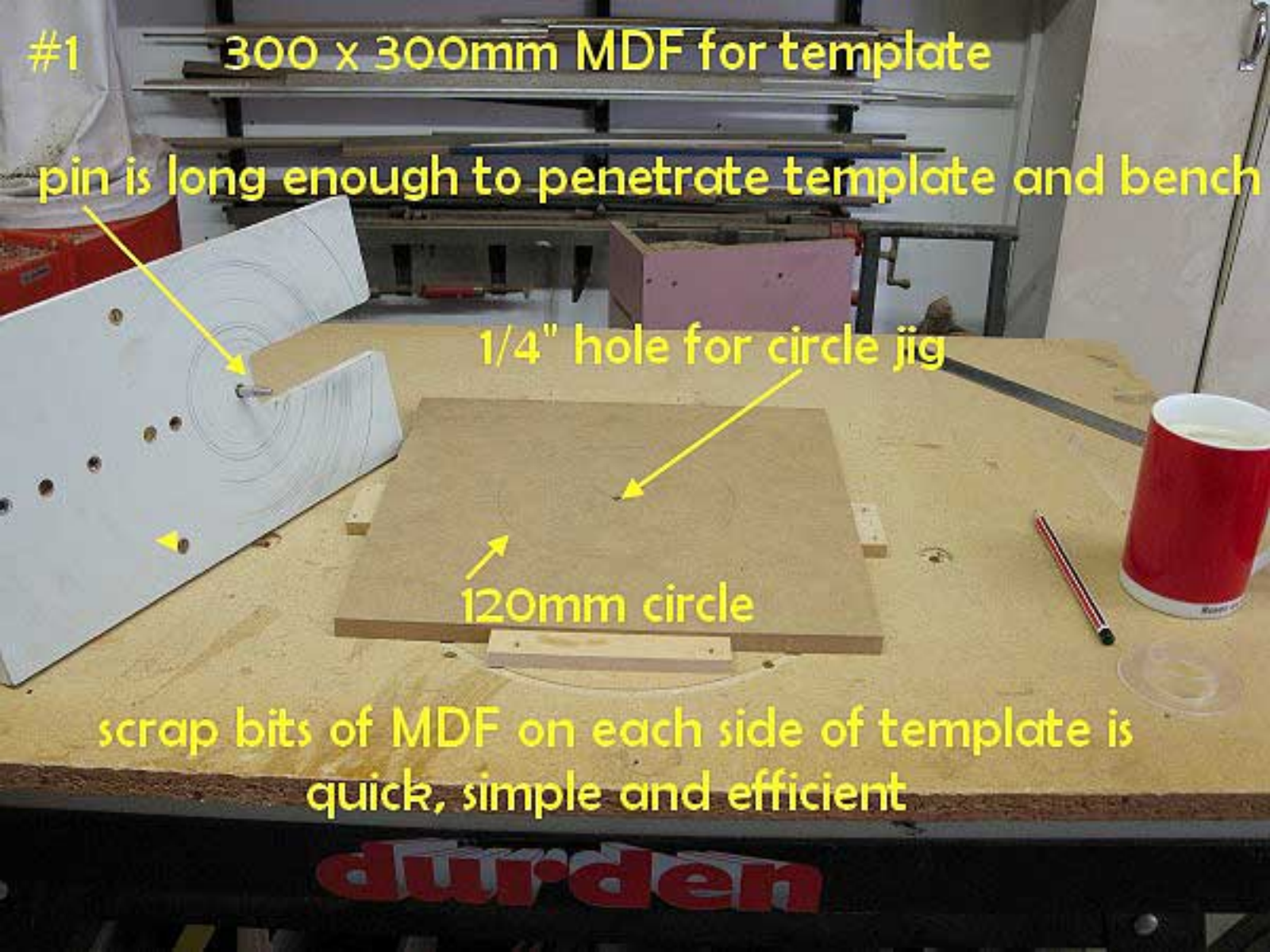
Routing for Beginners by Harry (aka Harrysin)

Lesson One

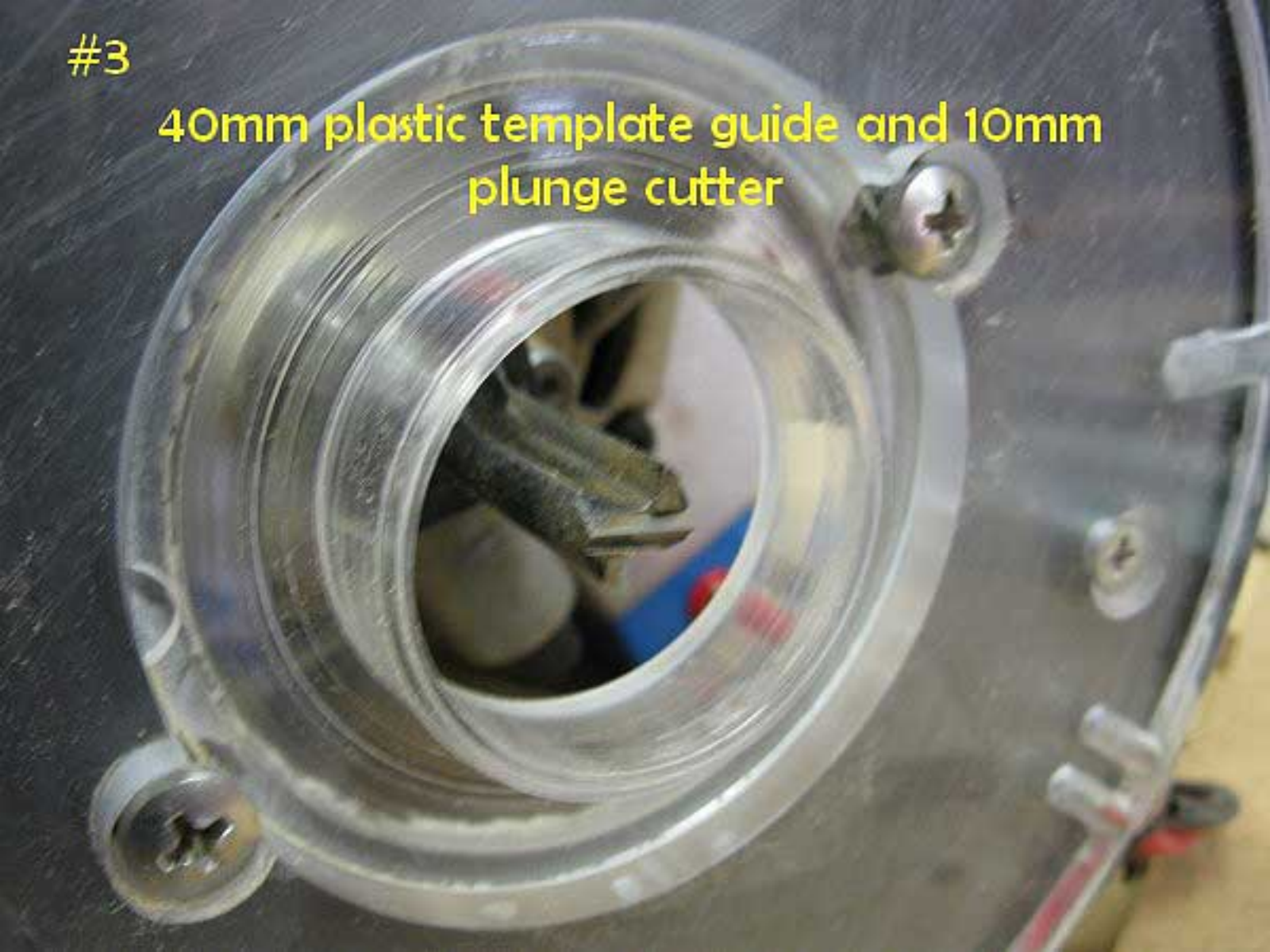
http://www.routerforums.com/guide-bushings-templates/21306-routing-tutorial-beginners.html

The first shot shows the finished project, a coin tray for the dressing table, I could have made it on the lathe in perhaps half an hour, or even with the router in a much shorter time than this one took, however, the whole idea of this tutorial is to show beginners, who are no doubt only familiar with table routing, that there are other, more exciting ways in which the router can be used, I've generally used metric measurements because of the cutters and template guides that I have, however, this coin tray can be any size or height that you want, based on what cutters and guides you have. The piece of American Oak that I used just happened to measure 8.5" x 7" x 1 3/8" which added an extra stage to reduce it's height after routing both inside and outside. I would suggest that a 1" thick piece would be better, also a thinner template, about 3/8", this would mean that a collet extension wouldn't be needed. If a dish cutter isn't available, just leave the inside corner square.

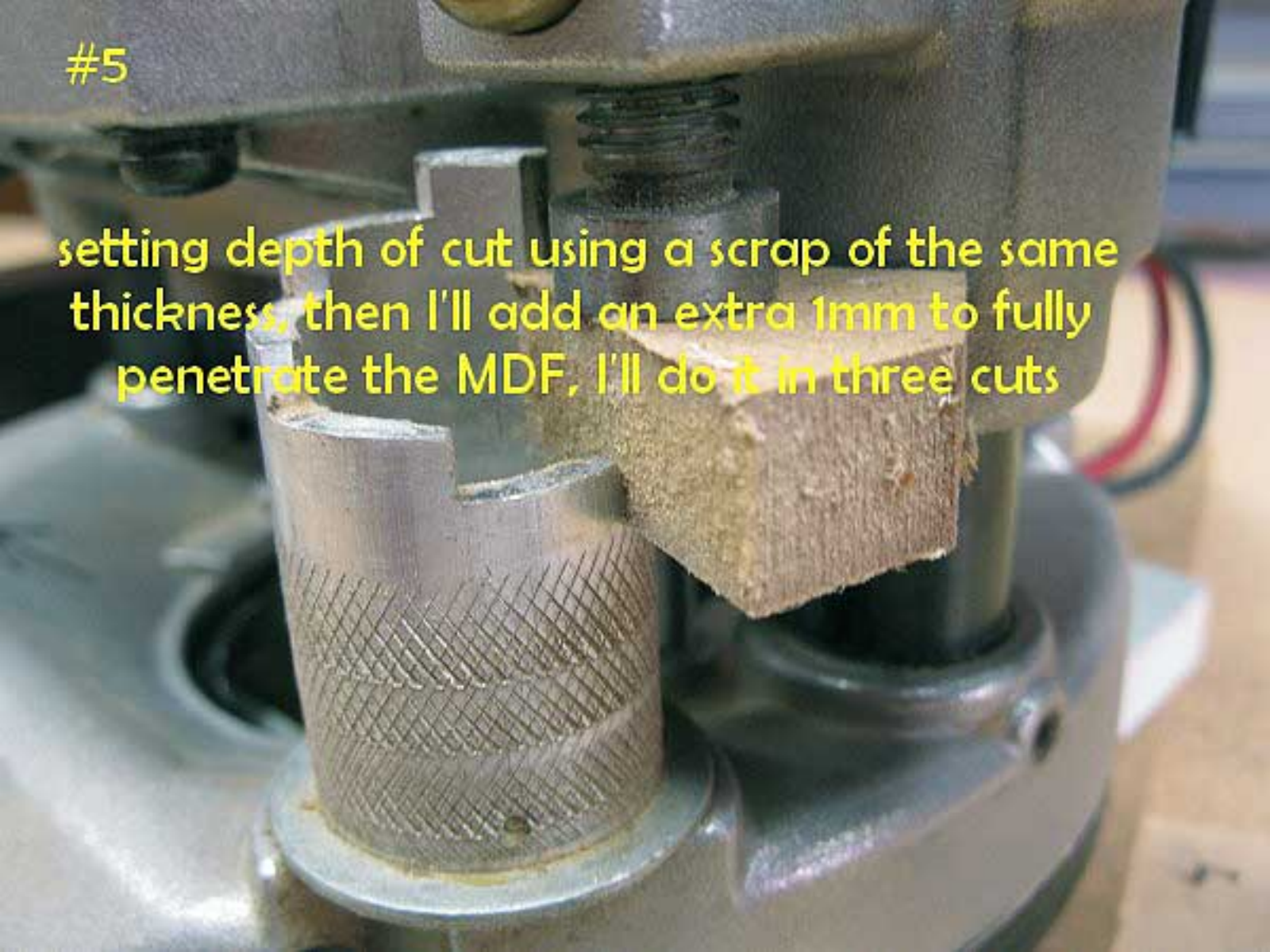
When sorting the photos, I realised that I had failed to take shots of some operations, the most important being how I routed the inside of the tray, so I did a mock set-up to show this with three shots at the end. If anyone has questions, don't hesitate to ask, the chances are that other members have the same questions but are too shy to ask, or feel that the question is foolish, no such thing, if you were in a classroom I'm sure you would raise your hand!


#1 300 x 300mm MDF for template
pin is long enough to penetrate template and bench
1/4" hole for circle jig
120mm circle
scrap bits of MDF on each side of template is quick, simple and efficient
durden


#2
circle jig in place ready for router


#3
40mm plastic template guide and 10mm plunge cutter

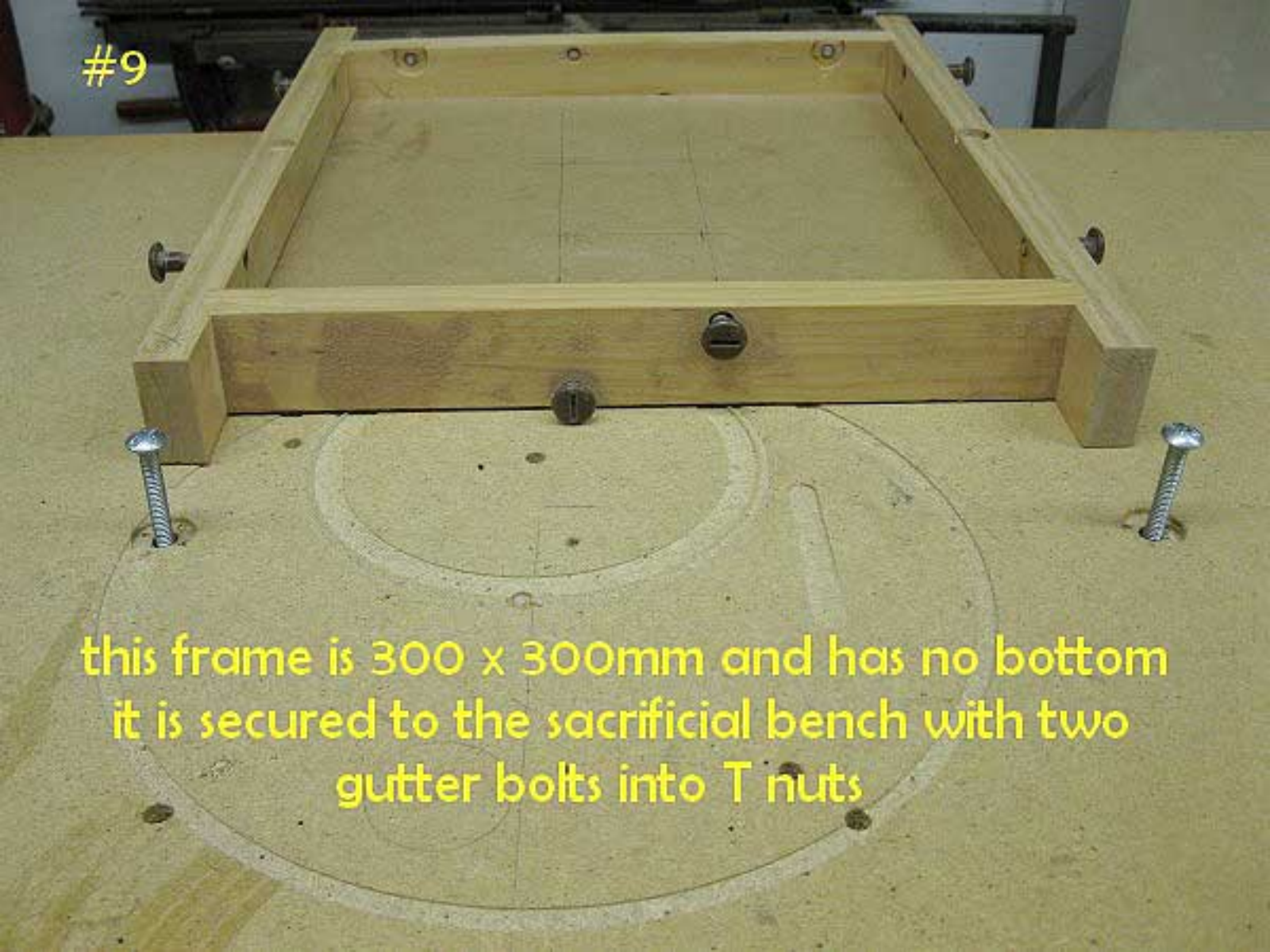

#4
router adjusted on jig so that cutter
just touches inside of line


#5
setting depth of cut using a scrap of the same thickness, then I'll add an extra 1mm to fully penetrate the MDF, I'll do it in three cuts


#6
depth set for first cut


#7
all the way through


#8
a nice clean cut


#9
this frame is 300 x 300mm and has no bottom
it is secured to the sacrificial bench with two
gutter bolts into T nuts


#11
non of the side screws are needed for this

#11a

after the first cut

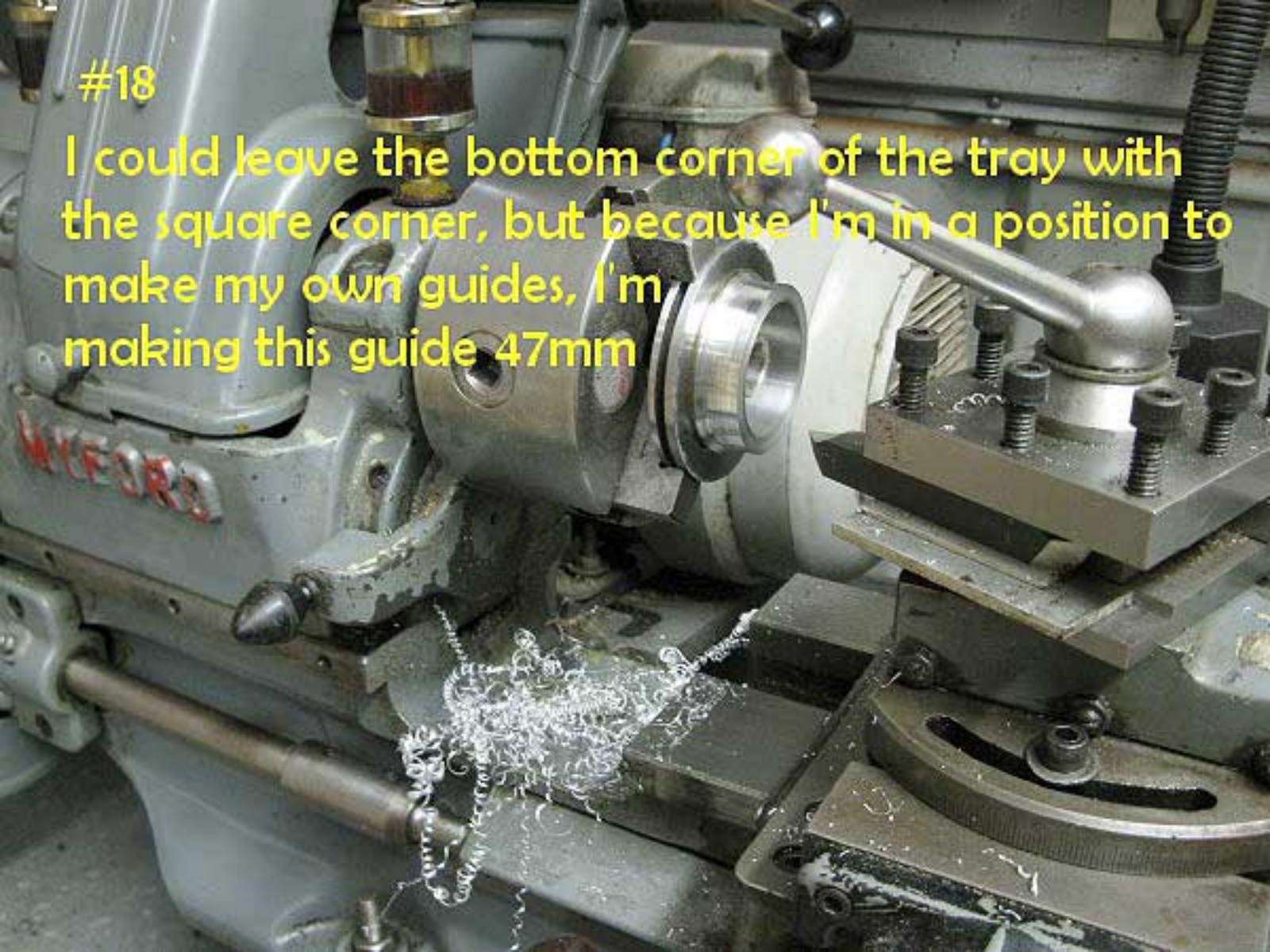

#13
a block of American Oak
found amongst my collection,
notice how it's held in position


#14
I'm going to rout to a depth of 25mm, each step is 4mm plus 5mm at the top set with drill


#16
after the third cut
after routing around the edge, the router was moved forward and backwards along the grain

#17

all the way down 25mm in six easy cuts


#18
I could leave the bottom corner of the tray with the square corner, but because I'm in a position to make my own guides, I'm making this guide 47mm

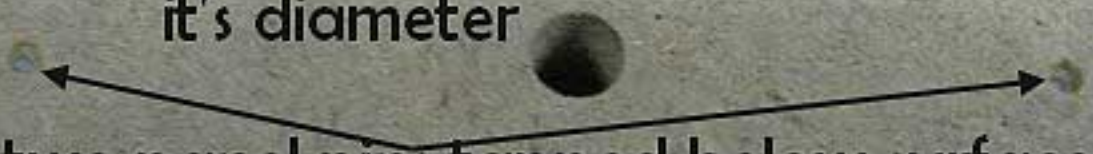

#19
notice, in order to use this dish cutter, the collet extension was required, also notice how it fits through the large guide .

#20

after removing 3mm from the walls with the dish cutter in order to round the corner

#22

in order to rout the outside of the tray, a plug is required to be a perfect fit into the tray, so why waste the center that came from the template, just reduce it's diameter



two panel pins tapped below surface

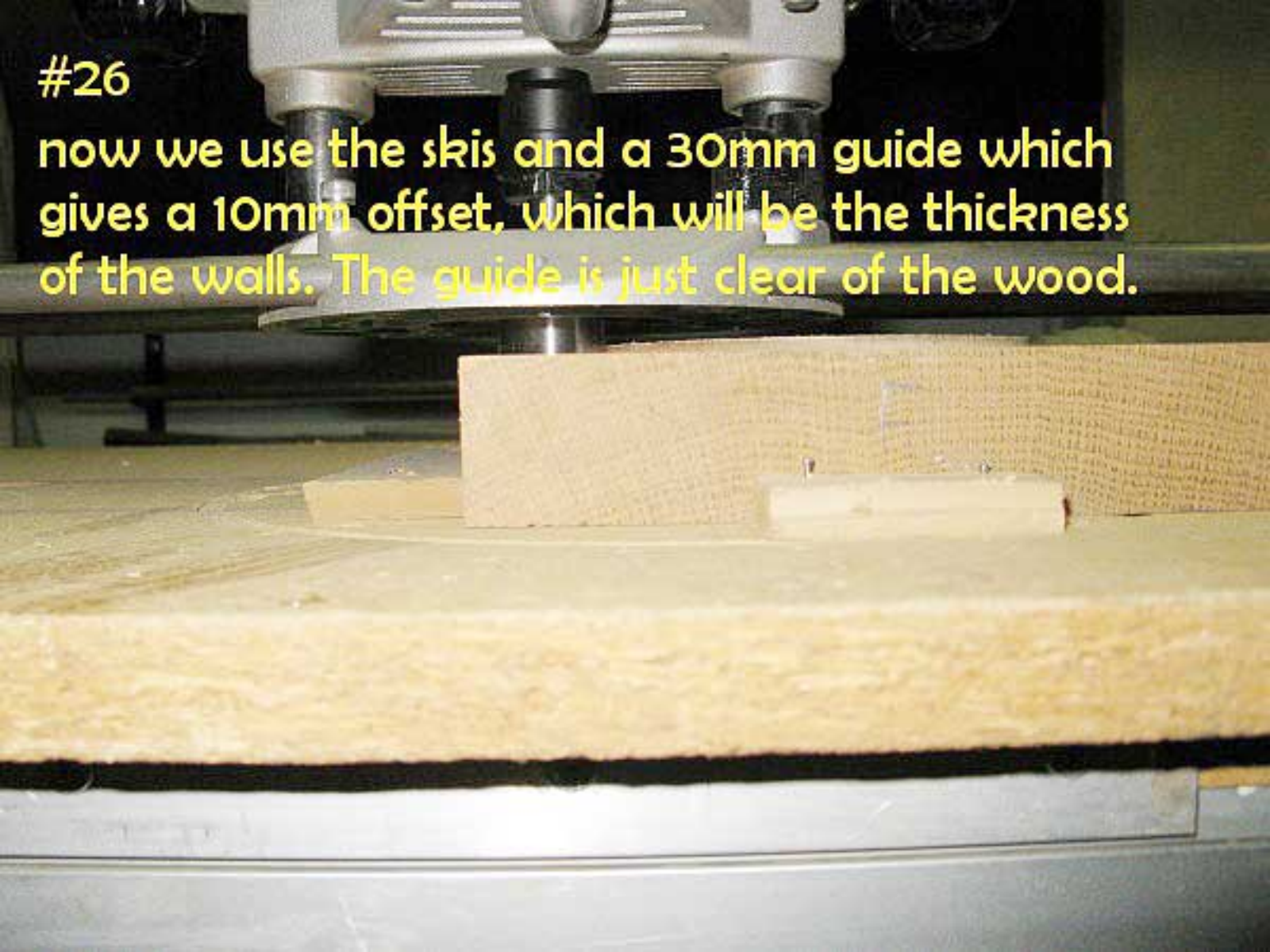
the hole is lined up with one in the sacrificial table and held with two panel pins

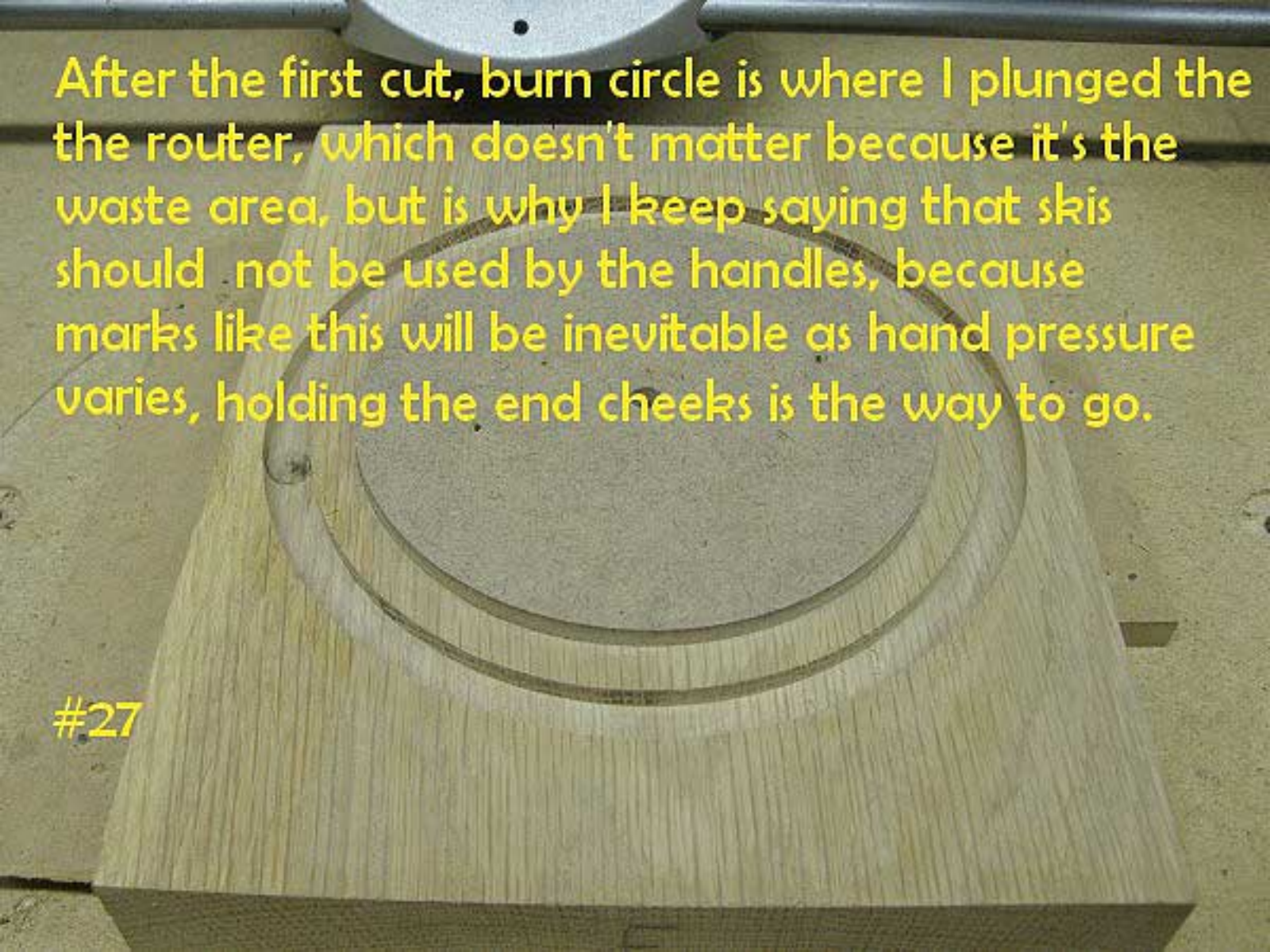

#23
cutter just touching line ready to reduce diameter


#24
ready for removing from table

there is packing below the plug
which is a perfect tight fit.

#25


#26
now we use the skis and a 30mm guide which gives a 10mm offset, which will be the thickness of the walls. The guide is just clear of the wood.


After the first cut, burn circle is where I plunged the the router, which doesn't matter because it's the waste area, but is why I keep saying that skis should not be used by the handles, because marks like this will be inevitable as hand pressure varies, holding the end cheeks is the way to go.
#27


#28
about 3mm left at the
bottom to keep tray
in place for next stages

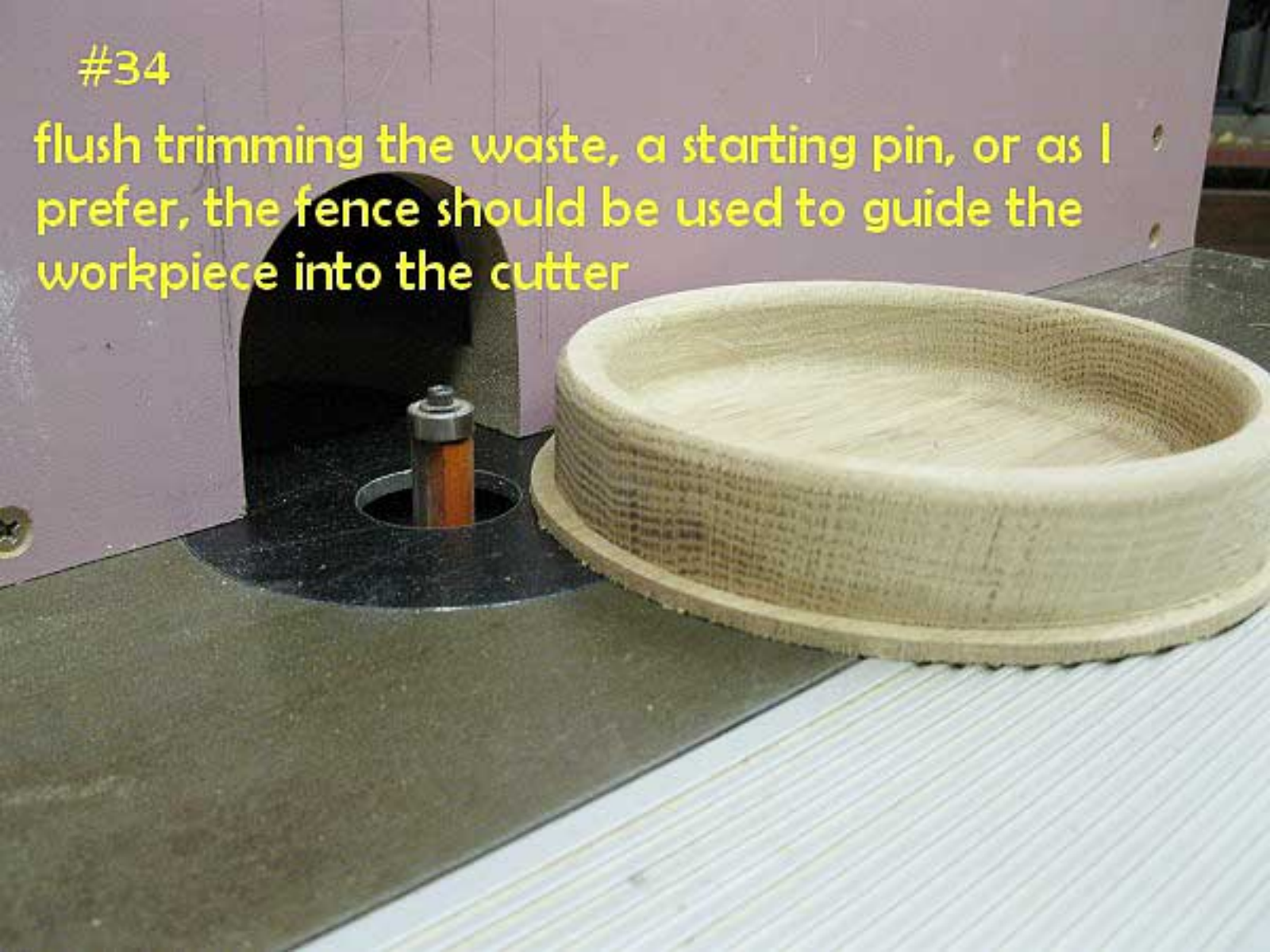

#29
back to the 40mm guide to widen the groove
for the next step


#30
notice not only the wider groove but also the reduced height of the walls, there is no mark because the depth of cut was set within the tray, which is why I say that ski routing is best when the cutter can approach wood from free space


#31
roundover cutter the reason for
wider groove


#32
the wider groove was to accommodate
the roundover bit


#33
now we can cut it free, band, jig, scroll, fret or coping saw, whatever you have.


#34
flush trimming the waste, a starting pin, or as I prefer, the fence should be used to guide the workpiece into the cutter


#35
flush and ready for a roundover


#36
sanded and ready for first coat of gloss poly


#37
first coat of poly is dry, sides look too plain, so some grooves might just be in order

the original bearing, on the right would have made for too deep a groove, so replaced with a bigger one as shown


#39
the second coat of rattle can poly


#40
I forgot to show how I routed the inside, no skis,
the router is fully supported on the template
witout the aid of skis as shown in these three shots
set up after the project was finished


#41
forward and backwards, the router is well supported on the template


#42
most of router is in contact with template and because of this, the bigger and heavier the router, is, the easier it is to control (believe me) Bj and I seem to differ on this point!