



SOFA SOUNDS

SOFA
SOUTHERN OHIO FORGE & ANVIL

June 1983

BOARD MEMBERS

Emmert Studebaker
Larry B. Wood
Robert S. Zeller
Ralph Hopkins
David Sprenkel

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Hans G. Peot, President
Duane Wegley, Vice-President
Richard A. Franklin, Secretary/Treasurer

EVENTS & NOTES

16 July 1983

NOTE DATE - NOT FIRST SATURDAY
SOFA monthly meeting - 2 p.m.
Studebaker Homestead
Hammer-in - a work session

6 August 1983

SOFA monthly meeting - 2 pm
Studebaker Homestead
Business meeting and hammer-in

10-11 September 1983

QUAD-State Round-Up
Studebaker Homestead, Hammer-in

QUAD-STATE ROUND-UP

Emmert Studebaker will host the annual Quad-State Round-up at the Studebaker Homestead on 10 and 11 September 1983. The fee for the Round-up will be \$30.00 for ABANA members and \$35.00 for non-members. One day will be \$20.00.

The following will demonstrate:

Dimitri Gerkitis
Jack Brubaker
Tom Joyce
Veda Beedler
Jim Tyson
Bruce Washington
Joe Bonifas

Creative & Friendly

SOFA MEETINGS

The May hammer-in resulted in a good turn out. All of the forges and anvils were in use and many problems were solved.

Over 100 SOFA members and students turned out for the SOFA picnic at Larry Wood's place. The weather was perfect and the plentiful food was delicious. The hospitality of Larry and his family was appreciated by all.

ATTENTION BLACKSMITHS

Public Auction of Blacksmith Shop

Place: 7 miles east of Winchester, Indiana on Greenville Road
or 12 miles west of Greenville, Ohio on Road 502 to
Bartonia

Date: Saturday, 9 July 1983

Time: 11:00 a.m. (Indiana time)

Items: Power trip hammer, anvil, floor and bench vices, hardies,
tongs, metal shears, grinders, hand tools and many other
blacksmith and garage tools.

FRACTURE MECHANICS

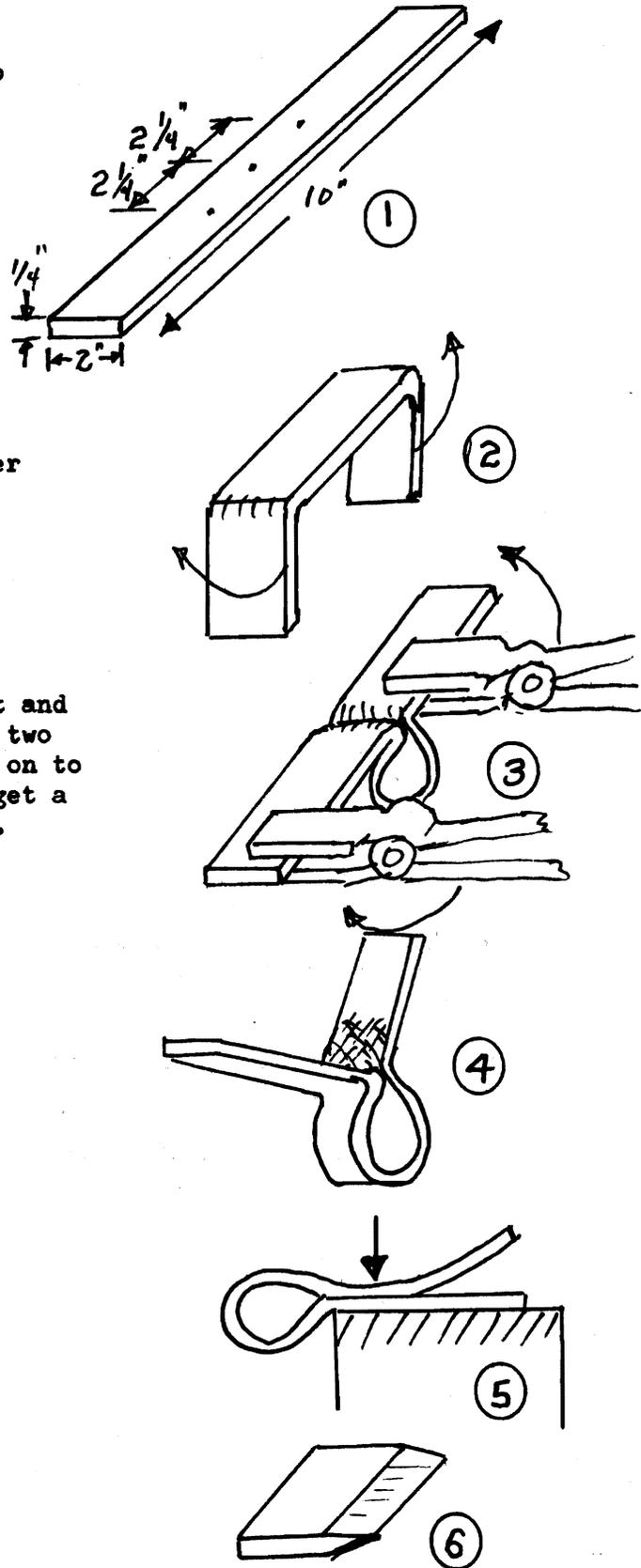
We would like to think that we are continuing to discover new phenomena like fracture mechanics in aircraft design. To stop crack growth in aircraft structure a hole is drilled at the end of the crack. Many times these cracks start due to machining scratches or imperfections. In aircraft manufacturing the rivet holes and other mounting holes are burnished (cold working) to remove the imperfections where cracks might start. I now would like to quote from Henry Holford's book published in 1876.

"If a circular saw is cracked it can be repaired so that the crack will go no further, and if the crack is deep, it can be remedied that there will be no danger in using it. Ascertain the end of the crack, then drill a 3/16 inch hole so the crack will end in that hole. . . . The reason why circular saw cracks is, in most cases, incorrect filing, with its square corners touch the bottom of the teeth you are filing; if you do you will make a short cut that will start a crack." (Fracture Mechanics, 1876!)

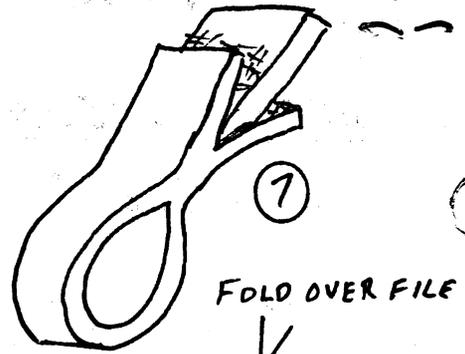
FORGING IDEAS

The following shows the steps Larry Wood uses to make a tomahawk:

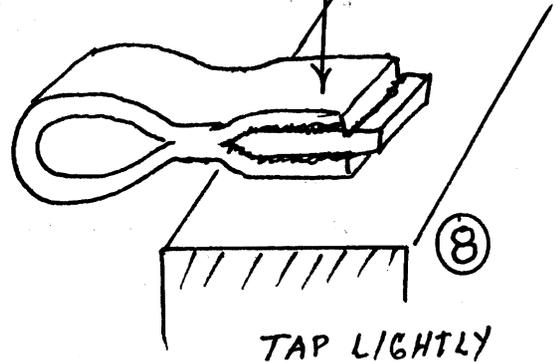
1. Select a piece of mild steel 10" long 2" wide and 1/4" thick. Centerpunch the strip 2 1/4" on each side of center.
2. Heat and fold the two ends over at the center punch marks.
3. Re-heat the center section to a uniform heat and grab the two ends with tongs and rotate the two corners together to form the eye. Continue on to the point that there's just enough room to get a steel brush in and reheat to an orange heat.
4. Brush the oxide off and sprinkle on the welding flux in the area shown. Fold the two ends closer together and heat to welding temperature.
5. Working from the center of the top to each edge hammer the weld together. The weld should be about 1 1/2" long.
6. Cut a piece of old file to the width of the strap and hammer one edge to as shown.



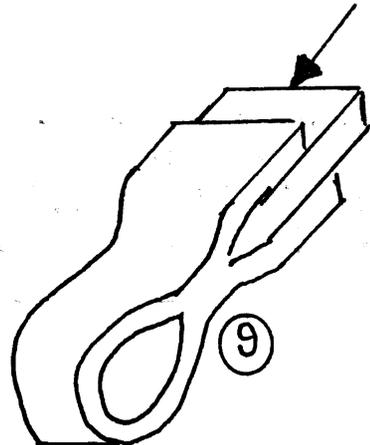
- Heat both pieces to orange heat and clean with steel brush and sprinkle the flux on both sides of the file piece and the inside of the spread ends.



- Gently fold the two ends over the file being careful not to drive out all the flux.

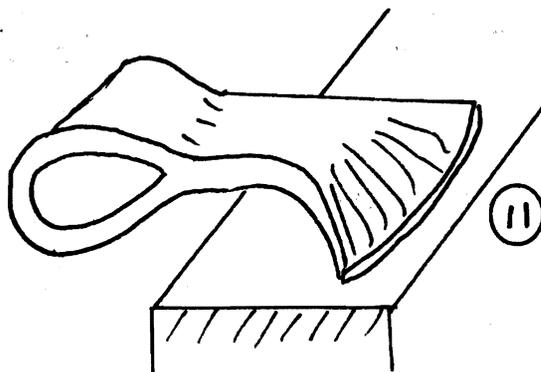
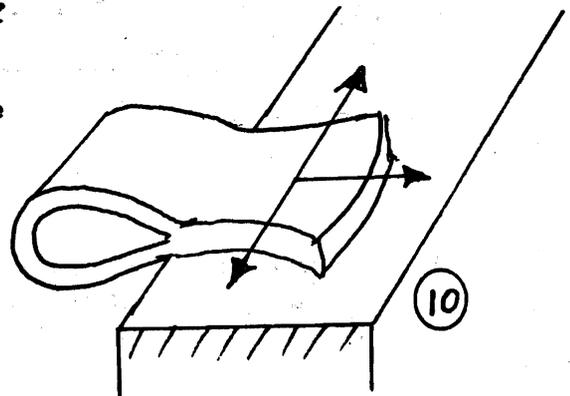


- Re-heat to orange color and remove from heat and tap the file piece firmly into the folded-over ends.



- Heat to a weld heat and start the weld from the center out to each edge and toward the edge.

- Re-heat to orange heat and with the fuller end of the cross peen spread the hatchet end as shown. Continue the final forging to the shape desired. Straighten the handle hole using the point on the anvil or a drift.



- The top of the tomahawk hole should be larger than the bottom.

