

# Second Heddle Kit Instructions

**Use for**

- weaving finer fabrics
- making more complex patterns i.e. Summer and Winter and Taquete

**FINER FABRICS**

- Two 7.5dpi (30/10cm) reeds will give 15 ends per inch.
- Two 10dpi (40/10cm) reeds will give 20 ends per inch.
- Two 12.5dpi (50/10cm) reeds will give 25 ends per inch.

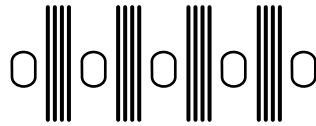
**ASSEMBLY**

Attach the two new support blocks to the insides of the loom behind the original support blocks. There are four screws provided and pre-drilled holes in the loom sides.

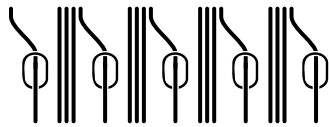
You will need an extra heddle identical to the one you have.

**WARPING**

1. Put one of the heddles in the front supports and start warping the normal way, BUT place two loops in each slot. This gives you four ends in each slot. Roll the warp onto the back roller in the usual way.

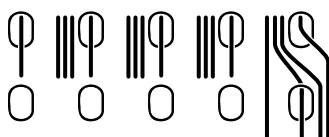


2. Start on the right side. Take one of the four ends out from the slot and thread it through the hole to the right. Now you have three ends in the slot and one in a hole.

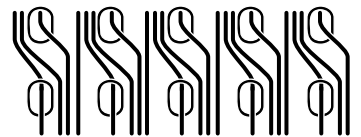


3. Take this heddle from the front support blocks and place it in the rear ones. Place the other heddle in the front supports.

Begin threading the front heddle the same as you did the back heddle. The end in the outermost hole goes into a slot on the front heddle. The first of the three ends (from the neighbouring slot on the back heddle) also goes into this slot. The next of the ends from the "back" slot goes into a hole. The last of the ends from the slot, plus the end from the next hole, plus the first of the ends from the next "back" slot go into the next slot on the front heddle.



4. You will end up having one end in a hole and three ends in a slot on each heddle. There will be alternately one end in a hole and one end in a slot all the way across the warp.



Tie the warp to the front roller in the usual way. You are ready to weave!

**WEAVING**

Put both heddles in the low position, insert the weft, pull the front heddle forward to beat the weft in place. LEAVE IT HERE TOWARDS THE FRONT while you move the back heddle to the top position. Beat the weft once more and put the front heddle in the top position.

Repeat this for each weft, moving the back heddle to its new position while the front heddle is waiting towards the front.

When you are familiar with this you are ready to experiment.

## DOUBLE WEAVE BLANKETS ON THE RIGID HEDDLE LOOM

By Kim Schiffmacher of Summit County, Colorado, USA

Soon after acquiring my 32" (80cm) rigid heddle, I was struck by the desire to do bigger things. Thanks to articles by Elsa Krogh<sup>1</sup> and Betty Davenport<sup>2</sup> I soon discovered the joys of double weave. Thus far I have made 3 blankets and have more planned.

In order to do double weave on the rigid heddle you need the 2nd heddle kit, two heddles of the same size, and two pick-up sticks. A sharpened dowel for clearing the lower sheds comes in handy for sticky warps. For the handspun, worsted weight I have used for my blankets I have found the 7.5 epi heddle to work the best. I have used 2 · 10 epi heddles and warped each at 5 epi but the weave was a bit looser than I wanted so I had to full the blanket a bit more than I would have liked in order to keep people from putting fingers and toes through it.

Blankets are limited in size by how much cloth will fit on the cloth beam - remember you are winding two layers at once - 72" to 78" (1.8-2.0 metres) in length appears to be about the maximum. Thus I make my warps about 100" (2.5m) long to allow for loom waste and shrinkage.

Start by warping using the Ashford direct warping method. Warp every slot and every hole (you now have two warps in each slot and hole) Wind on as usual, move the threaded heddle to the back heddle holder and thread the two heddles

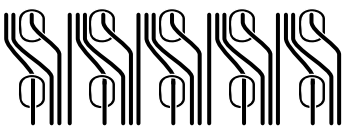


Figure #1

as per Figure #1. Tie onto the front beam and check for crossed threads by raising and lowering the heddles. Fix any errors.

To insert the pick-up sticks, place both heddles in the DOWN position, all the slot threads are now up, and behind the heddles pick up the right hand thread from each pair with the first pick-up stick (stick A) and slide that stick to the back of the loom. Place both heddles in the UP position, and, if possible, carefully turn the loom over or crawl under it as I do, and pick up the remaining slot threads. Slide that pick-up stick to the back of the loom and carefully turn the loom right side up (or unkink yourself from underneath it). You are now ready to weave!!!

It takes 4 sheds to complete two rows and come back where you started:

- 1) Back heddle down, front heddle in a neutral position and weave lower shed from the right.
- 2) Front heddle up, back heddle in a neutral position. Weave upper shed from left.
- 3) Bring pick-up stick A forward, both heddles in a neutral position. Weave upper shed from right.
- 4) Bring pick-up stick B forward (return A to back of loom), both heddles in a neutral position. Weave lower shed from the left.

The sheds you are forming in the above steps are as follows:  
shed 1) back heddle down - means the hole threads in the back heddle are down forming the first half of the bottom layer.

shed 2) front heddle up - all the hole threads in the front heddle are up - forming the first half of the top layer.

shed 3) pick up stick A forward - all the slot threads in the front heddle are UP (if you picked up all the right hand threads when you inserted the pick up stick) - forming the 2nd half the top layer.

shed 4) pick up stick B forward - all the slot threads in the back heddle are now DOWN - forming the 2nd half of the bottom layer.

Threading and weaving in this sequence will result in a double warp at the fold. If you wish, you can avoid this by warping an odd number. However, I find it to be useful as I remove one of the warps when the blanket is finished and thus relieve some of the crowding that occurs at the fold - making the fold line less visible.

Having a mirror to check that the sheds are clear is handy. If you are using a sticky warp, use the dowel to clear the sheds then insert the shuttle. When clearing the lower sheds insert the dowel between the heddles. It is definitely worth the extra time and effort to check the sheds while weaving. That way there are fewer floats to fix after the blanket comes off the loom.

Weave until you run out of warp or reach the desired length, cut the blanket off the loom - I tie my fringe as I go, unfold the blanket, check for and repair any errors, full as desired, tie fringe on the remaining two sides if you like and enjoy your new blanket!!!

Although my rigid heddle has "grown up" - I now have a 24"(60cm), 4 harness table loom and a 45" (110cm) 8 harness jack loom - I still return to the rigid heddle for its ease of warping and weaving. That said; I am currently spinning for an 80" (2m) blanket on the jack loom - maybe by this time next year!!!

1 Elsa Krogh. "Rigid Heddle Weaving - with two heddles". The Wheel, issue #13, 2000 page 4

2 Betty Davenport. "Double weave on the Rigid Heddle" Handwoven, May/June 1992 pages 62-62

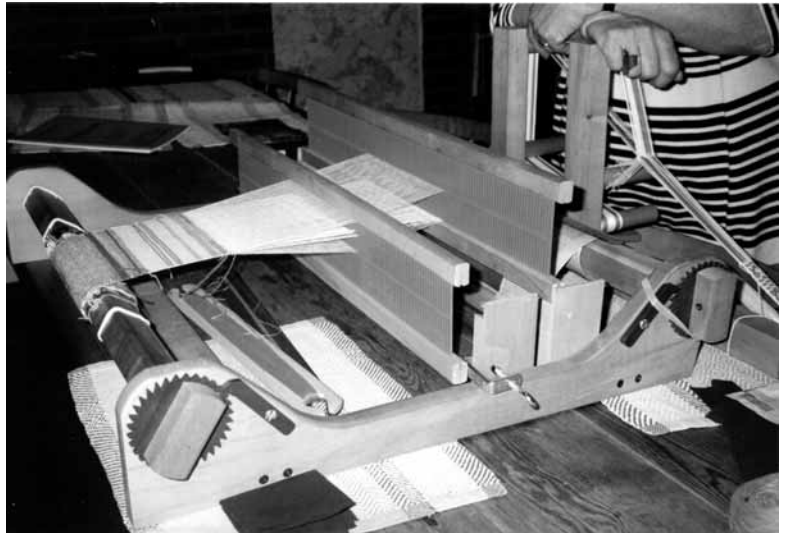


## Rigid heddle weaving - with two heddles

By Elsa Krogh of Mariager, Denmark

By popular demand, we re-print these two articles by Elsa Krogh, Danish weaver and author, so that you too, can extend the versatility of these compact looms.

With an extra heddle, identical to one you already have, and an extra pair of heddle supports, you open a door to more complex weaves on your rigid heddle loom. You also get the possibility of weaving with finer yarns, as two identical heddles can give you the double EPI: two 10 DPI = 20 EPI. Let's first look at the warping of two heddles for double EPI.



### Yarns

With 2 x 10 DPI I use a cotton Ne 12/2, and with 2 x 8 1/2 DPI a cotton Ne 8/2, but you can also use a worsted Nm 20/2, a cottolin Ne 22/2, or a cotton Ne 16/2 used double, or indeed any yarn of this grist: running length from 3000 to 5000 yds per lb (6000 - 10000 metres per kg). If you just want to have a go at the technique, and have access to two 5 DPI heddles, you can use the yarn you would ordinarily use for a balanced weave with a 10 DPI heddle.

### Warping

When you have chosen your heddles and warp, you start by attaching the extra heddle supports. You will find the Ashford Rigid Heddle Loom prepared for the job: there are holes predrilled in the sides of the loom just behind the normal supports.

Put one of the heddles in the front supports and start warping the normal way, but with double yarn, so you get four ends in each slot. See drawing 1. Beam as usual with strong paper or similar between the layers of warp on the back roller.

Now take one of the four ends out from the slot and thread it through the hole next to it. If you start at the right side of the heddle, put the end in the hole to the right of the slot where it came from, at the left side in the hole to the left. Repeat this till you have one end in each hole, and three ends in each slot across the width of the warp. See drawing 2. Take the heddle from the front supports and place it in the rear ones (this will now be called the back heddle), and put the other heddle in the front supports.

Begin threading the front heddle in the same side as you did the back heddle. The end in the outermost hole goes into a slot on the front heddle, the first of the three ends (from the neighbouring slot on the back heddle) also goes into this slot. The next of the ends from the \*back\*\* slot goes into a hole, the last of the ends from the slot plus the end from the next hole plus the first of the ends from the next \*back\* slot go into the next slot on the front heddle. See drawing 3.

This way you will end up having one end in a hole and three ends in a slot on each heddle, but the end-in-hole on one heddle will be the middle of the three ends-in-slot on the other heddle. It means that there will be alternately one end in a hole, one end in a slot all the way across the warp. See

drawing 4.

Tie the warp to the front roller in the usual way, and you are ready to weave.

### Weaving

For plain weave you can tie the two heddles together and use them as one, but it feels a little awkward, and it will result in reed marks: a stripey effect in the woven cloth, due to the three ends huddled together in the front heddle slots.

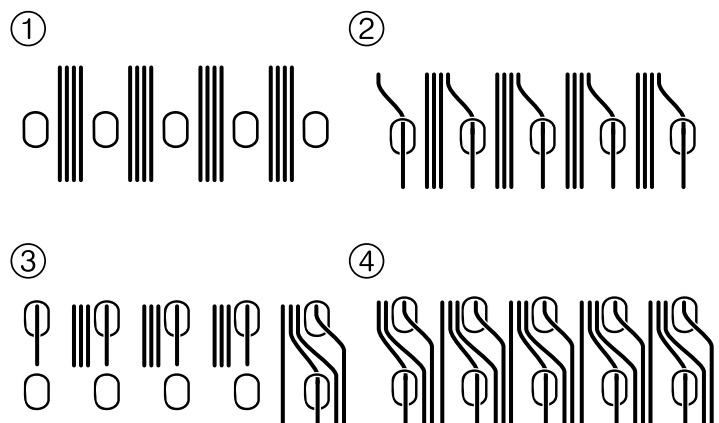
Using the two heddles separately reduces the reed marks, and once you get used to it, it will feel more comfortable too. Using the heddles separately means that you move them one by one.

Put both of them in the low position, insert the weft, pull the front heddle forward to beat the weft in place, AND LEAVE IT HERE AT THE FELL while you move the back heddle to the top position. Beat the weft once more, and put the front heddle in the top position. Repeat this for each weft, moving the back heddle to its new position while the front heddle is waiting at the fell.

When you are familiar with this, you are ready to experiment.

Ref: Betty L Davenport: Hands on Rigid Heddle Weaving (Interweave Press Inc, USA, 1987)

PHOTO: Elsa\*s Ashford rigid heddle loom with two heddles showing double sheds.



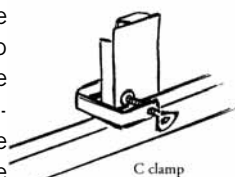
## Summer & Winter and Taquete



Now we go on to the more complex weaves. The tabby loom should be set up as described over, i.e. weaving with both heddles up/both heddles down will result in plain weave. However, we can also make a double shed, a.k.a. a split shed. When the back heddle is in the \*up\* position, and the front heddle is hanging in front of the heddle supports, you will see a narrow shed over

and a narrow shed under the layer formed by the slot ends. With the back heddle in the \*down\* position, and the front heddle lifted halfway up, we get the opposite split shed.

To support the front heddle in the halfway position, it is a good idea to arrange an extra step on the front heddle supports. I use two small ordinary C-clamps, one on each of the heddle supports, with the screws on the outside of the loom. The backs of the clamps (towards the weaver) act as the extra heddle supports. - See drawing 1. - experiments will help you find other and maybe better solutions.



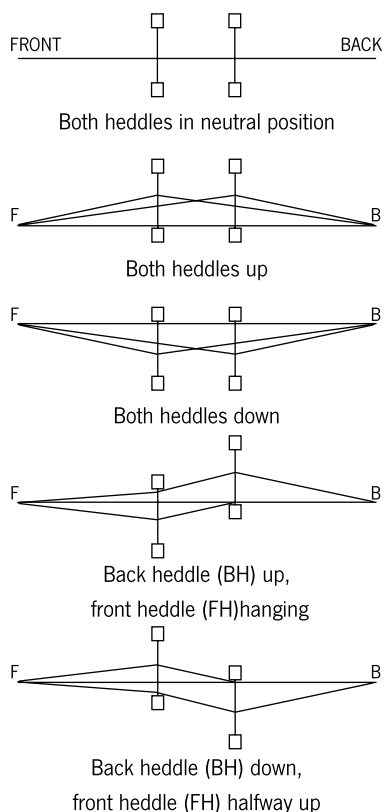
With these split sheds we can weave Summer & Winter in its various forms. The sample first demonstrates ordinary S&W woven \*brick-fashion\*, and afterwards S&W woven on opposites and without a tabby. The international name for this variation is Taquete.

You need two wefts, a tabby weft of the same grist and colour as the warp, and a pattern weft in a contrasting colour and thicker than the tabby.

Abbreviations:

BH = back heddle, FH front heddle.

TW = tabby weft, PW pattern weft.



## TABBY

Step 1: BH up/FH up - TW from right to left

Step 2: BH down/FH down - TW from left to right

Pull the front heddle towards the fell, keep it here while you shift the back heddle to the new position, beat the weft into place, push the front heddle back and place it in its new position. Weave a few cm to get into the rhythm.

You weave either A: pattern texture, or B: background texture, or C: blocks, a combination of pattern texture and background texture in the same row.

A: Pattern texture

1. BH down/FH down - TW from right

2. BH down/FH halfway up - PW from right, upper shed.

3. BH up/FH up - TW from left

4. BH up/FH hanging - PW from left, uppershed

B: Background texture.

The same four steps, but with the pattern weft in the lower shed.

C: Blocks

Repeat the four steps, but the shuttle with the pattern weft moves up from the bottom shed to the top shed at the point where you want the block to start, and drives down again where the block ends. It goes through the middle warp layer (i.e. the slot ends) precisely underneath a raised warp end. At the edges of the blocks, the second PW overlaps the first PW by one warp end, making a two-end float. All other floats span three ends.

## TAQUETE

As already mentioned, Taquete is the international name for S&W woven on opposites without tabby. You will need two wefts (two different colours: a and b of equal grist, and you only use the split sheds.

Step 1: BH down/FH halfway up - Weft a from right, lower shed, weft b from right, upper shed

Step 2: BH up/FH hanging - weft a from left, lower shed, weft b from left, upper shed

This will result in colour a on the back and colour b on the surface of the weaving. Please note that there are two picks in each row, before the heddles are moved.

The two weft colours can change place anywhere along the row. When one colour goes up through the middle warp layer, the other colour goes down in exactly the same spot. Before experimenting with free form pick up it is a good idea to practice simple geometric blocks to get familiar with the technique. You can make squares, triangles, and sloping lines - and once you get the hang of the technique - even curves and circles, indeed anything you might need in free form weaving.

The woven sample shown here begins at the bottom with a few cm of tabby.

Summer & Winter: 6 repeats of all pattern structure, 6 repeats of all background structure, pattern block (the stylized tree), 4 repeats of all background structure, 1 repeat of pattern structure. Approx. 1 cm of tabby.

Taquete: Black pattern blocks against a white background, followed by 4 repeats of white weft only on the surface, black weft on the back, then 4 repeats the other way round. The sample ends with plain weave with the white Taquete weft.

By the way: The small motif on the S&W part of the woven sample would require 12 shafts and 24 treadles on a standard loom (14 treadles with a skeleton tie-up). Isn't the Ashford rigid heddle loom a wonderful thing?

Ref: Donna Sullivan: Summer-&Winter, A Weave for All Seasons (Interweave Press, USA 1991)

Sample top left: Stunning summer-&-winter tree and geometric Taquette woven on an Ashford Tabby Loom.

# Handwoven Jacket in Summer & Winter Weave on the Rigid Heddle Loom

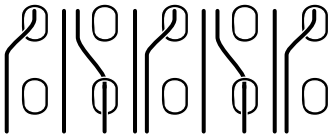
Kim Schiffmacher from Summit County, Colorado, read Elsa's \*Summer & Winter\* article in issue 9 of The Wheel. Kim embarked on this project to make herself a jacket. It's fantastic! And all the weft is handspun wool, blended with fibre from her special pet Edgi.

How Kim did it:

32" rigid heddle loom, 2 10 dpi heddles each threaded at 5 dpi (I used two 10's rather than 2 fives because the loom came with a 10 and it was cheaper to buy one 10 than to buy 2 fives). Front heddle was threaded in grey and the back in white. I did this mostly to make it easier to thread and to count when doing the \*checkered\* pattern. Here's the threading sequence and heddle sequence.

1) Back Heddle down/Front Heddle halfway up  
weft \*a\* from right, lower shed  
weft \*b\* from right, upper shed

2) Back Heddle up/Front Heddle hanging  
weft \*a\* from left, lower shed  
weft \*b\* from left, upper shed



Threading for 2 10 dpi heddles, each at 5 dpi.



The checkerboard pattern was made by bringing weft \*a\* up through the middle warp layer (those warp threads in the slots) and dropping weft \*b\* down at the same place. I set the pattern so that all the squares are 5 warps wide, so all I had to do was count warp threads to know where the wefts exchanged places.

I started with the back and wove it in one piece - 27" wide. I then figured out how to match the pattern and wove the two fronts so that the sides and front would match. Then I did the sleeves, hood and pockets. I then sewed the whole thing together by hand. The entire jacket is made up from squares and rectangles so I did not have to cut any of the pieces.

I used commercial wool warp

Hand spun weft

Light grey is approx 30% Edgi and 80% white merino (from Colorado)

White is approx 30% Great Pyrenees and 80% white merino

Dark grey/black is approx 30% Edgi and 80% dark grey merino (also from Colorado)

Edgi is a Blue Heeler (Australian cattle dog)/Australian Shepherd mix

Kim at the fabulous store \*Shuttle Spindle and Skeins\* Boulder Colorado U.S.A.