

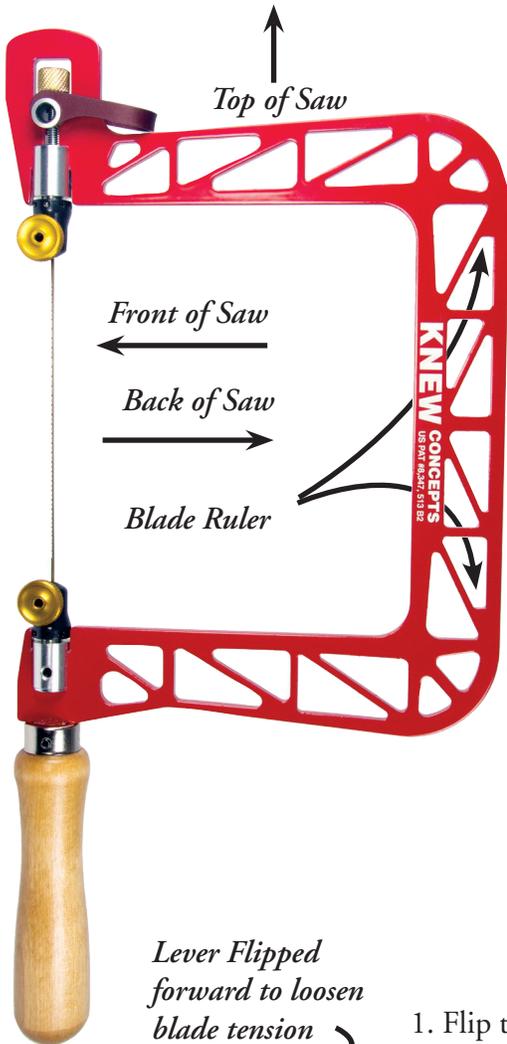


# KNEW CONCEPTS

## Using the Knew Concepts Heavy Duty Fret Saws

V1.0

*A Cut Above*



*Lever Flipped forward to loosen blade tension*

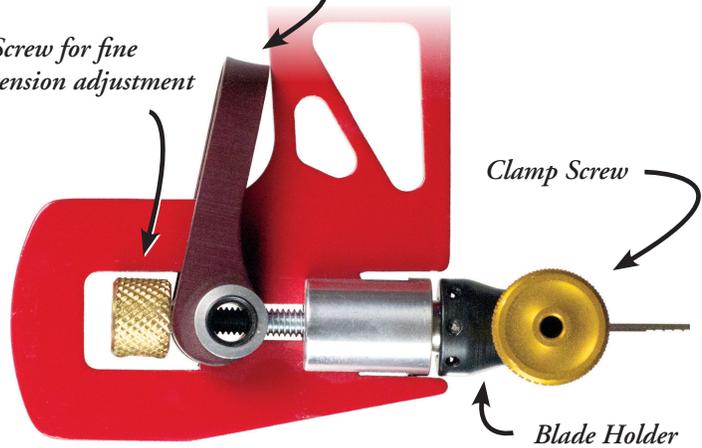


### Features:

- There are two versions: with and without the rotating blade clamps. They are identical otherwise.
- Rotating blade clamps allow blade to rotate a full 360° to allow off axis cuts.
- Spring loaded blade clamps snap into locking positions every 45°, as well as straight ahead.
- All three sizes engineered to develop 60 pounds of tension—up to 6 times more than traditional designs.
- Cam release tension lever
- Screw for fine tension adjustments
- 5<sup>1</sup>/<sub>8</sub>" blade ruler built into spine for checking blades

*Lever in blade tight position*

*Screw for fine tension adjustment*



### Blade Removal

1. Flip the lever 180 degrees, towards the front, as shown at left.
2. Loosen both of the clamp screws by turning them counter-clockwise.
3. Remove saw blade

### Check the Saw Blade length

Before sawing, check the length of the saw blades.

**The standard length for jewelers/fret saw blades is 5<sup>1</sup>/<sub>8</sub>".**

All sizes of aluminum frame have a blade ruler built into the spine.

There are two flat spots on the walls of the windows indicated in the main photo above. They are exactly 5<sup>1</sup>/<sub>8</sub>" apart. Check your blades between them.

If the blades are too long, use wire cutters to shorten the blades.

Blades that are shorter than standard will not work.

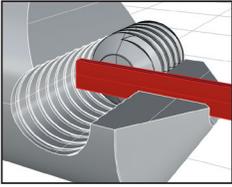
**Coping saws are totally different saws.**

*This fret saw will not take coping saw blades*

## **Blade Installation**

**1. Flip the lever forward to release the tension.**

**2. Insert blade into the top clamp, making sure that it is fully inserted, and tighten the clamp screw.** Touching the back wall at the bottom of the blade hole stops the blade at the proper length.



### **End of blade fully inserted**

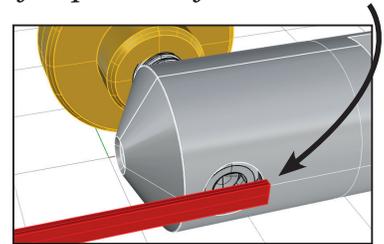
The end of the blade is stopped by touching the threads at the bottom of the blade hole. As you can see in this cut-away view, the blade is gripped at the very end. The tension must be relaxed before inserting a blade so that the blade will reach the end of the hole

**3. If you are piercing, thread the blade through the hole in the metal.**

**4. Insert blade in lower (handle side) clamp.**

Check the lower end of the blade against the anvil screw of the bottom clamp. After clamping the blade in one clamp, the loose end of the blade should cover the diameter of the anvil screw on the other clamp. This makes sure that the blade will be clamped properly before tensioning, as shown to the right. If the blade is 5 1/8", but does not extend as shown, loosen the tension more.

*End of blade should extend just past end of anvil screw.*



**5. The blade will bow slightly when the ends of the blade contact the bottoms of the holes, with the lever in the forward/loosened position.**

The image below shows a blade bowed after inserting into the clamps, before the blade is tensioned. This sort of flexing shows that the blade will be tensioned and clamped well and correctly. If the blade isn't bowed, check that the lever is in the loosened position, and try gently moving the blade clamp downwards a bit.

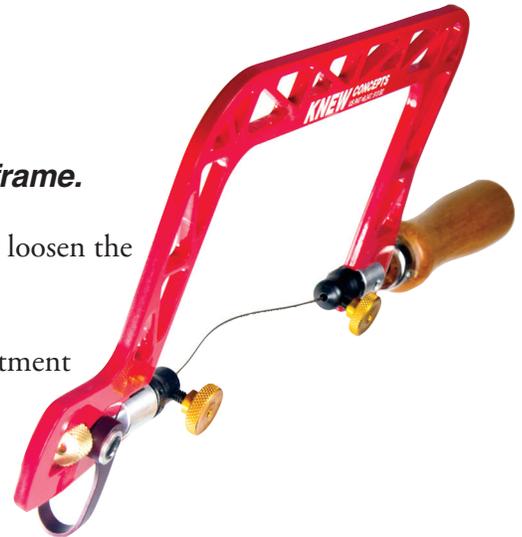
**6. Tighten the clamp screw into the blade clamp.**

### **Tensioning the blade:**

**Tension the blade by flipping the lever back, above the frame.**

- If it feels difficult to move the lever all the way, stop, and then loosen the tension by turning the gold knob counterclockwise.
- Flick the blade with your finger — a taut blade “sings”.
- If the blade is the same as the previous blade, no further adjustment should be necessary.

The tension knob can be turned to fine-tune the tension.



### **Installing the next blade:**

Remember to loosen the tension, by flipping the lever to the front, which lowers the blade-holding barrel.

- This is essential, so that the clamp screws can grab the blade ends.

### **Tensioning the New Saw Blade:**

If the new blade is the same size as the previous blade, the same tension is achieved simply by flipping the lever.

- If the tension is not the same as before, then check that the blade is installed fully and correctly.
- The tension can be adjusted by turning the gold tensioning knob. The knob is difficult to turn with the lever in the tensioned position, flip the lever to the loose position, turn the knob, and then re-tighten the lever. Repeat as needed.

## **Tips & Troubleshooting**

**There are a variety of troubleshooting videos at [www.knewconcepts.com](http://www.knewconcepts.com). Look for the 'videos' link.**

### ***If you are unable to get the blade tight,***

Make sure that you remembered to loosen the tension, so that the tips of the blade will touch the ends of the holes. Also, check the length of the blade. It may be too long or short; standard length is 5 1/8”.

- There are blade rulers built into the frame, see page 1.

### ***Tightening means to turn a screw clock-wise.***

Some people like to remember this by saying, “Lefty-Loosey, Righty-Tighty”

### ***If the blade breaks before you start sawing:***

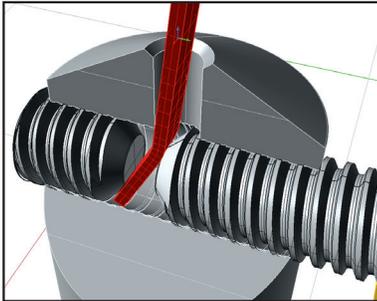
- The blade is over-tightened. Don't set the tension quite so high on the next blade.  
Knew Concepts saws are the stiffest ever made. Your saw is stronger than the blade, and is capable of tearing it apart if you dial in too much tension. How much tension a blade will take varies by brand and size. You will have to experiment to see how much your brand will take, and how tight you like them.

***If the blades pull out of the holder prematurely,*** unscrew the knob, and check for broken bits of saw blades inside the hole. If you really have trouble, unscrew the clamping knob entirely, and blow out the clamp socket with compressed air through the blade hole. Then reinstall the clamping knob. Do not remove or adjust the anvil screw.

- “Canned Air” sold for computer cleaning works well for this. Use the straw.

### ***Correct alignment***

This cut-away provides a visual of what is going on inside the blade clamp. When properly aligned, the blade will go in easily, and when the clamp knob is tightened, the blade will stay straight.

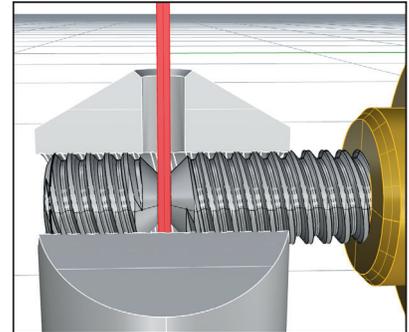


### ***Anvil screw out too far***

The cut-away view to the left shows what usually causes bent or broken ends.

- Use 5/64” Allen wrench to adjust anvil screw for correct alignment.

The goal is to get the blade centered in the throat of the clamp, as in the correctly aligned cut-away view. (above right.)

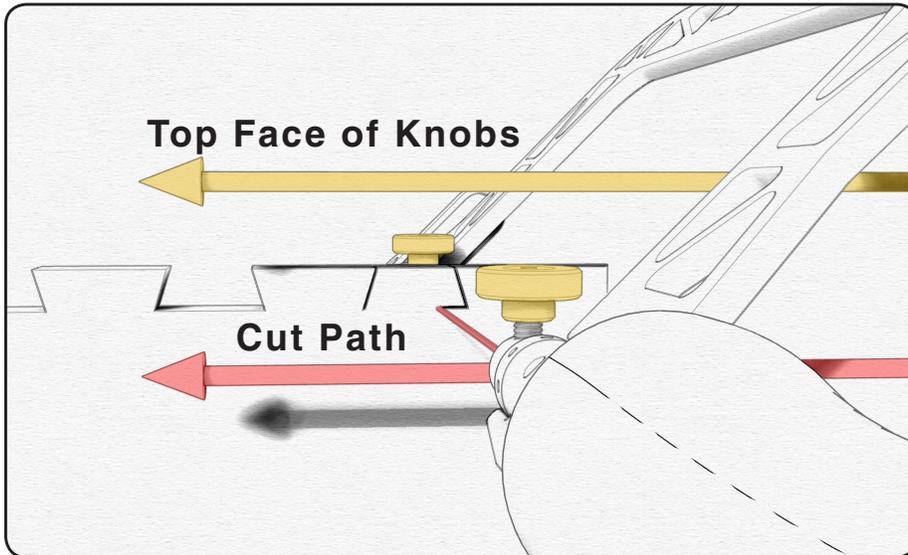


## ***Changing clamp knob orientation for left handed use on non swivel models*** ***If you prefer to have the clamp knobs on the opposite side of the frame:***

- Unscrew the brass tension knob from the upper blade clamp.
- Remove the upper blade clamp, flip it over so that the clamping knob is on the other side, and reinstall.
- Replace the brass tension knob.
- Use 5/64” allen wrench to loosen the set screws that hold the lower blade clamp in place.  
(The two sockets closest to the handle.)
- Flip the blade clamp over so that the clamping knob is on the other side.
- Reinstall lower blade clamp. (Make sure the lower clamp re-seats all the way down against the handle.)
- Re-tighten the two set screws loosened previously.
- Replace blade, and adjust brass tension knob for desired tension.

# Blade Swivels

## What blade swivels can do for you



*To aid in aiming the saw blade, use the flat sides of the clamping knobs as a reference for where the blade is pointed. The blade always cuts in the same plane as the faces of the knobs.*

*Notice that with most dovetails, you can still see the knob on the forward clamp. This makes it easier to cut straight.*

This is more than just a marketing gimmick, they really do allow your new saw to do things no jeweler's or fret saw has ever done before. The new Mk.IV clamps will do a complete 360° rotation, with click stops every 45°.

To rotate them just hold the silver barrel of each clamp, then press the black section towards it to overcome the internal spring. Then rotate to your desired angle and release. Set both clamps to the same angle.

What they allow you to do depends on what kind of work you do.

- **For woodworkers**, the biggest and most obvious advantage is that they let you rotate the blade off to the side, to allow the accurate removal of the waste left inside dovetail cuts.
- **For jewelers and metalsmiths**, being able to rotate the blade allows greater flexibility in terms of cutting into and around larger sheets of metal. It allows effectively infinite 'depth' when cutting along the edge of a large piece of material.
- **Another advantage for jewelers**, or anyone doing close up, detailed cuts using an optivisor or other magnifying headpiece is that it allows you to swivel the frame of the saw off to the side, to avoid the sawframe hitting the optivisor.

*The saw is cutting straight ahead.  
Without smacking into the optivisor.*

