

The “Welted” Seam

By Ric Harber

As leather craftspeople, we're always looking for ways to secure pieces of leather together, whether it is sewing, lacing, rivets or other mechanical machinations. This article describes another way of joining leather that has been around for a while: the Spain/Marshall/Reynolds/frog tuck/frog toe welt or seam. To simplify things, let's just call it “the seam” (fig. 1). In essence, the seam is formed by making

a corresponding set of holes and tabs and using these to form an interlocking system that holds two pieces of leather together. I've seen examples of its use in tapaderos, saddle forks, handle wraps, messenger bags, etc. I use it for notebooks and padfolios. One of the big advantages of using this seam is that you can adapt it to your project based on size and thickness of your leather.

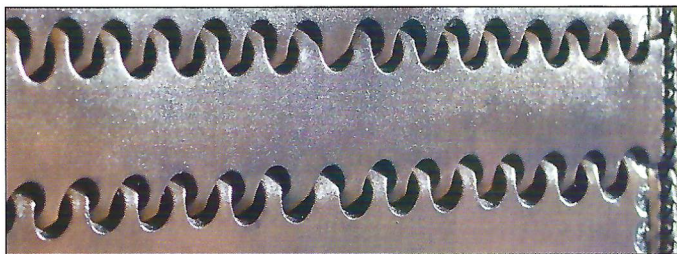


Figure 1

History

Following is a very brief (and incomplete) history of the seam and discuss the general layout for using it in different sizes. From the moniker in the title, it's clear that no agreed upon name exists for the seam. The common agreement is that it has had a long use in securing the sections of tapaderos as well as in saddle forks.

I first learned about it from a visit with Al

Reynolds in Wickenburg, Arizona. He used it on the long seam of many of his boots. He provided a reference to its use in tapaderos and said that some in the bootmaking community call it a *Reynolds seam*. As I started looking for more information, I was referred to a Jeremiah Watt blog post where he demonstrated using the welt on a pair of tapaderos and credited Joe Marshall

for showing it to him. As a result, he referred to it as the *Marshall welt*. In a subsequent on-line discussion, Mr. Marshall said that he used the welt on tapaderos and saddle forks, and admitted to showing it to both Jeremiah Watt

and Al Reynolds. He also said that he learned the technique from Larry Spain. Mr. Spain did not indicate to Joe where he had learned it. In that same discussion, others referred to it as a *frog tuck* or *frog toe seam*.

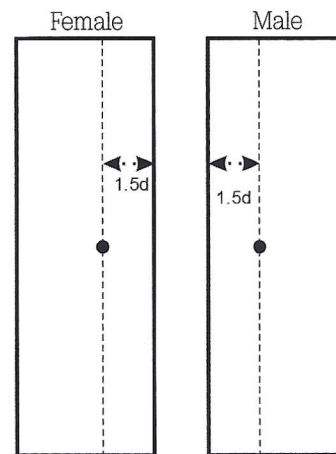


Figure 2: Initial Layout

Designing the Welt

The first step is to pick the size of the hole you want to use in the seam. For purposes of this discussion, we'll assume you want to attach two pieces of leather together, using holes of diameter “d” inches. Designate one of the pieces as the female/receiving piece and the other as the male/tabs piece. On the edges of the leather to be joined,

mark a line $1.5 \times d$ inches from the edges (e.g., if the hole will be $\frac{1}{2}$ ” in diameter, mark the line $\frac{3}{4}$ ” from the edge). This will mark the center for the holes on each piece of leather. Mark the center of each of these lines (fig. 2).

The male/tab side will have one more hole in it than the female/receiving side, so let's

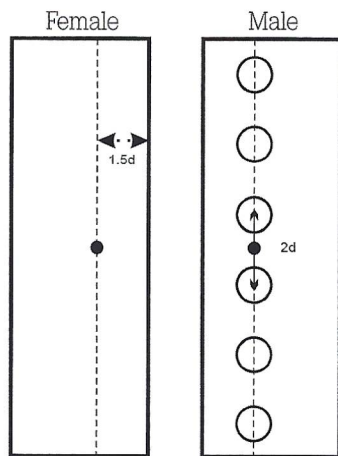


Figure 3: Laying out the holes for the Male Side

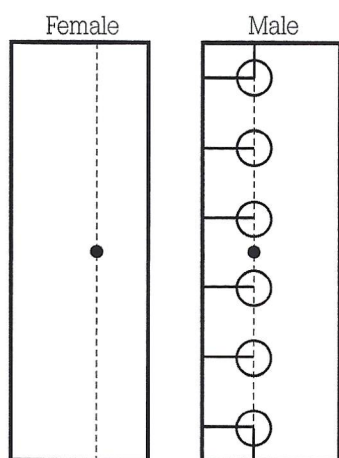


Figure 4: Cut lines for the Male Side

start with that side. Center a line of length "2d" at the center of the boundary line marked on the male side in the first step. The ends of this line will be the center of the first holes. Using a distance of "2d", add holes to each side of the line until you can't add any more (fig. 3).

The next step is to mark the cut lines to form the tabs. From the center of each hole, mark a perpendicular cut line towards the edge of the leather. For the two end

holes, mark a similar perpendicular cut line toward their second edges (fig. 4). When the holes are punched and the cuts are executed, the final result for the male/tab side is shown in Figure 5.

Now let's turn to the female/receiving side of the pattern. Center the first hole at the center of the boundary line. Next add holes on each side of the first hole with centers "2d" apart. Keep adding holes on alternating sides until

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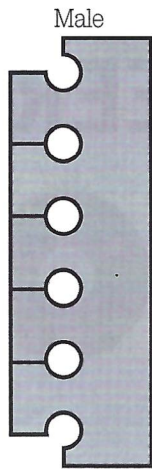


Figure 5: Final version of the executed Male Side

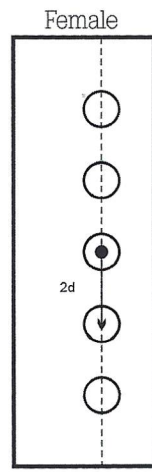


Figure 6: Female Side layout

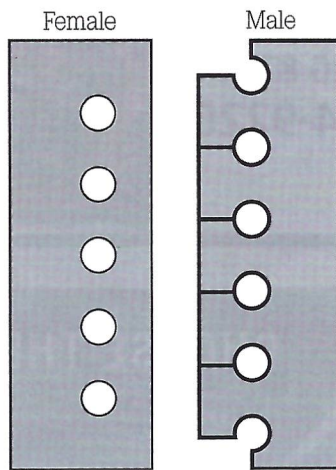


Figure 7: Final Layout

you have one less hole than on the male/tab side (fig. 6). Once the holes are punched, the final female side, along

with the male side, is shown in Figure 7. As you can see, a tab is aligned on each hole of the female side.

Assembly

Now you have your seam template and are ready to use it on your project. First, be sure to adjust the width of your project to allow for the overlapping parts of the seam. Next, skive the edges where the seam will be to avoid excessive bulk. Use your template and mark the components of the seam, punch the holes and cut the tabs. You're now ready for assembly.

Dampen both sides of the seam and roll up the edges of the tabs. Work the rolled tabs through their corresponding holes, going over the outside edge of the female side, so that the tabs rest underneath the female side. Next unroll the tabs, adjust the pieces so that the top and bottom edges are aligned and the tabs

fit snugly in their holes. Finally, use a smooth-faced hammer to flatten the tabs and set them into the female side of the leather. Set the assembled pieces aside to dry. Depending on your project, you can optionally use some glue underneath the tabs to help hold them in place. If you do use glue, be sure to check the final project for glue in the holes. Dental tools are a great help in removing any glue that escapes into the holes and ends up visible from the outside.

For my notebooks and padfolios, I install lining leather over the inside of the seam which helps keep it in place and hides the seam. Give "the seam" a try! (See **Pattern Pull-Out** for larger versions of Figs. 2-7.)↑

Practical Portability

By Vic Carman

My shop doesn't have a great heater and has zero air conditioning, so at certain times of the year it's pretty uncomfortable doing the most time-consuming part of the leather working process: hand sewing.

I solved the problem by putting all my sewing gear in one of those large, plastic trays with a handle in the middle. I fabricate in the shop and then grab my home-

made stitching pony and head for the comfort of my air conditioned (or heated) living room. I turn on the TV, settle down in the recliner, and welcome an unknown number of toy poodles who insist on joining me.

I'm not the greatest carver but I sew fairly well, and it adds a lot to my projects. Besides it's calming – and a lot cheaper than a psychiatrist.↑