S I M P L E H U L L P L A N K I N G T E C H N I Q U E S F O R B E G I N N E R S

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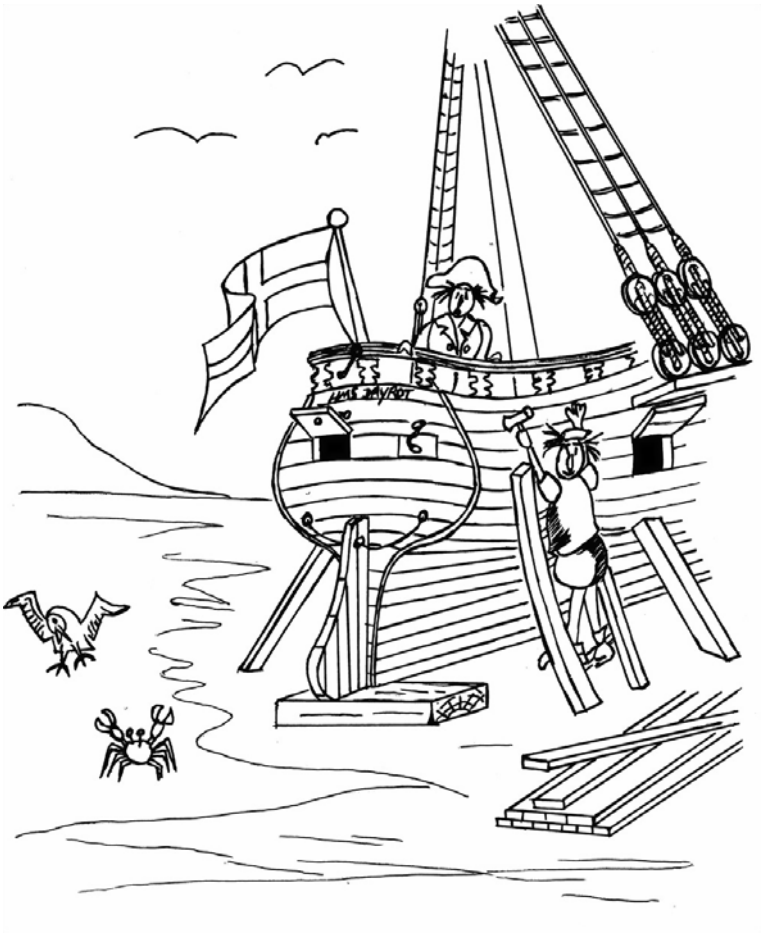

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SIMPLE HULL PLANKING TECHNIQUES FOR BEGINNERS

Introduction:

This project has been compiled and contributed to by a number of moderators of the Dry Dock Models forum to assist newcomers to this hobby and enable them to carry out simple planking operations. It has been put together partly in response to the numerous questions asked by new members regarding "how to do planking" and it will hopefully give them in a practical way a full and simple method to help them on their way to bigger and better things in the future.

This instruction is not to plank a ship in the traditional way used by the shipwrights of old but rather it is a simple demonstration of general methods to plank a hull to satisfactory standards that the newcomer can be proud of and display with an element of pride.

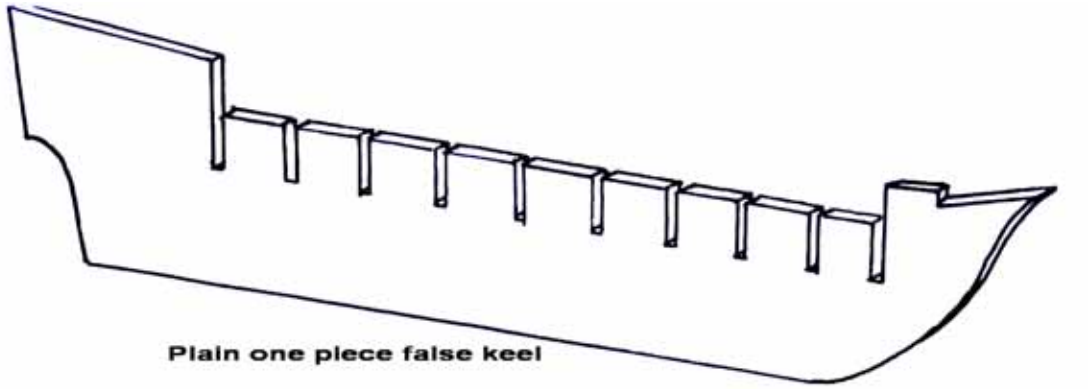
There are numerous books which deal with this operation, some of them are excellent and generally cover the full aspect of the planking operation itself to varying degrees some are a lot better than others. However it is the bits that are missing and the lack of pictorial detail that poses the biggest problems from a newcomer's point of view.

Hopefully this project will explain some of the mystery and make the whole planking operation less stressful and painful. The plan is to show a simple step by step detailed planking procedure while explaining the reasons why it is done this way and what can occur if it is done another way. Many books touch only briefly on the stem and stern areas of a ship and as such don't show the detailed operation required to allow a novice builder to successfully overcome what is sometimes a difficult part of the model building process.

1. Keels:

Figure1:

This drawing shows the basic false keels of a plank on bulkhead (POB) ships. These are the most common types of false keels that come with kits. The upper one is a typical one piece keel while the lower one shows the additional components that go to make up this type of keel. The keels are basically identical to one another and the additional components shown in the bottom drawing could if needed be used on the upper keel if required.



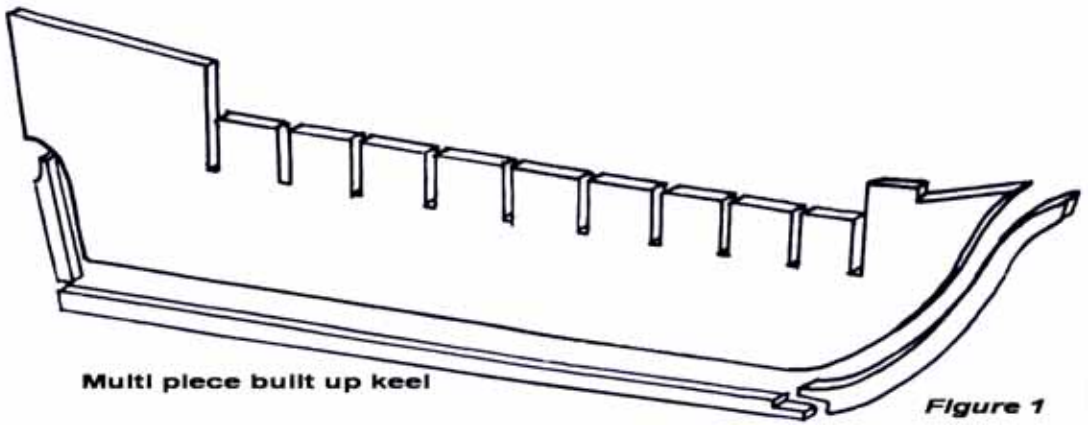


Figure 1

2. Bearding Line:

Figure 2:

This is a term used to indicate the tapered section of the false keel at either the bow or stern of the model. It is a section where extended tapering is required to allow the hull planks to lay flat against the false keel. This taper is variable from point to point and is shown on your plans and must be adhered to, to enable you to construct a faired model. *Figure 2* shows a simple method of cutting the bearding line with a sharp chisel being careful not to cut above the indicated dotted line of your plans. There are numerous other ways to carry out this operation but to make this exercise a simple matter among them are sand paper over a wooden block or the use of power tools such as a Dremel with a sanding drum are as good as any. It is really just a matter of builder preference and whatever tools he has available to him.

Sections AA, BB, CC show an approximate finished shape that will need to be obtained. Again this is approximate and the correct shape for your particular model can be obtained from the kits plans.

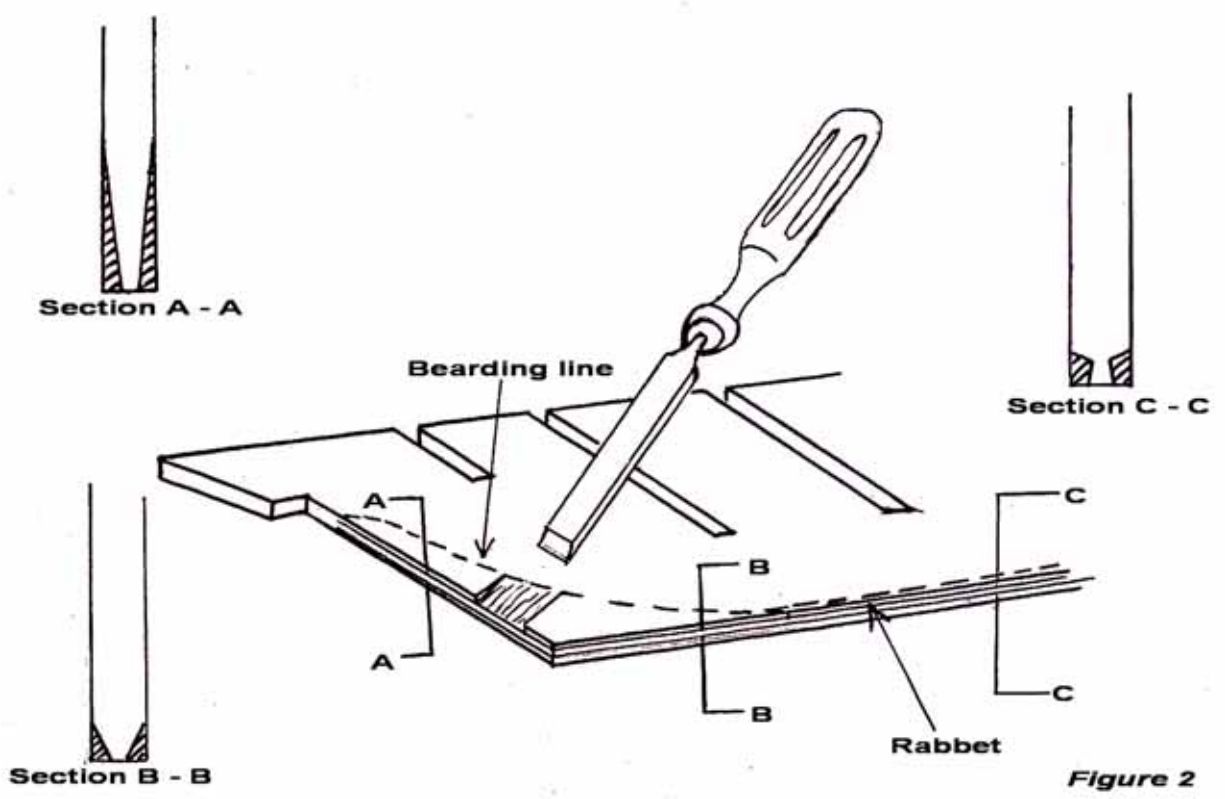


Figure 2

Important:

Take your time with this operation and do your best as it is important to the successful outcome and appearance of the model.

4. Bulkheads:

Figure 3:

The bevelling of bulkheads can be carried out in the same manner and with the same tools as mentioned in the keel section. Sometimes the bevel is shown in the kits plans sometimes not. I would caution against using the plans indicated bevel though. Good advice is to dry assemble the bulkheads to the keel and check the amount of material required to be removed using the method shown in *figure 6*. The amount of bevel required can be seen by laying and pinning a temporary plank the full length of the model as shown. Do this at several points throughout the hulls length to establish this bevel. If the bevel of the kit plans looks right then bevel in the method described earlier. The correct bevel is essential to allow the planks to lie fair along the full length of the hull. Sharp or incorrectly bevelled bulkheads can cause loose, springy or lumpy planks later during the final sanding of the hull and are extremely hard to repair at a later date when the hull is ready for sanding process.

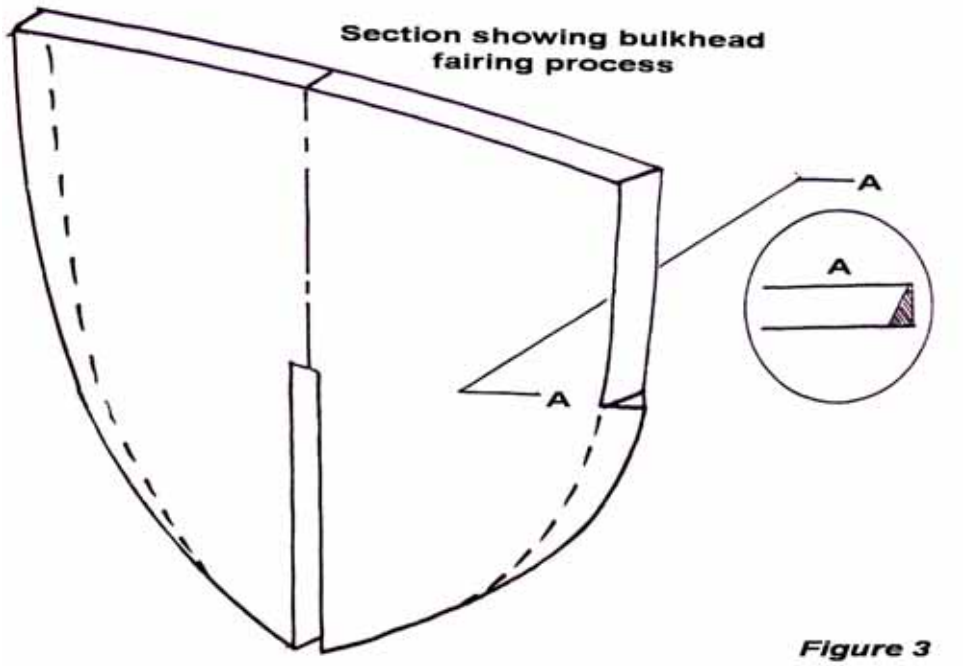


Figure 3

5. Filler Blocks; Bow:

Figure 4:

Balsa filler blocks can be used in the bow and stern sections to allow for a better controlled shape to these sections. Apart from the added advantage of superior glue surface the shape of the hull can be better formed without the use of additional bulkheads or separate formers. Some hulls are more difficult in the area of bow shapes than others. With hulls like 'Endeavour', where a real 'apple' shaped bluff bow is required filler blocks are almost invaluable to obtain the correct curvature. With another completely different form of a hull such as 'Flying Fish' or a clipper ship with smooth free flowing lines at the bow the use of filler blocks is probably not required at all, and would be a matter of choice in this case.

To build up the filler blocks a bread and butter type construction is better. Don't pay too much attention to getting the exact shape of the area at this point in time as sanding and fairing will show up any errors. It is better to have too much material rather than too little as low spots take more time to fix with the use of wood fillers. Although low spots are not a sign of a disaster they are an unnecessary problem that could be overcome earlier with some thought.

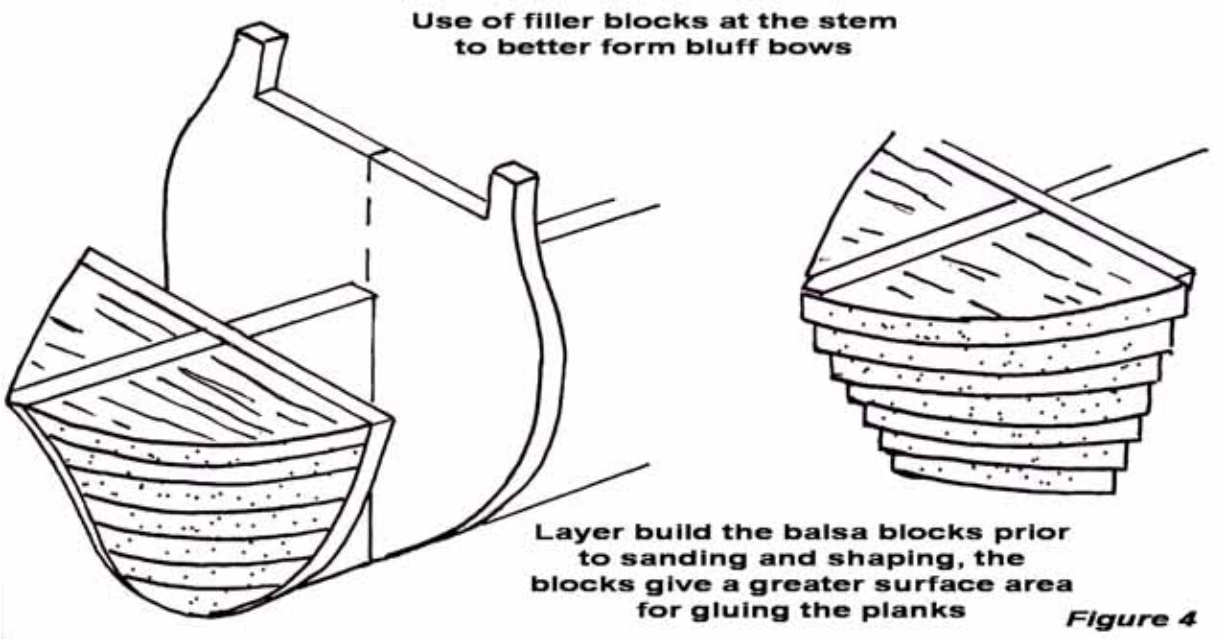


Figure 4

6. Filler Blocks; Stern:

Figure 5:

With the stern, filler blocks are again an advantage to obtain the correct flowing shape of the counter and transom of the ship. As in the bow the additional gluing surface area is of great benefit. Although in both instances the use of nails in these filler blocks to hold planks is doubtful due to the soft nature of balsa, if you do use nails to fix the planks be sure they go into the actual bulkheads.

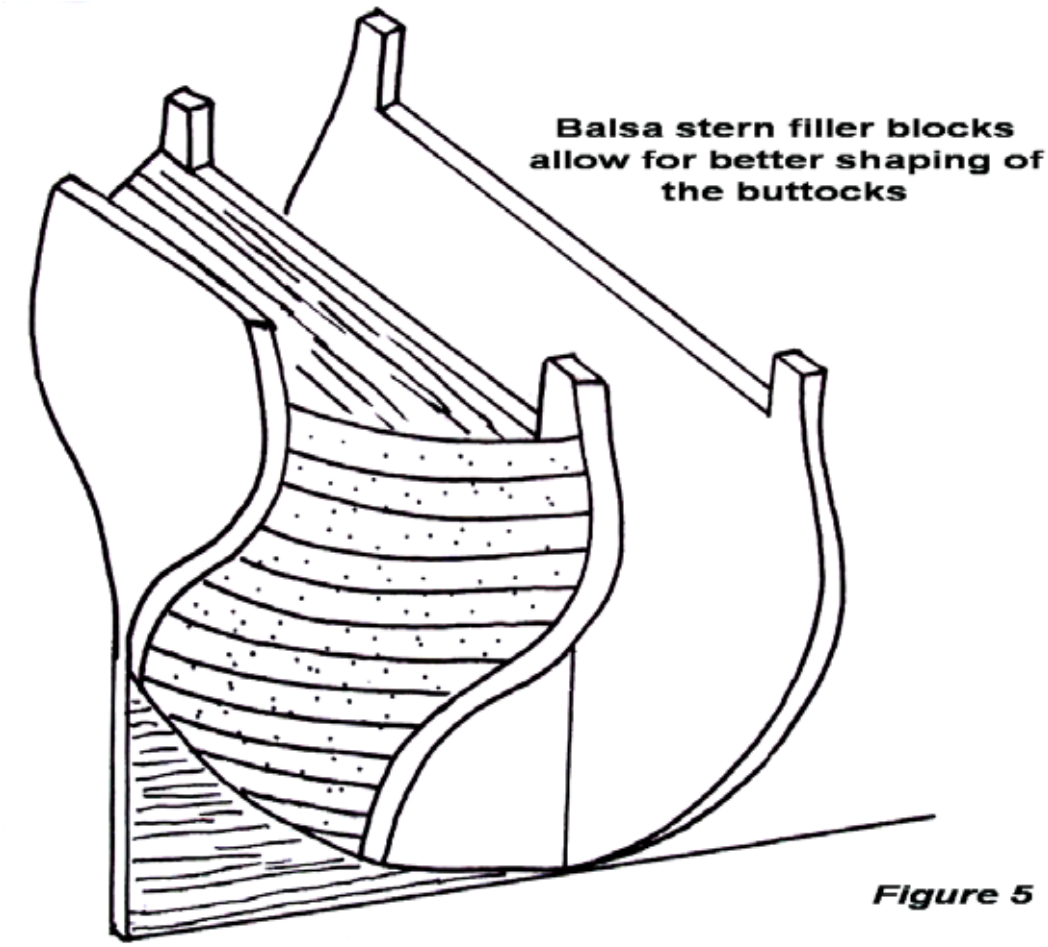


Figure 5

7. Fairing the Hull:

Figure 5a:

This drawing shows the smooth transition from the bulkheads to bearding line. This transition needs to be smooth, free flowing and without severe curves. If the latter occurs a depression or bump will appear in the planked hull. Again something like this is most difficult to correct at a later date. So again take your time and look at this step carefully and from all directions. Run your fingers over the transition surface or lay a temporary batten along the bulkheads to check the alignment. It is important.

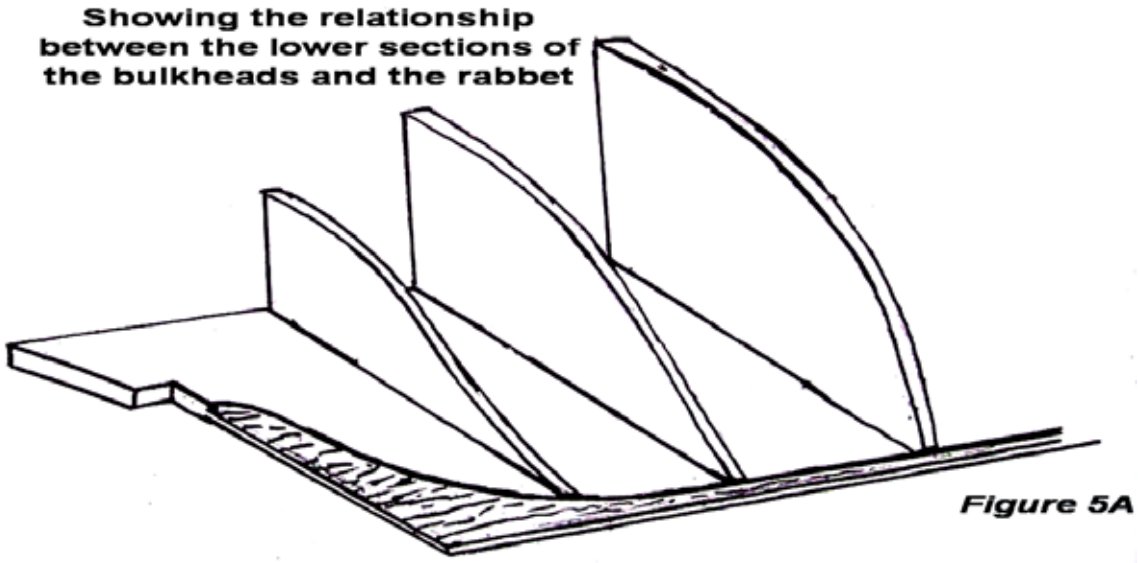


Figure 5A

Figures 6 & 7:

This is the method used to actually fair the hull and to check the lie of the hull planks along the hulls bulkheads. Take a temporary batten, something in the order of say 5mm x 1.5mm. This temporary batten must be without weak areas and knots as this will affect the natural flow of the timber being used and will certainly give you a false or incorrect reading. Pin the batten at every bulkhead station. Pre drilling may be necessary to prevent splitting the bulkheads and batten. Any type of temporary fixing (planking screws are invaluable) can be used as long as the batten is held in constant contact with the bulkhead, if allowed to bulge away a false reading will result and the hull planking will be incorrect and almost impossible to correct later. Move the batten up and down the bulkheads as many times as possible, the more accuracy you obtain in this operation the better and smoother the finished hull is going to be.

Note: Planking screws can be obtained from many hobby stores and the authors fully recommend their usage.

Take the time to look along the batten from stem to stern, look for its even smooth flow with no lumps, bumps or loss of contact with the bulkhead, this is important.

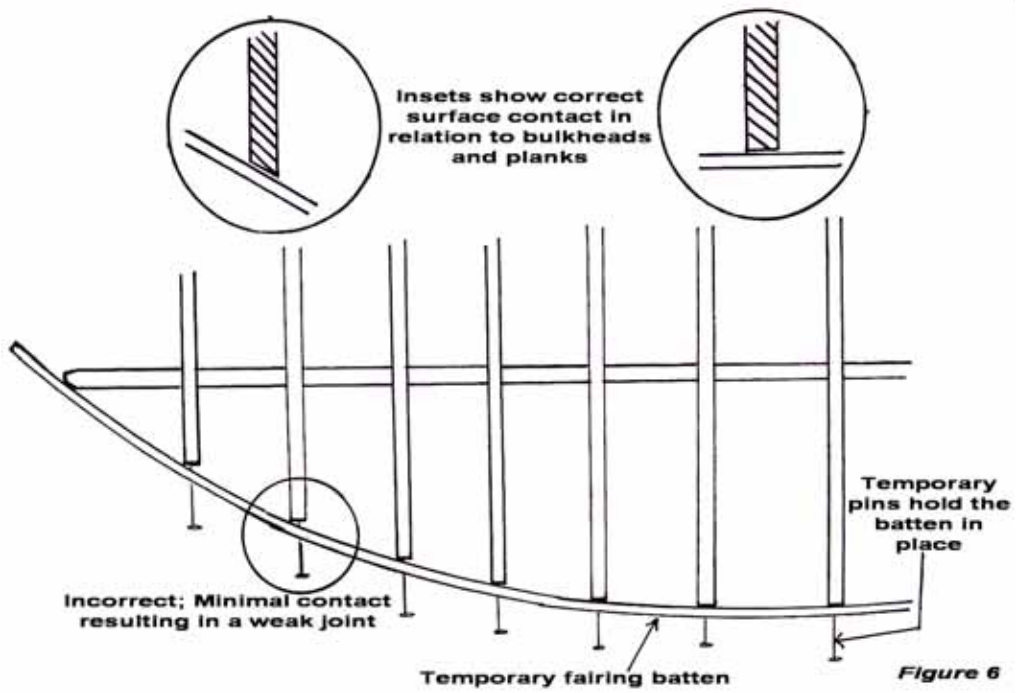


Figure 6

If an error is present such as a high spot move the batten up and down to determine the amount of error involved. Sand or remove the bulge to correct the problem. If there is a low spot a wooden slither or wedge can be added, just don't forget to glue the correction piece into place, no sense in allowing the piece to fall out later resulting in springy planks when trying to sand the hull down.