

# Level 1 Certificate

As with any craft; blacksmithing progresses from basic skills needed for all tasks to the more complex which are used in advanced creations. The California Blacksmith Association (CBA) education program has three levels of certificates corresponding the beginner (Level 1), apprentice (Level 2), and journeyman (Level 3) blacksmith.

After completing level 1 you will have the skills needed to create basic blacksmith projects and the associated tooling.

The “Level 1 Check Off” form lists the items which need to be completed. The “final” is making a Farm Gate Hook pictured in the following pages.

The textbook for this class is Mastering the Fundamentals Of Blacksmithing by Mark Aspery. It is available from multiple sources including the author at: [http://www.markaspery.com/School\\_of\\_Blacksmithing/Purchase\\_books.html](http://www.markaspery.com/School_of_Blacksmithing/Purchase_books.html), and at Amazon.com. This book covers all the projects for both Level 1 and Level 2. You can see him demonstrate many of these projects on YouTube; just search his name. The textbook is not required, but it really helps.

The items can be made during one of our classes or on your own. The completed item needs to be shown to one of our CBA certified instructors who will sign your form.

To receive a Level 1 Certificate from the CBA you do need to be a member of the CBA. It is strongly encouraged for any student with an interest in Blacksmithing to join the CBA as this will give you access to additional classes and meetings throughout the year. You will also receive the CBA magazine containing pictures, projects, and listings of events.

Completion of these basic skills is expected to take approximately 40 hours. It is assumed that the beginning blacksmith has no shop or tools of their own.

Tasks from Skills of a Blacksmith Volume 1, by Mark Aspery,

PROJECT	SKILLS DEMONSTRATED
1. Hot cut chisel	chisel, heat treat
2. Butcher	butcher
3. Hand held round punch	tapers, punch
4. 7/8 by 1/8 slot punch	slot punch
5. Hammer eye drift and monkey tool	hammer eye drift and monkey tool
6. Tongs	punching
7. Flux spoon	bending, forge weld
8. Flower	upsetting, tenon, tenon tool
9. Farm Gate Hook	final project

Different schools throughout the state use different projects to teach these skills. All that is important is to show you understand and have mastered the skill.

## California Blacksmith Association Level 1 Check off

<b>STUDENT NAME:</b>		
<b>Date</b>	<b>Instructor's Signature</b>	<b>Item</b>
		Safety Plan
		Nomenclature of the anvil
		Hammers and types of hammer blow
		Tapers (Square Octagon Round)
		Make a Hot Cut Chisel
		Make a Butcher (chisel or top tool)
		Make a hand held Round Punch
		Make a Hammer Eye Drift (1/2 by 7/8)
		Make a 7/8 by 1/8 Slot Punch (or equivalent)
		Make a Monkey Tool
		Heat treat a tool
		Punching a round hole
		Upsetting a bar
		Make a Round Tenon
		Use a tenon tool (ie. Smithin-Magician, Guillotine)
		Bending over the bick or horn
		Make a forge-weld (i.e. drop tong, celery weld)
		Make a Farm Gate Hook

## BLACKSMITH SAFETY VERIFICATION

Please review safety plan at:

[https://www.calsmith.org/resources/Documents/policies\\_bylaws/Updated%20CBA%20Safety%20Guidelines%20with%20Lung%20Revision.pdf](https://www.calsmith.org/resources/Documents/policies_bylaws/Updated%20CBA%20Safety%20Guidelines%20with%20Lung%20Revision.pdf)

1. The two main elements of Safety are common sense and attitude.      \* True \* False
2. The stated requirements of our Safety Plan and Guide can never be exceeded.  
\* True      \* False
3. Safety is the responsibility of:  
A. Members.  
B. Instructors.  
C. Demonstrators and guests.  
D. All the above.
4. Safety glasses and goggles are not required when watching a demonstrator.  
\* True      \* False
5. The ring of an anvil is less than 85db and therefore does not suggest the use of hearing protection.  
\* True      \* False
6. In hot weather short pants may be worn while forging.  
\* True      \* False
7. If a glove becomes hot while forging it should be soaked in water to cool it off.  
\* True      \* False
8. Clothing made from synthetic materials is best to wear while forging.  
\* True      \* False
9. Organization members shall not consume alcoholic beverages when:  
A. Forging.      B. Demonstrating.  
C. Instructing.      D. All the above.
10. Match the item in column A with the correct answer in column B.

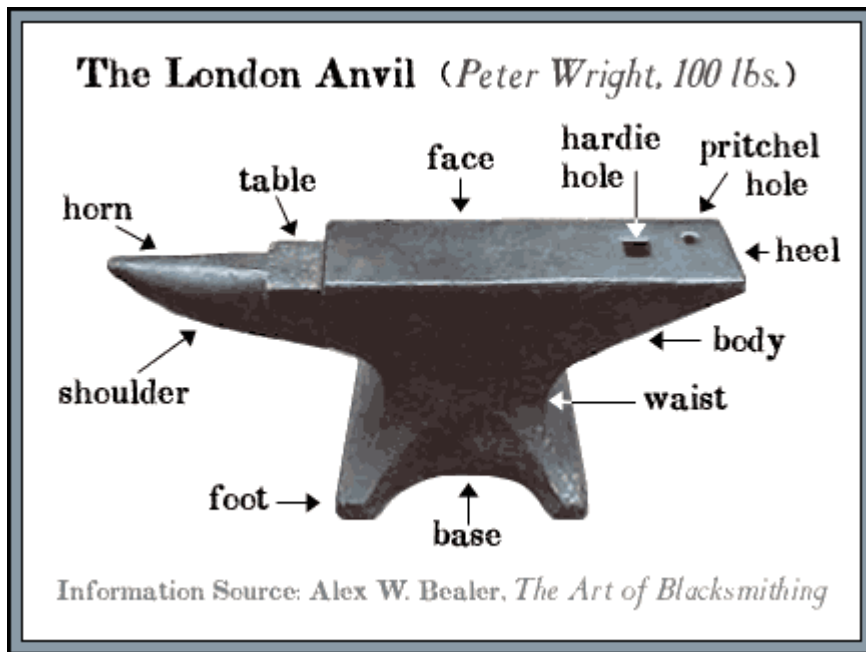
Column A

- a. Hammer.
- b. Tongs.
- c. Files.
- d. Hot cut hardy tool.
- e. Chisels, punches and drifts.

Column B

- a. Assume jaws are hot
- b. Always remove before continuing to hammer
- c. Keep hammer end free of burrs (mushroomed)
- d. Keep the head tight
- e. Never use without a handle

Anvil Nomenclature:



### Hammer types:

Ball Pein Hammer  
Cross Pein Hammer  
Straight Pein Hammer

### Hammer blow types:

Full faced  
Half faced  
Fullering  
Shearing

## Hot cut chisel

Skills of a Blacksmith Volume 1, by Mark Aspery, p 66 – 69

## Heat Treating

Skills of a Blacksmith Volume 1, by Mark Aspery, p 108 – 110

## Butcher

Skills of a Blacksmith Volume 1, by Mark Aspery, p 73 – 74

## Round Punch

Skills of a Blacksmith Volume 1, by Mark Aspery, p 76 – 77

## Hammer Eye Drift

Skills of a Blacksmith Volume 1, by Mark Aspery, p 88 – 90

## Slot Punch

Skills of a Blacksmith Volume 1, by Mark Aspery, p 79 – 81

## Monkey Tool

Skills of a Blacksmith Volume 1, by Mark Aspery, p 151 – 155

## Tongs

Skills of a Blacksmith Volume 1, by Mark Aspery, p 247 – 248

## Flux spoon

Skills of a Blacksmith Volume 1, by Mark Aspery, p 174 – 187

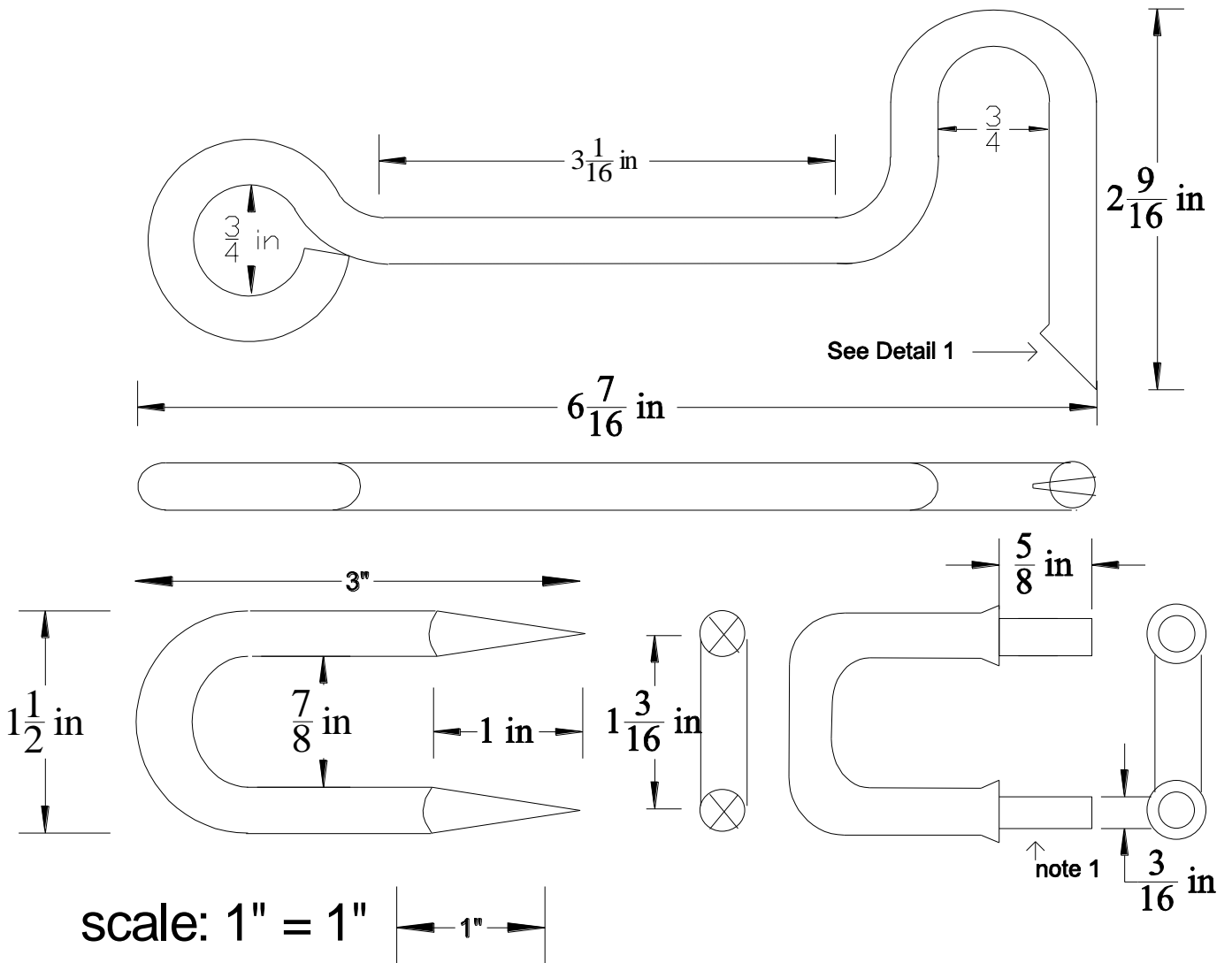
## Flower

Skills of a Blacksmith Volume 1, by Mark Aspery, p 229 – 288

# Level 1 Gate Hook

Material: 5/16" round A36

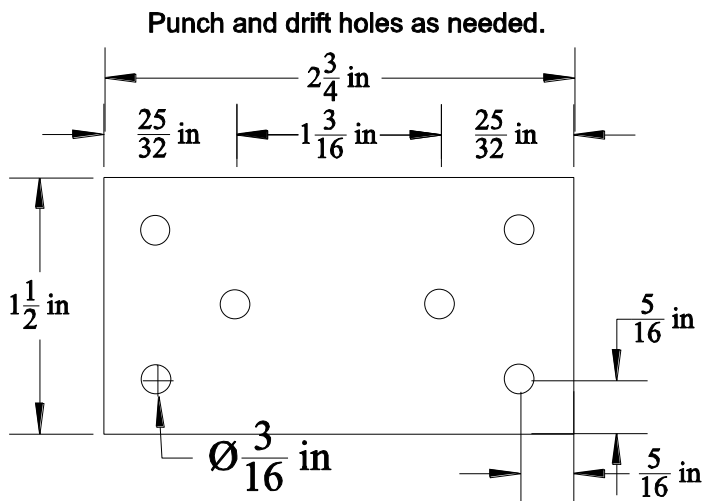
page 1



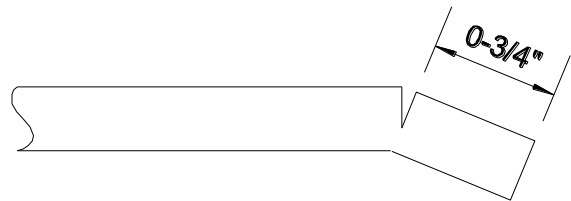
# Level 1 Gate Hook

Mounting plate 1/4" thick A36

page 2



Detail 1  
Celery Weld  
Nick the material, fold back and  
forge weld to add material to form the barb



## NOTES

### 1. Upset ends to form tenon:

Isolate tenon material using a butcher or guillotine.

Draw down tenon using a hand hammer, set hammer guillotine tool, or Smithin-Magician Tool

Dress tenon and shoulder using a monkey tool

Trim to  $\frac{5}{8}$ " length

Copied by Gary Standke from the

California Blacksmith Association

initial drawing by G O Gorman