

## JOIST STIRRUP

The making of a joist stirrup is a good test of your ability to bend iron

## How to Make the Joist Stirrup

1. Find the center of the stock and mark points A, B, B, A on the edge of the iron. See top of Plate 17.



FIG. 34. CENTER HAMMERED TO ONE SIDE; ENDS HAMMERED DOWN AT ARROWS.

2. Heat and place in the vise at one of the A points and with a tongs twist the end a quarter turn. Hold the iron with the tongs about two inches above the top of the vise.

3. Twist above the other point A in the same manner, being sure that you twist in the right direction

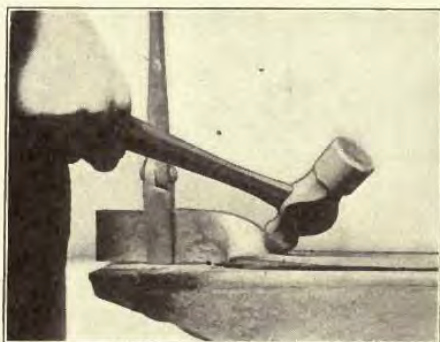
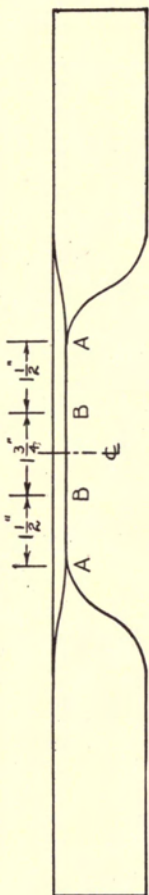


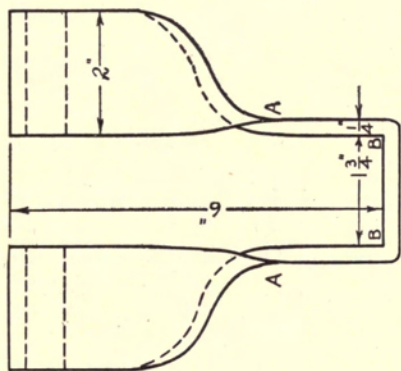
FIG. 35. HAMMERING DOWN THE CENTER.

4. You will note that the twists are now thru the center of the stock. The central part, Fig. 34, must all be hammered over to one side, as to the line E-E; and the ends hammered down as shown by the arrows. Fig. 35 shows the method of hammering down one side of the center. The outside ends are hammered down in the same manner.

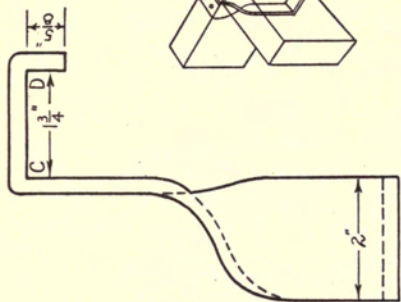
# JOIST STIRRUP



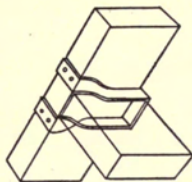
Stock  
 $1'' \times 2'' \times 20''$



Front View



Side View



5. Bend in the vise at points B, B.
6. Mark point C on both upright parts and bend in the vise.
7. Mark point D on both pieces and bend in the vise. Fig. 35 is a picture of the completed stirrup.

*Note.*—For other than 2x6-inch joists, add enough stock to make the stirrup either longer or wider or both.

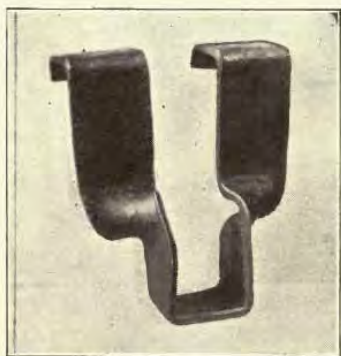


FIG. 36. JOIST STIRRUP.

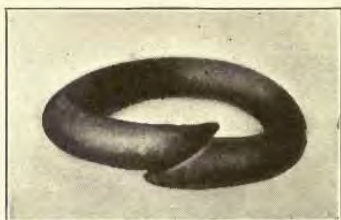


FIG. 37. SHOWING SCARFS ON LAP WELD OF RING.

### LAP WELD

There are a number of different types of welds used by blacksmiths, but the lap weld, Fig. 37 and Plate 18, is the most common. Try welding a ring, C, Plate 18, first, as that is the easiest object to weld. The scarfs can be bent to the position shown before actual welding is begun.

#### How to Shape the Scarfs

1. Upset both ends, see A, Plate 18.
2. Hold the iron with a bolt tongs, and on the rounding edge of the anvil, shape the slope of the scarf. Hammer with a *backward* stroke, not straight down, Fig. 42.
3. Point the scarf as shown in the top view of B, Plate 18.

UNIVERSITY OF CALIFORNIA

# FARM BLACKSMITHING

A TEXTBOOK AND  
PROBLEM BOOK FOR STUDENTS IN AGRICULTURAL  
SCHOOLS AND COLLEGES, TECHNICAL  
SCHOOLS. AND FOR FARMERS

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THE MANUAL ARTS PRESS  
PEORIA, ILLINOIS

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Added by Allen Dyer. December, 2007  
Blacksmith Guild of Central Maryland  
Publications Committee

Printed in the United States of America