



MASTER TOOL CUB SEWING MACHINE

OWNER'S MANUAL

U.S. Patent #9,657,418

Hand-Crank Design Simulates a Flywheel for Natural Movement and Precision Stitching

MASTER TOOL

LIMITED LIFETIME GUARANTEE

HANDCRAFTED IN THE USA

Congratulations on your purchase of the Master Tool Cub Sewing Machine. This heavy-duty cylinder arm sewing machine stitches up to 3/4" leather, nylon and canvas with ease and precision with a non-motorized, portable design that's perfect for crafters, hobbyists and repair shops.

- Patented, hand-crank design simulates a flywheel, encouraging natural movement for smooth operation that makes it easy to maintain a continuous line of stitching.
- Sews up to 4 stitches per inch with a consistent stitch length no matter the speed.
- Portable design is great for taking to shows.
- Backed by our Limited Lifetime Guarantee.

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UNPACK YOUR BOX

The Master Tool Cub arrives completely assembled.

You'll find the following in your box:

1. Master Tool Cub Sewing Machine
2. Thread Holder
3. Two 4 oz. Spools of White Thread
4. Thread Nipper
5. Bobbin Winder
6. Two Bobbins
7. One Pack of 794S-200 Needles
8. Allen Wrenches
9. 4 oz. Lily Stitching Oil
10. Sewing Machine Oiler
11. Roller Guide
12. Mounting Hardware
13. Owner's Manual



13

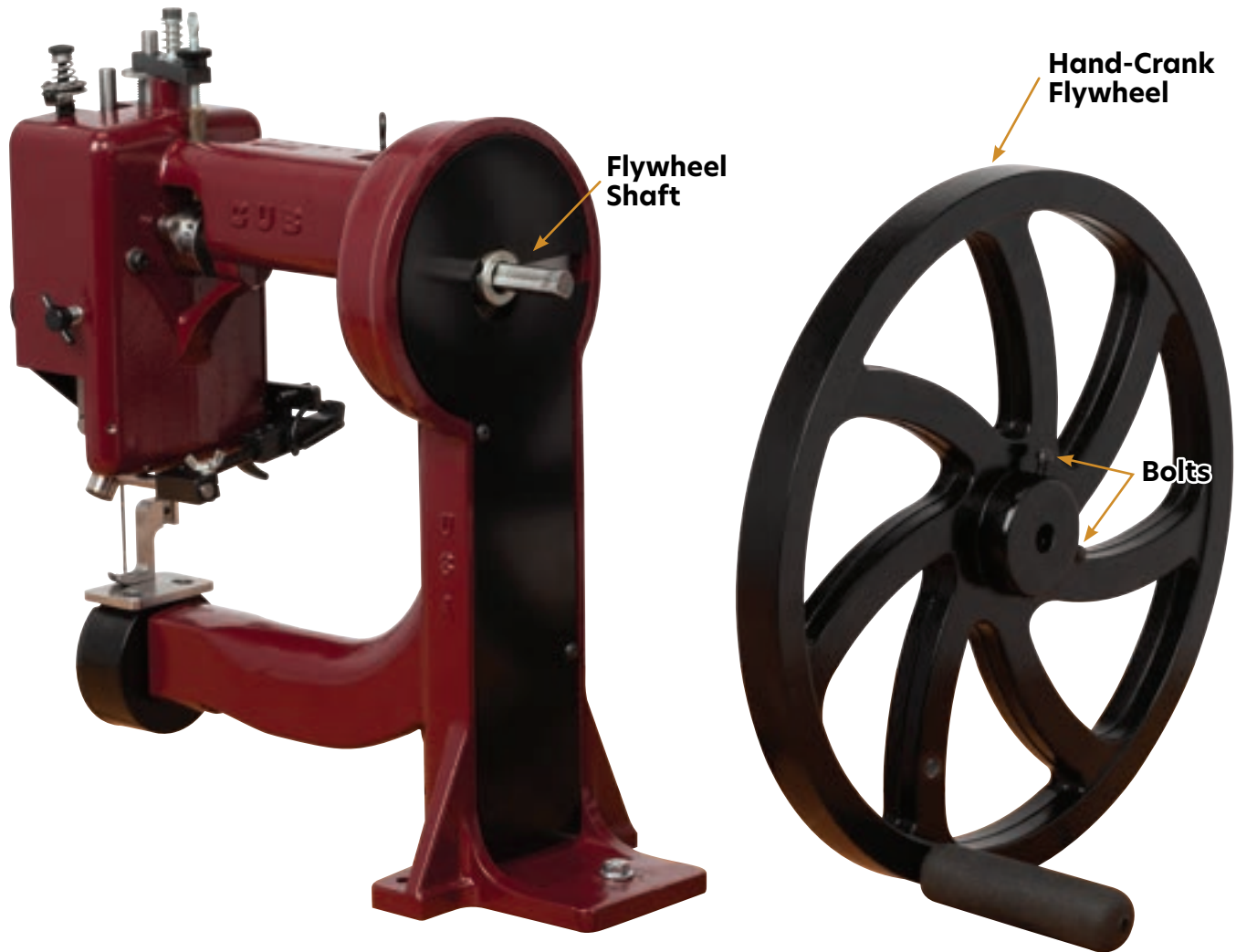
Shipping Weight:
50 lbs.



Machine holds Allen Wrenches and Bobbin Winder for easy access



ATTACHING THE HAND-CRANK FLYWHEEL



You may find it easier to transport the Master Tool Cub without the Flywheel attached. The Flywheel can be easily removed after loosening the Bolts with a 3/16" Allen Wrench. Below are instructions on attaching the Flywheel.

- 1) Locate the flat sides on the Flywheel Shaft. **(Figure 1)**
- 2) Slide the Hand-Crank Flywheel on the Flywheel Shaft, making sure to line up the Bolts with the flat sides on the Flywheel Shaft. **(Figure 2)**
- 3) Tighten the Bolts using the included 3/16" Allen Wrench. **(Figure 3)**



Figure 1

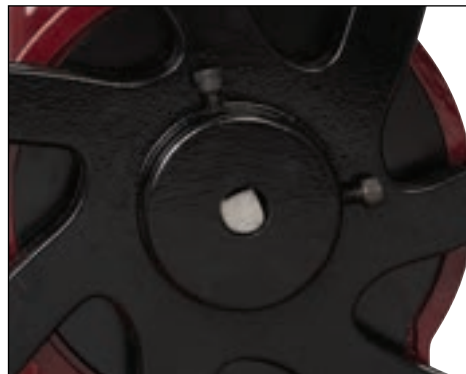


Figure 2



Figure 3

MOVING THE FLYWHEEL HANDLE

Important Note: Flywheel design features two threaded holes for changing the position of the Flywheel Handle. **(Figure 4)**

The threaded screw inside the Handle can be reached from the cut out portion on the Handle's end and loosened using the included 7/32" Allen Wrench. Move the Handle to the desired threaded hole, and tighten the screw using the Allen Wrench. Make sure the Handle is attached securely. **(Figure 5)**

Positioning the Handle on the outer edge of the wheel provides more leverage and control. Moving the Handle to the inner position allows the Flywheel to turn faster.

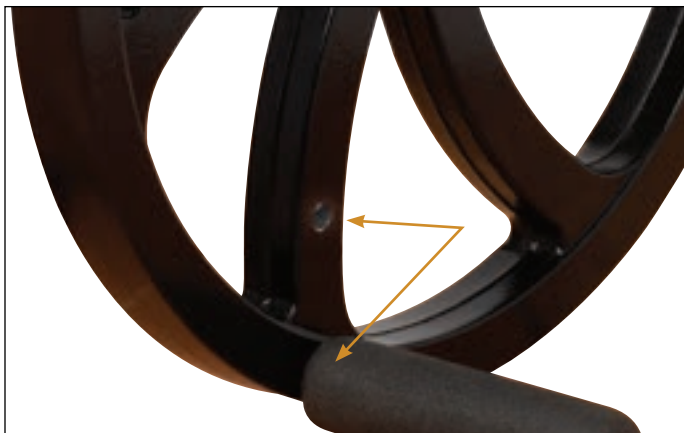


Figure 4



Figure 5

GETTING TO KNOW THE MASTER TOOL CUB SEWING MACHINE

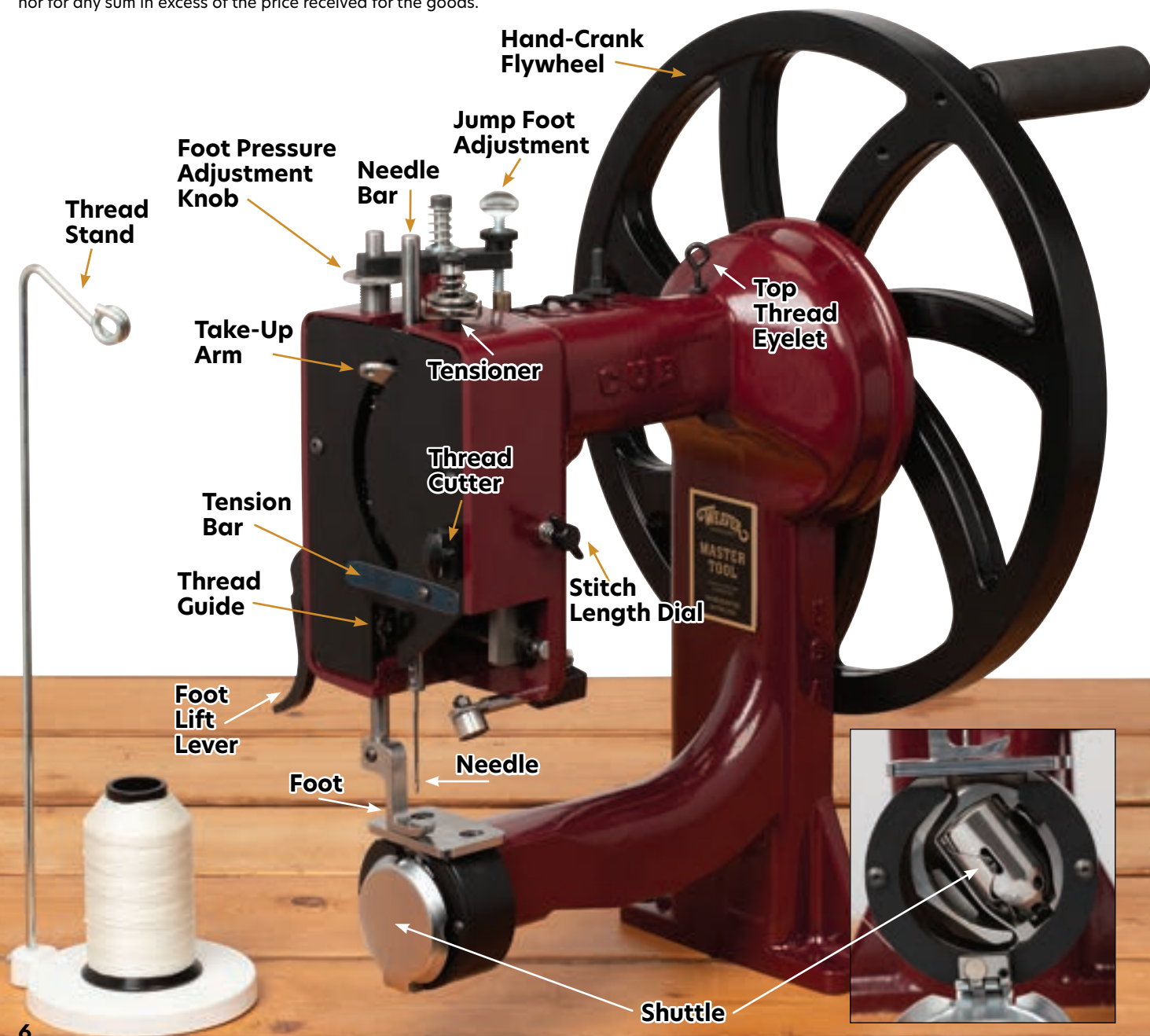
Do not operate this machine until you have read and understand the instructions in this manual. This machine is designed for stitching up to 3/4" leather, nylon and canvas. Use for any other purpose is prohibited and voids the warranty.

Safety

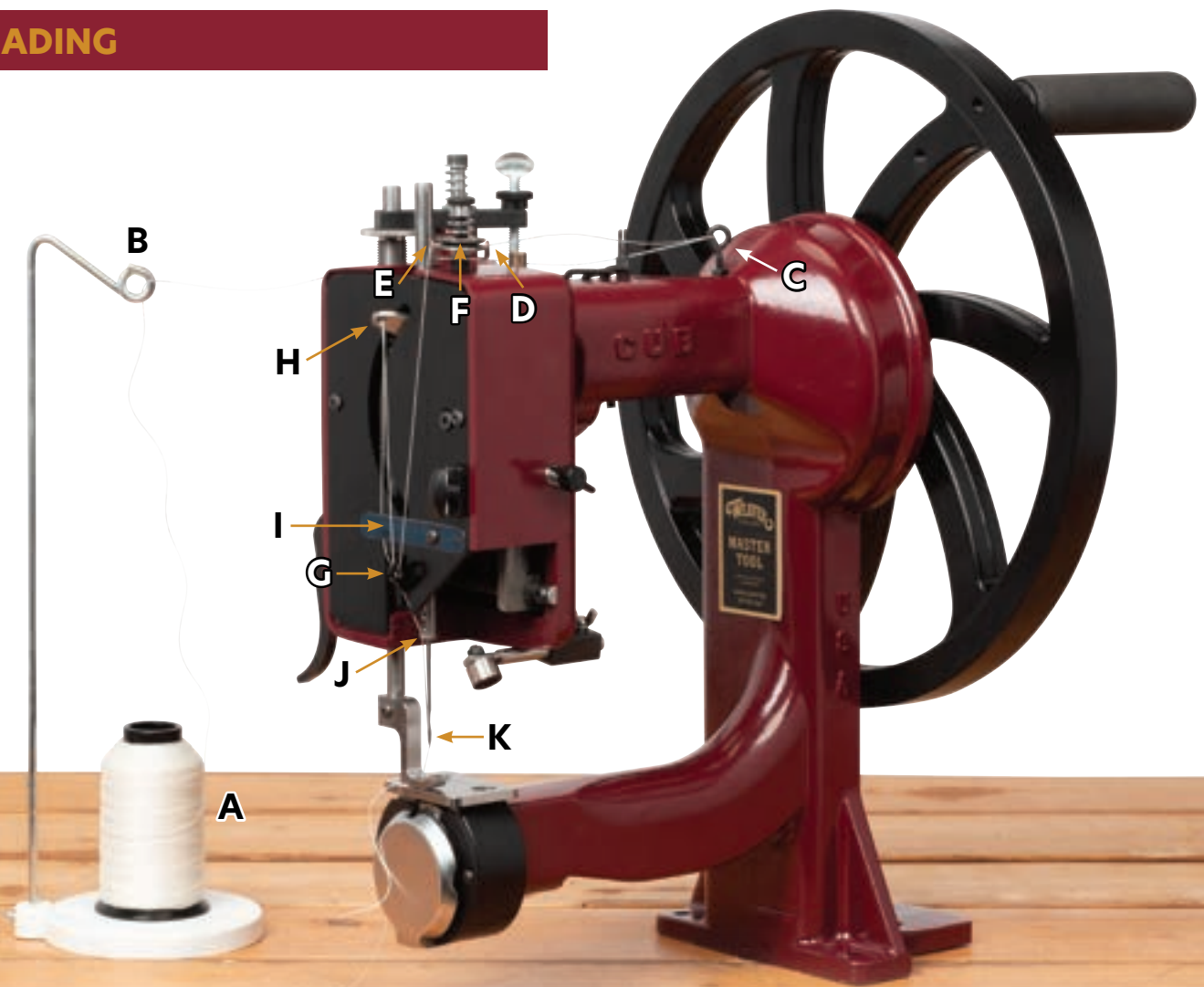
- Never use this machine unless it is securely fastened to a workbench. Simply secure machine to your workbench with included mounting hardware.
- Always keep all fingers and body parts away from moving parts.
- Keep in mind that this machine weighs 50 lbs. Always use proper lifting techniques when moving it and verify its stability before use.
- Keep away from children at all times.

Limited Lifetime Guarantee

Every Master Tool is built to last using the finest materials and skilled American workmanship. We are proud to stand behind our products with an unmatched Limited Lifetime Guarantee. This quality standard warrants each product for its lifetime against defects in materials and workmanship under correct use, normal operating conditions and proper application. This guarantee does not extend to any component parts not manufactured by Weaver Leather, or if the machine is modified in any way. Weaver Leather makes no express warranties other than those that are specifically described herein. This warranty is expressly in lieu of all other warranties express or implied. There are no implied warranties of any kind including merchantability or fitness for a particular purpose. Weaver Leather will in no event be liable for any incidental or consequential damages whatsoever, nor for any sum in excess of the price received for the goods.



THREADING



- 1) Run thread from Spool **(A)** on Thread Stand **(B)** to the Thread Eyelet **(C)**. **(Figure 6)**
- 2) Run thread through Tensioner Eyelet 1 **(D)**, around the Tensioner and through Tensioner Eyelet 2 **(E)**. Make sure thread is pulled tightly in between the Tensioner Discs **(F)**. **(Figure 7)**
- 3) Run thread down the front of the machine to the Thread Guide **(G)**, threading it from right to left. **(Figure 8)**

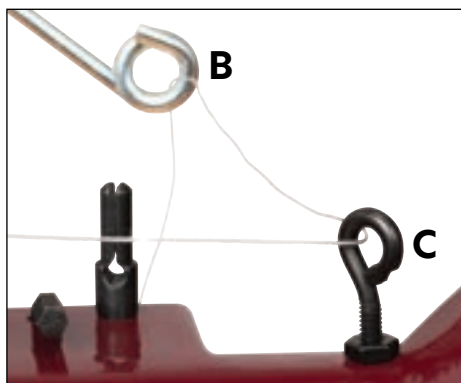


Figure 6

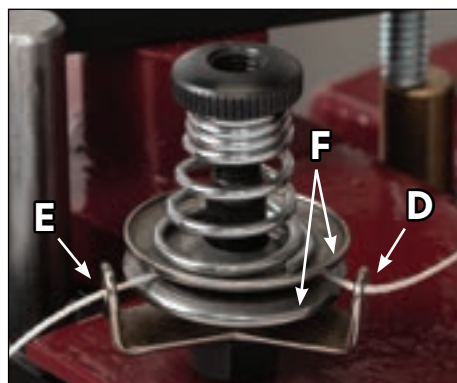


Figure 7

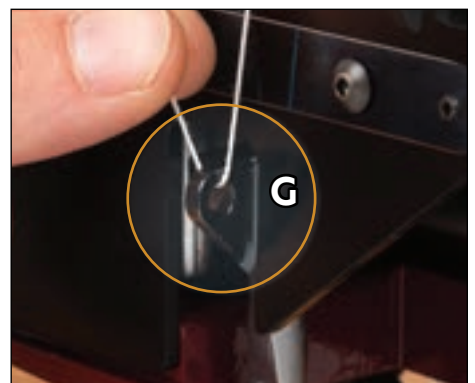


Figure 8

THREADING CONT.

- 4) Run thread back up the front of the machine and through the Take-Up Arm (H). Make sure thread is run in front of the Tension Bar (I) at this point. (Figure 9)
- 5) Run thread back down and behind the Tension Bar (I). (Figure 10)
- 6) Run thread through the bottom of the Needle Bar (J) and through the Needle Eye towards the machine (K). (Figures 11 & 12)

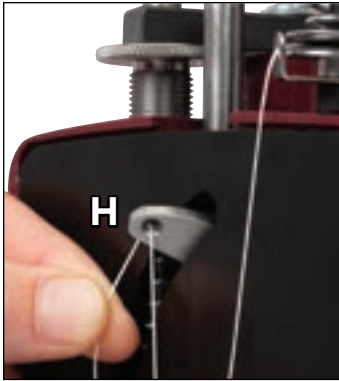


Figure 9

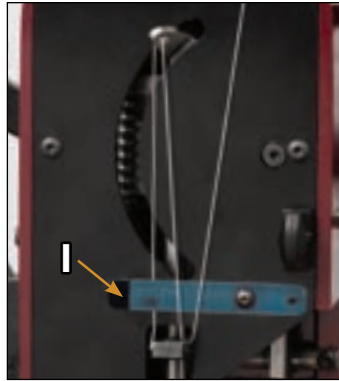


Figure 10

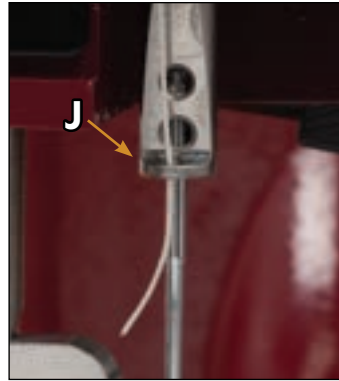


Figure 11



Figure 12

FILLING BOBBINS

A Bobbin Winder is included that may be attached to an electric drill to assist you in winding bobbins if desired. **We accept no liability for any injury or damage incurred through the use of this method.**

TO USE THE BOBBIN WINDER

1. Bring the thread from the spool through the hole in the end of the Bobbin. (Figure 13)
2. Bring the thread through the split end of the Bobbin Winder, then place the Bobbin on the Bobbin Winder. (Figure 14)
3. With a light tension on the thread, turn the drill over slowly and allow the Bobbin to wind evenly. (Figure 15)

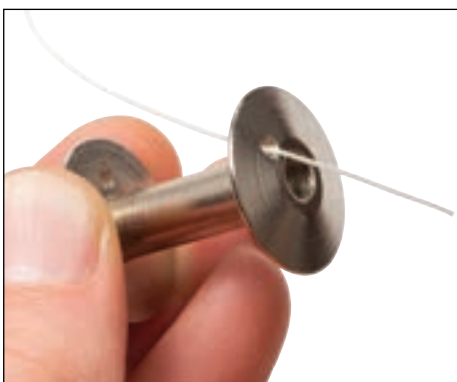


Figure 13

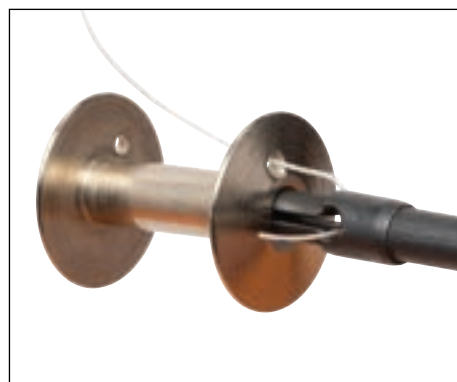


Figure 14

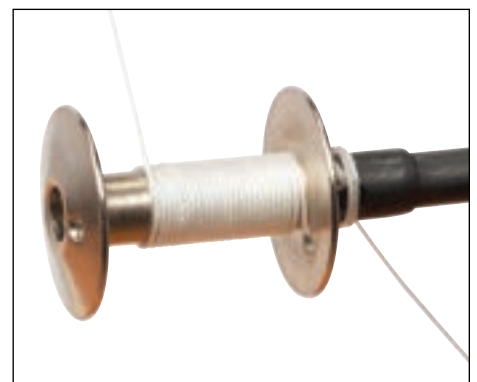


Figure 15

REMOVING & INSERTING BOBBIN

REMOVING BOBBIN

- 1) Turn machine over until Bobbin Case sets in position shown. **(Figure 16)**
- 2) Pull back tab **(A)** to release Bobbin Case.
- 3) Lift base of Bobbin Case out to remove Bobbin. **(Figure 17)**

Important Note: When closing Bobbin Case, make sure the Case snaps back into place with the tab holding it.

INSERTING BOBBIN

- 1) Place a full Bobbin into empty Bobbin Case, and slip the thread from the Bobbin into the slot **(B)** at the base of the Case. **(Figures 18 & 19)**
- 2) Continue pulling thread under the tension spring until it rests in the fork **(C)** of the spring. **(Figure 20)**

Important Note: The Bobbin should always be inserted so thread unwinds counterclockwise to ensure consistent tension. **(Figure 21)**

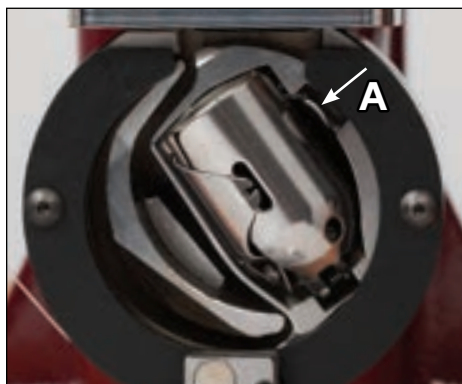


Figure 16



Figure 17



Figure 18

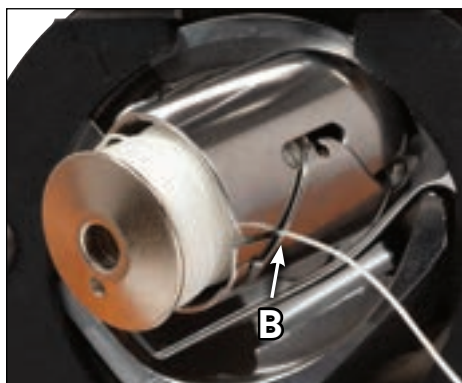


Figure 19

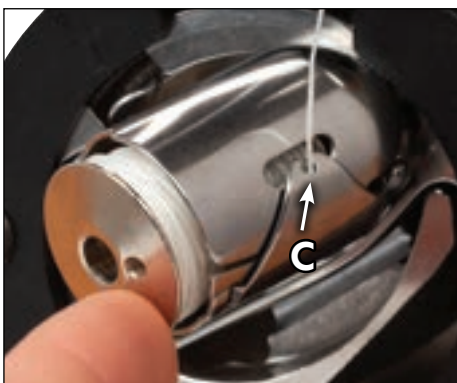


Figure 20



Figure 21

STITCHING

Please Note: This machine does not have reverse. You may choose to turn your work and take a “forward stitch” for a “backstitch,” or tie the thread off manually. (Figure 22)

- 1) Begin by lifting the Presser Foot by raising the Foot Lift Lever located directly behind it. **(Figure 23)**
- 2) Hold the upper thread and bobbin thread under the Presser Foot and to the rear. Insert your work under the foot, positioning it so the needle is directly above the desired point of entry for your first stitch. **(Figure 24)**
- 3) While still holding the thread to the rear, lower the foot and turn the crank to complete your first couple stitches. After the stitches are made, you can release the thread. **(Figure 25)**

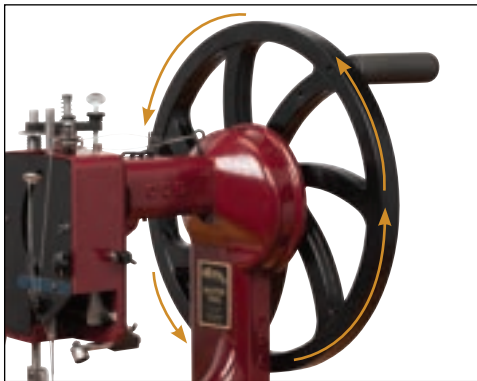


Figure 22



Figure 23



Figure 24



Figure 25

STITCHING

ADJUSTING FOOT PRESSURE

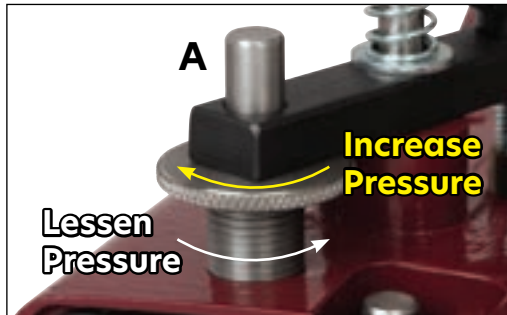


Figure 26

The amount of pressure the Presser Foot places on your work is controlled by the Foot Pressure Adjustment Knob **(A)**. Turn the knob clockwise to increase the pressure placed on your work, or counterclockwise to lessen the pressure. **(Figure 26)**

ADJUSTING STITCH LENGTH



Figure 27

Locate the Stitch Length Dial on the front of the machine. For a longer stitch length, turn the dial counterclockwise. For a shorter stitch length, turn the dial clockwise. **(Figure 27)**

TURNING YOUR WORK AT CORNERS



Figure 28

Please note: Your work should be turned before your needle exits the material. At this point, raise the Presser Foot slightly, pivot your work to the new position, and resume stitching. **(Figure 28)**

ADJUSTING THREAD TENSION

Thread tension on the Master Tools Cub is controlled primarily from the Upper Thread Tension. As needed, turn the Tension Assembly Nut (**B**) clockwise to tighten the tension or counterclockwise to loosen the tension.

(Figure 29)

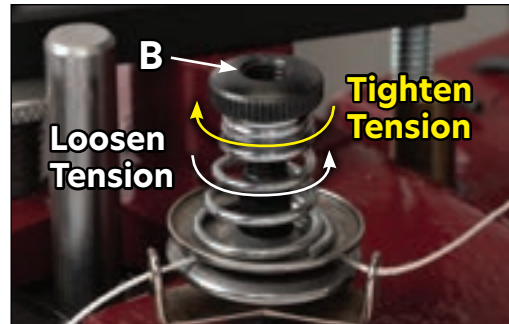
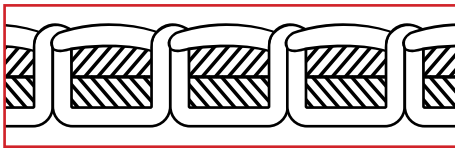
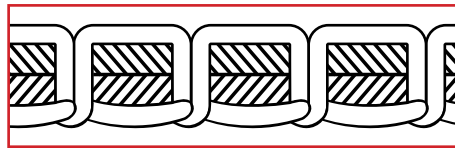


Figure 29



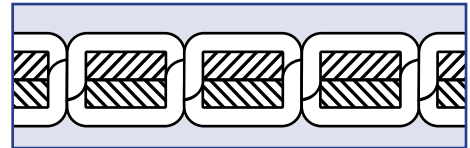
Wrong

When the knot is on top of the material, the top tension is likely too tight. Turn Tension Assembly Nut (**B**) counterclockwise to loosen tension.



Wrong

When knot is on the bottom of material, the top tension is likely too loose. Turn Tension Assembly Nut (**B**) clockwise to tighten tension.



Correct

Needle and bobbin threads are equally drawn into material resulting in a perfect stitch.

ADJUSTING BOBBIN TENSION

Important Note: The bobbin tension rarely needs adjusted, even when using varying sizes of thread. The rule of thumb is that the bobbin thread tension is always less than the upper thread tension.

TO ADJUST TENSION (Figure 30)

- 1) Loosen Lock Screw (**C**). Failure to loosen lock screw may result in a broken screw or damage to the bobbin case.
- 2) Turn Adjusting Screw (**D**) clockwise to tighten tension or counterclockwise to loosen tension.
- 3) Tighten Lock Screw (**C**) when proper tension has been established.

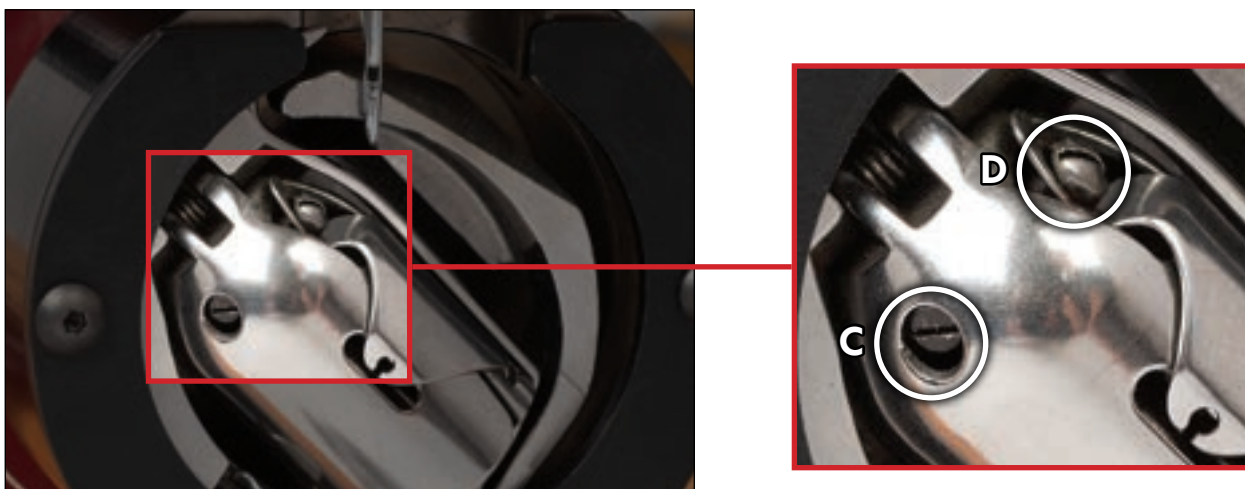


Figure 30

CHANGING THE NEEDLE

Refer to the Thread & Needle Chart below to ensure you are using the correct needle for the thread you are using.

- 1) Loosen the Needle Screw (**A**) with the Allen Wrench provided and remove the old needle. (**Figure 31**)
- 2) Be sure the new needle is positioned correctly with the Scarf (**B**) facing to the right. **Please note:** You should be able to see the needle in the two round openings of the needle bar. (**Figures 32 & 33**)

Troubleshooting Tip: If you experience sewing difficulties, including skipped stitches, failure to pick up the bobbin thread, and frayed thread, try changing your needle. Bent or dull needles may be responsible.

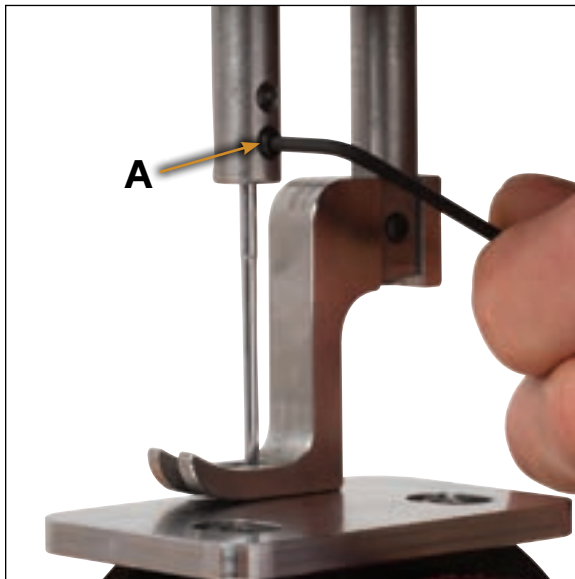


Figure 31

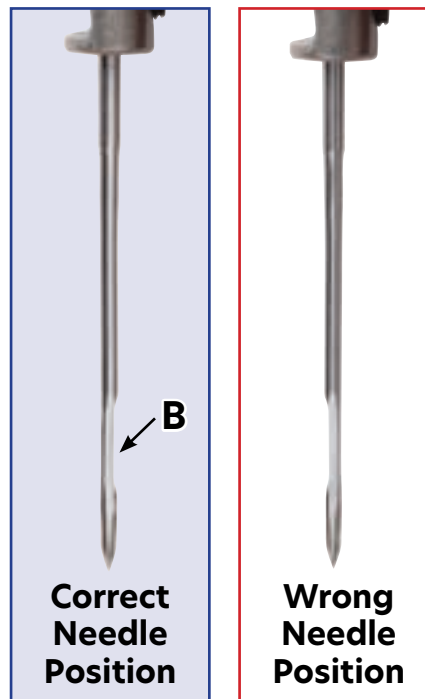


Figure 32

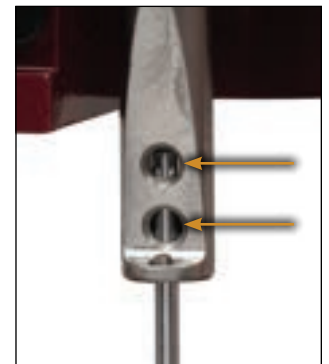


Figure 33

NEEDLE & THREAD CHART

The Master Tool Cub uses 794S (Chisel Point), 794LR (Twisted Chisel Point) and 7X3R (Round Point) System Needles:

- Chisel Point & Twisted Chisel Point Needles - Recommended for leather or non-wovens
- Round Point Needles - Recommended for woven materials

Helpful Tips

- When ordering needles indicate 794S or 794LR for leather or 7X3R for nylon.
- We recommend using Schmetz® brand needles for superior performance.
- Be sure to use the correct needle for the thread being used.

NEEDLE SIZE	THREAD TOP/ BOTTOM
230	346/277
200	277/207
180	207/138
160	138/92

MAINTENANCE

We recommend oiling the Master Tool Cub after every eight hours of use with Lily Stitching Oil. Oiling Points are indicated on **Figures 35, 36 and 37**.

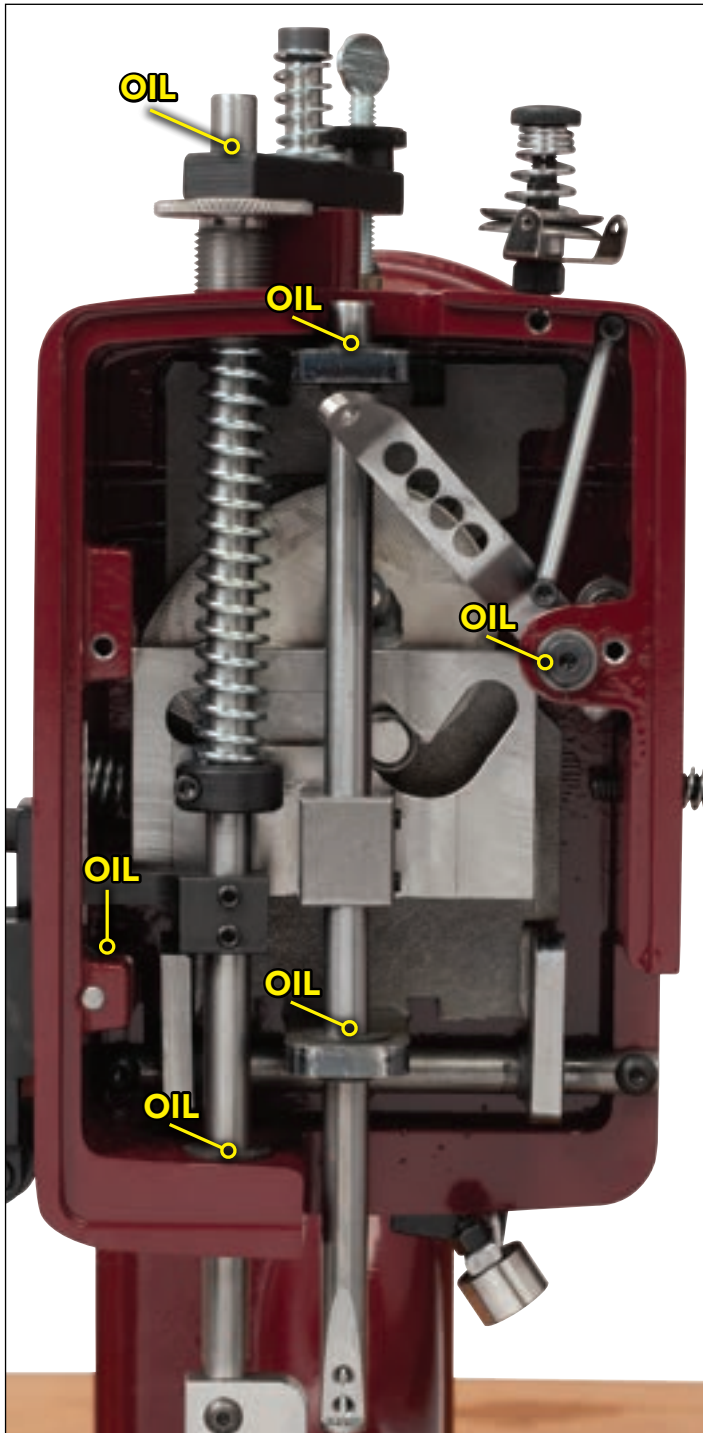


Figure 35

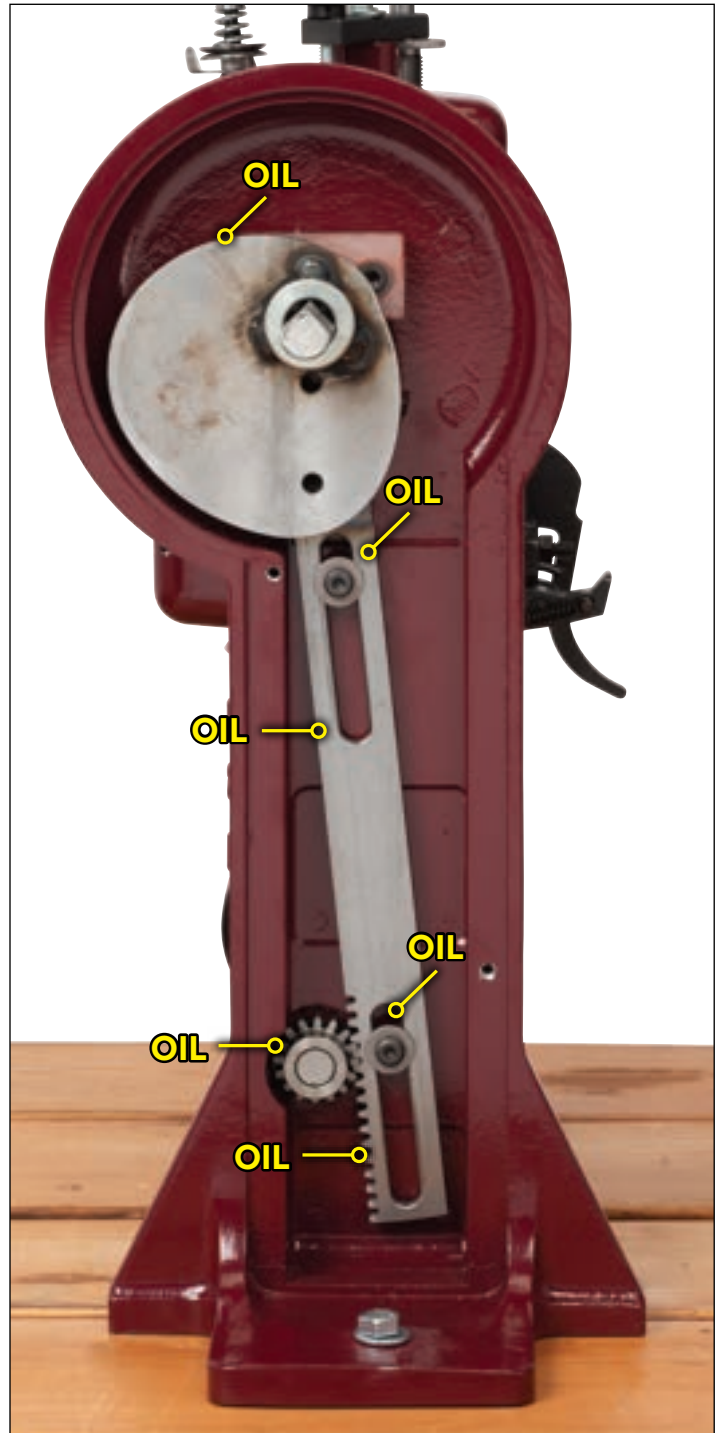


Figure 36

MAINTENANCE



Figure 37

TROUBLESHOOTING

ADJUSTING TIMING

If you think your machine's timing is off, call Weaver Leather at 1-800-932-8371, ext. 223 for assistance.

REPLACEMENT PARTS

- 1. 65-8228**
Shuttle



- 2. 63500-124**
Bobbin Winder



- 3. 65-8121**
Bobbin



- 4. 63500-125**
Thread Stand



- 6. 88008-06**
Needle Bar Set Screw
8-32 x 3/16"



- 7. 88014-01**
Shuttle
Cover Door



- 5. 63500-102**
Presser Foot

