the weight of the yarn/thread you will choose for your mend. It will affect the visibility of the mend. The closer the weight of the garment material fabric is to the weight of the thread, the less visible will be the mend at the end.

### **Making a diagnosis step 3: Initiating your mending project**

You can use the presented examples and instructions as an inspiration to plan your mending project, including what type of aesthetic expression you would like if you preferred decorative mending.

#### *Mending of holes*

When the damage of your garment has resulted in one or more holes, start by making a strategy of how to secure the damage.

#### *Mending of stains*

When the damage is a stain, start by making a strategy of how to cover the damage or supplement it with a partial coverage.

#### *Mending of tear and wear*

When the damage is a result of tear and wear, you may consider using a mending technique or the concept of reinforcement. This can either be using patching in form of an additional fabric or by making a supporting structure of additional threads/yarns.

#### *Planning your mending project*

See your mending project as an artwork with a functional effect to support your garment. Work in layers from bottom to top. It can help you to make a drawing of your mending project or you can go with a freestyle approach.

- How would you like your mending project to be like?

### **MATERIALS AND AESTHETICS**

The two selections of materials are developed to provide a set of threads/yarns and fabrics with different aesthetic expressions. The materials represent aesthetic qualities of smooth, rough, shiny, matte, textured, solid, and flexible. The selection of colours comprises three lighter and darker neutral tones and two brighter accent colours. The colours are kept in a matching palette which can be combined or may be used together with other materials according to the garment and personal preferences of the mending project.



Fig. Material selection 1 (left). Material selection 2 (right).

## Material selection 1



### Fabric quality overview

- 1a. – Jersey /Cotton, 98%, Lycra 2%
- 1b. – Cotton poplin /Cotton 100%
- 1c. – Crinkle cotton /Cotton, 100%
- 1d. – Plain weave /Cotton, 100%
- 1e. – Warp satin /Cotton, 100%

### Overview of yarn qualities





## Material selection 2



### *Fabric quality overview*

- 2a. – Jersey /Viscose, 98%, Lycra 2%
- 2b. – Crinkle cotton /Cotton, 100%
- 2c. – Cotton poplin /Cotton 100%
- 2d. – Warp satin /Cotton, 100%
- 2e. – Plain weave /Cotton, 100%

### *Overview of yarn qualities*



## MENDING TOOLS

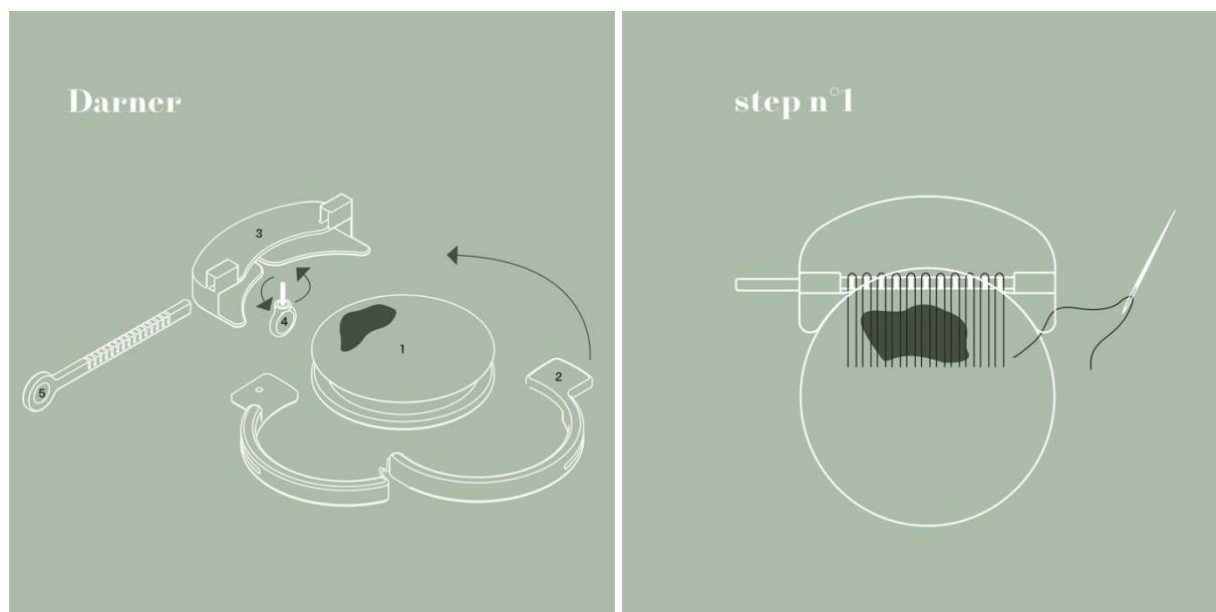
The toolset includes three different mending tools: the darner, mending mushroom and embroidery hoop. All the components of the toolset are interchangeable, and the separate elements allow different assemblages. It is designed for the easy maintenance, repair, and replacement of single components. And the 3D double extrusion supports easy reproducibility in the local contexts.

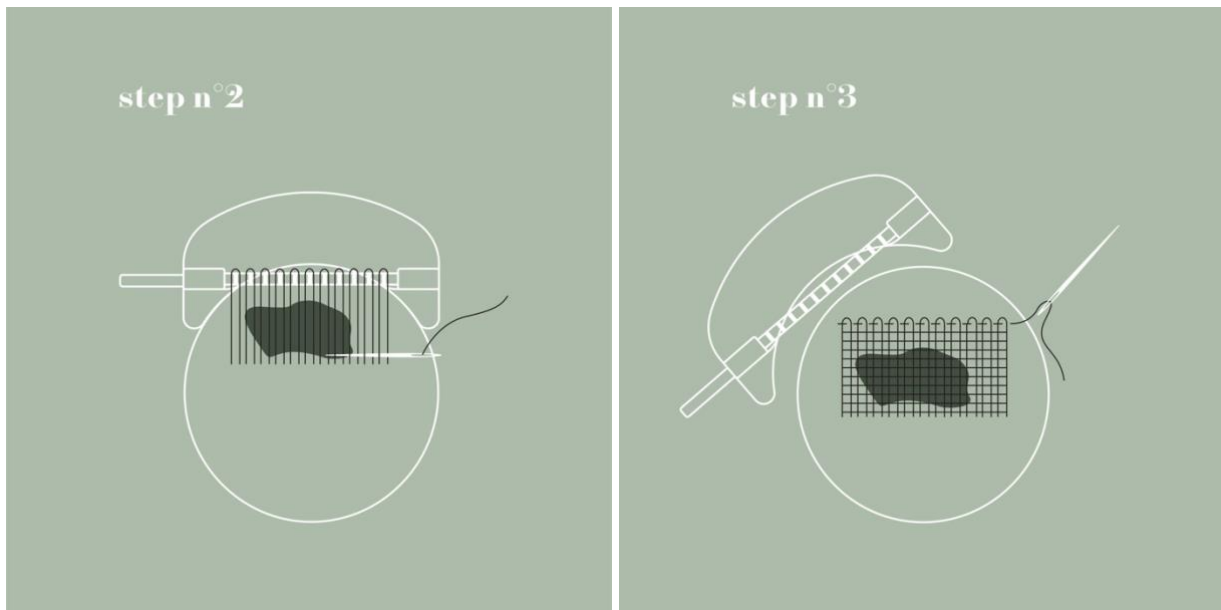
The darner is mainly used for needle weaving or swiss darn, while the mending mushroom and embroidery hoop can be utilized for all the techniques of the spectrum. You can choose the tool which is the most suitable for your mending.

### The Darner

Suggestions on how to use it: Take the mushroom's head (1) and place it with the convex side under the garment's hole. The hole should be close to the edge of the head. Fix the hoop (2) around the mushroom's head (1). Insert the mushroom's head (2) into the body (3) of the darner, and fix it with the screw (4). Finally, put the beam (5) into the body.

Start by stretching the longitudinal threads as shown in the picture. Weave the thread horizontally in and out, until you get to the other side, then turn around and go back again. When the longitudinal rows of thread come to the hooks, separate the darning body from the head. Remove the thread from the beam, and sew the loops with the whip or running stitches.





### **Mending mushroom.**

Can be used as a support for all the mending techniques of the spectrum.





**The embroidery hoop.**

The embroidery hoop is mainly used for embroidery techniques; however, it can be utilised also for supporting needle weaving.

