

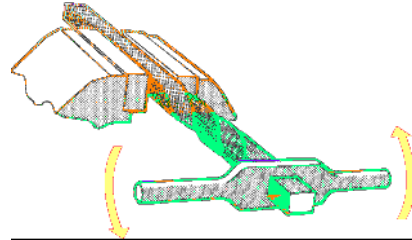
# Design & Manufacture

## Homework 34

### Forging Continued

#### Twisting

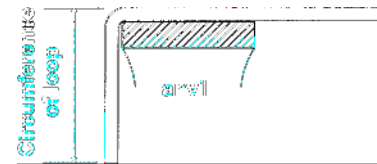
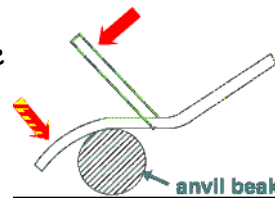
Heat the bar to a bright red and then grip it in the vice and slide on a special twisting tool, or use a large tap wrench. Twist the metal while it is still red hot. Twisting will only occur between the vice and the wrench.



#### Forging a Loop

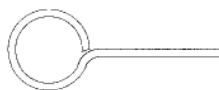
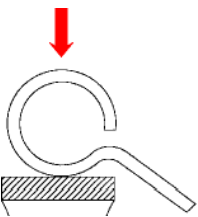
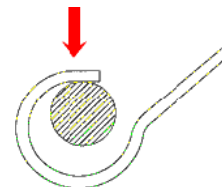
A loop is useful for the end of a handle to improve grip and to allow the object to be hung up.

1. Bend the length of the loop circumference over the rounded edge of the anvil. Circumference of loop



2. Start the curve by hammering it over the anvil beak.

3. Work towards the end of the metal to complete the curving.

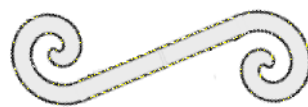


4. Close the loop by tapping it with a hammer on top of the anvil face.

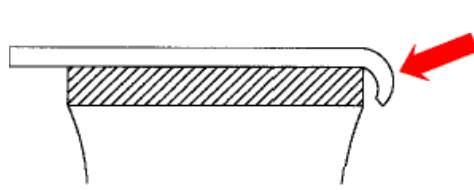
#### Scrolling

Creating scrolls from strips of wrought iron has been a traditional form of decoration for gates and screens. Today, the scrolls are made of mild steel and are still popular.

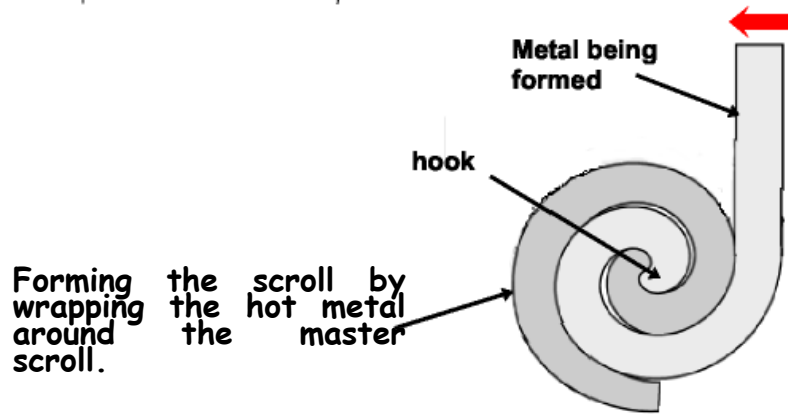
#### An 'S' scroll



To make identical scrolls a master scroll is used. The metal is heated to bright red in a forge and then tightly wrapped around the master scroll. To stop the metal from slipping the end is prepared by forging the end into a hook shape.

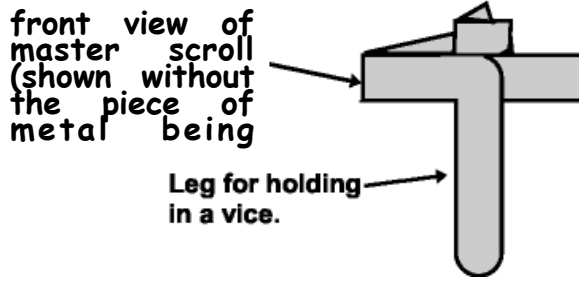


Forging a hook shape to stop the metal from sliding around the master scroll.



Forming the scroll by wrapping the hot metal around the master scroll.

Plan view of master scroll hook



## Questions

1. When twisting a bar, how can you make sure that the twisting is exactly where you want it?

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2. Illustrate the stages used for forging a loop.

3. Give an example of what is meant by a metal scroll.

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4. How do you prepare a bar for scrolling on a master scroll?

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