

Joined Plaids - Settings and Construction

Introduction

In Highland society of the 17th and 18th centuries the joined plaid was ubiquitous both for clothing, the *Breacan an Fheileadh* or belted plaid, Earasaid¹, and for domestic blankets². Joined plaids were a feature of a rural culture where small houses necessitated smaller looms that in turn produced narrow cloth³ and thus two pieces had to be joined to make broader cloth that had greater utility. The rural practice continued until the end of the 18th century when the weaving of domestic blankets seems to have died out in favour of commercially woven double width ones. Wilsons' of Bannockburn continued the practice of narrow cloth into the early 19th century supplying the military who continued to wear joined plaids until about 1820 after which the army dropped the belted plaid completely in favour of the kilt and the technique disappeared.

Surviving Examples

We are fortunate that so many plaids (both complete and portions of) and domestic blankets survive. Many of these have either been overlooked or misinterpreted by past historians probably because they did not understand the weaving process and therefore what they were looking at; for example, below are the MacDonald of Keppoch given by Stewartⁱ which he recorded as a balanced sett (Fig 1), and an 1821 copy of the original plaid showing that it was a more complex offset design with a selvedge mark intended to be joined (Fig 2).

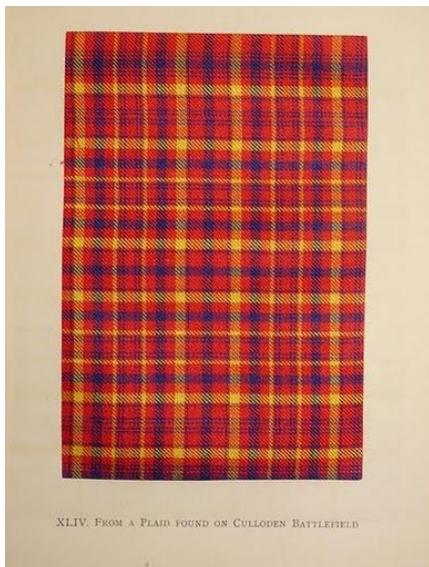


Fig 1. Stewart's Culloden Tartan
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Fig 2. 1821 copy of the original 'Culloden' Plaid
© The Author.

¹ Earasaid (often Arisaid or Arasaid), a square of cloth, often tartan, worn as a form of mantle by Highland women.

² Domestic blankets were joined plaids of a predominately white based tartan with a particular style of border decoration. For more information see my paper on [Traditional Selvedge Techniques](#).

³ 18th century rural plaids varied in width from 20 – 36 inches with 26 inches being a common single width for belted plaids.

It's important at the outset that the reader understands the difference between the material, often termed *plaiding*, and the finished plaid/blanket.⁴ Although the material for plaids was woven in exactly the same way as any other tartan, that intended for joining required a greater level of expertise from the weaver to offset the tartan, normally with a selvedge mark or pattern and set it for the loom. For this reason it's likely that some weavers specialised in plaiding. The theory that every home had a loom and produced their own cloth is not credible. Cloth was probably supplied off-the-loom by the local weaver and the actual garment/blanket joined at home by the user/family.

The significant difference between plaid setts and normal tartan was that plaiding was always wove offset⁵. Generally a larger sett was used together with some form of decorated selvedge. The following two images show these techniques well. Black arrow shows the single width from decorated to joining selvedge. Fig 3 shows a piece of a barred blanket c1720-60: note the basic white and red/green sett with a broad barred selvedge pattern. The join between the two lengths can be seen running through the middle of the white square on the right.

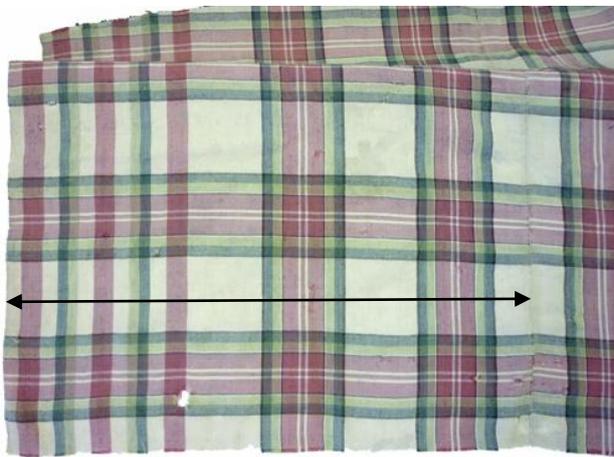


Fig 3. A barred blanket with the single width marked.
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Fig 4. An early 18th century joined plaid.
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The second image shows a recently discovered finely woven early 18th century plaid that had been reused as curtains. Although it was cut in half c1800-20 the whole plaid survives and is possibly the oldest example of its kind. The join, marked by the black arrow, can be seen running down the middle red square. Because the whole plaid survives it's possible to determine that it was originally 18' long x 27" giving a 6 yard double width plaid⁶.

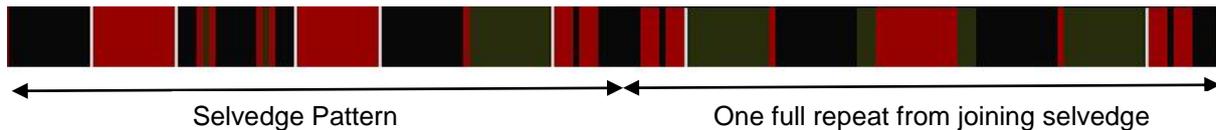
⁴ For ease I use the terms Plaid for those intended to be worn and Blanket for those used indoors as domestic coverings. It's likely that they were similarly differentiated in Gaelic as *breacan an fheiledh* and *plaid*.

⁵ The practice of setting the warp from the centre of one pivot that was placed on one selvedge to the selvedge mark or selvedge pattern on the other. When woven the tartan appears unbalanced until two pieces are joined at the pivot selvedge giving a double width piece with a balanced sett and border on each side.

⁶ The plaid has been conserved and a reconstruction produced to replace the curtains.

How to set an offset pattern to the loom

As mentioned earlier, traditional plaiding was woven offset and usually with some form of selvedge decoration so that when two pieces are joined the pattern will repeat across the plaid with a selvedge pattern on each side/top and bottom. To demonstrate how a weaver works out such a pattern in order to fit to his loom I shall use the example of a plaid from Nova Scotia⁷. It comprises two offset pieces of cloth 26.5" wide x 134.5" long joined at the pivot edge and each piece has a single 13" repeat plus an elaborate border set approximately 13.5" wide. The warp arrangement for the single width plaiding is shown below followed by one showing the effect when two pieces are joined.



The effect when two pieces are joined giving 2 x full repeats plus decorated selvedge pattern

Although this is a joined plaid its proportions and tasselled ends mean that it was a domestic plaid rather than one designed to be worn. It's unusual in having a selvedge pattern that takes up half of the warp and the full effect of the setting can only be appreciated once the two halves are joined. This is not something that a novice weaver could produce.

In order to produce the material the weaver would have had to calculate the following:

- There are 766 threads across the warp
- The pattern half sett is K R K R W G R K G R
13 12 4 12 2 52 4 52 12 26 = 189 threads
- The warp will require: 1 x full sett, 378 threads, leaving 388 ends for a selvedge pattern arranged as follows: K R K R W G R K W R W K R G R K R G R K W R W K
13 12 4 12 2 52 4 52 2 52 2 12 4 4 4 34 4 4 4 12 2 52 2 50

Exceptions to the rule

Examination of numerous old specimens identified two scenarios in which the sett will not repeat properly when cloth is joined to make a plaid:

1. In asymmetric tartans because when one piece is turned the non-repeating stripe will be in the mirror position on the second side i.e. it will be upside down.
2. Where a symmetrical tartan is offset but the joining edge doesn't finish on a pivot. I know of at least two old plaids in which this is the case. The reason is not obvious and the practise illogical. Perhaps the material was woven by someone that did not fully understand the requirement in order for the pattern to repeat properly or perhaps it was the result of a warping error.

⁷ The plaid is discussed in detail in a separate paper [here](#).

Joining and Finishing a Plaid

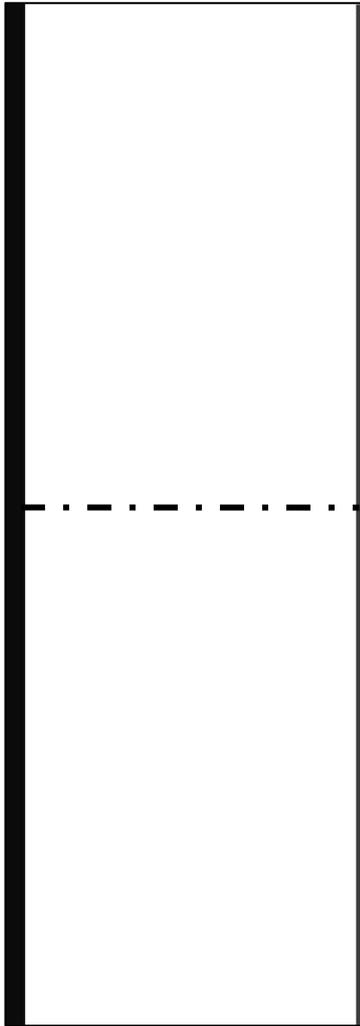


Fig 5. Layout of an offset warp

When an offset length of material is finished it will look like the layout in Fig 5 in which there is a selvedge pattern one on side (dark bar on the left) and the pattern finishes in the middle of a pivot at the other selvedge (thinner bar on the right). To make a double width plaid the material has to be cut in half in the middle of its length, shown by the hatched line on the diagram, then half of the cloth turned through 180°; the two pivot selvages are then aligned and sewn together to give a double width piece with the pattern repeating and the selvedge pattern now on each side (Fig 6) top and bottom .

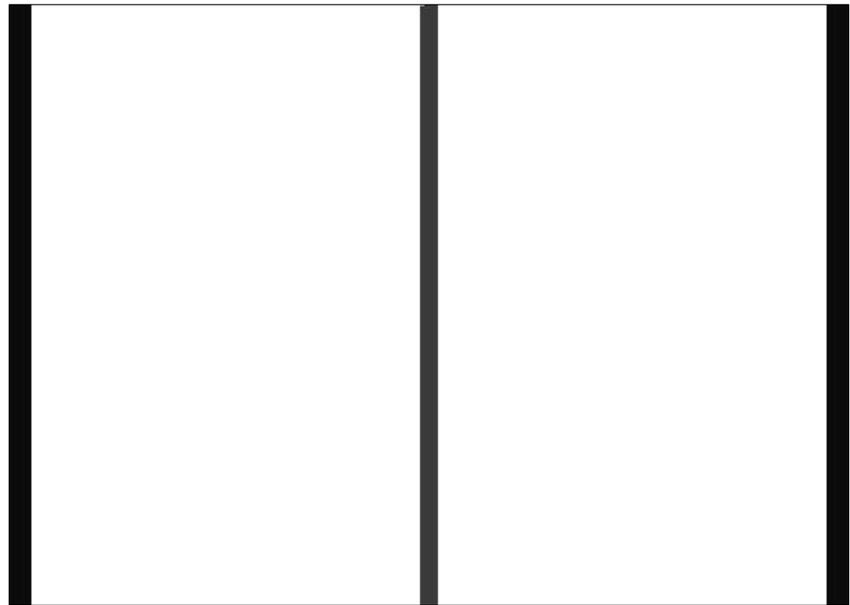


Fig 6. Layout of an offset pattern once cut, turned and joined

The effect can be seen in the plaid from Nova Scotia (Fig 7) where the join is marked by the arrow. The border pattern is at the top and bottom of the piece but also appears at the top and bottom (left and right as viewed), a unique feature amongst surviving specimens.



Fig 7. Joined plaid from Nova Scotia with 'total border'.
Picture courtesy of Archie MacLellan, Antigonish.

There are a confusing amount of names for the three different types of stitch used for joining two pieces of cloth. Fell-stitch, a simple over-stitch, being by far the most commonly used method for plaids (Fig 8). In a small number of pieces feather-stitch or similar decorative styles such *herringbone*, *catch* or *baseball stitch* were used (Fig 9). Evidence of a far more rudimentary or amateurish practice can be seen in the last example where a simple running stitch was used and which results in an unsightly seam which sits above the cloth (Fig 10). Further research is needed to determine if there is any correlation between thread used and stitch types.



Fig 8. Over-stitch
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Fig 9. Feather-stitch
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Fig 10. Running-stitch
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Which type of stitch was used on an individual plaid was probably a reflection of the level of skill of the sewer and the space available to them. When two pieces are joined with over-stitch the work can be done with the cloth across the sewer's lap with the material on the floor. Feather-stitch is best done when the two pieces of cloth can be laid flat side by side; for example, on a table. Although quicker, the main disadvantage of whip stitching is that it causes the two pieces to skew meaning that the pattern will become misaligned unless steps are taken to ameliorate the effect. In quite a lot of plaids the need to join the cloth seems to have been more important than the look and the misaligning of stripes is quite common and can be pronounced as in the example of the domestic barred blanket (Fig 11).



Fig 11. Mis-aligned join © The Author.

This piece also nicely demonstrates the other outcome of using whip stitch; the join is raised on one side. Today this can easily be sorted with a steam iron but may not have been an easy option in historic specimens and so was simply left as it was.

The actual joining was normally done with some of the wool yarn used for the weaving because the wool's elasticity is similar to the rest of the cloth and would also have been less

likely to cut the material compared with linen. This would have been particularly important in a plaid used for clothing. The Nova Scotia plaid is unusual in being joined with linen but as mentioned previously, it was a domestic plaid and so would not have been subject to the same level of wear and tear (strain) as a worn plaid. The choice of thread colour seems again to have been a matter of personal preference. White based domestic plaid always seem to be joined with white thread, presumably because a darker colour would show, whereas full tartan ones are either joined with the selvedge colour or a contrasting one from amongst the others in the tartan with red or blue being usual as was used here.



Once the cloth had been joined all that was then required was to finish the ends to prevent the cloth from fraying/unravelling. Again, the plaid from Nova Scotia is unusual in having twisted tassel ends. In every other surviving example the ends are simply rolled and tacked down with a slip-stitch or over-stitch as in the 1726 plaid woven by Christina Young (Fig 12).

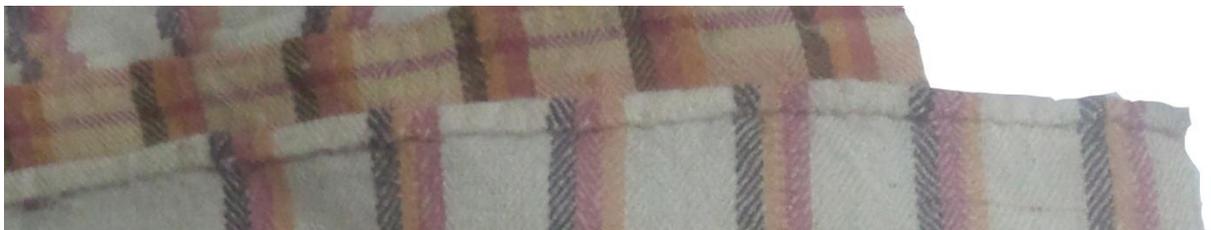


Fig 12. Turned end secured by a slip-stitch. © The Author.

Much has been written about the technique of pleating and wearing the feileadh mor most of which is not relevant to this paper; however, the use of drawstring/belt loops added to the plaid may be regarded as part of the finishing process. The principle of either drawstring or belt loops is to make the donning of the plaid simpler by having loops to make the pleating easier. Both techniques would work like blinds or curtains allowing the pleats to be gathered or bunched. Unfortunately little is known about the technique beyond possible evidence in one portrait and the only known surviving plaid that has loops although that was made c1815-20 as part of a Highland Revival outfit⁸.

Michael Wright's c1660 portrait of a Highland Chieftain, possibly Lord Mungo Murray, shows what appears to be a drawstring running just above his dirk belt (Fig 13). Assuming this does show a drawstring it's unfortunately of little help beyond confirming the early use of the technique but gives us no clue as to how it was attached to the cloth. In preparation for this paper it was not possible to photograph the Highland Revival plaid but from memory the loops are made from cotton tape stitched at intervals along



Fig 13. Detail of a plaid draw-string from Wright's portrait of Lord Mungo Murray c1660.

⁸ The Drawstring plaid is discussed [here](#).

the back (non-apron area) below the join of the two pieces. There is no drawstring with the outfit so it's impossible to tell whether a drawstring or belt was used to hold the pleats. As there is no other known example we cannot tell how widespread this technique was nor whether it was an old technique kept alive by the military and copied during the Highland Revival or a unique variation of the principle.

Conclusion

In conclusion, it's obvious that joined plaids were common throughout the Highlands 17th and 18th centuries and that their use as domestic plaids continued beyond the Proscription era when the feileadh mor became confined to the military. The technique of weaving offset designs with selvedge patterns was common in these old plaids but the skill and tradition seems to have disappeared completely from the Highlands by the later 18th century. The offset technique continued to be practised by the famous weaving firm Wm. Wilson & Son of Bannockburn in the early years of the 19th century but was dropped as fashions and cloth use changed. It is completely unknown in today's commercially produced double with cloth.

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ⁱ **STEWART D.W.** 1893 *Old & Rare Scottish Tartans*. Geo. P. Johnston., Edinburgh