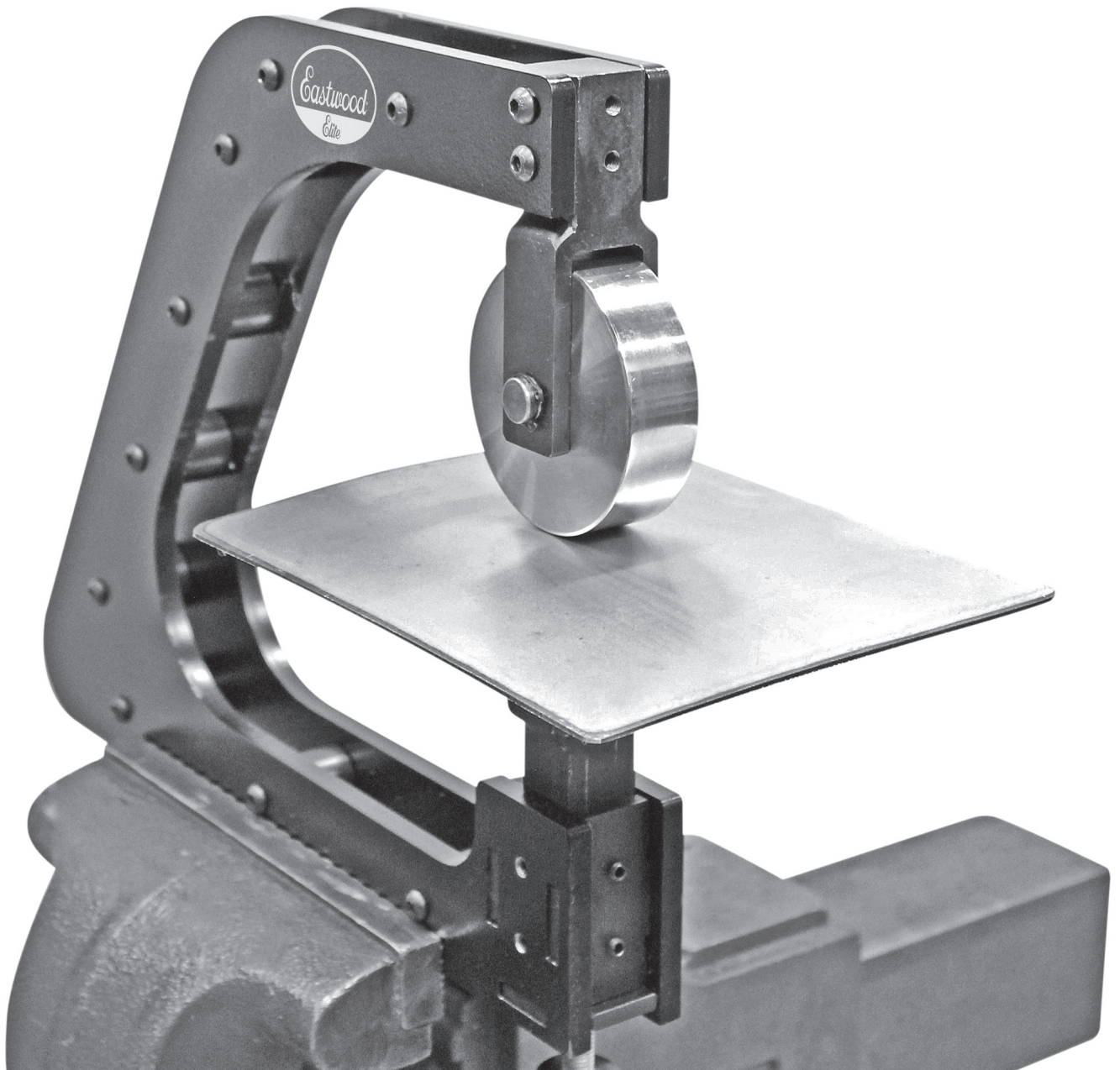




Item #54830

# MINI ENGLISH WHEEL INSTRUCTIONS



The **EASTWOOD ELITE MINI ENGLISH WHEEL** is designed to be an affordable way to get into wheeling, while still offering the capability to form body patch panels for fenders, doors, quarter panels, and more while obtaining professional results. A unique cantilever frame design provides a generous 7.5" [191mm] throat depth in a horizontal plane and up to 10" [254mm] at an angular panel working plane. Fully indexable Upper and Lower Yoke positions allow working from the front of the Frame or 90° to either side.

## CONTENTS

(1) Frame Assembly [A], Includes:

- (1) Upper Wheel Yoke [B]
- (4) Upper Wheel Yoke Screws [C]
- (1) Anvil Yoke [D]
- (4) Anvil Yoke Screws [E]

(1) Upper Wheel Axle [F]

(2) Upper Wheel Axle Snap Rings [G]

(1) 3.19" [81mm] Dia. Upper Wheel [H]

(1) Anvil Axle [J]

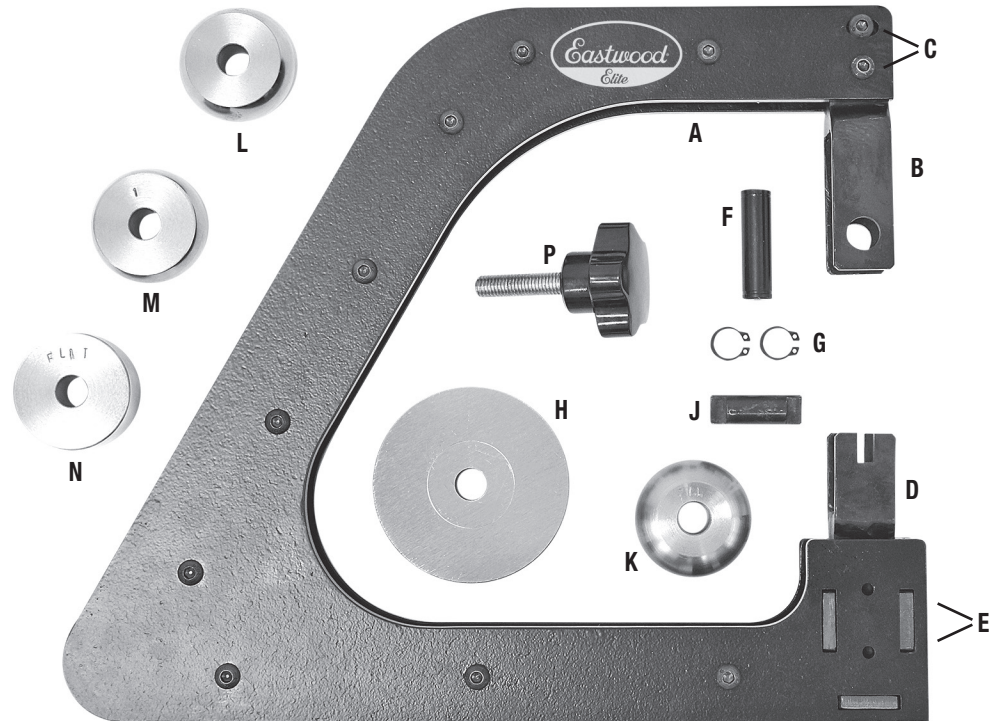
(1) 1/2" Radius Anvil [K]

(1) 1" Radius Anvil [L]

(1) 2" Radius Anvil [M]

(1) 3" Radius Anvil [N]

(1) Jackscrew [P]



## SPECIFICATIONS

<b>Maximum material working thickness:</b>	Steel: 18 Gauge Aluminum: 16 Gauge
<b>Throat Depth (Horizontal):</b>	7.5" [191mm] Up to 10" [254mm] when working a panel in an angular plane
<b>Maximum panel width (working from center):</b>	15" [381mm]
<b>Wheel Diameter:</b>	3.19" [81mm]
<b>Anvil Diameter:</b>	1.93" [49mm]

## SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

### **⚠ DANGER**

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **⚠ WARNING**

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **⚠ CAUTION**

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **⚠ NOTICE**

NOTICE is used to address practices not related to personal injury.

# SAFETY INFORMATION



## **⚠️ READ INSTRUCTIONS**

- Thoroughly read and understand this manual before using.
- Save for future reference.



## **⚠️ WARNING PINCH AND CRUSH HAZARD!**

- The Eastwood Mini English Wheel consists of heavy metal components which can present a hand/finger pinch hazard and cause potentially serious injuries if dropped. Avoid pinching hands while handling. The use of safety shoes is strongly recommended. Keep fingers and hands away from moving parts when operating.



## **⚠️ WARNING CUT HAZARD!**

- Handling sharp metal can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling sharp metal.



## **⚠️ WARNING EYE INJURY HAZARD!**

- Metal particles can be ejected from the metal surface when rolling. Sheet metal edges and corners are sharp and can injure eyes. Always wear ANSI approved eye protection when operating this tool.



## **⚠️ WARNING**

- Before beginning ANY work with the Eastwood Mini English Wheel, it is necessary that it be installed in a vice properly secured to a sturdy, workbench anchored to the floor or wall.
- Some minor physical force and awkward positions may be applied to the workpiece while using The Eastwood Mini English Wheel. Failure to ensure proper footing can quickly result in a fall which could inflict serious personal injury or property damage. Always work in a clean, uncluttered environment.
- Make sure there is sufficient working room around the tool to allow for safe handling of various sizes of metal.



## SET UP

- Before beginning assembly, clamp the lower edge of the Mini English Wheel Frame just below the frame screw heads (**FIG 1**), in a securely mounted, minimum 4" (6" & larger strongly recommended) vise (not included).

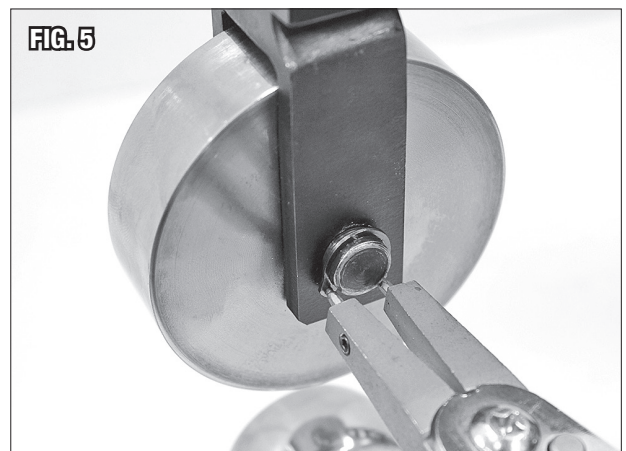
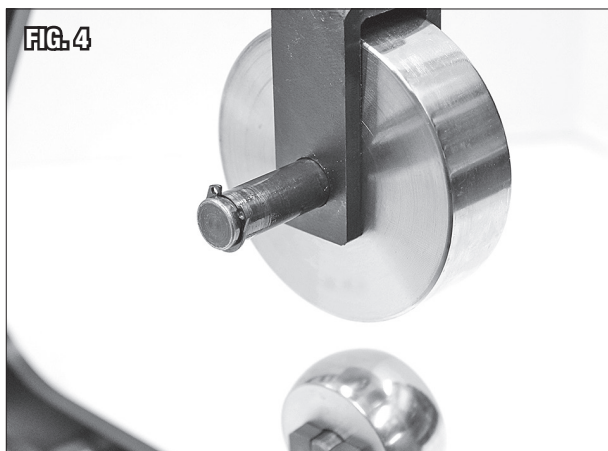
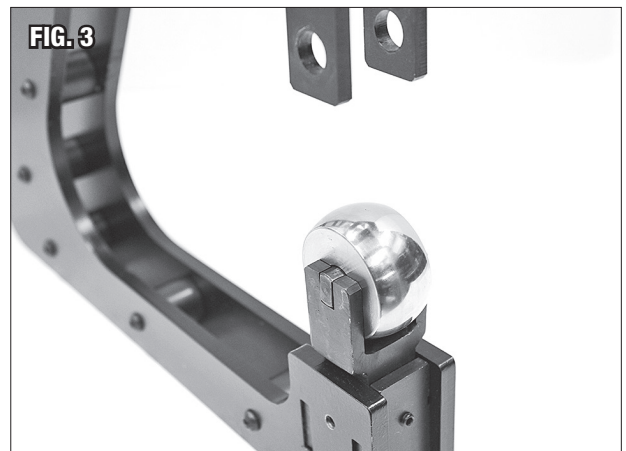
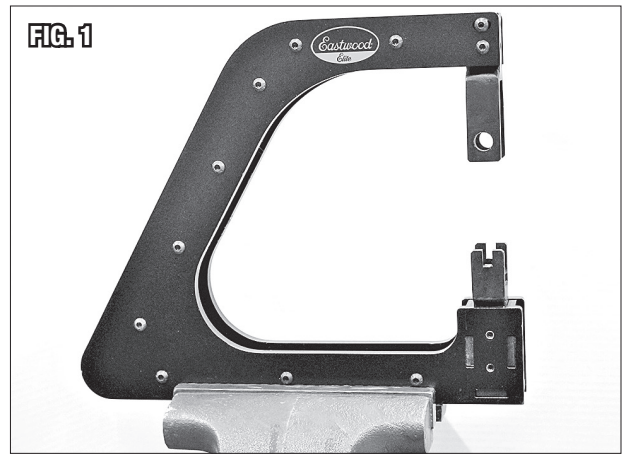
### **⚠ WARNING**

**DO NOT clamp over the frame screw heads as it may cause damage and cause the frame to be unstable in the vise. It is helpful to use a vise with a swiveling base, allowing rotation as needed to maintain a comfortable position while working a panel.**

*For a quick how-to video on assembly and use, visit [Eastwood.com](http://Eastwood.com) and search #54830, then click the Set-up video link!*

## ASSEMBLY

- Apply several drops of motor oil to the Anvil and Upper Wheel Axles [**F**] & [**J**] for lubrication (**FIG 2**).
- Slip the Anvil Axle [**J**] into a selected Anvil [**K, L, M OR N**] and insert it with the shaft flats keyed into the slots of the Anvil Yoke [**D**] (**FIG 3**).
- Install one Snap Ring [**G**] into a groove on the Upper Wheel Axle [**F**].
- Carefully hold the Wheel [**H**] in place with the bore aligned with the holes in the Wheel Yoke [**B**] and slide the Wheel Axle [**F**] through (**FIG 4**).
- Install the remaining Snap Ring [**G**] on the other side to retain the Upper Wheel Axle [**F**] securely (**FIG 5**).
- Apply a good quality, medium bodied chassis grease to the Jackscrew threads.
- Thread the Jackscrew [**P**] into the bottom of the Frame until it begins to engage the bottom of the Anvil Yoke [**D**] (**FIG 6**).



## WHEEL TO ANVIL ALIGNMENT

- For maximum accuracy, Eastwood recommends aligning the Wheel and Anvil with a straight edge before use. To do so: Place a straight edge and hold it against the faces of the Wheel and Anvil as shown (FIG 7).
- The straight edge ideally should lay flush with both Wheel and Anvil faces. If adjustment is necessary:
  - With a 3mm Hex Key (not included) turn in or out on the Anvil Yoke Screws [E] from opposite directions as needed to move the Anvil Yoke and Anvil into alignment (FIG 8).
  - When the Wheel is indexed parallel to the frame axis, the Wheel Yoke Screws in the upper Frame can be loosened with a 4mm Hex Key (not included) side to side for additional adjustment (FIG 9).
  - With the alignment verified, the Wheel and Anvil Yoke Screws can be tightened.

### **⚠ NOTICE**

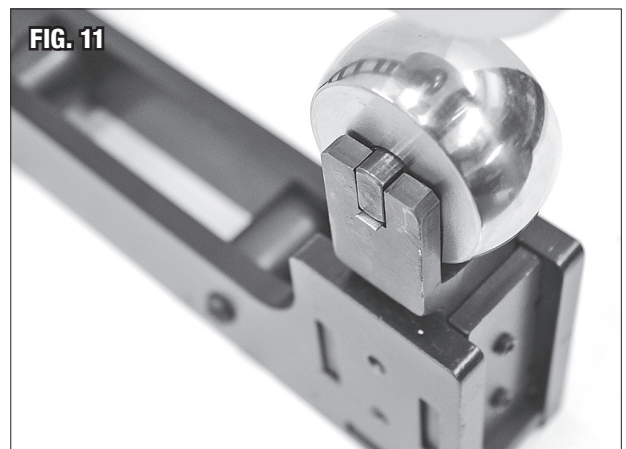
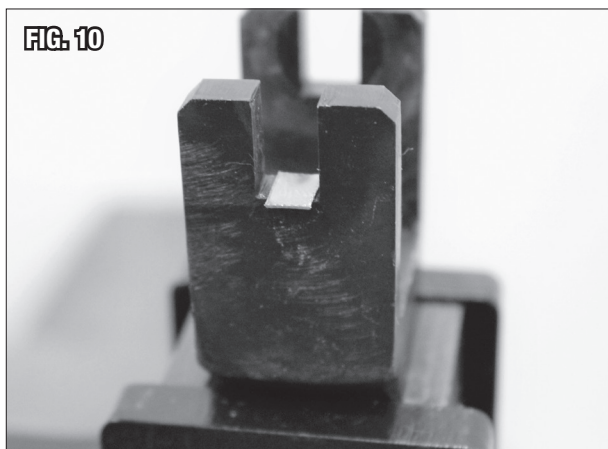
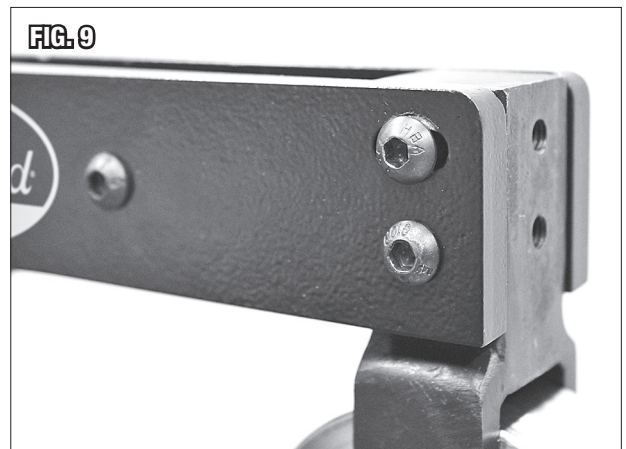
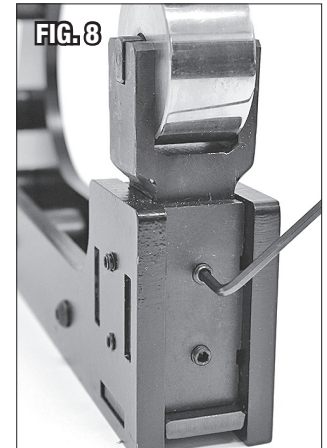
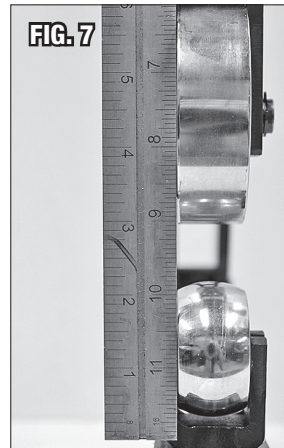
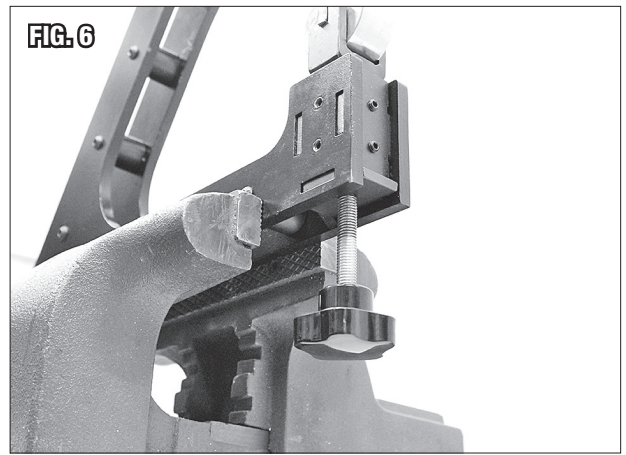
**DO NOT over tighten the Anvil Yoke Screws as the Anvil Yoke needs to be able to move up and down smoothly.**

If more angle is needed on the Anvil, a strip of metal can be placed in the bottom of the Anvil Yoke slot (FIG 10) to shim one end of the Anvil Axle up (FIG 11).

**NOTE:** Some professional wheelers also utilize this method to purposely tilt an Anvil, creating an edge to set a body line in a panel.

### **⚠ NOTICE**

**The above-described alignment procedure should be performed whenever the wheeling direction is re-indexed and rotated 90°**



# MINI ENGLISH WHEEL USAGE

## ANVIL SELECTION

- Each anvil has a different profile intended for creating a variety of contours in metal sheet. Choose the anvil with the profile that most closely matches the panel curvature to be achieved.
- The included Anvil set is comprised of 1/2", 1", 2", and 3" radiused Anvils **[K, L, M & N]**. Optionally, a 5" Radius Anvil (#54836) is available for very gentle curves or stretching and a Flat Anvil (#54831) for stretching metal can be purchased separately.
- Illustrated are the included Anvil Radii and the contours they can be expected to product (**FIG 12**).

## PANEL FORMING

English Wheeling is an age-old metal-working skill that many metal workers consider an art. Some amazing forms can be created in a piece of metal when in the hands of an experienced wheeler. Keep in mind that there are differing methods of operation which vary among professional wheelers. None are absolutely fixed in stone as the "correct" way and none are wrong. It is simply a matter of choosing which method you find most comfortable as it is the results that matter most. The best method for learning is to obtain several metal-working books and videos containing material on English Wheeling by different well-known metal workers then determine which methods appeal most to you.

The #1 most important rule in becoming an expert in the time-honored art of English Wheeling is Practice, Practice, Practice. As with any professional metal working equipment, the English Wheel requires a learning curve to be able to achieve desired results that once achieved, prove to be highly satisfying.

The following are several basic elements crucial to English Wheeling that are:

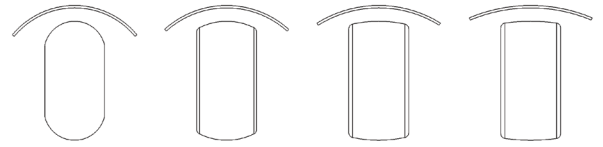
- Obtain a stack of 8" x 10", 20-gauge aluminum and steel panels to use as practice pieces.
- Leaving a gap equal to the thickness of the workpiece between the Wheel and Anvil, place a practice piece of aluminum between them then raise the Jackscrew until the anvil just contacts the metal and the metal contacts the Wheel, allowing easy rolling between the Anvil and Wheel (Fig 13).

### **⚠ NOTICE**

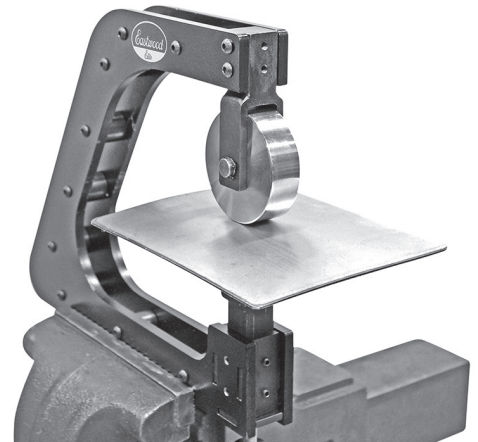
**DO NOT overtighten the Jackscrew which would press the Anvil against the Wheel!**  
**Overtightening will quickly crease and harden the metal, create unnecessary effort, and will damage the surface of the Anvil.**  
**When forming a panel, only minimal pressure is required to hold the metal in place.**

- Keep in mind that the metal forming is done by passing the metal over the anvil while pulling it down and shaping it. The Wheel functions as a guide.
- It is normal to constantly adjust the anvil tension as you work. The goal is to have it "not too tight yet not too loose."
- Grasp the edges of the metal and continue to exert a gentle but firm downward force while rolling it. With repeated rolling, a curvature will begin to appear in the metal (**FIG 14**).

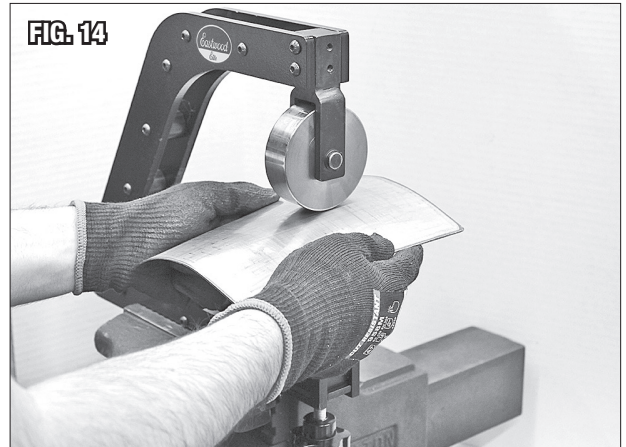
**FIG. 12**



**FIG. 13**



**FIG. 14**



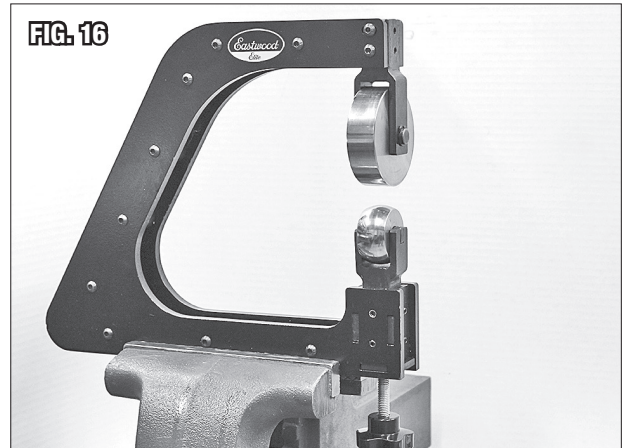


- Track the wheel close between runs, the lines should fully overlap in the desired forming area leaving no gaps (**FIG 15 LEFT SIDE**). Too much space between runs or too much pressure will result in a poorly formed panel (**FIG 15 RIGHT SIDE**).
- Try not to repeatedly pass over the same point in the metal which can work-harden it but keep it moving in a tightly spaced, sweeping “W” or “X” pattern over the Anvil for best results. Note that the “W” pattern will produce a curve in one direction only while the “X” will produce a compound curve or “bowl” effect.
- Practicing these techniques will have you well on the way to becoming an expert English Wheeler! Continue practicing and you will be proud to have mastered a nearly forgotten metalworking skill that few in the world possess!



## LONG PANELS

- When forming long panels, it may be optimal to change the direction you are wheeling, this is simple with the Mini English Wheel as it is easily indexed 90° so that the centerlines of the Wheel and Anvil are perpendicular to the axis of the Frame (**FIG 16**).
- Lower the Jackscrew, remove the Wheel and Anvil from their respective Yokes and carefully place them aside.
- Loosen the Anvil Yoke Screws.
- Reinsert the Anvil Yoke with the notches rotated 90°.
- Remove the four Screws holding the Wheel Yoke in place, and carefully withdraw it from the Frame.
- Insert the Wheel Yoke with the Axle holes rotated 90°.
- Reinstall the four Screws and reinstall the Wheel and Anvil into their respective Yokes (**FIG 16**).
- Check alignment of the upper wheel and lower anvil. If adjustment is required, follow the “WHEEL to ANVIL ALIGNMENT” procedure in this Manual.



## MAINTENANCE

- Clean dirt and debris from Wheel and Anvil surfaces.
- Check tightness of all hardware.
- Check operation of Jackscrew for binding. Lubricate threads periodically with medium bodied chassis grease.
- Check the rotation of the Wheel and Anvils periodically. Add several drops of oil if needed.

## OPTIONAL ITEMS

- #54831 Optional Flat Anvil
- #54836 Optional 5" Radius Anvil
- #23808 Eastwood Sheet Metal Gauge

## REPLACEMENT ITEMS

- #54832 Replacement 1/2" Radius Anvil
- #54833 Replacement 1" Radius Anvil
- #54834 Replacement 2" Radius Anvil
- #54836 Replacement 3" Radius Anvil
- #54837 Replacement Upper Wheel

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**If you have any questions about the use of this product, please contact**

The Eastwood Technical Assistance Service Department: 800.343.9353 >> email: [tech@eastwood.com](mailto:tech@eastwood.com)

PDF version of this manual is available at [eastwood.com](http://eastwood.com)

The Eastwood Company 263 Shoemaker Road, Pottstown, PA 19464, USA 800.343.9353 [eastwood.com](http://eastwood.com)

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