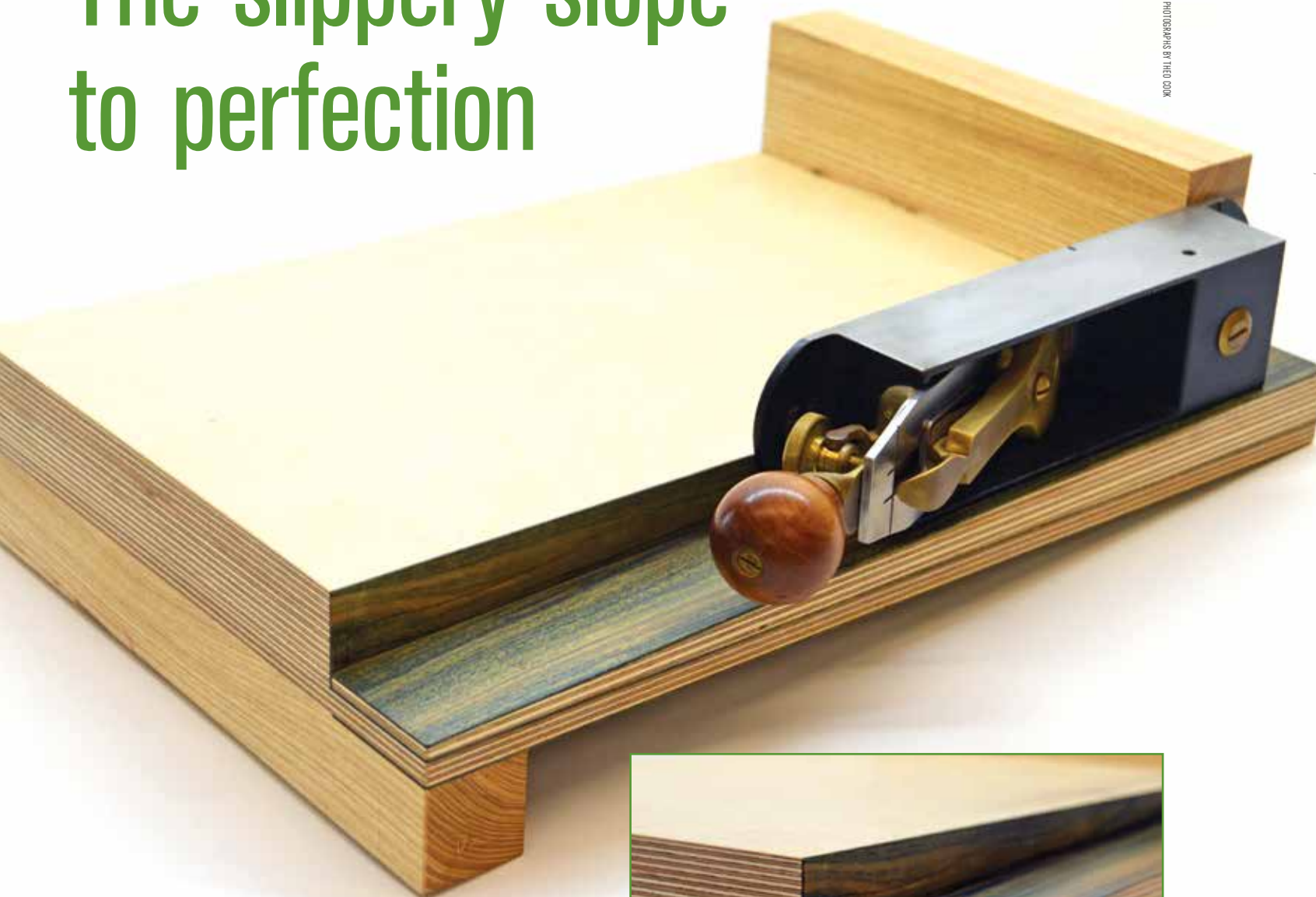


The slippery slope to perfection



PHOTOGRAPHS BY THEO COOK



Theo Cook explains how to make a tried-and-tested shooting board

I've been a teacher at the Robinson House Studio furniture school for over a year now. When teaching certain techniques I found that we didn't quite have enough shooting boards to go around. So I decided to design and make a new one and turn it into a student project. Of course, the students keep the shooting boards they make and their boards are custom-made to their particular planes.

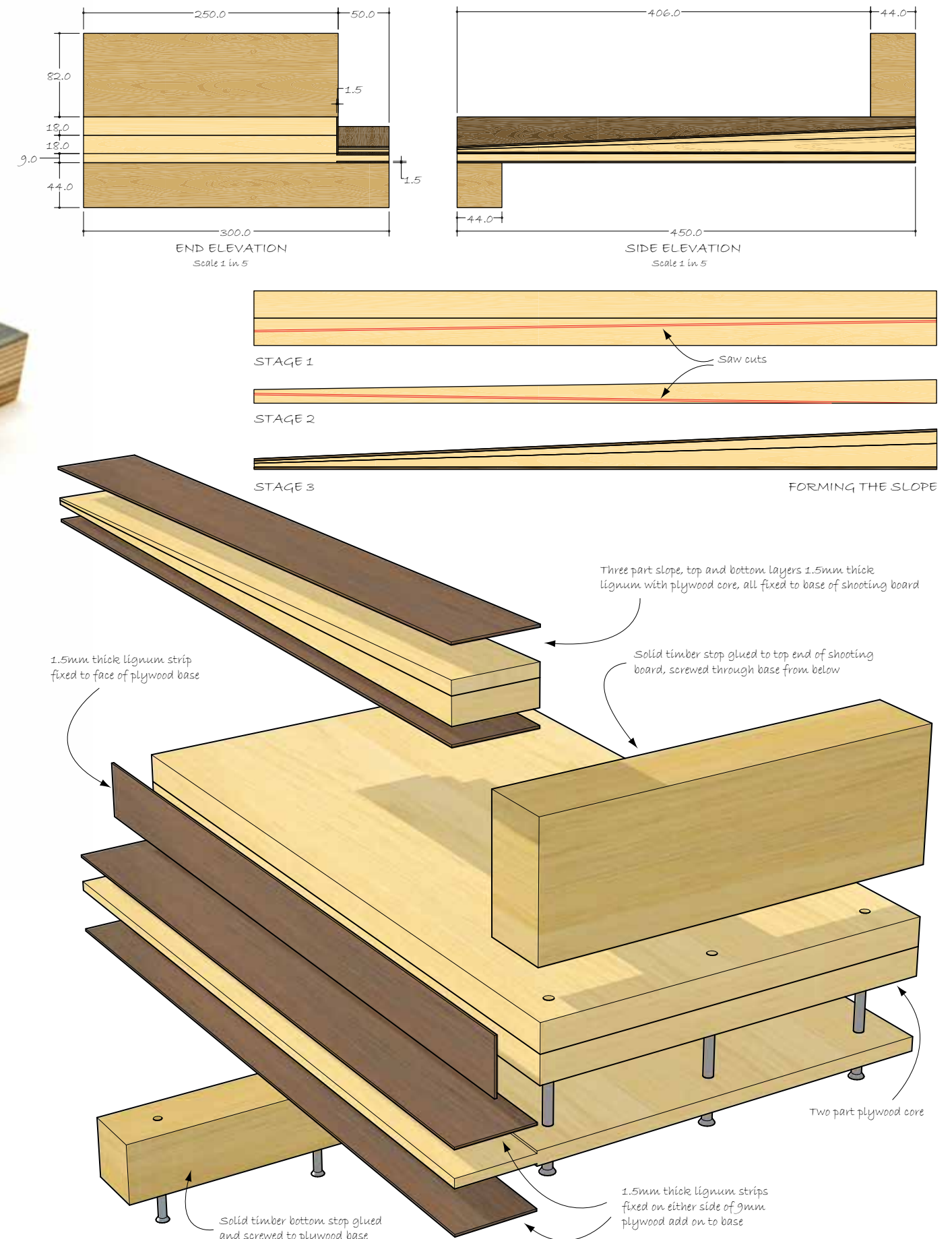
My design is based on the concept of the Lie-Nielsen skewed shooting plane. My thinking was, why not just make the slope on the shooting board skewed, so it

would do the same thing as the plane. One of the questions people ask me is why I chose to do the slope up instead of down. I decided to do it this way because when your plane is at the top of the slope, almost all of your blade is cutting. If the slope is going down, then you aren't cutting with that much of your blade when you hit the stop. One of the benefits I can see with the slope going down is that when cutting down on to your wood it may break out less, but I haven't seen the problem so far with the slope going up.

The wood I've used on the shooting board

is birch-faced ply for the main body, with solid wood for the end and bottom stops and lignum vitae (*Guaiacum officinale*) for the running surfaces as this is a naturally oily wood and very hard wearing. Before gluing any of the lignum make sure you clean it with acetone. I use Titebond original to glue lignum. The shooting board size is 450 x 300 x 48mm.

I hope that with the drawings and pictures you can make your own shooting board just like the one we use in the workshop. It's tried and tested and a well-used tool by all of our students at the workshop.





STEP 1

Start by cutting all the 18mm-thick ply components oversize, then glue the two boards together that will make up the main top. Use sufficient clamps or cauls to make sure there is a good even bond between the two surfaces. When dry, check for flatness with a straightedge. Adjust accordingly and cut a straight edge along one side. Now glue the two 18mm thick pieces of ply together that will make up the slope. Don't scrimp on clamps.



STEP 2

Prepare the lignum into slices of 1.5mm thick. A well-tuned bandsaw is the most convenient method of re-sawing. If you don't have access to one, your supplier may be willing to do this for you for a small fee. Be wary about thicknessing through a machine, not all planer-thicknessers are capable of handling thin stock. If you are left with no option other than hand tools, a scraper plane is the best option. You can now glue a piece of lignum onto the straight edge of your main board.



STEP 3

Cut a straight edge along one side of the slope component. Prepare a sacrificial board with a taper equal to half the slope angle along one edge. Mount the ply onto it and cut one side of the slope. Turn the sacrificial board around and cut the other side of the slope. Face both sides of the slope with a slice of the lignum and trim flush all round when the glue has dried.



STEP 4

Glue the piece of 9mm ply on the bottom of the main board. At this time you can decide whether you want to make your shooting board left-handed or right-handed. Taking all the same precautions mentioned in Step 1 you can now glue the slope in place ensuring it's tight up and square to the edge of the main top.

STEP 5

Route a 1.5mm-deep rebate the same width as the slope on the bottom of the 9mm sub-base directly beneath the slope. Glue another strip of lignum into this rebate and flatten with a scraper plane when the glue has set. This will help to counter any uneven shrinkage of the solid wood and balance the ply. You can now trim and flush the whole board to size on all four edges. Fix the front bottom stop (hook) in place with fixings of your choice. A combination of screws and glue will be fine.

STEP 6

Finally, glue and screw the top back stop in place paying careful attention to make sure the end is perfectly square and flush with side of the main top. As well as preventing breakout at the back of the workpiece it also prevents the plane from tipping over if you put too much pressure on it at the end of the cut. Use an engineer's square when gluing this on just to make sure it's 90° to the slope. It's very difficult to adjust afterwards.