Planking Tips

This author is a complete novice at building a period ship, so it is with a fresh set of eyes that the various problems are viewed; planking is just one example. There is much information to be read on the subject, yet when actually attempting to do it, not all the techniques are fully explained. An experienced kit modeller will have developed his own methods, so the tips in these guidance notes are just one view as to how planking on H.M.S. Fly was attempted by this novice.

The literature read on the subject is as follows:

Period Ship 'Kit Builders Manual; Keith Julier "Chapter 7 Deck Planking" Pages 45-49. Special Interest Model Books Ltd., P.O. Box 327, Poole, Dorset, BH15 2RG, 2005. ISBN 978-185486-228-0

http://shipmodeling.net/vb_forum/articles51-Deck-Plank-Caulking-Mock-up.html

http://ezinearticles.com/?Planking-the-Deck-of-a-Model-Ship&id=3721128 (Wray Hodgson)

http://forum.model-space.co.uk/default.aspx?g=posts&t=808

The wood being used for the deck planking is 3 X 0.5mm Tanganyika Strip. Additional planking will be required to accommodate the modifications that will be incorporated into this model. It was advised that Amati only supplied the exact quantities; to ensure uniformity of colour, new deck planking was obtained.

Using lengths of 1000mm it was calculated that the Main Deck would require 22 lengths; Quarter Deck 11 lengths; Fore Deck 4 lengths and the additional planking for the Second Deck 5 lengths.

The Tanganyika was purchased from:-

http://www.jotika-ltd.com/Pages/1024768/Material_Tang.htm#Strip.

Given the size of the Fly it was decided to use a '3 Butt system of deck planking', although a '4 Butt system of deck planking' could have been used, Figure F1. The plank length used for this model is 80mm, which when scaled up, is approximately 16.5 feet. This was based on information read at:
http://www.modelshipwrightsdatabase.com/Articles/plankingproject.pdf Page 26, and
http://www.modelshipworld.com/phpBB2/viewtopic.php?t=1475 Paragraph 13.

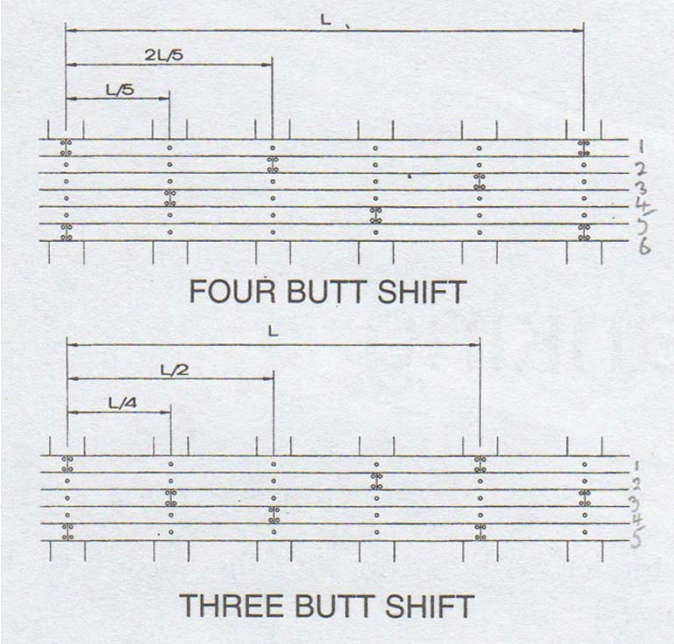

Figure F1 – Butt system of deck planking (Julier 2005, p46)

To ensure the plank lengths are all the same with end's that are square, a simple jig was constructed, using 5/32" X 5/32" Square Brass Tubes, Figure F2.

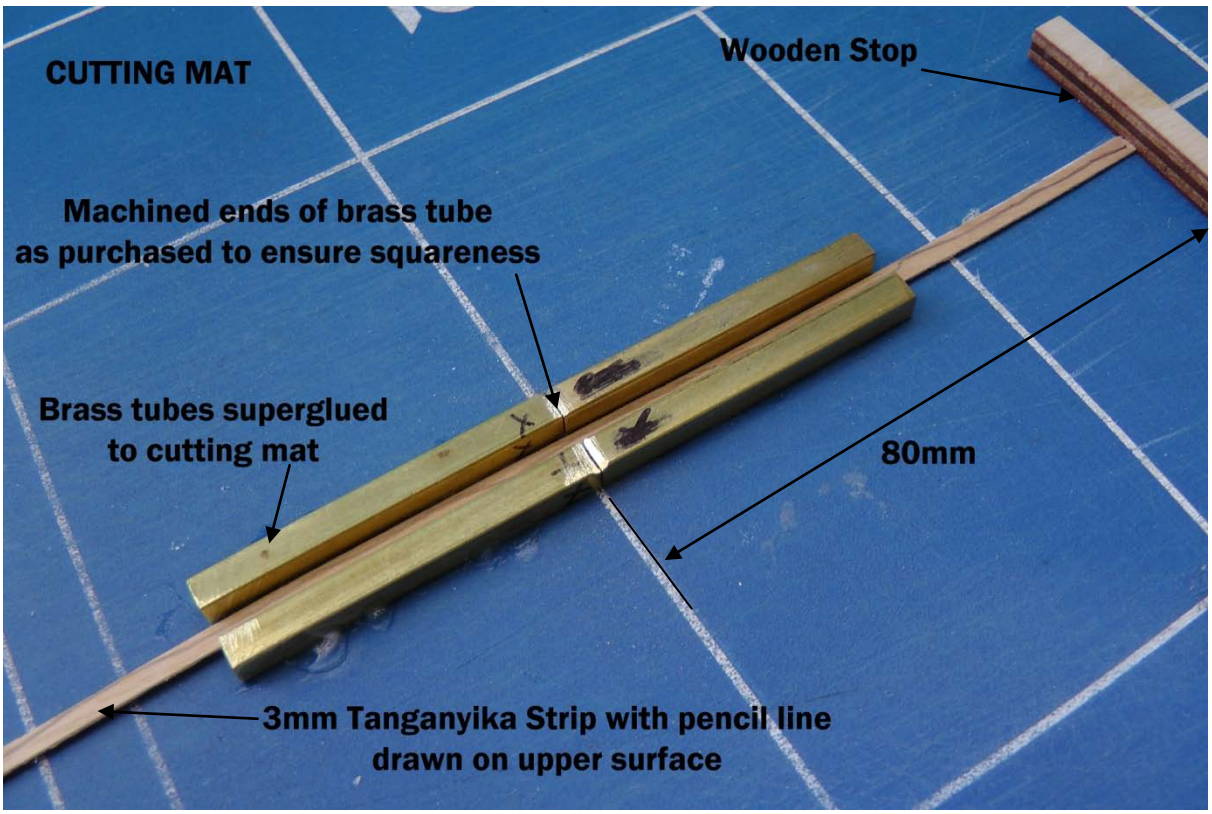

Figure F2 – Jig for cutting plank lengths

From experience, this author found that the butting of plank ends was important; it was noticed that cutting the planks with a conventional craft knife produced butt joints that were very slightly larger than the longitudinal side joints. When looking at a finished deck this would catch 'the eye', thereby questioning its authenticity. *Note: It is said that only the items that are not correctly done will stand out on a model.* This is caused by the 'V' shape of the blade creating a slight indentation on the cutting surface of the wood. It can be overcome by placing this side of the plank at the bottom when laying the deck; a pencil line is drawn on the Tanganyika Strip prior to cutting it as shown in Figure F2, to ensure continuity.

To reduce this effect further, a simple holder was made for the razor blade Figure F3.

Figure F3 – Holder for razor blade

The razor blade is then positioned in the jig for cutting the planks Figure F4.

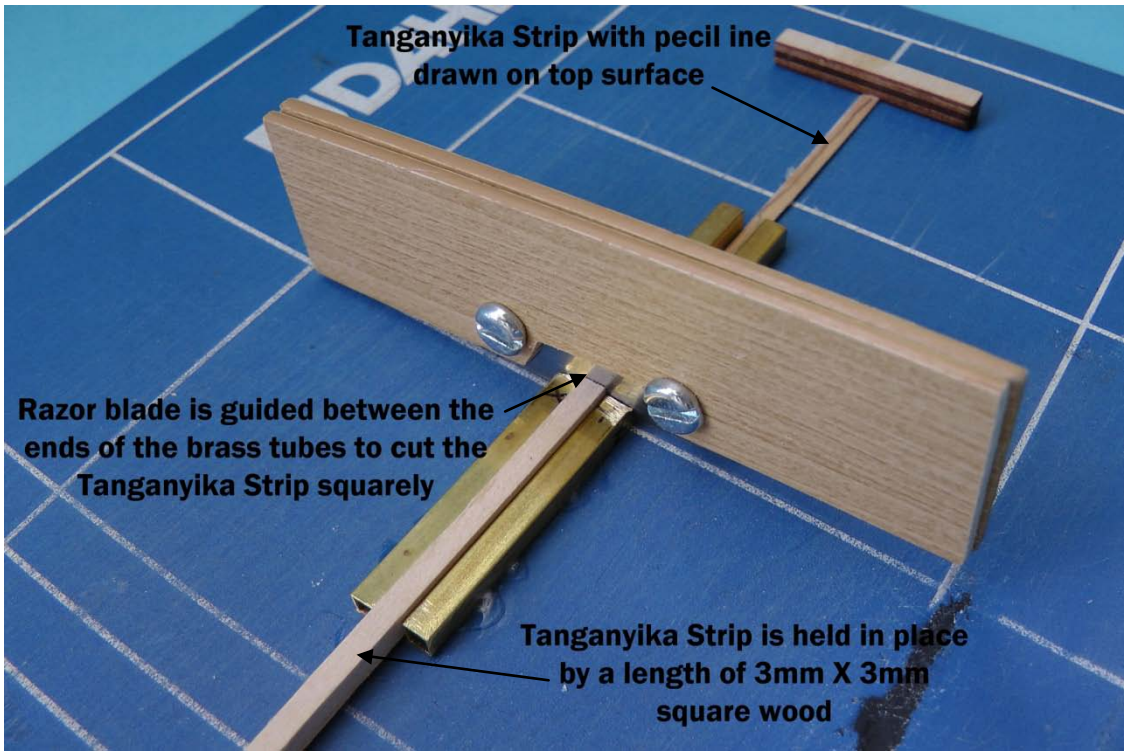

Figure F4 – Jig used for cutting planks

Various glues can be used for fixing the planks, and all modellers will have their individual preferences. Experimentation found that 'EVO-STIK Wood Adhesive Resin W' provided the best results.

A simple tool was made to hold the individual planking strips whilst the glue was applied, Figure F5. This same tool enabled the planks to be easily positioned and laid; this avoided the fingers becoming covered in adhesive.

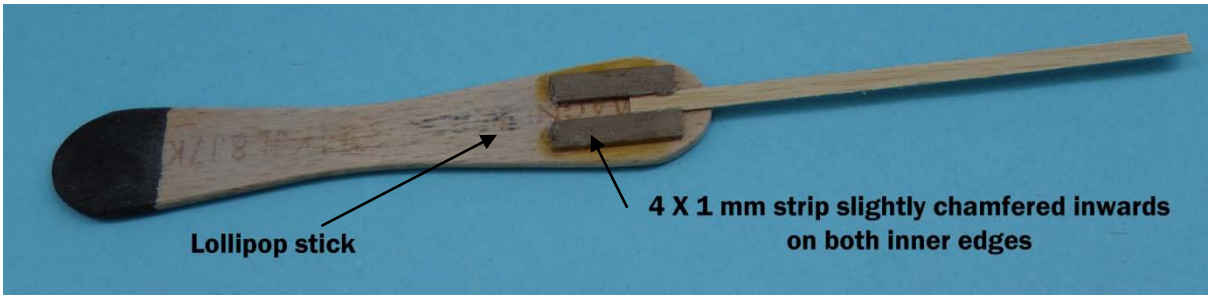

Figure F5 – Tool for holding individual planks

Only a small amount of glue is required on the back of each plank; if too much is applied the excess is likely to spoil the surface and also cause the plank to warp. A glue dispenser was made using the fine nozzle supplied with "ZAP-A-GAP Medium CA+ - www.zapadhesives.com", and was fixed to a small glue bottle, Figure F6.

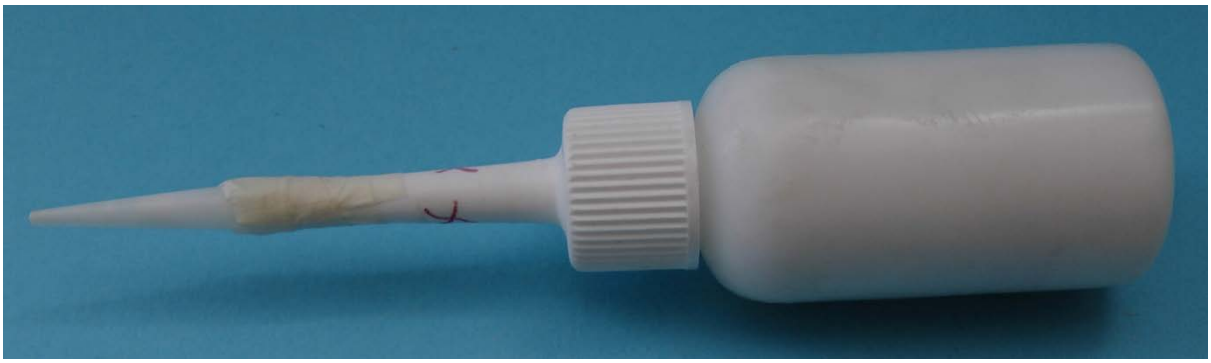

Figure F6 – Fine nozzle fitted to glue bottle

At the end of this nozzle the flexible component of a "0.4mm Interdental dental brush", Figure F7, was fitted to the end of the nozzle, Figure F8; the wire from a "0.6mm interdental brush" was fixed inside the flexible component, Figure F9. This restricted the glue from the nozzle enabling very small continuous amounts to be easily squeezed onto the plank, Figure F10.

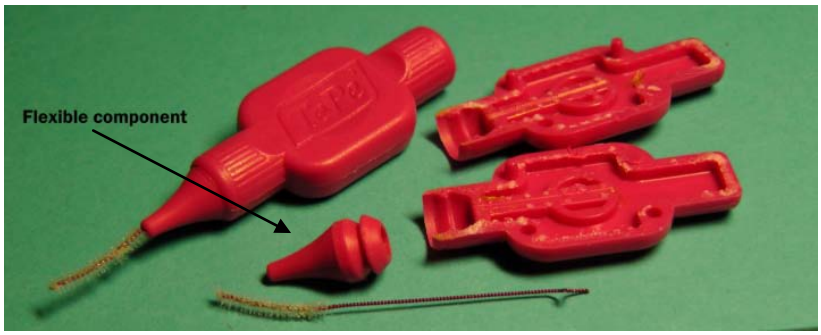

Figure F7 – Flexible component from interdental brush

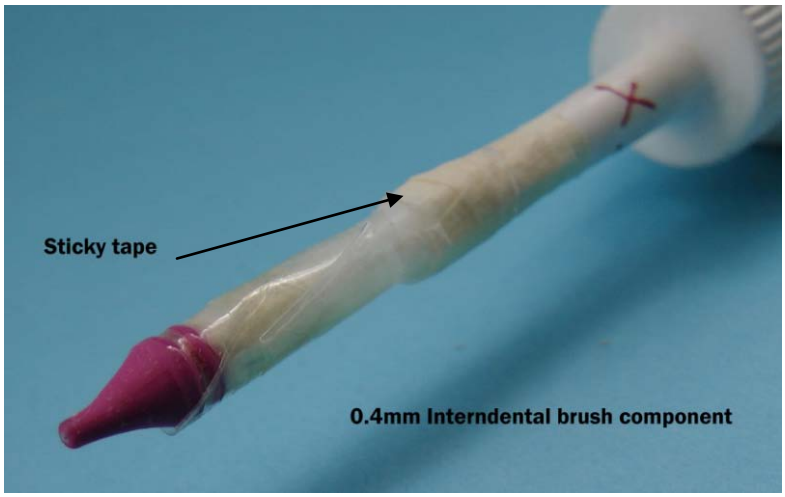

Figure F8 – Interdental brush component fitted to nozzle

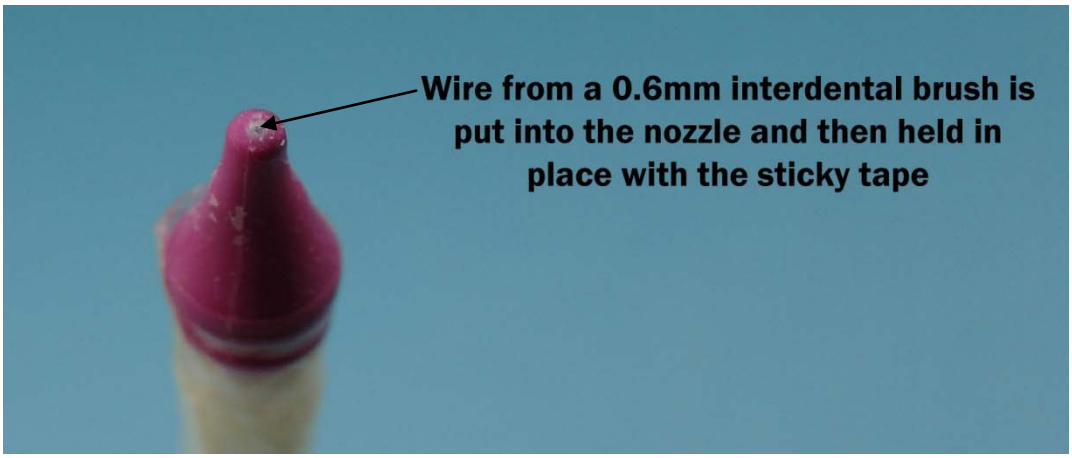

Figure F9 – Wire threaded into nozzle

Figure F10 – Glue squeezed in a measured amount onto plank

To enable the nozzle to be drawn along the plank in a steady straight line, a simple guide was made Figure F11. *(Note: the slot in the end of the doweling serves no purpose; this piece of wood was originally a 'budgie's perch'!)*

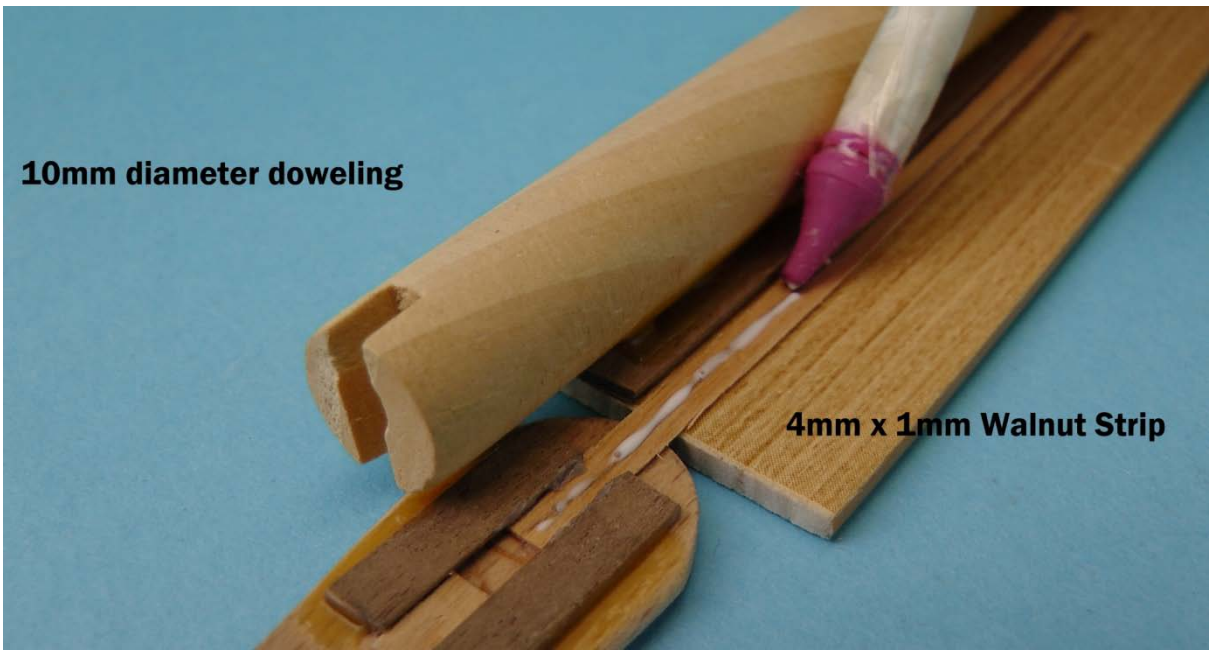

Figure F11 – Guide for ensuring a uniform amount of glue is applied to plank

It was found that if the bottle was kept upside down air bubbles would not become trapped in the nozzle, Figure F12. A pin is placed in the top so air can be let be allowed in when required.

Figure F12 – Glue bottle holder

To prevent the adhesive dripping from the nozzle when not being used, a small a stopper was made for the nozzle that had been sealed with superglue Figure F13.

Figure F13 - Stopper made from an “interdental brush” component part

“On a full size ship a gap of 3/8 " wide (0.15mm 1:64 scale) was left between the deck planks both lengthwise and at the butt ends to suit the caulking iron. Decks were nailed down next and then caulked with oakum (a mixture of animal hair, sphagnum moss or hemp and tar) and the seam was paid with pitch.” (Hodgson)

To understand what “3/8 inch” caulking would look like at 1:64 scale, a simple experiment was conducted. The scale width of the 3mm Tanganyika Strip equates to an actual plank width of 192mm (7.5 inches). This was drawn on an A4 sheet with the “3/8 inch” caulking either side; it was then reduce to 1/64 scale as shown in Figure F14.

Figure F14 – 1:64 scale replication of plank and caulking

(R*educed using ‘Microsoft Publisher’*)

To simulate the caulking, various methods were attempted as read in the above mentioned literature on Page 1; it was found that the best result was achieved by rubbing a STAEDTLER Mars Lumograph 2B pencil around the plank edges. The pencil lead was exposed to enable the edges to be easily marked, Figure F15.

Figure F15 – STAEDTLER Mars Lumograph 2B pencil with lead exposed

It was found that only a slight shading of the wood was required to provide the effect of ‘caulking’, Figure F16.

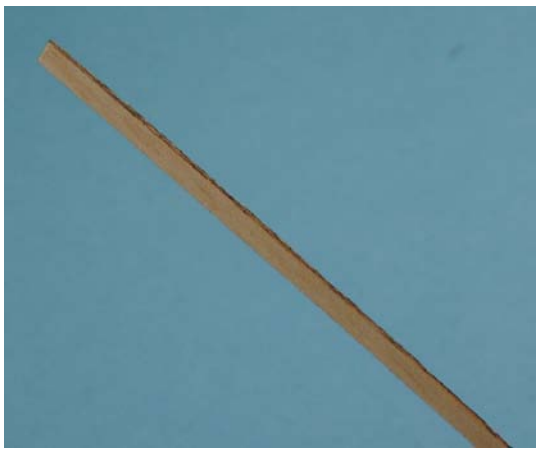

Figure F16 – Shading the edges of the plank

There are two methods of simulating the caulking, which affect the density of the caulking lines. Firstly planks can have all edges shaded, Figure F17; secondly only the long and short edge of each are shaded and are then matched with an un-shaded adjoining plank, Figure F18.

Figure F17 – Planking demonstrating 'caulking' effect with all edges shaded *(test piece)*

Figure F18 – Planking demonstrating 'caulking' effect with one edge shaded *(test piece)*

From the above experimentation this author will be shading the edges of the planks on all sides, and using a razor blade to cut the plank lengths. A final test piece is shown in Figure F19.

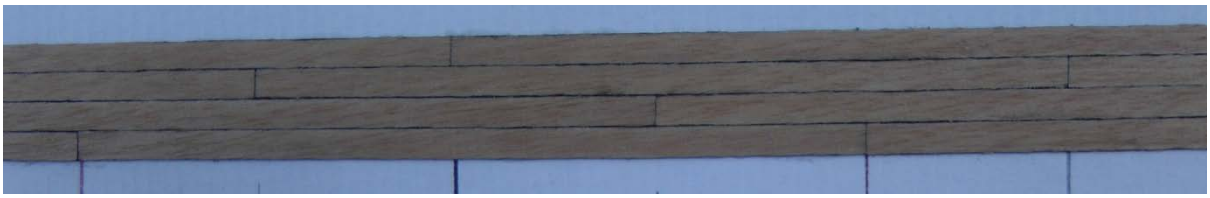

Figure F19 – Final test piece of planking prior to planking the model