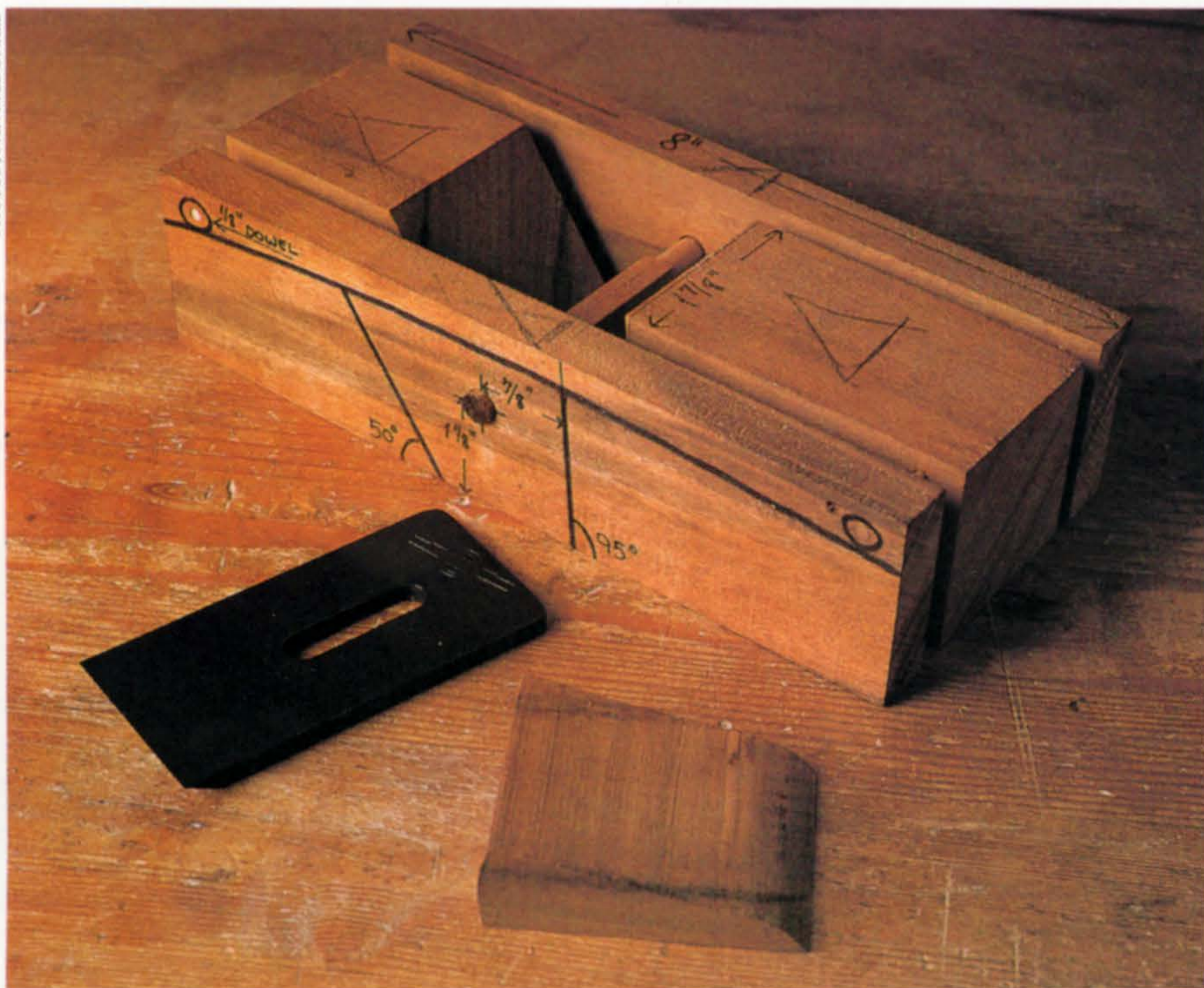


# Hjorth-Westh: Making a Scraper Plane

BY TOM MCFADDEN

PHOTOS JOHN McDONALD



Faced with the question of how to flatten and smooth a 4'x10' Bubinga tabletop, Ejler Horth-Westh chose a solution which allowed him to affirm his belief that the process of woodworking is more important than the final product; it also allowed him participation in the "community" of woodworkers who have gone to the College of the Redwoods.

Ejler asked a friend, Greg Smith, to come and help and together they surfaced the top with scraping planes which Ejler designed and made. He has provided the step-by-step instructions on how to make such a plane, as well as a "kit" for a second, more refined, version of the plane.

I asked him why he did it this way

*The "kit" (above) for making Ejler's highly recommended finishing scraper plane. This design was patterned after the more aggressive "hog," built by Greg Smith. A wide throat (below) opening allows ample clearance for shavings.*



instead of simply taking the top to a wide-belt sander and he said, "If I did that I would not be engaged in woodwork. I would be engaged in anything but woodwork. This is fun work, this is good work—I would like to call it the true way of woodworking. Not only do I get to flatten the tabletop by hand, I also develop a tool in the process."

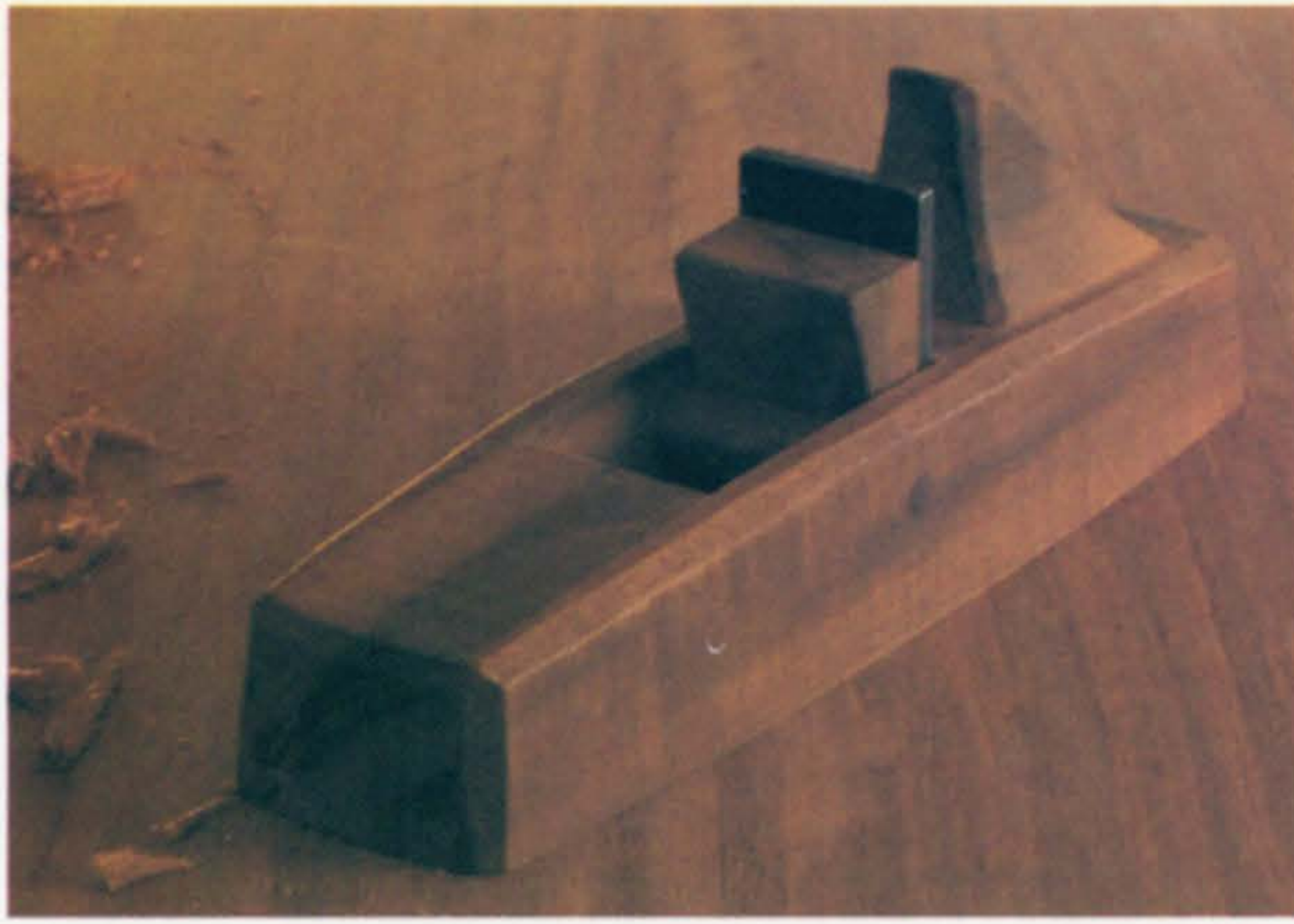
Ejler said that the scraper plane used for the initial flattening of the top, is a "hog." It takes off a lot of material quickly. The second version, shown in the photos in "kit" form, is designed to be a finishing tool. It will refine the surface left by the first one.

The iron in the first plane is set at 90 degrees to the bottom of the plane, he said. The iron in the finishing version is set at 95 degrees and will have a "burr" put on the edge with a burnishing tool.

Ejler said he chose a wood called Goncalvo Alves for the planes, "...it is a hard, oily wood that burnishes itself, it does not allow a build-up of dust on the sole of the plane." He likes to use a Hock Iron "because it has the hardness to hold an edge."

The plane is made from five pieces of wood; the body piece, in the center, is 2" thick and 8" long. Ejler said it should be the width of the iron plus about 1/8". The two cheek pieces are 1/2" x 2" x 8", the "pin" is made from square stock 1/2" x 1/2" x 3-1/4", and the wedge is cut from the piece which is removed from the center of the body piece.

The first step is to draw the shape of the plane and the layout on one cheek piece. The 1/8" dowels, which keep the parts in proper relationship to each other during the glue-up, are located at the top of the plane in the waste portion of the cheek pieces and body piece. Then the body piece gets cut to form the throat of the plane. In the finishing version the front "ramp" is cut on a 50 degree angle and the back "ramp" is cut on a 95 degree angle. The wedge is made from the piece removed between these two "ramps."



The next step is to assemble the parts dry, using the locator dowels, and drill the holes for the pin. These holes must be aligned perfectly in order to keep the iron in the plane straight. Their centers should be 1-1/8" up from the bottom of the plane and 7/8" forward of the back "ramp" where the back of the iron sits.

Ejler makes the pin from oversize square stock. He cuts shoulders on the ends of the piece on the table saw and then rounds the ends to fit the 5/16" pin holes with a file. He said the file

has a "safe" edge with the teeth ground off so he won't damage the shoulder cuts. He rounds the front of the pin and leaves the back surfaces flat to rest against the front of the wedge.

After the pin is made Ejler assembles the plane again with the pin in it and checks to

see that the pin is perfectly parallel with the ramp. This can be readily adjusted while the plane can still be taken apart, by cutting a taper on the face of the pin on the side near the wedge. When the pin and the ramp are parallel it is time to glue the cheek pieces and the body pieces together. Don't forget to put the pin in place, and don't glue the pin!

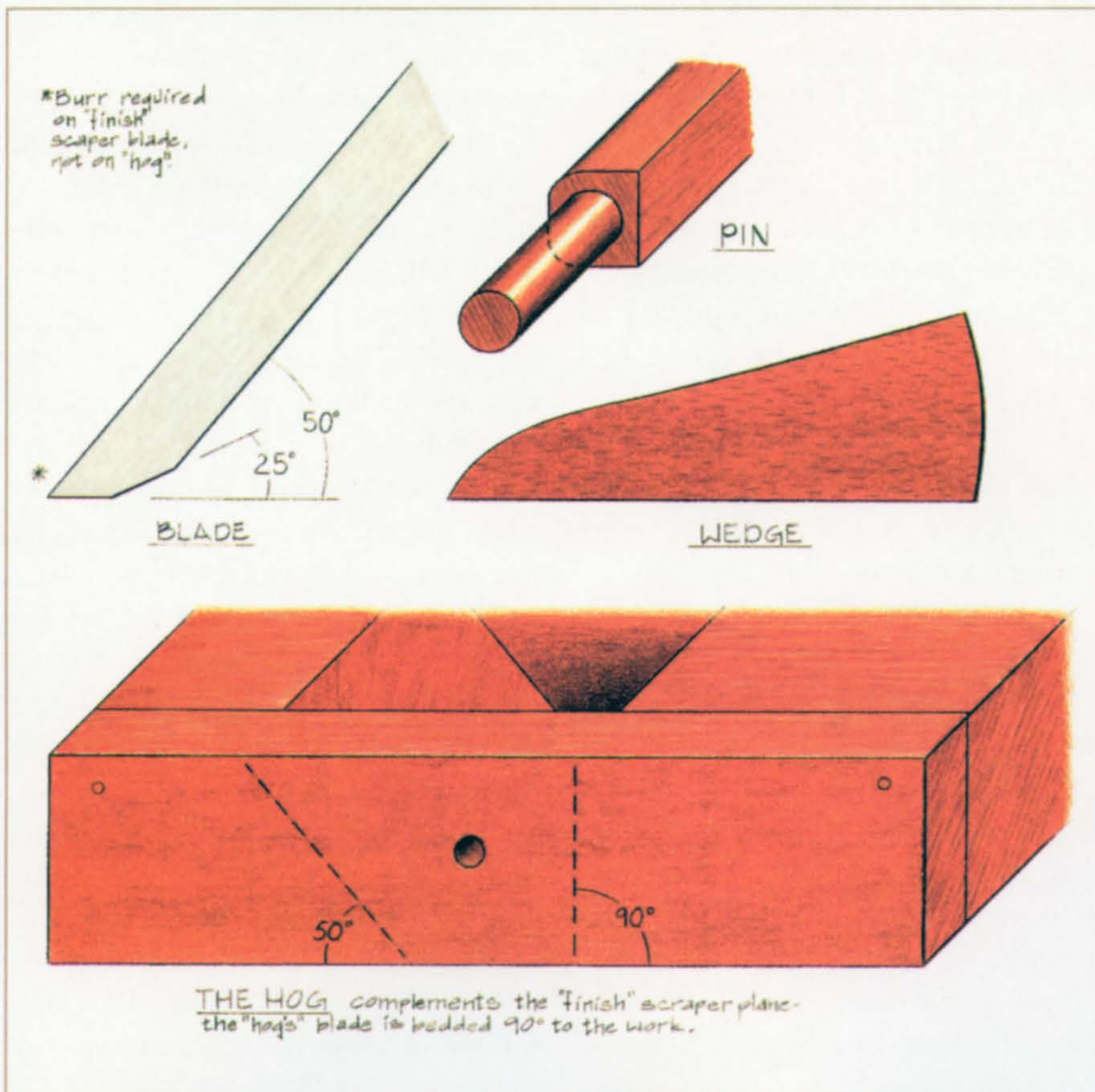
The next step is to make the wedge from the body piece cutout and to fit it with the iron in place. This is the final opportunity to make parallel adjust-

ment. If the wedge and the pin do not meet evenly all across the plane the iron will only be tight on one side and the blade will chatter. Take a bit off the back of the wedge to correct for parallel at this point.

Now it is time to shape the body of the plane. Add a handle if you want, and cut away the waste part with the locator dowels in it. Ejler flattens the sole with a piece of 120 grit sandpaper clamped to a flat table such as the jointer table.

Ejler said the iron should be ground to a 25 to 30 degree angle on the front side and then should have a 45 to 50 degree "microbevel" put on the same side. "It will go dull immediately if you don't do this," he said.

Ejler said his friend Greg Smith had a scraping plane with a small throat, "...I found out from this unit how a better design would work. This works really sweet," he said: "It has a wide throat to let the shavings out. It has some mass, some weight to it, you don't have to put any pressure on it."



## SOURCES

• **Hock Irons** (a full 3/16" thick, Rockwell 62)  
Hock plane irons are available directly through the manufacturer:  
**Ron Hock**  
16650 Mitchell Creek Drive  
Fort Bragg, CA 95437  
mail order only, please;  
OR  
**Woodline, Japan Woodworker**  
1731 Clement Ave, A4  
Alameda, CA 94501  
(510) 521-1810

• **Finck Irons** (limited production, limited availability, oversized 3/16" stock, both high carbon and D2 steel)  
Finck irons are available through the maker:  
**David Finck**  
314 W. Jefferson St.  
Pittsburg, KS 66762  
mail order only, please