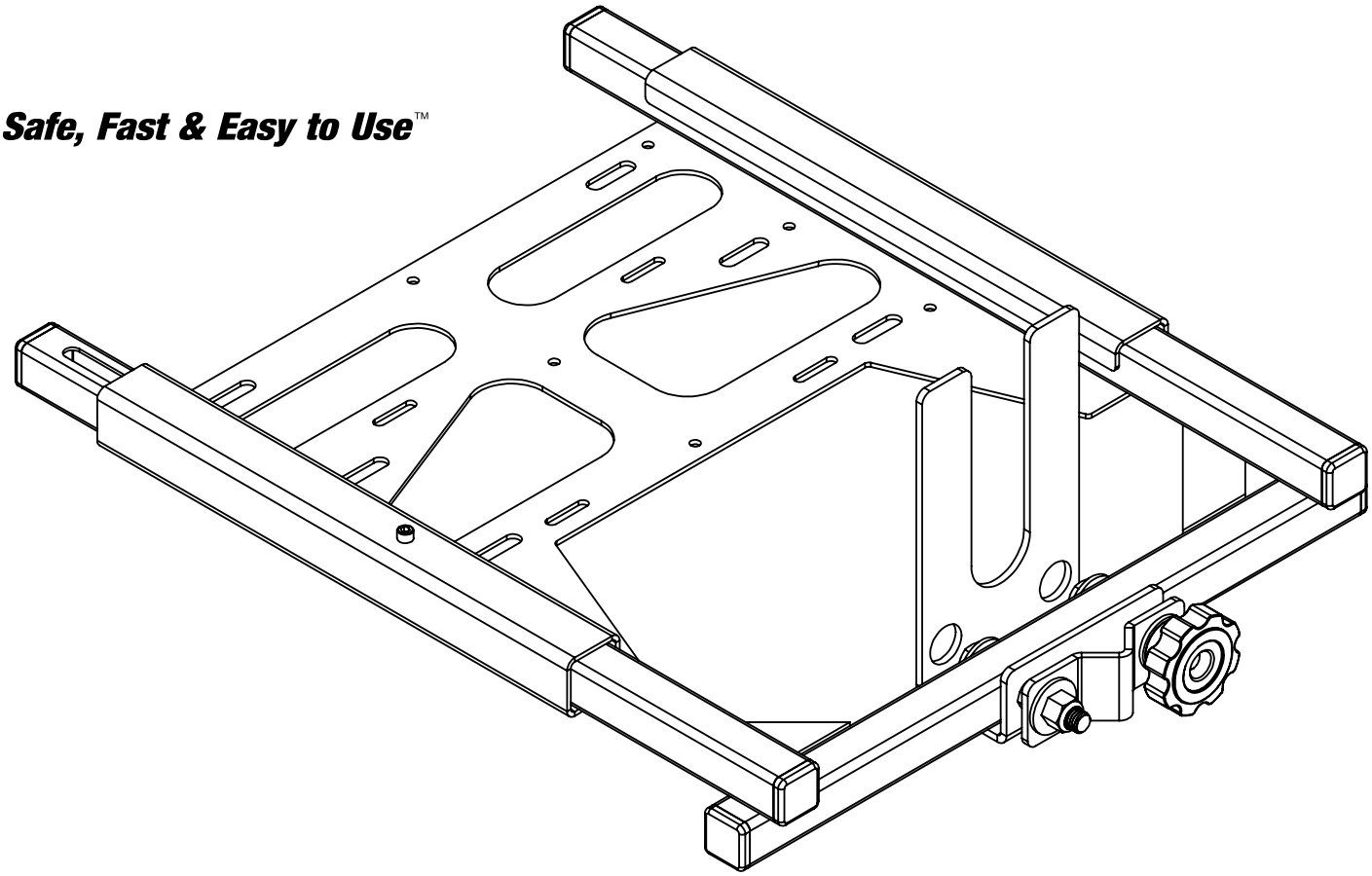
LUMBERJACK TOOLS®

made in usa

Safe, Fast & Easy to Use™



USER MANUAL

SAFETY SLED

Drill-Guide System

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Phone: 715-514-0319

MODEL: TM1580
TM1581
TM1582

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ABOUT YOUR PRODUCT

Thank you for purchasing our Safety Sled! Made of steel tubing welded to a piece of structural steel, the Safety Sled is designed to aid tenon cutting. The guide system eliminates slippage which allows the user to cut tenons with ease. Simply bolt down the fixture to a stable work surface, hook up a single-speed 1/2” or 5/8" drill and you’re ready to go.

Our lifetime guarantee covers the steel body parts for manufacturing defects. Normal wear and tear is NOT covered under warranty. The nuts, bolts, washers and knob handle are covered for 90 days from the date of purchase for breakage under normal working conditions. Side loading the fixture could cause failure to occur in the bolts. Over tightening of the knob handle may bend the bolts or strip threading as a result. This is valid only to the original buyer, and not for the tools sold secondhand, used, or sold “as is” to a second party.

What Voids Warranty

In order to keep our lifetime and 90 day warranty you must **AVOID** the following actions:

- Side loading the fixture
- Over tightening the knob handle
- Altering or misusing the fixture
- Failure to follow maintenance schedule
- Excessive weight/force at end of fixture

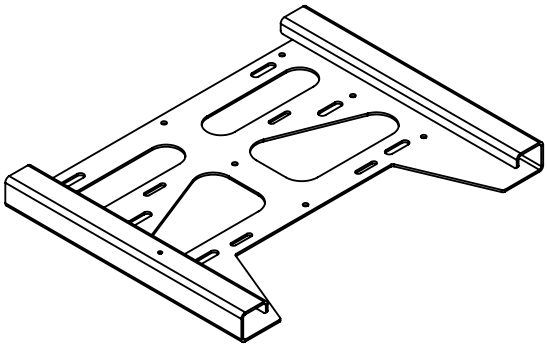
SAFETY

Before beginning any project, carefully read and follow ALL safety and operational instructions for any tools or devices you will be using. Failure to do so may cause physical harm to yourself or those around you. If you feel uncomfortable using our Safety Sled, STOP immediately. Lumberjack Tools assumes no responsibility for injury caused to the operator, bystander, or tools used in conjunction with the use or misuse of our Safety Sled.

- NEVER OPERATE POWER TOOLS UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR ANY MEDICATIONS.
- REPLACE THE WARNING LABELS IF THEY BECOME OBSCURED OR DAMAGED.
- KEEP SPACE AROUND THE FIXTURE CLEAN AND FREE OF DEBRIS.
- ALWAYS WEAR SAFETY GLASSES, DUST MASK, AND ANY OTHER PERSONAL PROTECTION ITEMS AS NEEDED.
- NEVER WEAR LOOSE ITEMS THAT COULD BE CAUGHT IN MOVING PARTS. SECURE LOOSE OR LONG HAIR AWAY FROM AREA.
- WE STRONGLY RECOMMEND A SINGLE-SPEED, GEAR DRIVEN DRILL WITH RPMS OF 500 OR LESS. EXCEEDING THESE RPMS MAY RESULT IN DAMAGE TO THE SAFETY SLED.
- NEVER PLACE ANY BODYWEIGHT ON THE SAFETY SLED. NEVER HANG ANY OBJECT OFF THE SAFETY SLED. DOING SO MAY CAUSE DAMAGE TO THE FIXTURE OR INJURY TO THE USER.
- NEVER USE FIXTURE WITHOUT BOLTING DOWN TO A LEVEL, SECURE SURFACE.
- ALWAYS ROUTE POWER CORDS AWAY FROM ROTATING PARTS. FAILURE TO DO SO MAY CAUSE SERIOUS INJURY OR DEATH.
- ALWAYS DISCONNECT POWER AND ALLOW DRILL TO COME TO A COMPLETE STOP BEFORE INSTALLING, REMOVING, OR ADJUSTING THE FIXTURE.
- NEVER APPLY BENDING FORCE (SIDE LOADING) TO THE FIXTURE. SIDE LOADING COULD CAUSE THE ARMS TO FAIL, OR MAY RESULT IN FIXTURE DAMAGE.
- ALWAYS SECURE STOCK IN A VISE, CLAMP OR LOG LOCK PRIOR TO STARTING YOUR DRILL. FAILURE TO DO SO MAY RESULT IN INJURY.

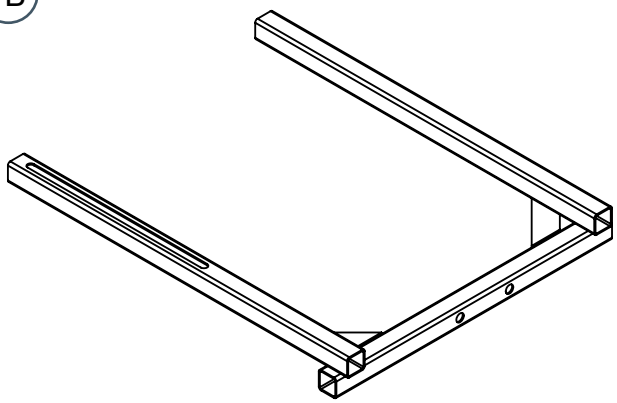
WHAT'S INCLUDED

1A



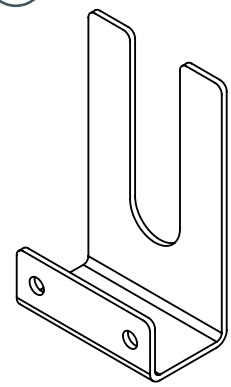
Base Plate (Qty. 1)

1B



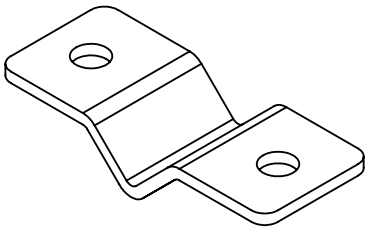
Slide (Qty. 1)

1C



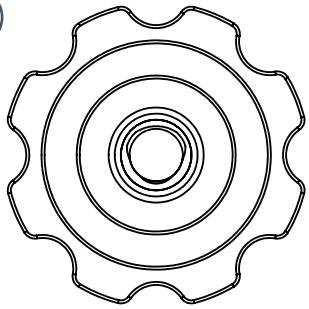
Align Plate (Qty. 1)

1D



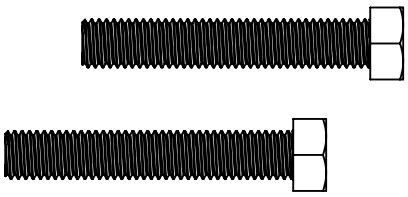
Clamp Plate (Qty. 1)

2A



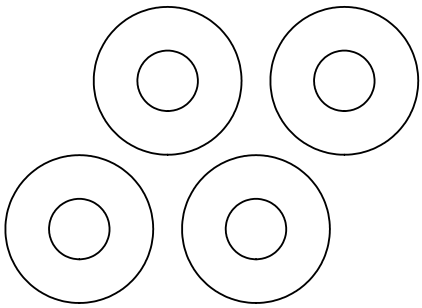
1/2" Knob (Qty. 1)

2B



1/2" x 3-1/4" Bolt (Qty. 2)

2C

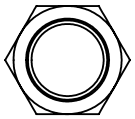


1/2" Washer (Qty. 4)

2D

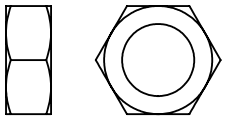
1/4" Socket Cap Screw (Qty. 1)

2E



1/2" Lock Nut (Qty. 1)

2F



1/2" Jam Nut (Qty. 2)

Note: Images not to scale

REQUIRED TOOLS

Allen Wrench	Wrench/Socket	Optional
● 1/4"	● 3/4"	● Crescent Wrench

ASSEMBLY

1 Open the hardware bag to begin assembling the Safety Sled.

Tools Needed:
- 3/4" Wrench/Socket

Parts Needed:
- (1B) Slide (Qty. 1)
- (1C) Align Plate (Qty. 1)
- (1D) Clamp Plate (Qty. 1)
- (2A) 1/2" Knob (Qty. 1)
- (2B) 1/2" x 3-¼" Bolt (Qty. 2)
- (2C) 1/2" Washer (Qty. 4)
- (2E) 1/2" Lock Nut (Qty. 1)
- (2F) 1/2" Jam Nut (Qty. 2)

Note: See Page 6 for instructions for use with the Milwaukee 1854-1.

IMPORTANT

Make sure Slide is oriented the correct way (with the cross tube beneath the two slide tubes).

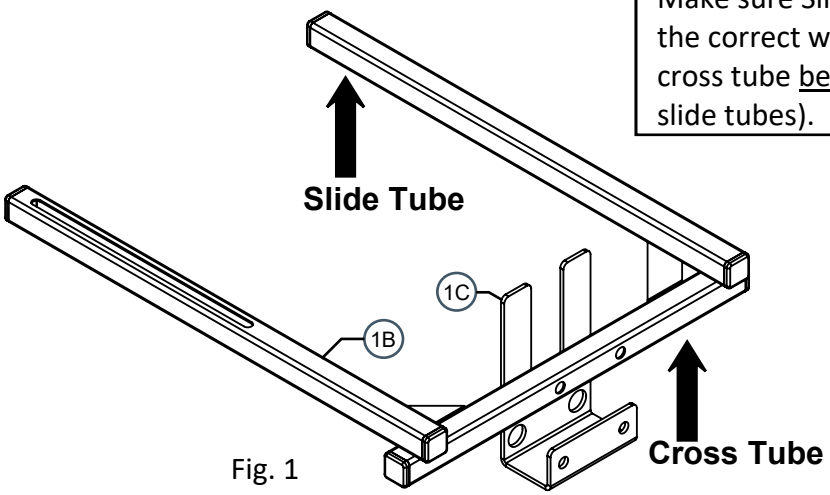


Fig. 1

a. Open the hardware bag
b. Install the Align Plate over the Slide as shown in Fig. 1
   - Be sure that the Slide is oriented the correct way before installing

c. Install the parts in order as shown in Fig. 2
   - Make sure the Jam Nuts are secured tight
   - Washer 2C must be installed between the Align Plate 1C and the Slide 1B

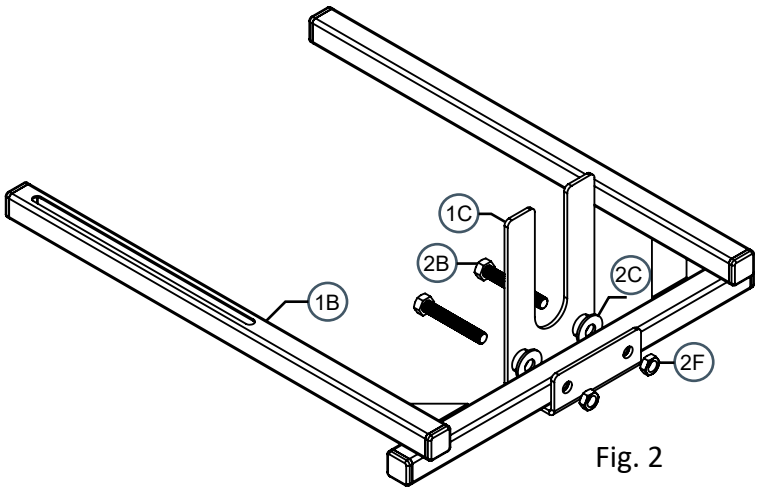


Fig. 2

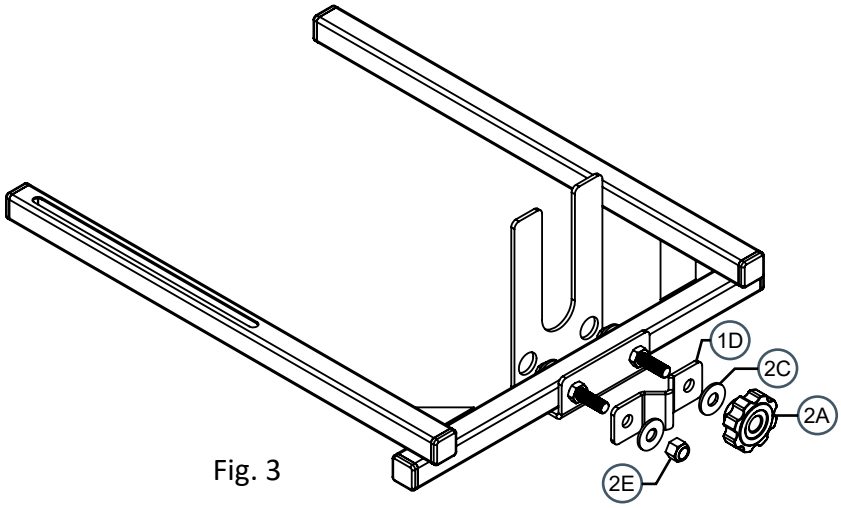


Fig. 3

d. Install the parts as shown in Fig. 3
   - Secure the Lock Nut until it is flush with the end of the bolt

Tip

The Knob can be installed on either side depending on preference.

ASSEMBLY (continued)

INSTRUCTIONS FOR USE WITH MILWAUKEE 1854-1

Install the Align Plate so the U-shape is pointing down.

Open the hardware bag to begin assembling the Safety Sled.

Tools Needed:	Parts Needed:
• 3/4" Wrench/Socket	(1B) Slide (Qty. 1) (1C) Align Plate (Qty. 1) (1D) Clamp Plate (Qty. 1) (2A) 1/2" Knob (Qty. 1) (2B) 1/2" x 3-¼" Bolt (Qty. 2) (2C) 1/2" Washer (Qty. 4) (2E) 1/2" Lock Nut (Qty. 1) (2F) 1/2" Jam Nut (Qty. 2)

IMPORTANT

Make sure Slide is oriented the correct way (with the cross tube beneath the two slide tubes).

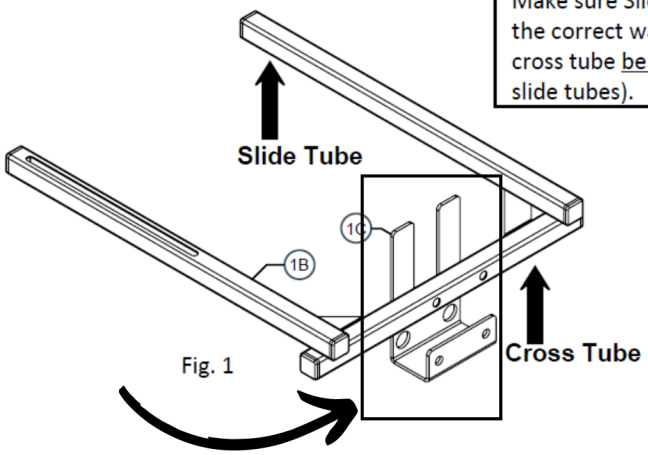
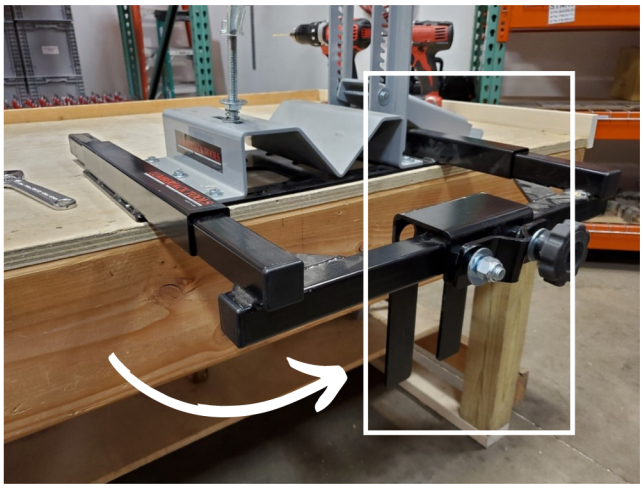


Fig. 1

Align Plate

a. Open the hardware bag
b. Install the Align Plate over the Slide as shown in Fig. 1
   - Be sure that the Slide is oriented the correct way before installing



The Align Plate U-shape is pointing down.

The Safety Sled with the Milwaukee 1854-1.

ASSEMBLY (continued)

2

Tools Needed:	Parts Needed:
• 1/4" Allen Wrench	(1A) Base Plate (Qty. 1) (2D) 1/4" Socket Cap Screw (Qty. 1)

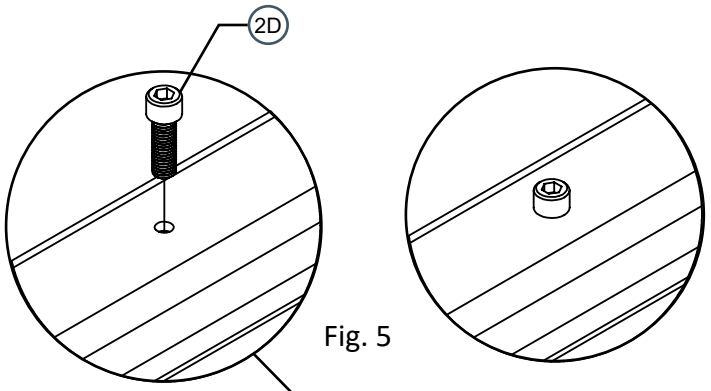


Fig. 5

NOTE

Socket Cap Screw should install easily. Make sure slide is installed about halfway into Base Plate.

Tip

If Socket Cap Screw is unable to start screwing in, clean threading in hole. Powder coating may be filling the initial threading of the hole.

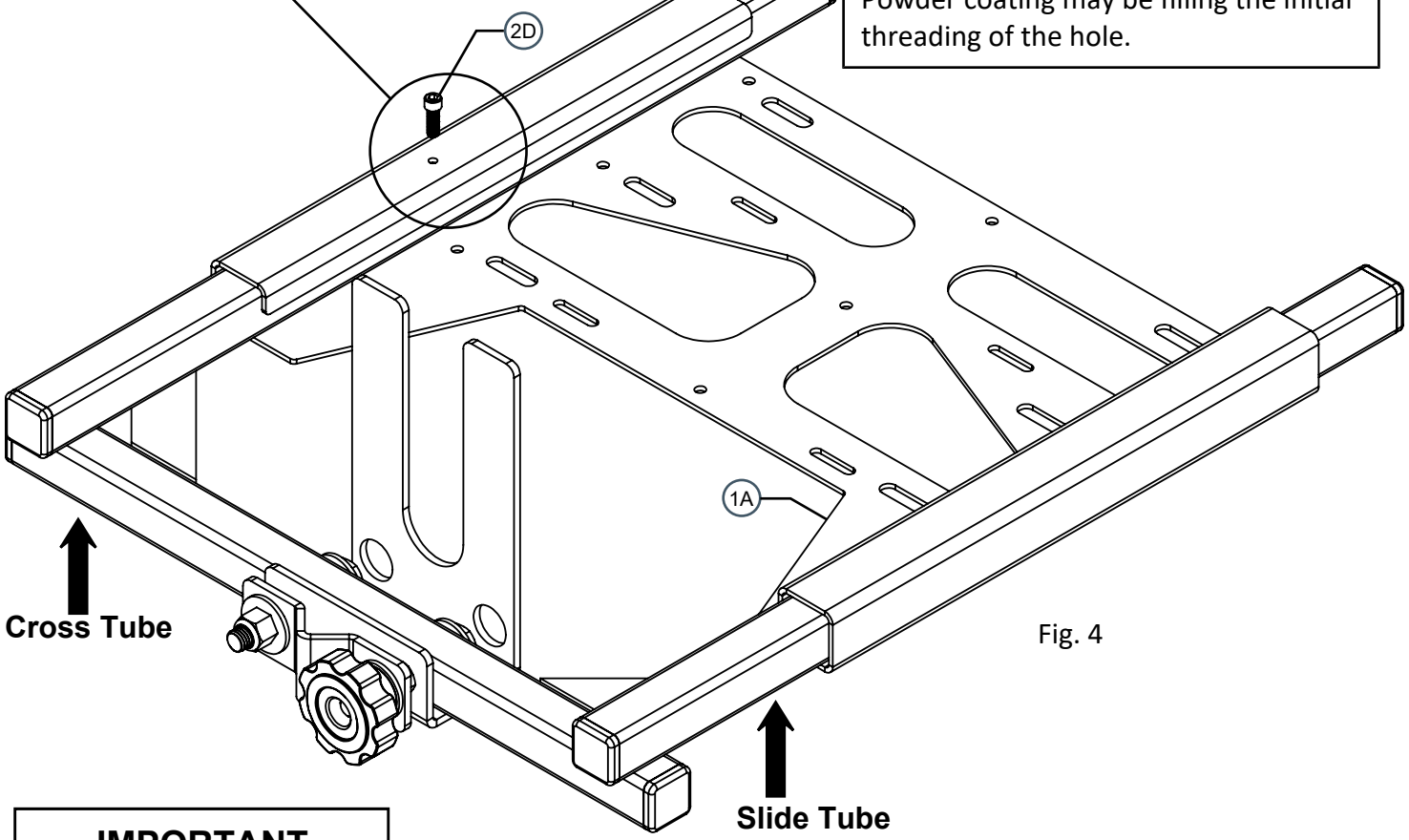


Fig. 4

IMPORTANT

Make sure Slide is oriented the correct way (with the cross tube beneath the two slide tubes).

a. Slide the completed Slide Assembly into the Base Plate as shown in Fig. 4
b. Install the Socket Cap Screw as shown in Fig. 5
   - Make sure the Slide Assembly is halfway into the Base Plate before installing
   - Screw may be tight when installing
c. Pull slide back to make sure it catches on Socket Cap Screw and cannot slide completely out of Base Plate

SET UP

Secure to Work Bench

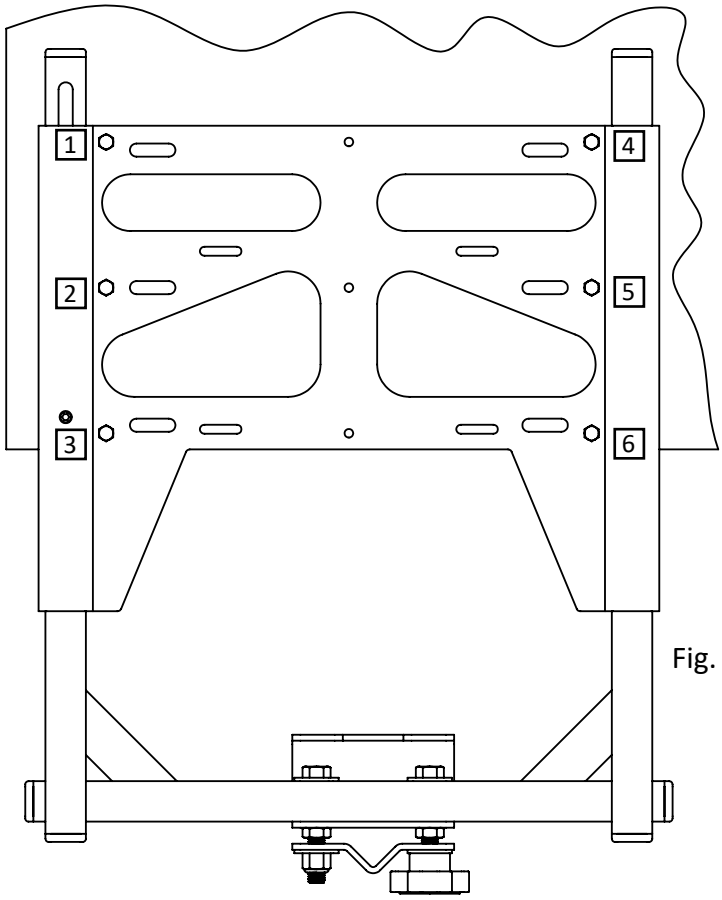


Fig. 6

1. Secure the Safety Sled to a work bench with six 1/4" lag screws* as shown in Fig. 6 & Fig. 7
   - Align the Safety Sled so the Base Plate is at the edge of the work bench

* 1/4" lag screws not included

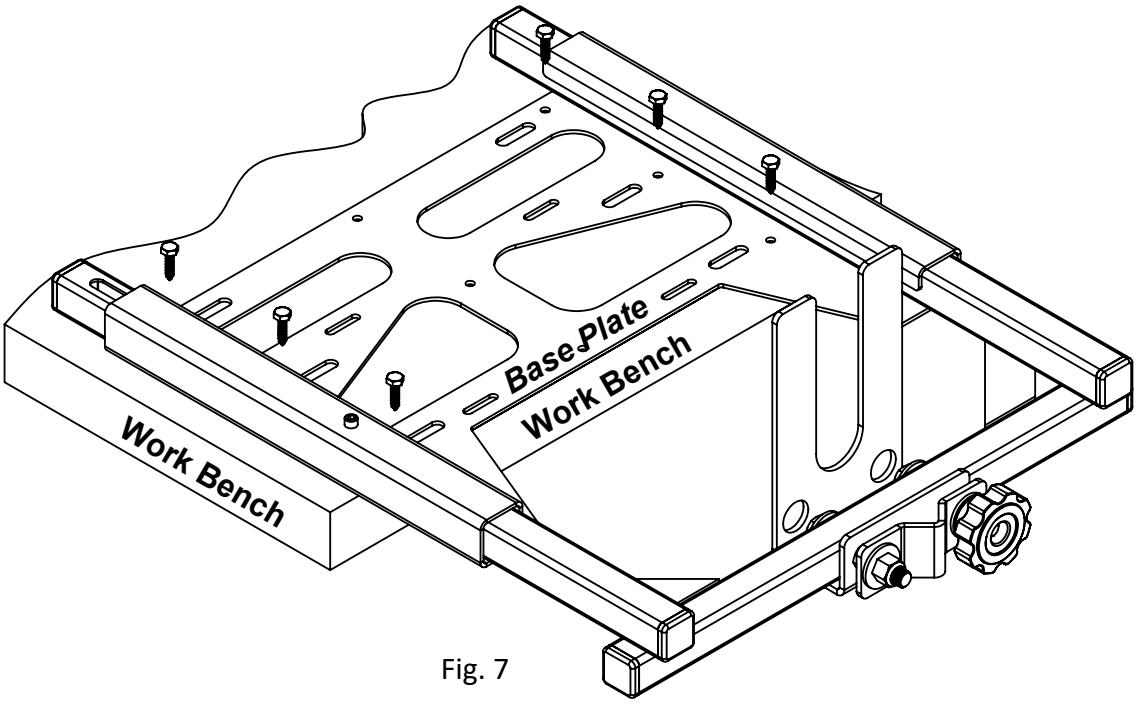


Fig. 7

Install Drill

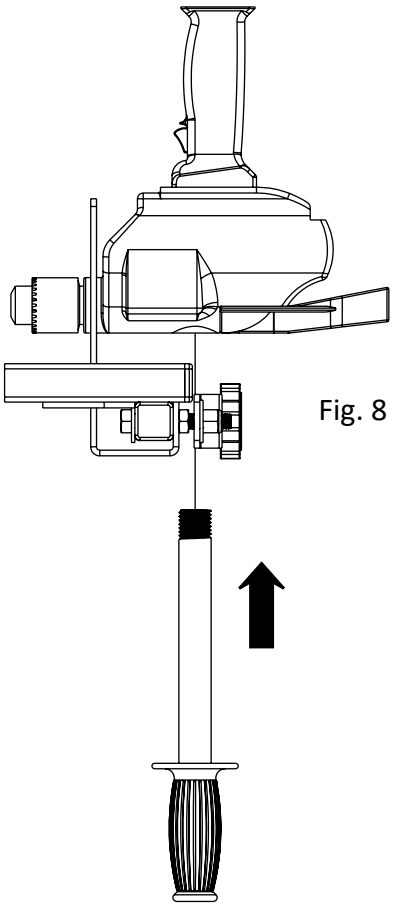


Fig. 8

1. Slide the pipe handle through the Clamp Plate as shown in Fig. 8 and screw into drill
   - Loosen the Knob if there is difficulty sliding the pipe handle through
2. Tighten Knob to hold the drill in place

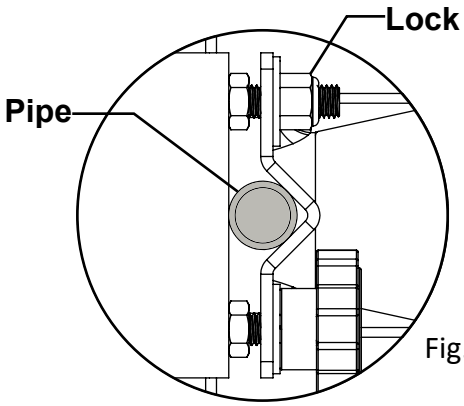


Fig. 9

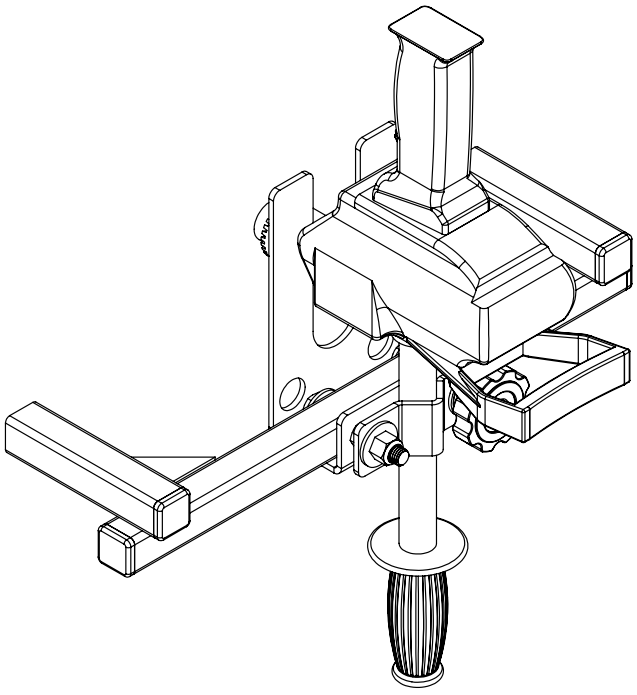
Tip

You may need to tighten/loosen the Lock Nut to ensure proper clamping of the drill.

Fig. 9 displays a cross-section view of pipe handle secured by the Clamp Plate

IMPORTANT

Only use the 1/2" Milwaukee 1660-6 Drill, 5/8" BOSCH GBM9-16 Drill, or 3/4" Milwaukee 1854-1 Drill with this fixture.



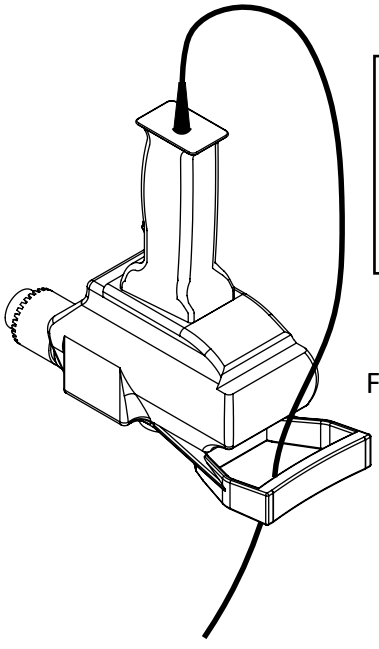


Fig. 10

IMPORTANT

Run the power cord through the handle to reduce risk of cord getting caught in moving parts. (Fig. 10)

Log Lock Attachment

1. Secure a 1-1/2” tenon cutter in the drill chuck
2. Clamp a 1-1/2” dowel rod (available at home improvement stores) in the Log Lock
   • For Log Lock XL use a 2-1/2” dowel rod and a 2-1/2” tenon cutter
3. Insert the dowel rod into the tenon cutter as shown in Fig. 11 to align with drill before bolting Log Lock in place
   • Refer to Fig. 12 for Log Lock and Log Lock XL bolt points
   • Make sure Log Lock is straight (flush with front of Safety Sled Base Plate)
4. Bolt down the Log Lock with 1/4" lag bolts
   • Log Lock XL uses 3/8" lag bolts

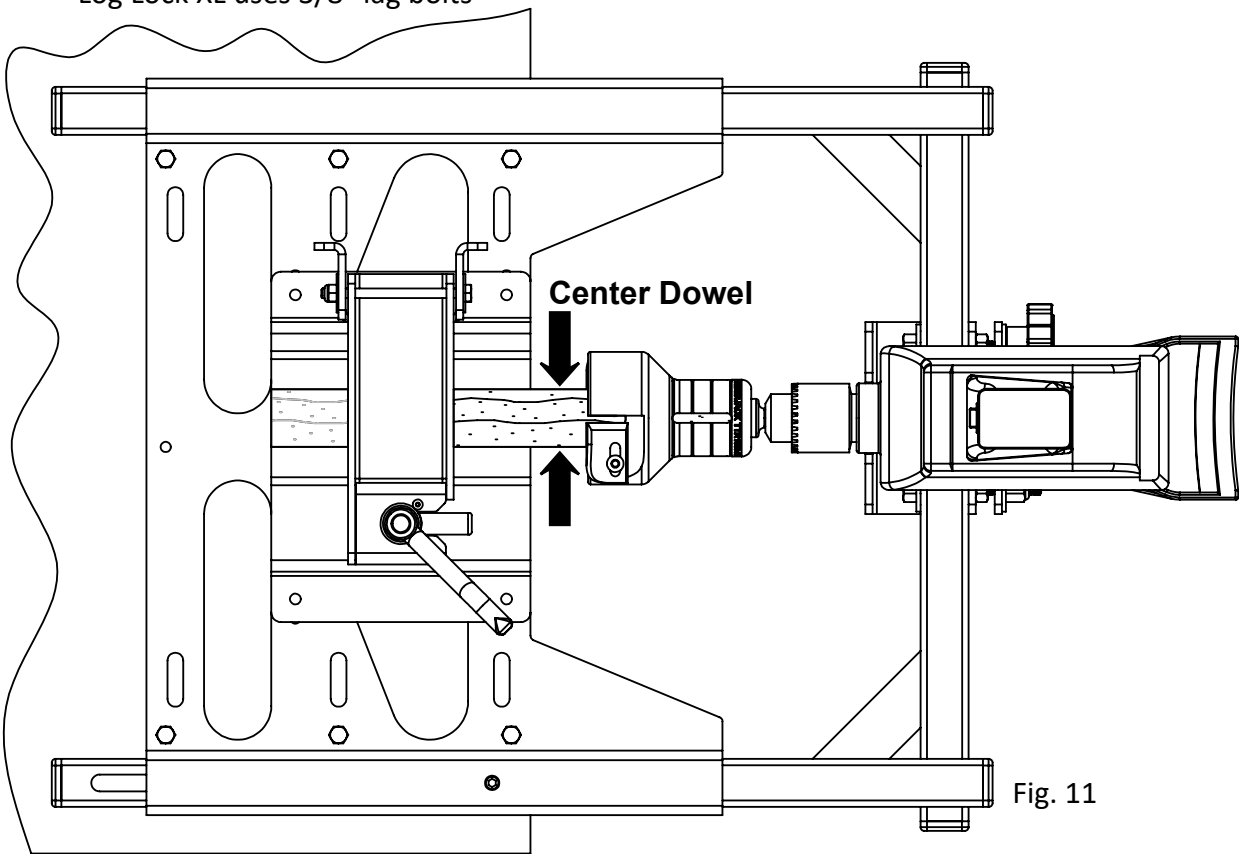
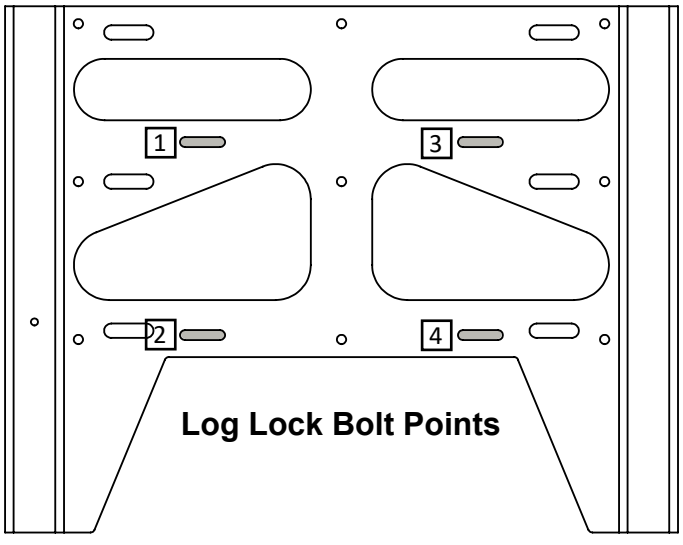


Fig. 11



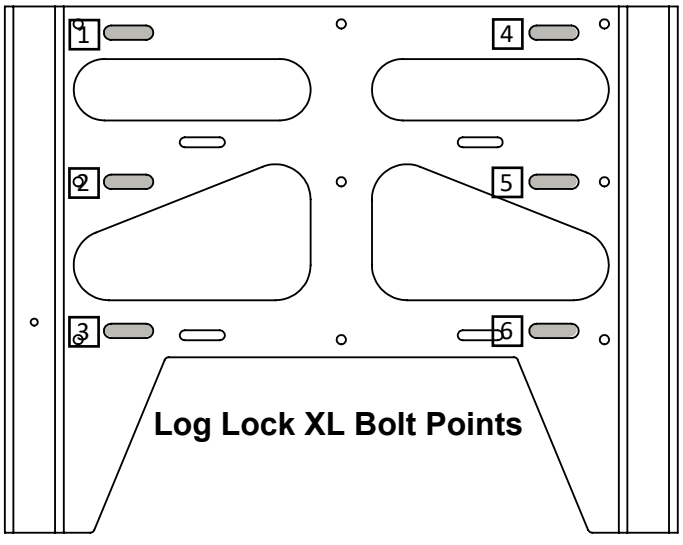


Fig. 12

OPERATION

ALWAYS unplug the drill before making any adjustments!

Center Vertically

CAUTION

DO NOT let the drill fall while adjusting. Failure to do so may result in damage to the drill or Safety Sled.

1. Clamp a log into the Log Lock
2. Loosen the knob 2-3 full turns
   • Hold onto drill while loosening
3. Adjust the drill by either lifting of lowering as shown in Fig. 13 until the log is vertically centered on the tenon cutter
4. Tighten the knob until the drill is secure

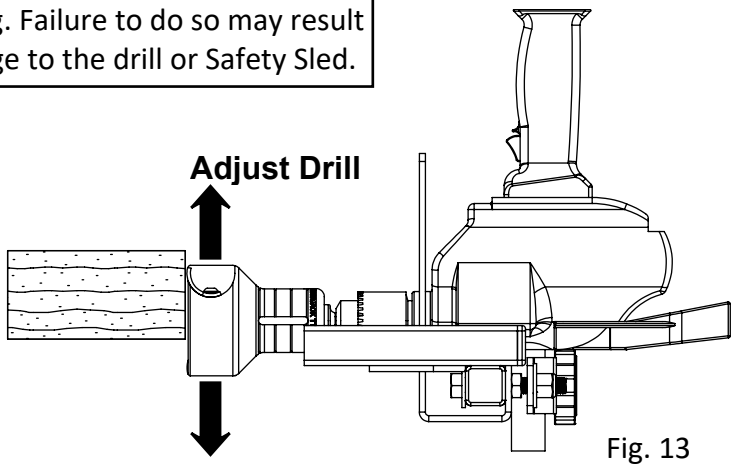


Fig. 13

Center Horizontally

1. Rotate the log so it is lined up with the drill horizontally as shown in Fig. 14
2. Clamp the log into the Log Lock
3. Center drill vertically (Fig. 13) as-needed

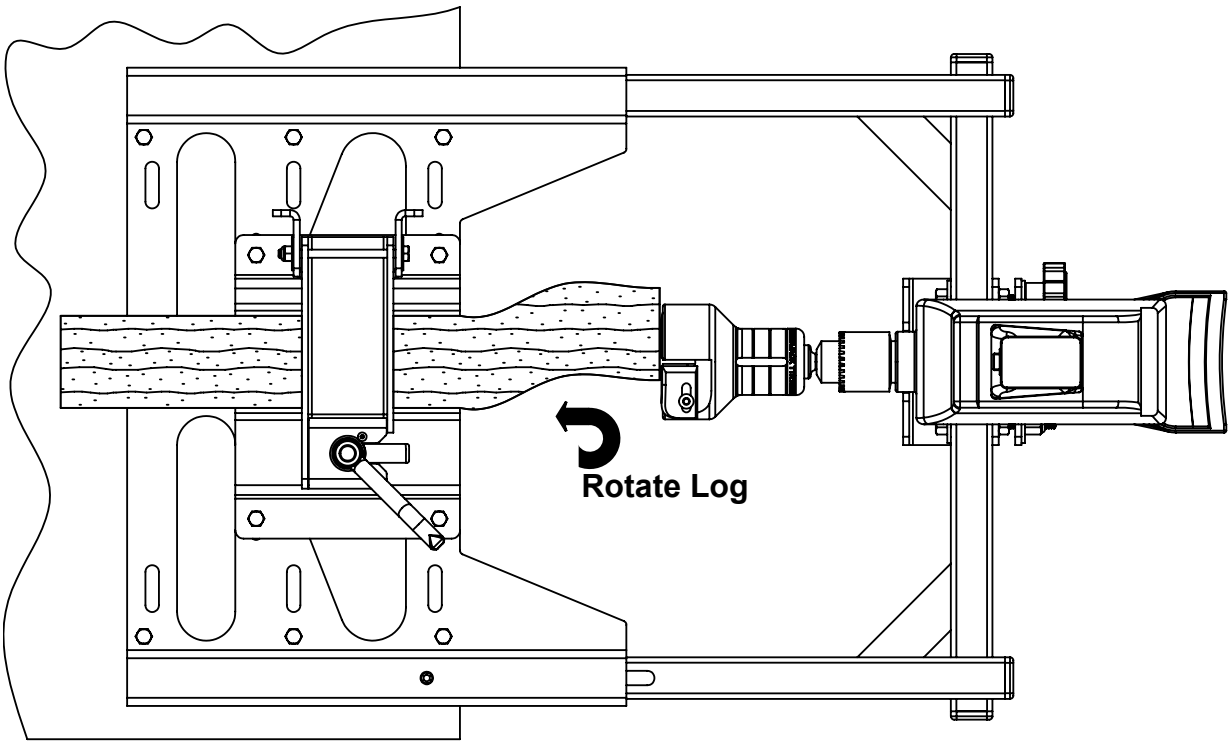


Fig. 14

ALWAYS unplug the drill before adjusting the blades or adjusting the chuck!

Cutting Tenons

1. Make sure the log is clamped into the Log Lock and centered on the tenon cutter

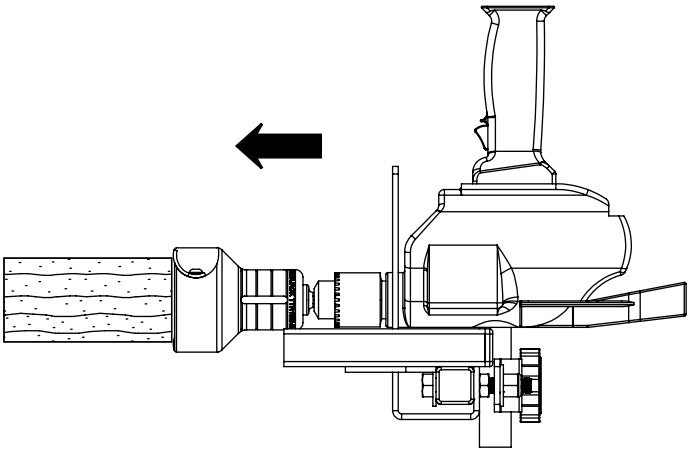
2. Position the cutter flush with the end of log
   • Never try cutting a tenon without being flush against a log
3. Apply body pressure by leaning into the drill

4. Pull the trigger to cut a tenon
   • Maintain constant pressure while cutting (Fig 15)
5. When the tool has bottomed out or you have reached desired tenon length, stop the drill

6. When the drill comes to a complete stop, pull the drill back to reveal the finished tenon (Fig. 16)

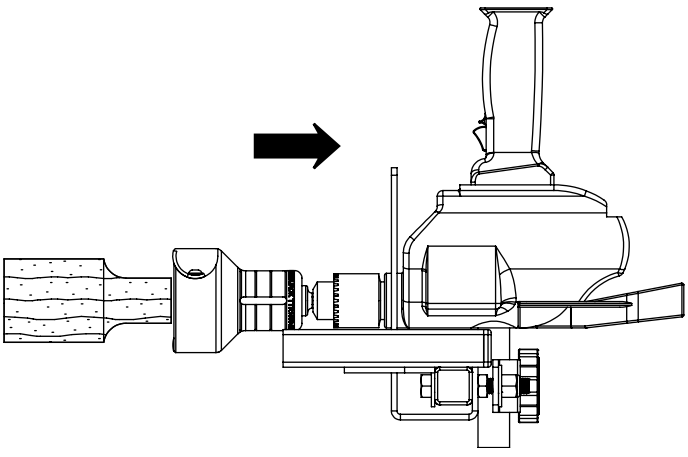
CAUTION

NEVER attempt to cut without the tenon cutter being flush against the end of log. Failure to do so may result in injury.



Constant pressure while cutting

Fig. 15



Remove from log once drill stops completely

Fig. 16

Cutting Tenons (continued)

When operating the Safety Sled **NEVER** apply stress on the fixture by leaning down, to the side, or by pulling up. The only way to operate this fixture is by applying body weight to the rear of the drill and allowing the horizontal force to aid in cutting. Operating the Safety Sled incorrectly may cause the slide tubes to fail, making the fixture unusable.

- Fig. 17 demonstrates correct force on the Safety Sled
- Fig. 18 demonstrates wrong force(s) on the Safety Sled

Correct Force

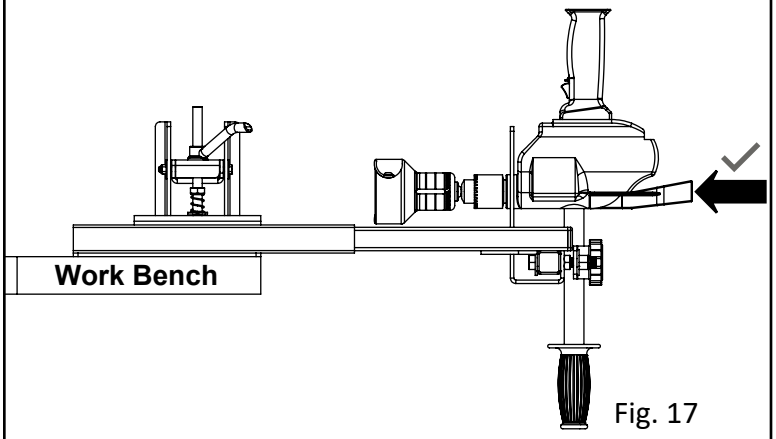


Fig. 17

Wrong Force(s)

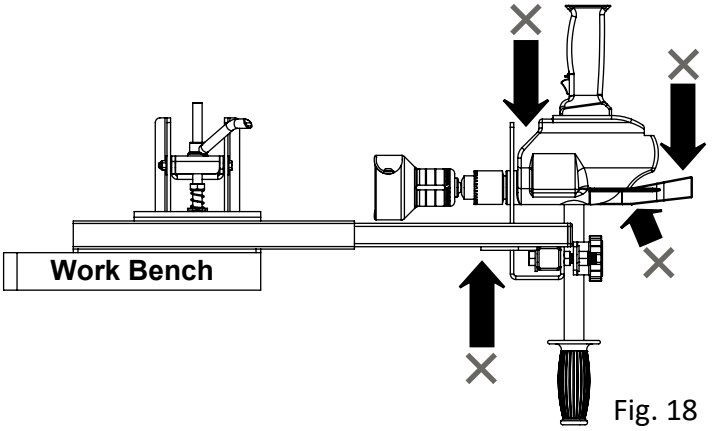


Fig. 18

Idle/Rest Position

When the Safety Sled is not in use:

- Remove the tenon cutter from the drill
- Remove drill from the Safety Sled
- **ALWAYS** keep the slide on the pushed in completely (Fig. 19)
- **NEVER** leave the slide extended out while idle (Fig. 20)
- **NEVER** hang any items from the slide

Correct

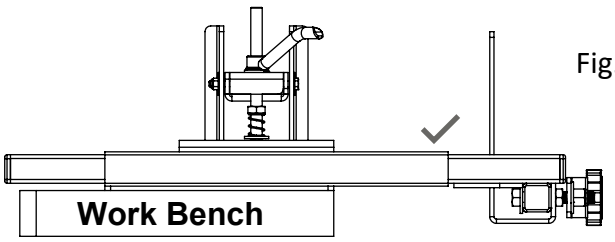


Fig. 19

Wrong

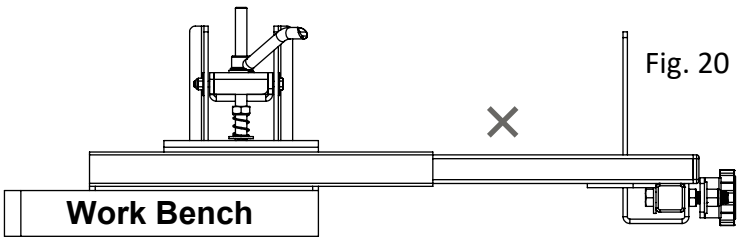


Fig. 20

MAINTENANCE

- **Fixture**

  Cleaning
  - Keep the Base Plate, Slide, Align Plate, and Clamp Plate clear of sap, wood chips and other build-up
  - Always remove drill and bit before cleaning
  - Clean the plates with a solvent (such as mineral spirits)

  Oiling
  - Once cleaned, apply grease or oil to Slide to improve slide action

- **Fasteners**

  Inspection
  - Check for visible thread damage
  - Do any of the bolts appear bent or deformed?
  - Replace any damaged nut, bolt or washer to reduce risk of damage to Safety Sled

- **Mounting**

  Inspection
  - Make sure the screws securing the fixture to the workbench are still holding properly
  - Remove any debris between the workbench and fixture
  - Is the workbench still level and stable?
  - Replace any broken screws
  - Tighten any loose screws

TASK	EACH USE	MONTHLY
Clean Fixture	X	X
Inspect Socket Cap Screw	X	X
Inspect Mounting Bolts	X	X
Oil Slide		X

TROUBLESHOOTING

Clamping

PROBLEM	CAUSE	SOLUTION
• Log/Timber spins inside clamp	• Clamp is not applying enough pressure	• Tighten handle until log is secured
	• Top not oriented properly over log	• Adjust top in ladder to properly fit • Re-orient the log if needed
• Wobbling or vibrating log in fixture	• Log sticking out too far from clamp	• Position log with no more than 24” of overhang
	• Fixture loose on base	• Re-tighten screws securing base
	• Workbench not stable	• Move fixture to more stable workbench
• Top not staying locked into ladder	• Top not oriented over log properly	• Adjust top so that the handle end is higher than the ladder end
	• Log orientation making it difficult to secure	• Re-orient the log and adjust the top as needed

Tenon Cutting

PROBLEM	CAUSE	SOLUTION
• Not cutting log	• Log is larger than tool will accept	• Taper down the end of the log with a draw knife
	• Blades are slid too far back	• Position blades so they are back no further than 5/16”
	• Blades are dull	• Sharpen blades • Purchase new blades
	• Not applying enough pressure	• Lean into drill with body
• Takes too much of a “bite”	• Aggressive cutting from dual blades	• Remove one blade or “shim” blade up to .020”
• Drill cuts on small diameter logs but not larger ones	• Using a non-Milwaukee brand drill or non-BOSCH brand drill	• We recommend purchasing a Milwaukee brand or BOSCH brand hole hog drill
• Spiral grooves on the tenon joint	• Removing the cutter while drill is still spinning	• DO NOT remove the cutter until the drill has come to a complete stop
• Safety Sled not sliding	• Debris between Slide and Base Plate	• Clean all debris between Slide/Base Plate
	• Socket Cap Screw not installed correctly	• Make sure Socket Cap Screw is inside the Slide arm slot (pg. 6)
• Safety Sled cutting crooked	• Align Plate is loose	• Tighten Align Plate nuts (pg. 5)
	• Log Lock not aligned with drill	• Re-align Log Lock (pg. 9)
	• Log is crooked	• Spin the log in the Log Lock to find best position to cut
• Cannot clamp drill handle	• Lock Nut not tight enough	• Adjust the Lock Nut to better clamp drill (pg. 8)
• Hard to adjust drill height	• Too much friction between clamp and drill	• Apply a light oil to the pipe handle on drill

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RECOMMENDED ACCESSORIES

Bosch 5/8 in. Drill - GBM9-16

Drill Sergeant Angle Driller™ - ADS4590

Draw Knife - DK1000

Blade Boss Sharpening Jig - BB2575

Log Center Finder CF1040 & CF4080

Countersink Bit Set - CSK4000