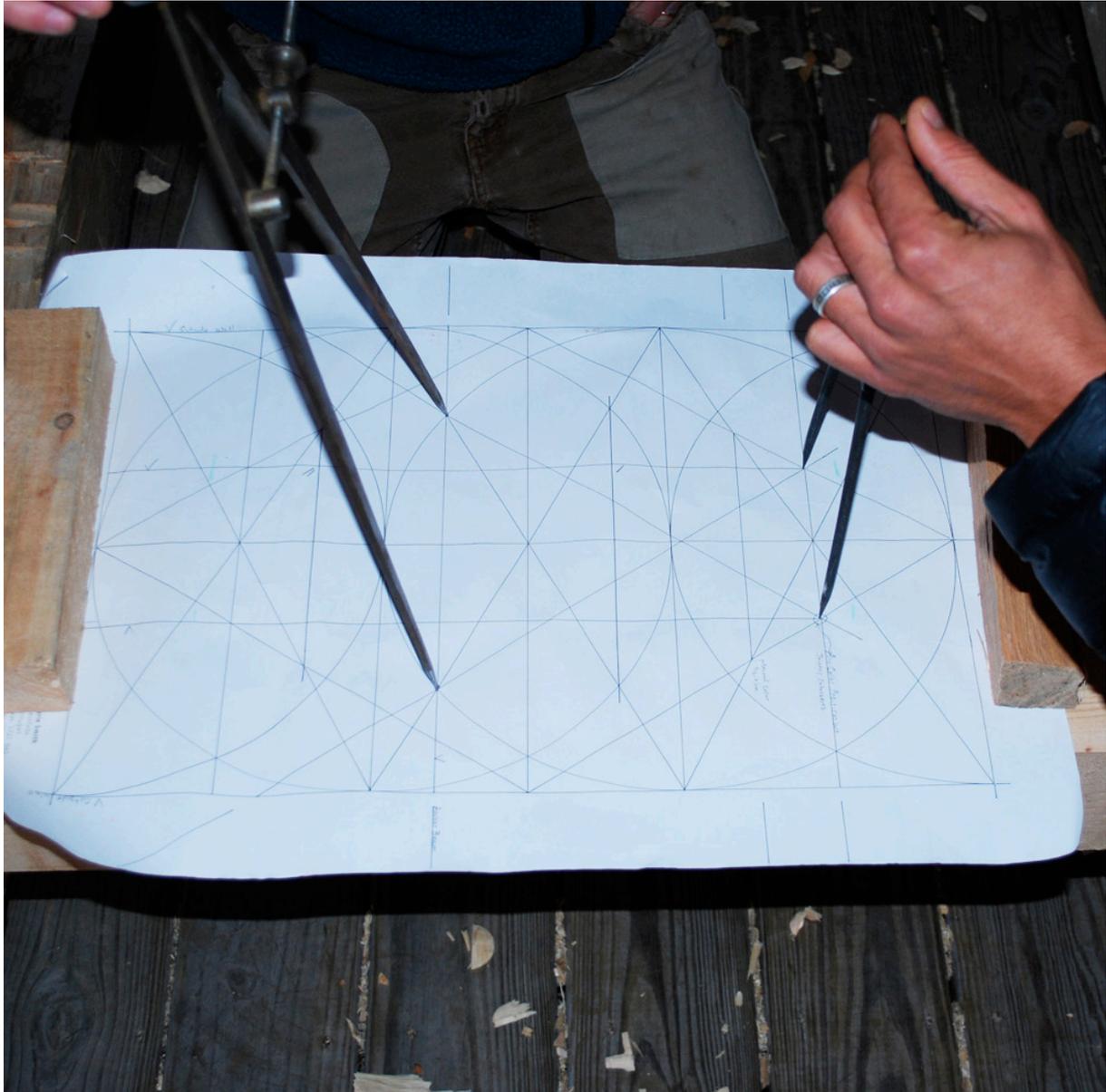


# THE DUTCH HOUSE at Bucksteep Manor

9 Photographs



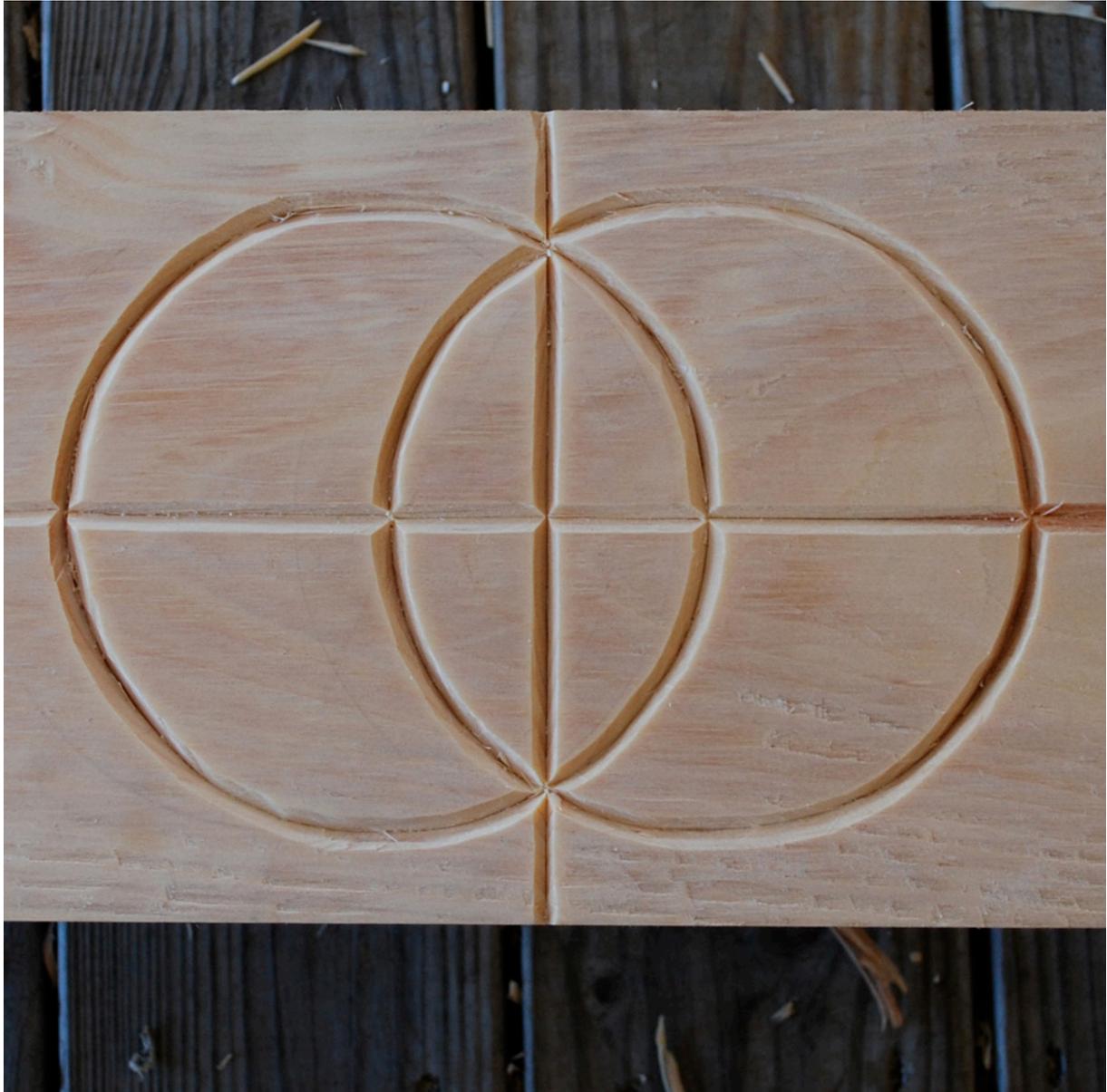
Laurie SMITH  
THE GEOMETRICAL DESIGN WORKS



1

The Gallery shows 9 photographs from a timber framing project at Bucksteep Manor, Massachusetts, USA –

Taking divider readings from an A3 scale two-circle geometrical design for the Dutch House. Once the divider readings are taken between cardinal geometrical points on the design they can be stepped out along chalk lines snapped onto timbers to give the full scale, twelve steps for 1:12 scale or 24 steps for 1:24.



2

The two-circle geometrical symbol, the first stage of the Dutch House design, cut into one of the frame's anchor beams to leave a record of the geometry used for posterity. Because the two gable walls would be boarded and therefore invisible, the symbol was cut on one of the internal anchorbeams, first in from the gable.



3

The Timber Framers Guild logo, branded into an anchorbeam using a hot iron, recording the Guild's initiation and funding of the project . This logo was placed on the first anchorbeam in from the opposite gable to the two-circle symbol.



## 4

The BOSS drilling machine used in the project. The operator sits on the machine's integral seat with his weight holding the drill firmly in position while drilling by rotating the machine's twin handles.



5

Four drill holes show the precision of the BOSS drilling machine. All that's left is to chisel out the remaining waste to clear the mortice, flat chisel on the sides and L-shaped chisel in the corner angles.



## 6

The corbels act as braces between the vertical posts and horizontal anchorbeams. They are housed into both timbers and are the same width as the anchorbeams. Their massive strength, which allows the posts to rise into a second storey without further support, is offset by the elegance of their curvature. They follow the same angle as the conventional straight braces in the gable walls (seen on the lower left and upper right of the photograph).



## 7

Trestle sawing a tree trunk into beams. Gerald, who trained in Germany and wears his traditional German carpenter's uniform, is the top sawyer (or top dog) on the trestle. Beneath him is the bottom sawyer (or under dog) on the ground. The log had previously had a its lower face hewn so that it could rest level on the trestle and therefore be stable for sawing.



## 8

Trestle sawing a curved timber into four braces. The top dog lifts the saw high to allow for each down stroke by the under dog. The saw, assisted by gravity, cuts on the down stroke. The sawing is carried out to a steady rhythm so that it can be maintained for long periods throughout the day.



## 9

The Dutch House frame test assembled in the exhibition hall of the Saratoga Springs Hilton Hotel, Massachusetts, venue for the Timber Framers Guild 2009 Eastern Conference. The woman at the centre of the frame is looking down at the building's scale geometrical drawing (see photograph 1). The frame was auctioned to provide funds for the TFG and re-erected in Texas by its owner.

For the full story of the project go to ~  
[ARTICLES > The Dutch House at Bucksteep Manor](#)

[www.historicbuildinggeometry.uk](http://www.historicbuildinggeometry.uk)

