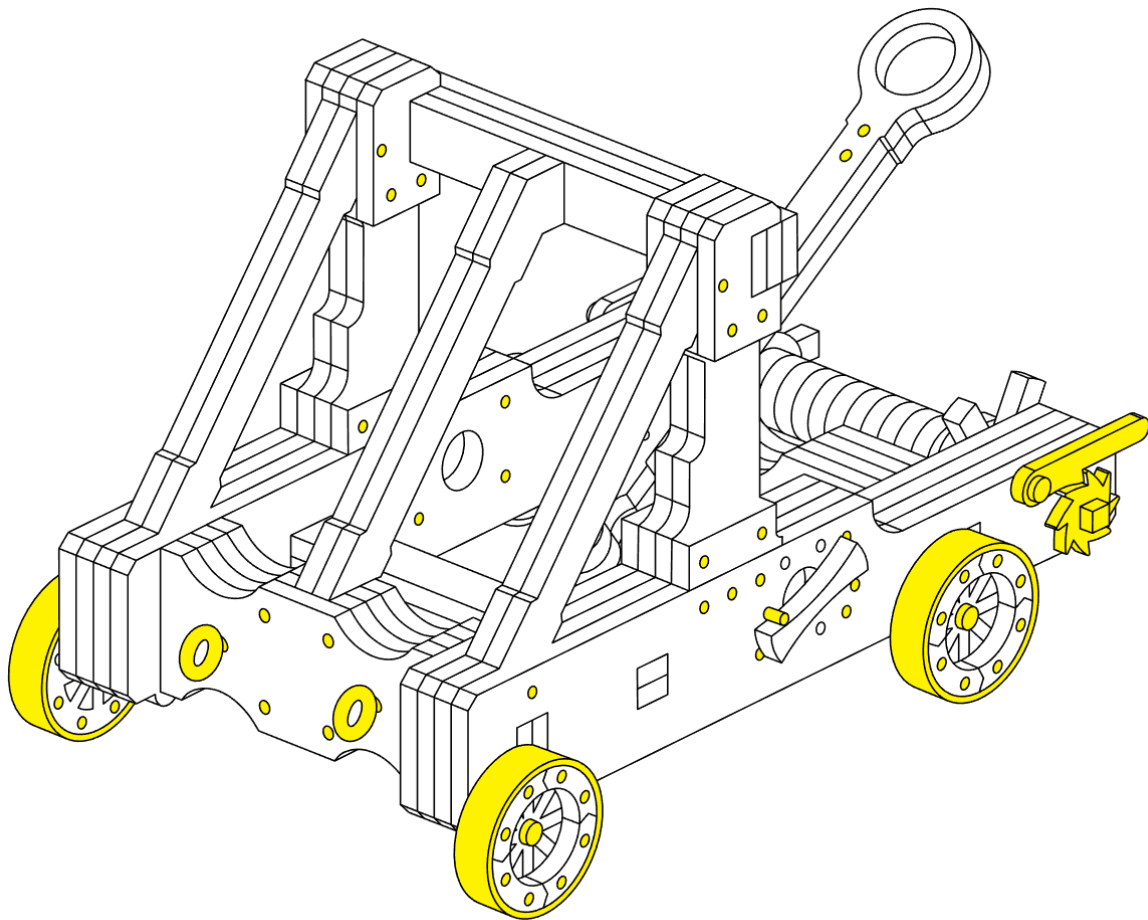


# INSTRUCTION MANUAL

CLASSIC SERIES

## CATAPULT KIT

RALPH PAYNE-GALLWEY



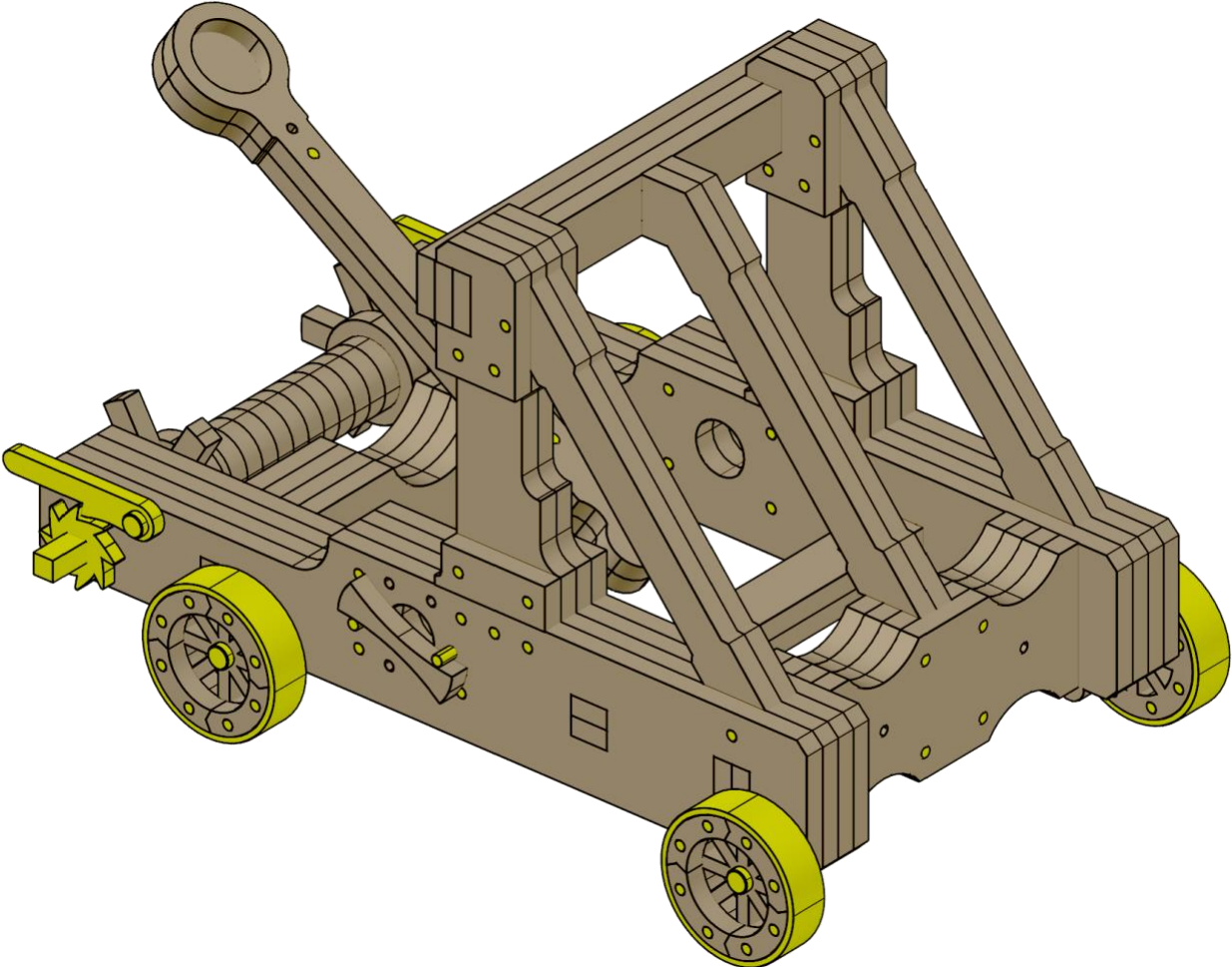
### **Warning**

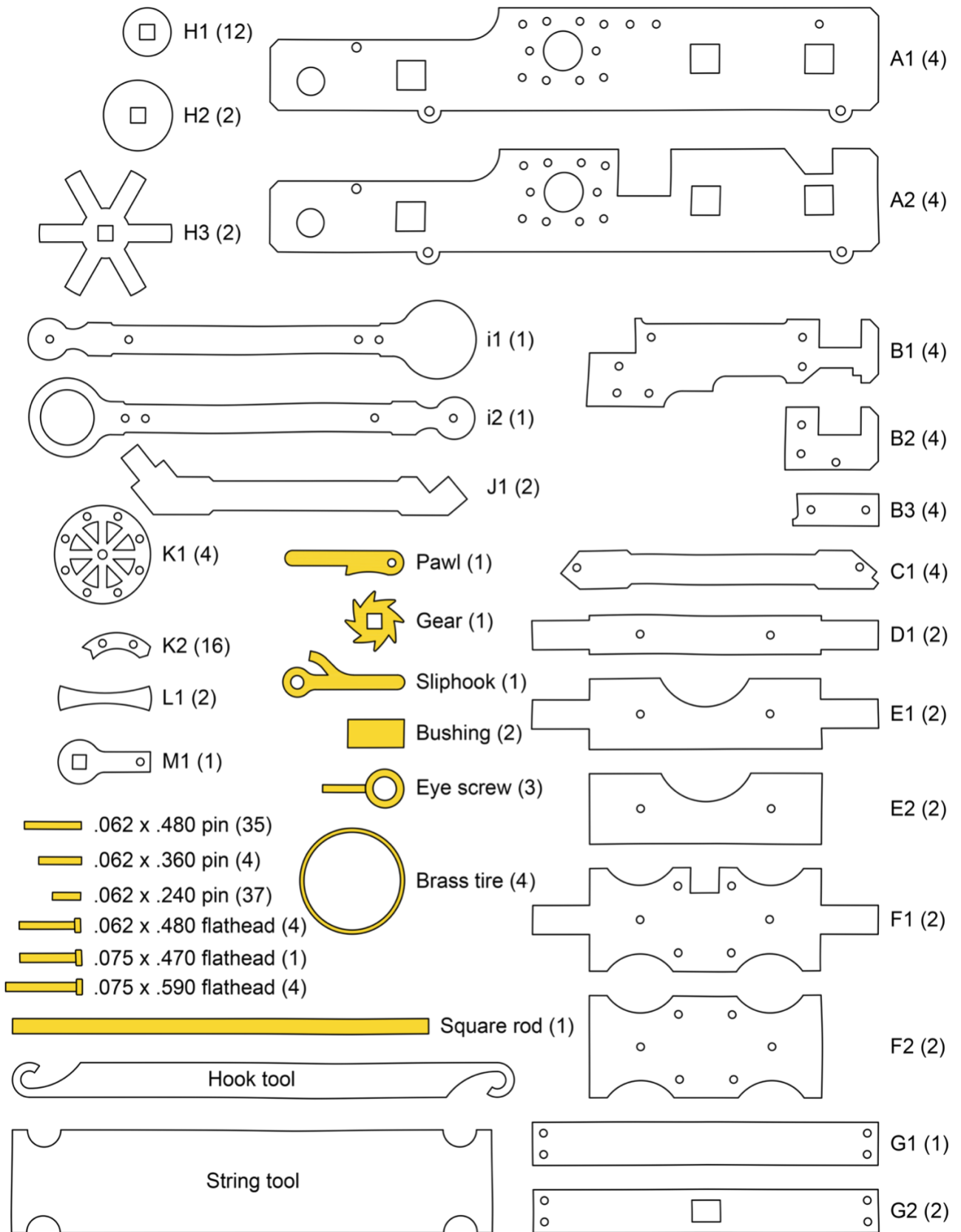
This kit contains small pieces. Keep away from children.

Do not aim at other people, pets, or yourself. Do not use this kit to launch sharp objects or anything that harms you or anyone else.

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### **What's Needed:**

- Hammer (for gently tapping brass pins into place)
- Scissors (to cut string)
- Superglue (to secure knots in the string)

### **Tips before you get started:**

- Lay out all the wood parts on the inventory list.
- Build the kit on a workbench or cutting mat to prevent damage to your table.
- Use a spare piece of wood to set the pins in place (string tool works great) or lightly tap with a hammer.

## Section 1 – Wood Parts

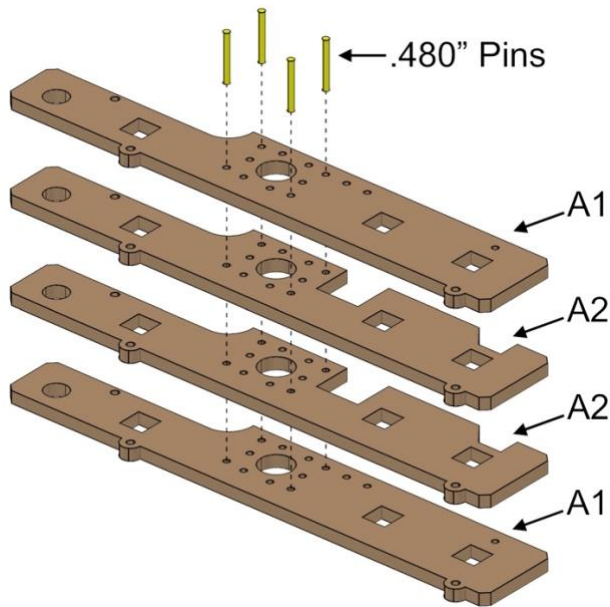


Fig. 1

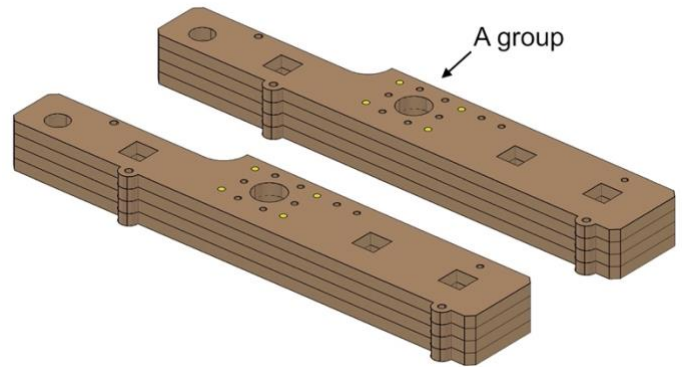


Fig. 2

- Align parts exactly as shown in *Fig. 1*.
- Insert four .480" pins.
- *Fig. 2* shows the completed process (make two parts).

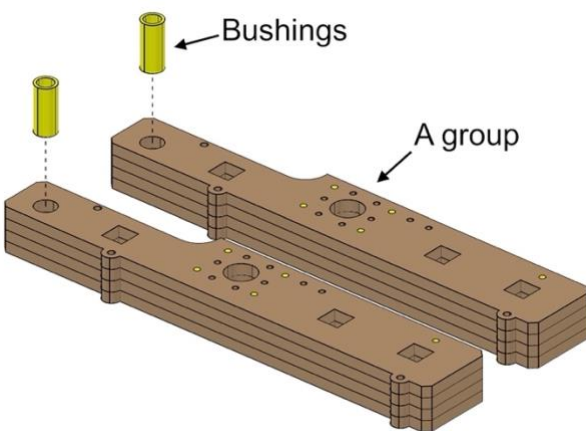


Fig. 3

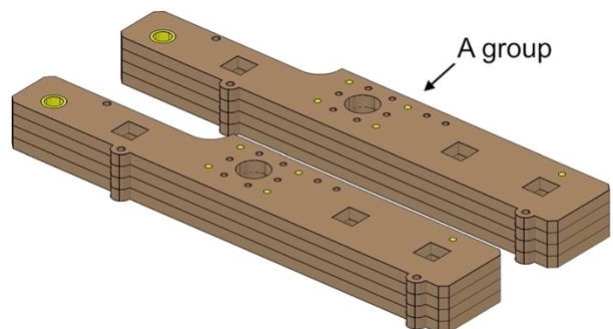


Fig. 4

- Insert the two Bushings into the A group parts.
- *Fig. 4* shows the completed process.

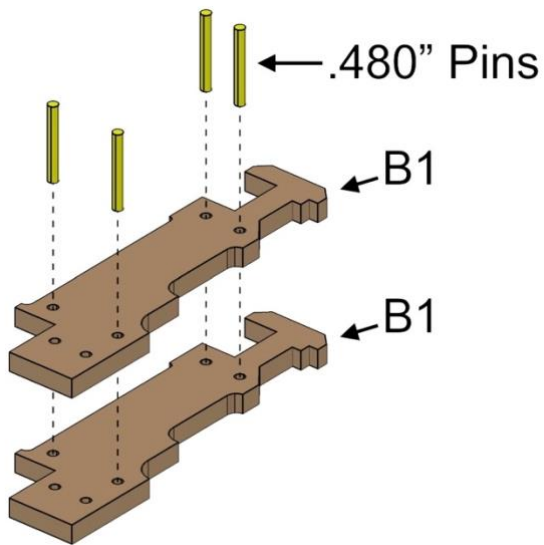


Fig. 5

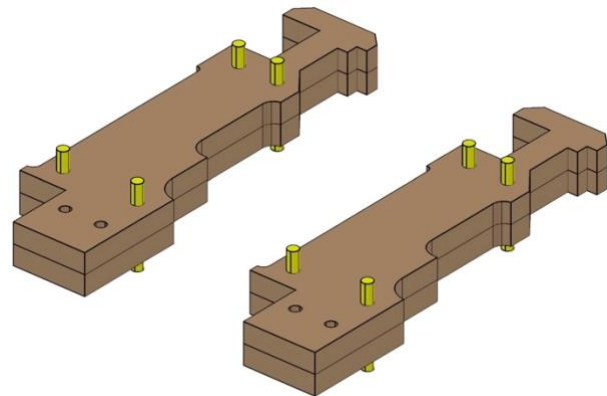


Fig. 6

- Align parts exactly as shown in Fig. 5.
- Insert four .480" pins.
- Fig. 6 shows the completed process (make two parts).

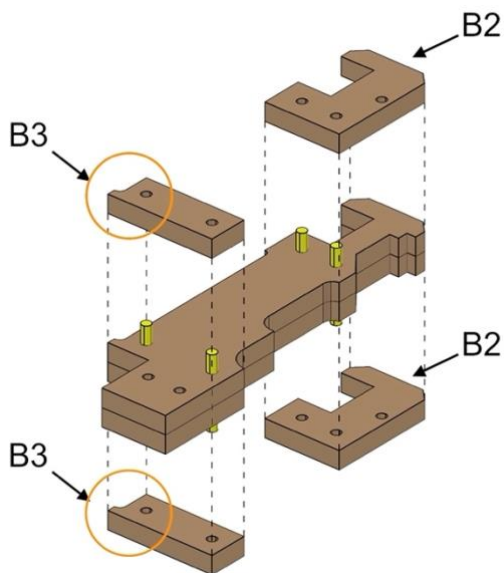


Fig. 7

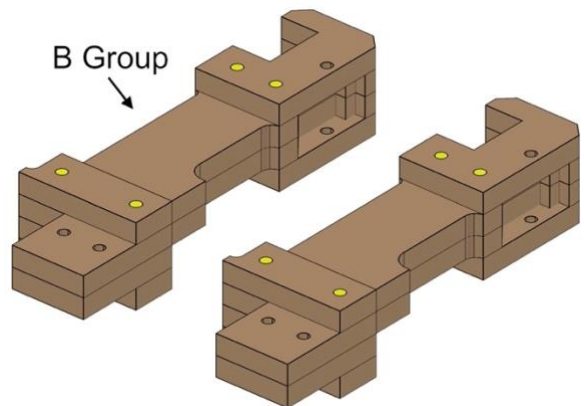


Fig. 8

- Align parts exactly as shown in Fig. 7.
- The orange circles highlight the correct orientation.
- Insert pieces together.
- Fig. 8 shows the completed process (make two parts).



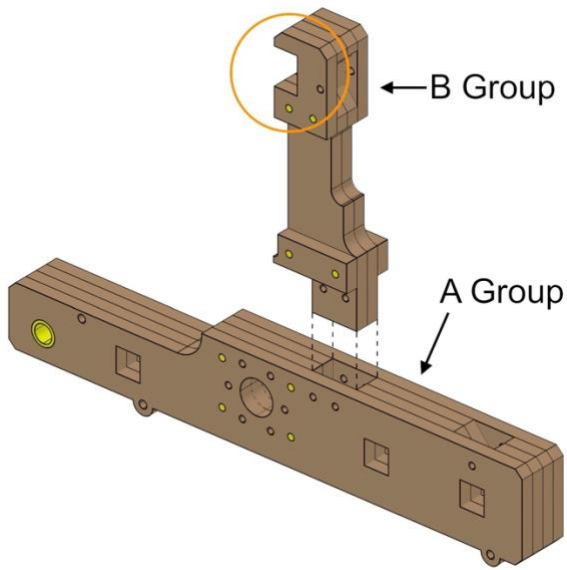


Fig. 9

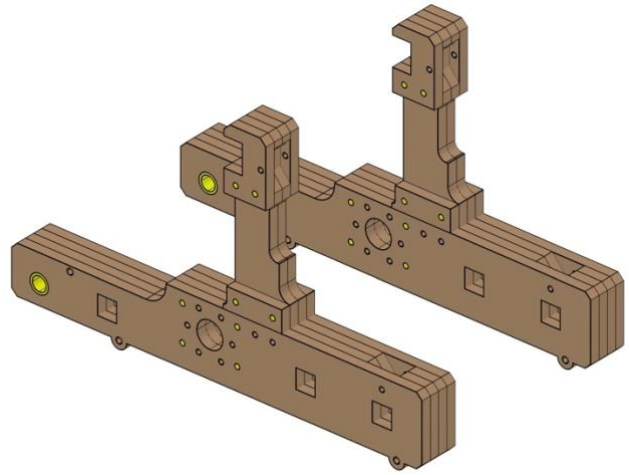


Fig. 10

- Align parts exactly as shown in *Fig. 9*.
- The orange circle highlights the correct orientation.
- Insert B Group onto A Group.
- *Fig. 10* shows the completed process (make two parts).

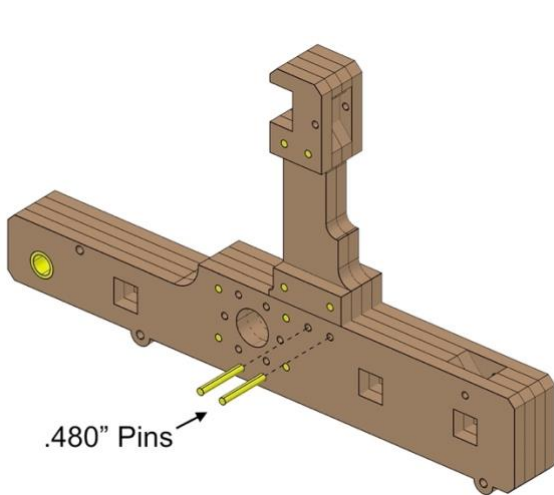


Fig. 11

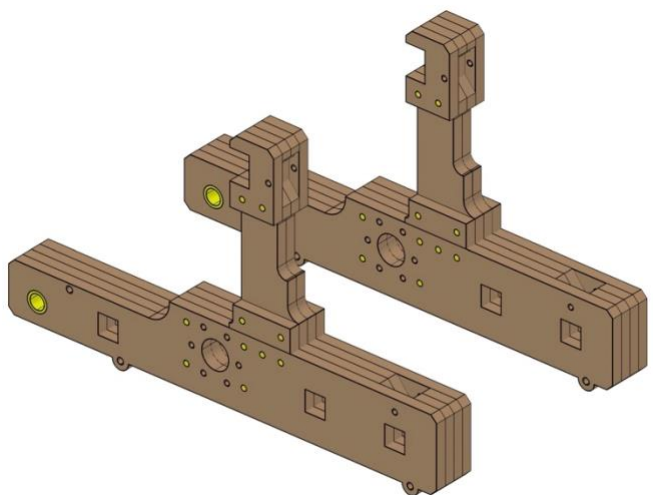


Fig. 12

- Align parts exactly as shown in *Fig. 11*.
- Insert two .480" pins.
- *Fig. 12* shows the completed process (make two parts).

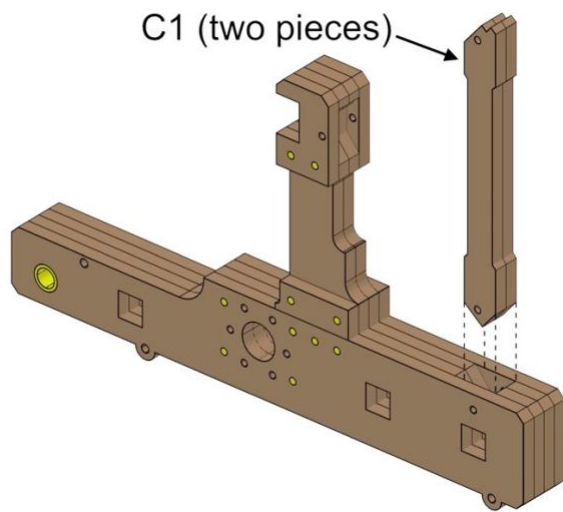


Fig. 13

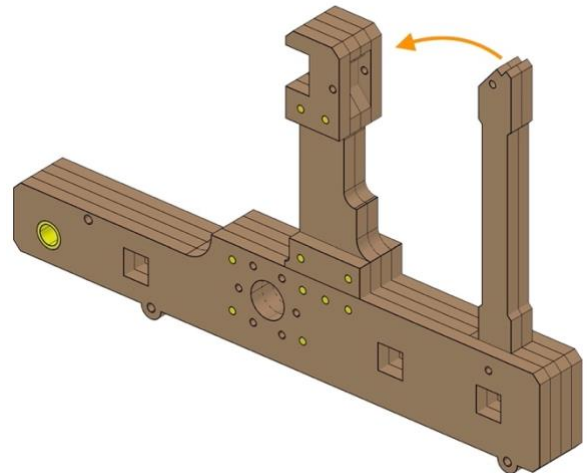


Fig. 14

- Align parts exactly as shown in *Fig. 13*.
- Insert two C1 pieces.
- Rotate the parts as shown in *Fig. 14*.

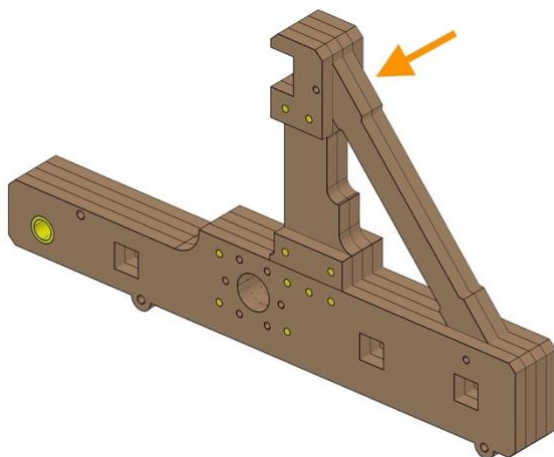


Fig. 15

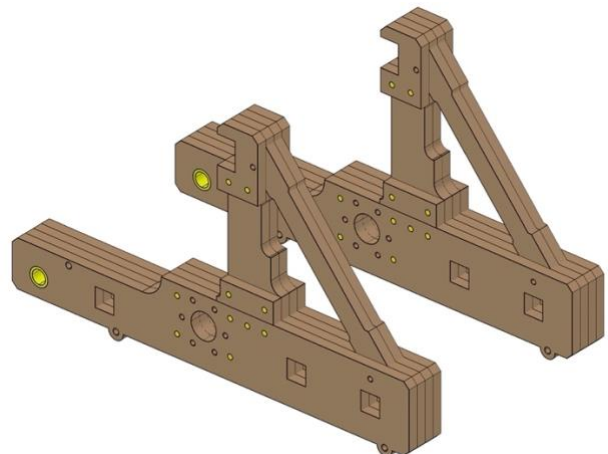


Fig. 16

- Fig. 15 shows where to push down.
- Push down until the parts snap in place.
- *Fig. 16* shows the completed process (make two parts).
- Make sure the C1 parts are all the way in by checking the pin holes.



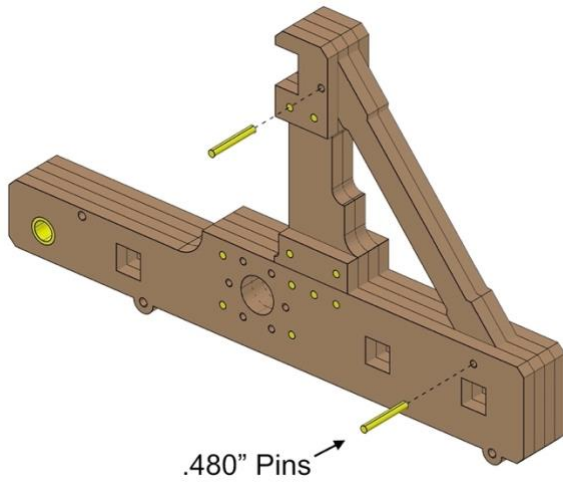


Fig. 17

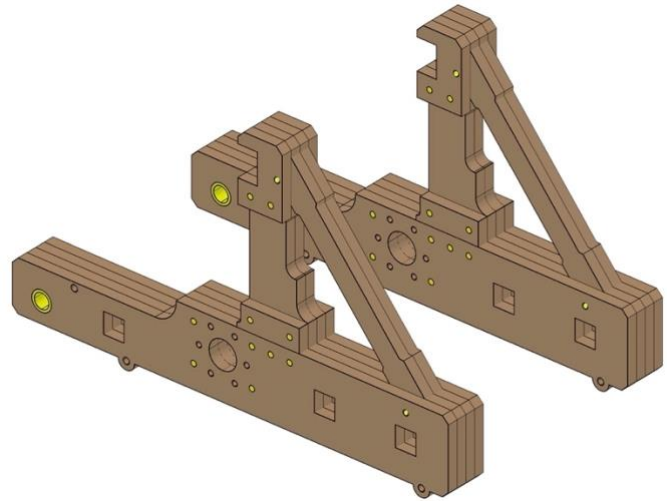


Fig. 18

- Align parts exactly as shown in *Fig. 17*.
- Insert two .480" pins.
- *Fig. 18* shows the completed process (make two parts).

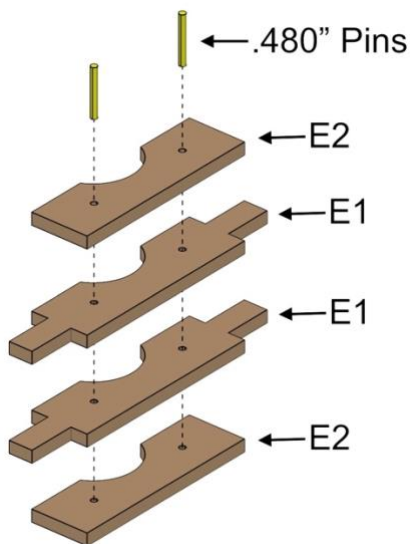


Fig. 19

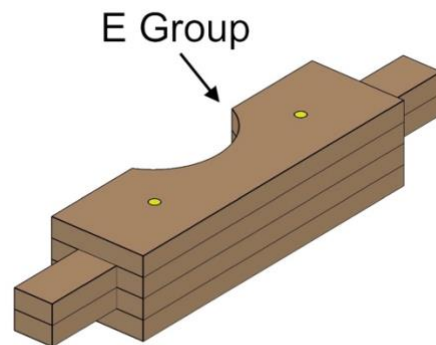


Fig. 20

- Align parts exactly as shown in *Fig. 19*.
- Insert two .480" pins.
- *Fig. 20* shows the completed process.

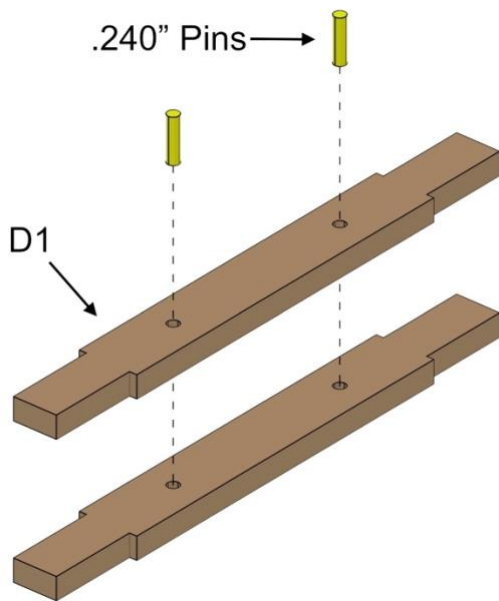


Fig. 20.1

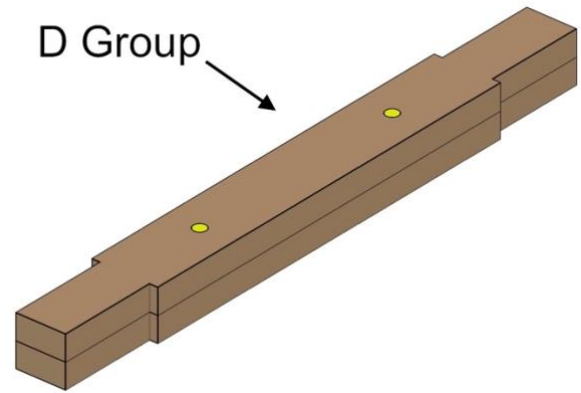


Fig. 20.2

- Align parts exactly as shown in Fig. 20.1.
- Insert two .240" pins.
- Fig. 20.2 shows the completed process.

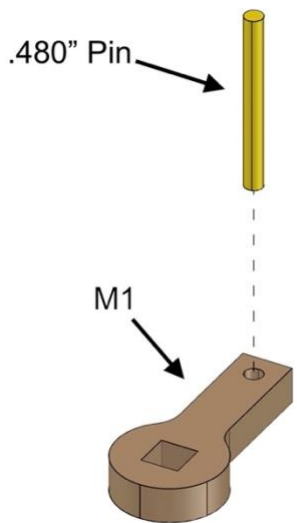


Fig. 20.3

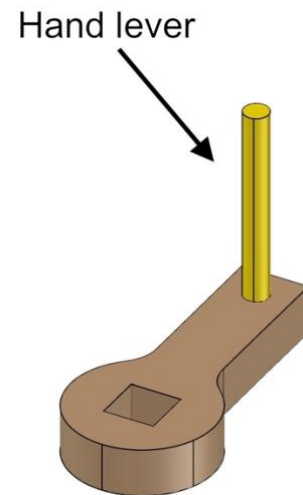


Fig. 20.4

- Align parts exactly as shown in Fig. 20.3.
- Insert one .480" pin.
- Fig. 20.4 shows the completed process.

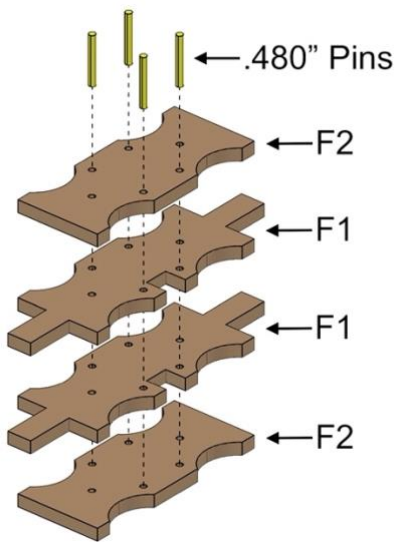


Fig. 21

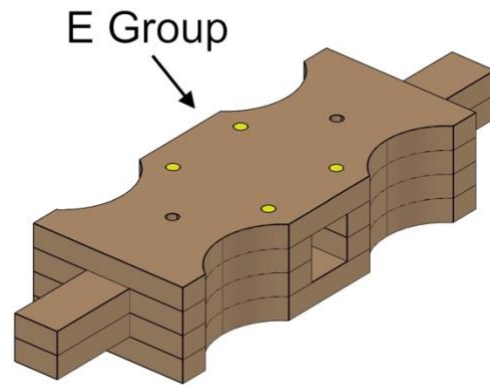


Fig. 22

- Align parts exactly as shown in *Fig. 21*.
- Insert four .480" pins.
- *Fig. 22* shows the completed process.

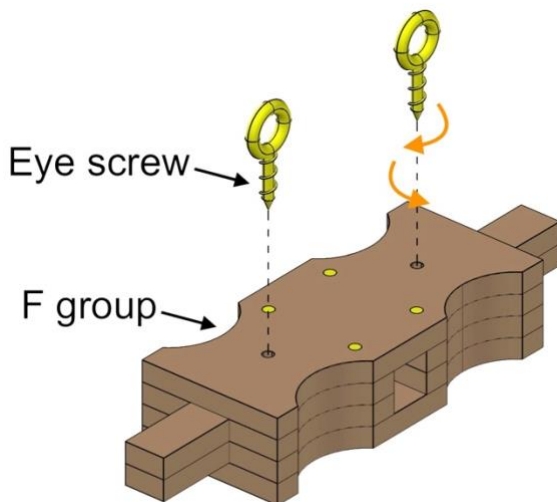


Fig. 23

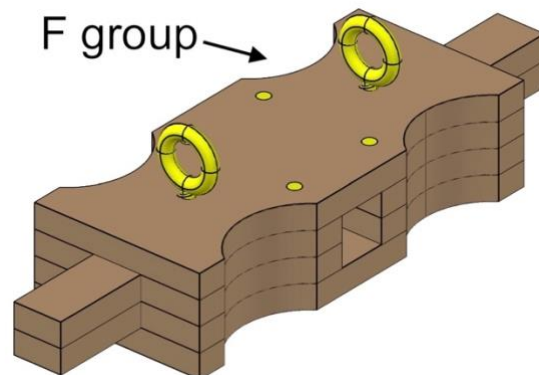


Fig. 24

- Align parts exactly as shown in *Fig. 23*.
- Insert two Eye screws.
- *Fig. 24* shows the completed process.

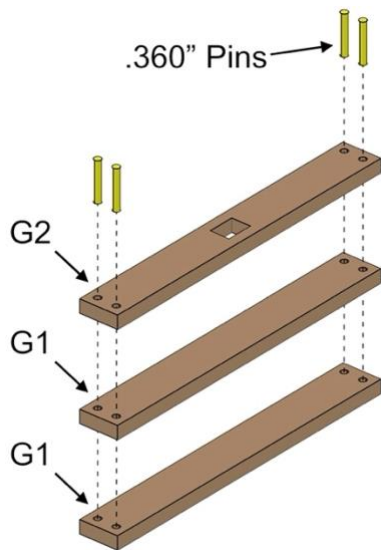


Fig. 25

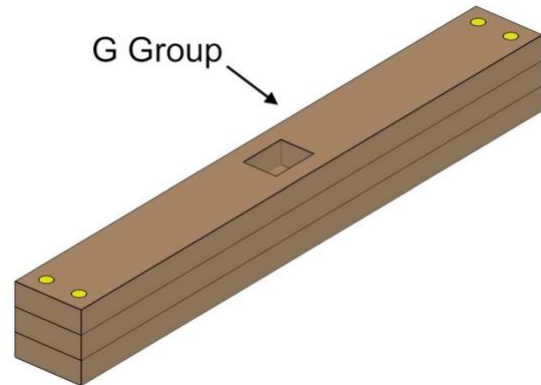


Fig. 26

- Align parts exactly as shown in Fig. 25.
- Insert four .360" pins.
- Fig. 26 shows the completed process.

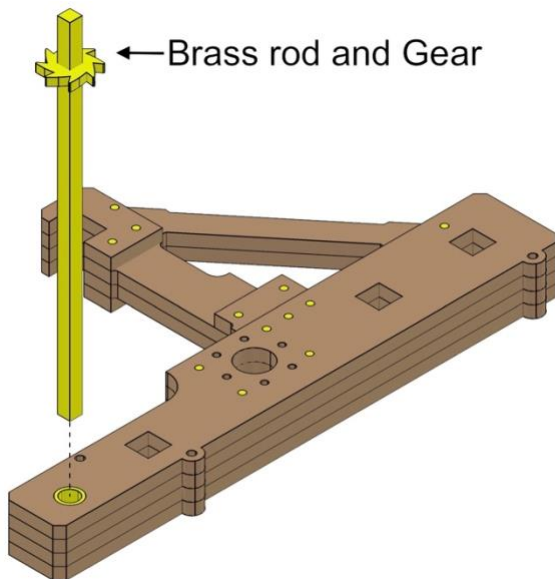


Fig. 27

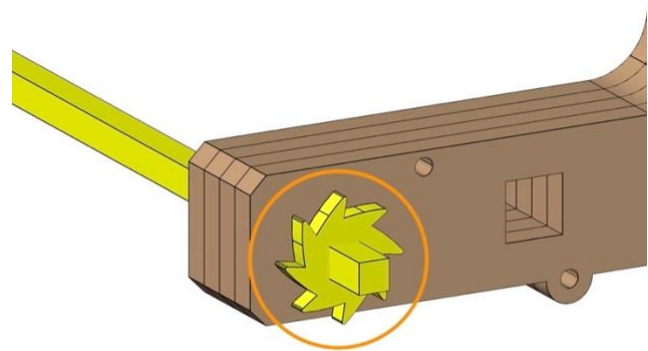


Fig. 28

- Insert the brass rod into the Brass bushing.
- Fig. 28 shows the completed process. The orange circle highlights the correct orientation.

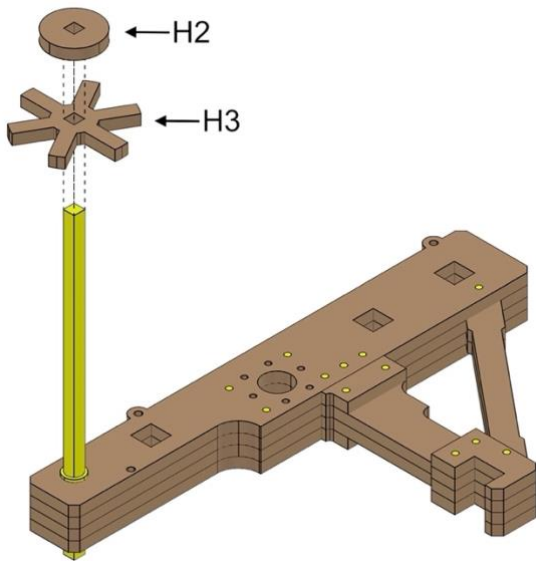


Fig. 29

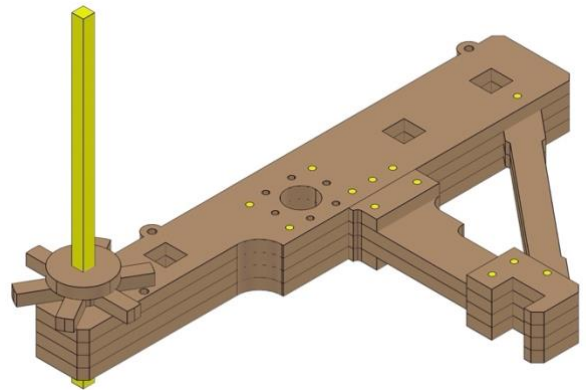


Fig. 30

- Align parts exactly as shown in *Fig. 29*.
- Insert the H3 and H2 piece.
- *Fig. 30* shows the completed process.
- Leave just enough room so the parts can rotate.

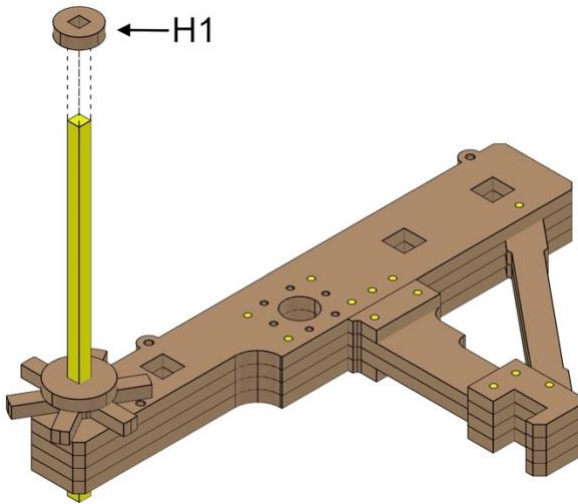


Fig. 31

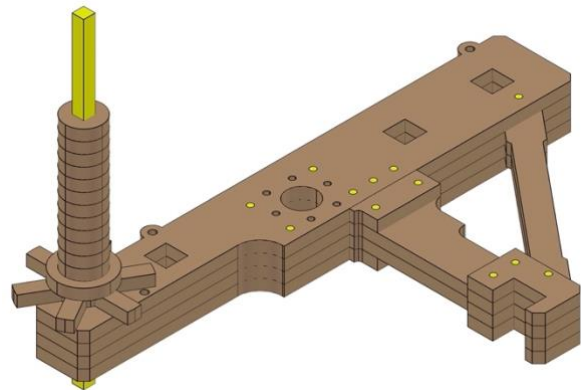


Fig. 32

- Align parts exactly as shown in *Fig. 31*.
- Insert twelve H1 pieces.
- *Fig. 32* shows the completed process.



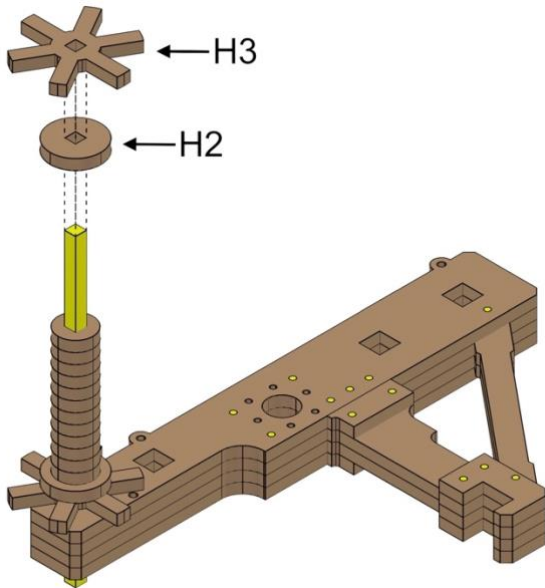


Fig. 33

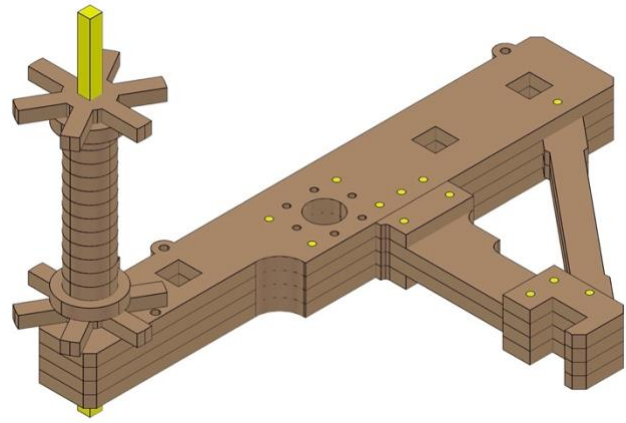


Fig. 34

- Align parts exactly as shown in *Fig. 33*.
- Insert the H2 and H3 piece.
- *Fig. 34* shows the completed process.

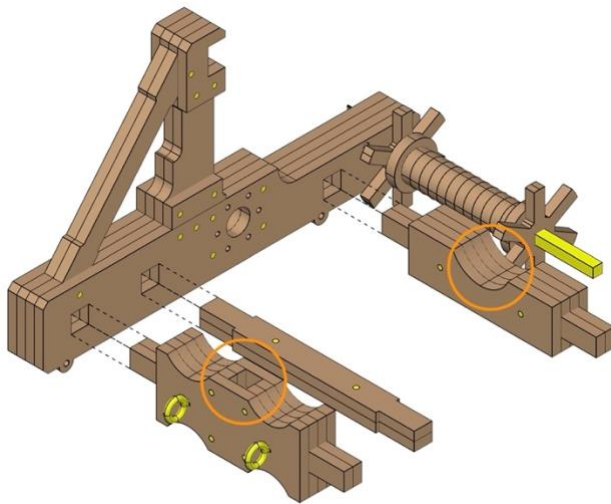


Fig. 35

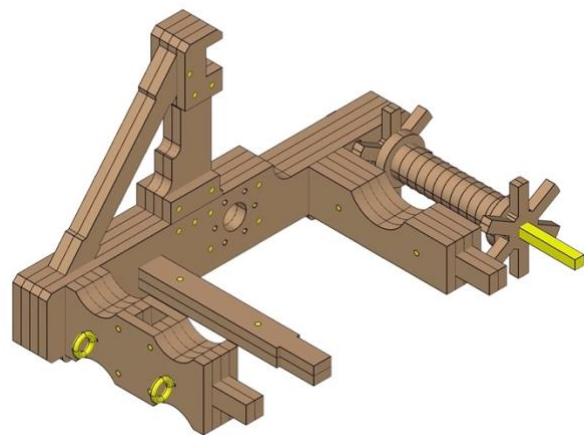


Fig. 36

- Align parts exactly as shown in *Fig. 35*.
- The orange circles highlight the correct orientation.
- Insert the parts together.
- *Fig. 36* shows the completed process.



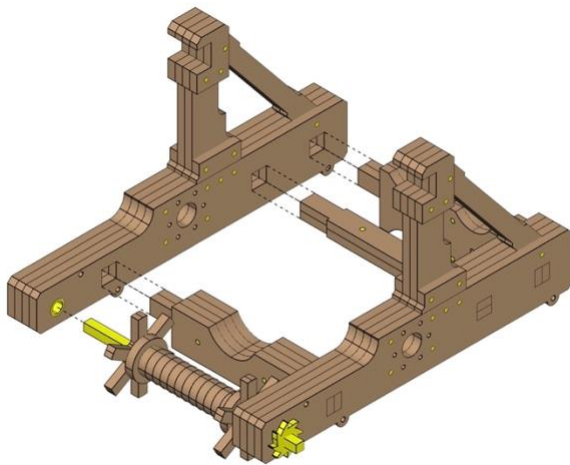


Fig. 37

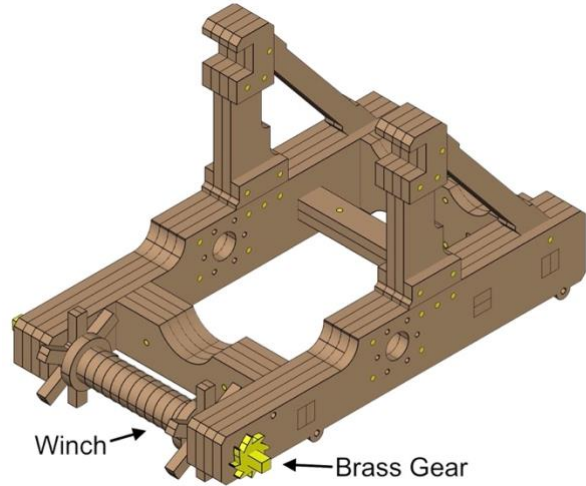


Fig. 38

- Align parts exactly as shown in *Fig. 37*.
- Join the parts together.
- *Fig. 38* shows the completed process.
- Make sure the Winch and Brass Gear can easily rotate.

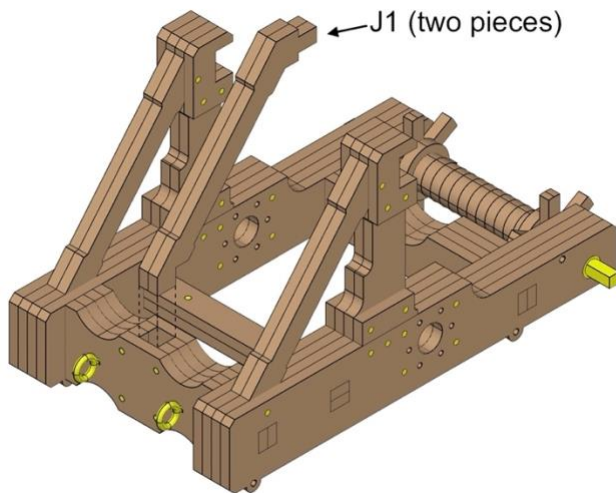


Fig. 39

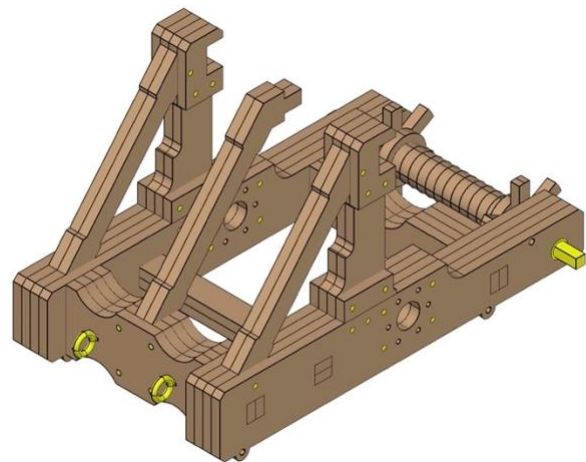


Fig. 40

- Align parts exactly as shown in *Fig. 39*.
- Insert two J1 pieces.
- *Fig. 40* shows the completed process.

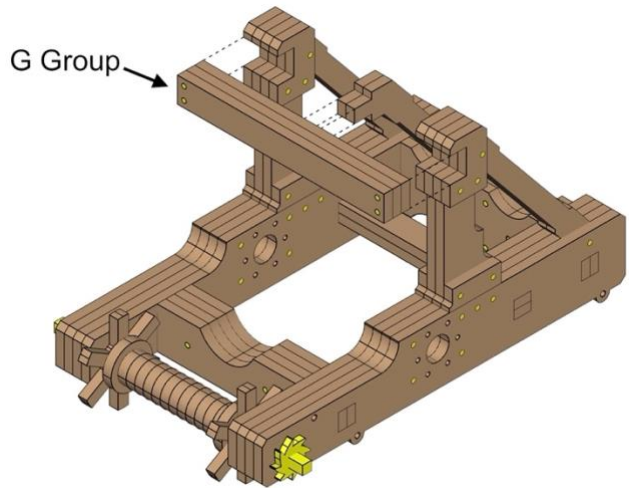


Fig. 41

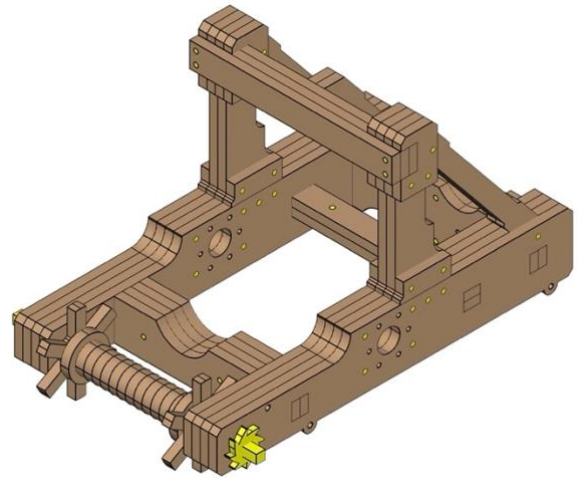


Fig. 42

- Align parts exactly as shown in *Fig. 41*.
- Attach the G Group to the Catapult body.
- *Fig. 42* shows the completed process.

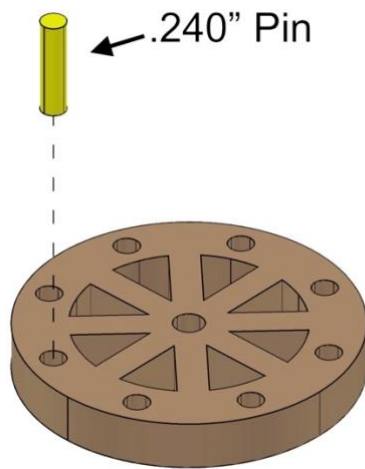


Fig. 43

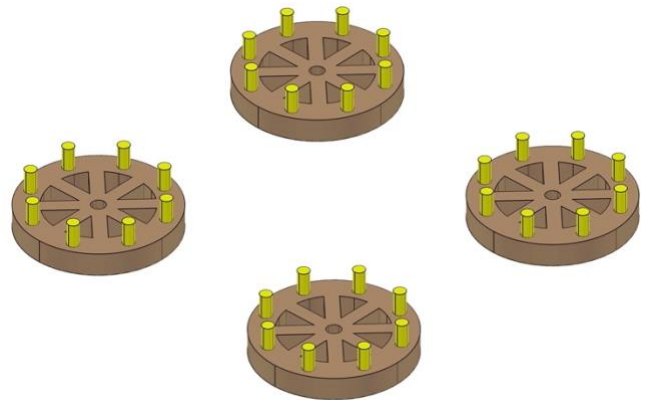


Fig. 44

- Align parts exactly as shown in *Fig. 43*.
- Insert the .240" pins (eight per wheel).
- *Fig. 44* shows the completed process (make four parts).

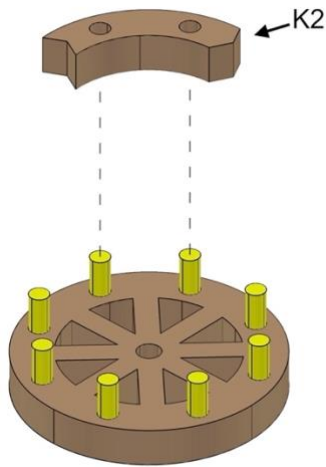


Fig. 45

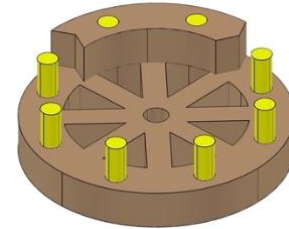


Fig. 46

- Align parts exactly as shown in *Fig. 45*.
- Insert a K2 piece onto the wheel.
- *Fig. 46* shows the completed process.

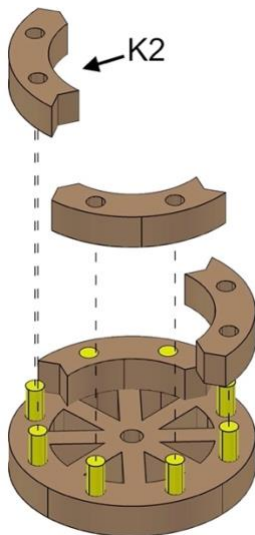


Fig. 47

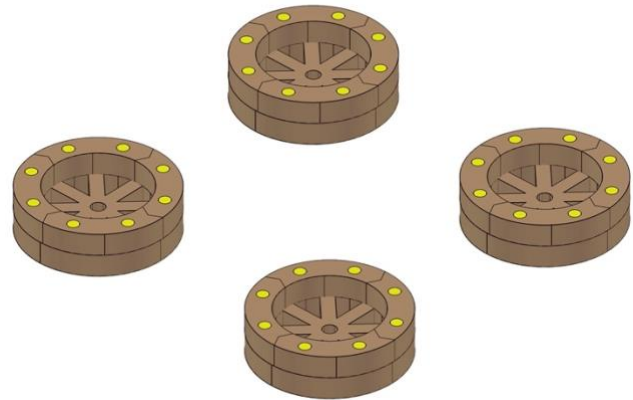


Fig. 48

- Align parts exactly as shown in *Fig. 47*.
- Insert three more K2 pieces.
- *Fig. 48* shows the completed process (make four parts).

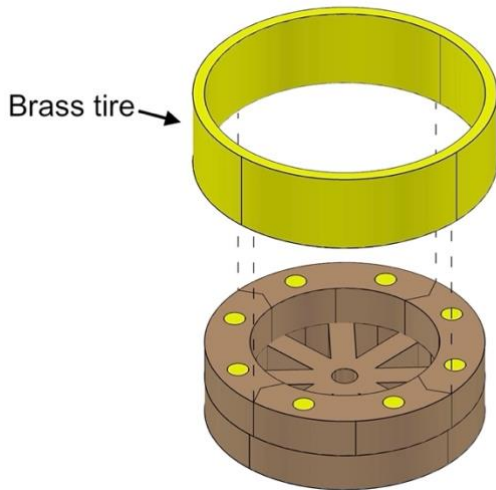


Fig. 49

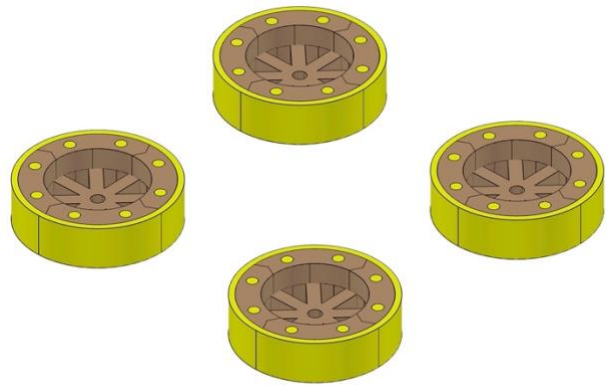


Fig. 50

- Align parts exactly as shown in *Fig. 49*.
- Insert a Brass tire on the wheel.
- *Fig. 50* shows the completed process (make four parts).

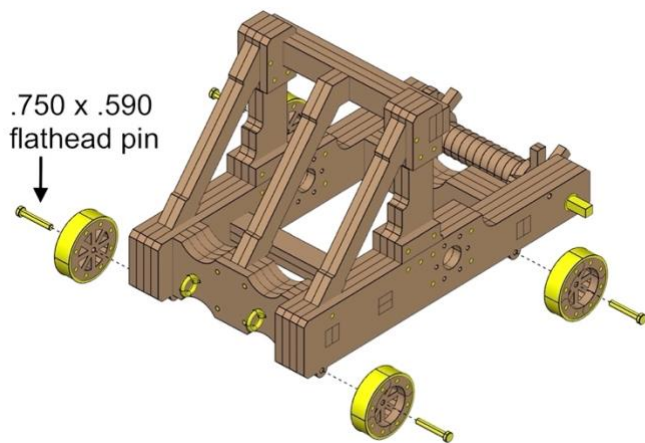


Fig. 51

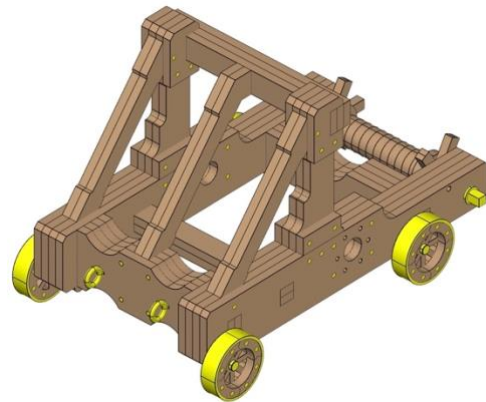


Fig. 52

- Align parts exactly as shown in *Fig. 51*.
- Insert the Brass wheels onto the Catapult using the .750 x .590 pin.
- *Fig. 52* shows the completed process.
- Leave just enough room so the wheels can rotate easily.

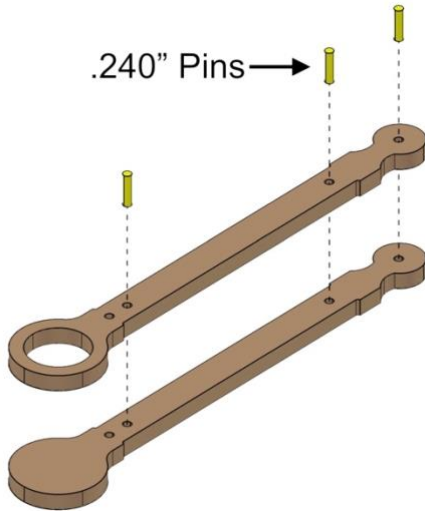


Fig. 53

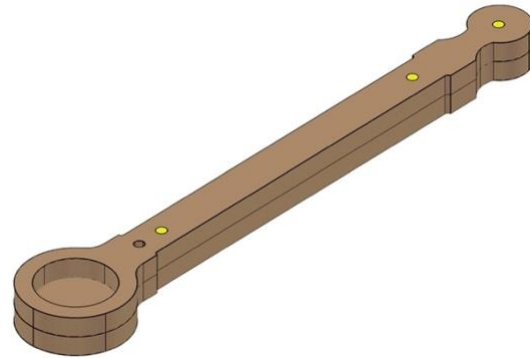


Fig. 54

- Align parts exactly as shown in *Fig. 53*.
- Insert three .240" pins.
- *Fig. 54* shows the completed process.

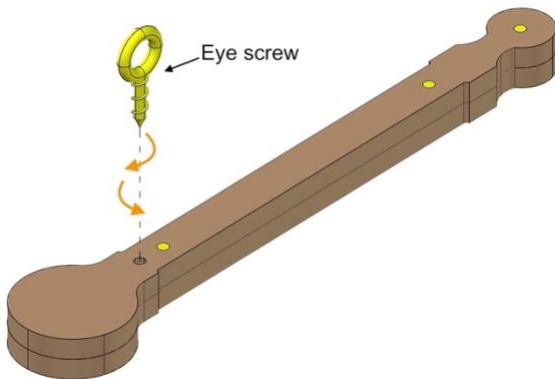


Fig. 55

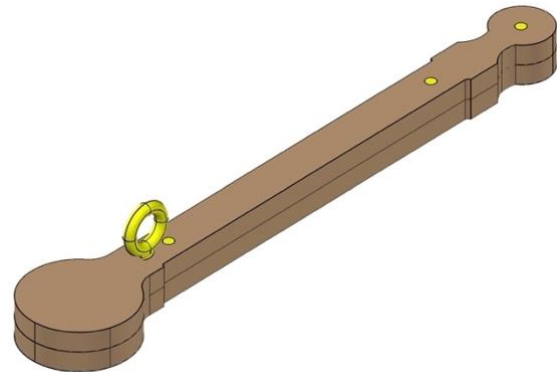
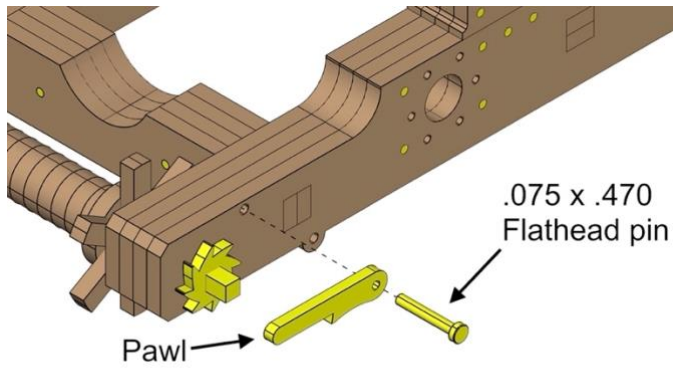


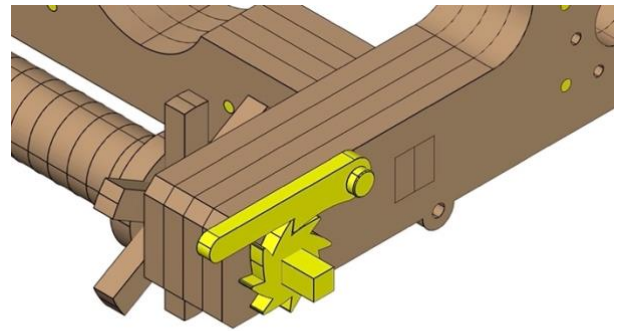
Fig. 56

- Align parts exactly as shown in *Fig. 55*.
- Insert an Eye screw.
- *Fig. 56* shows the completed process.





*Fig. 57*



*Fig. 58*

- Align parts exactly as shown in *Fig. 57*.
- Insert a .075 x .470 Flathead pin onto the Pawl.
- Insert the Pawl/pin onto the catapult.
- *Fig. 2* shows the completed process.
- Leave just enough room so the Pawl can easily rotate.



## Section 2 – String

1.



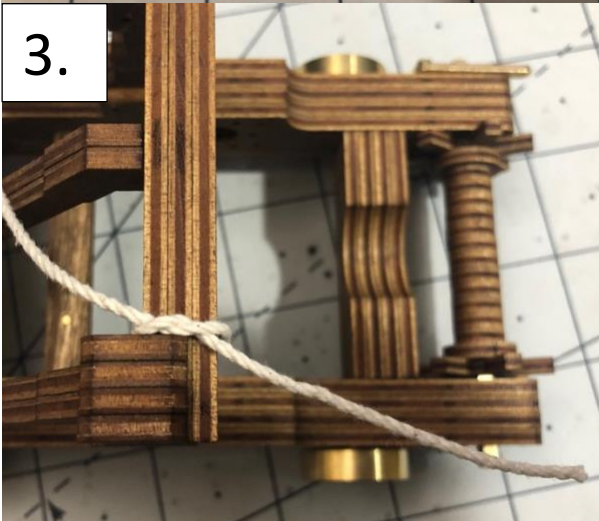
Wrap string around the String tool 5 times. Tie a knot.

2.



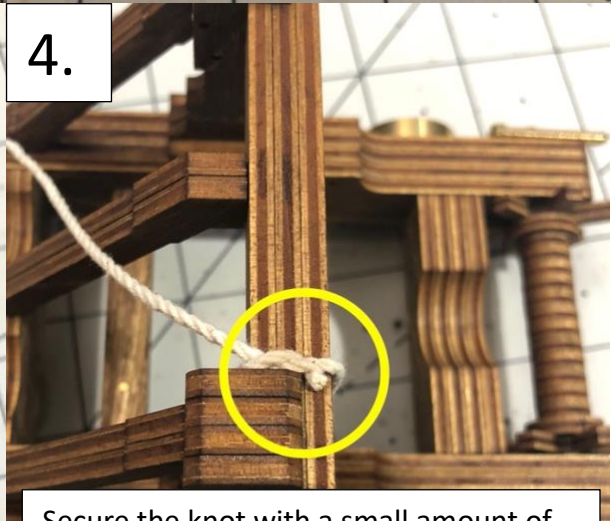
Secure the knot with a small amount of Superglue. Set aside.

3.



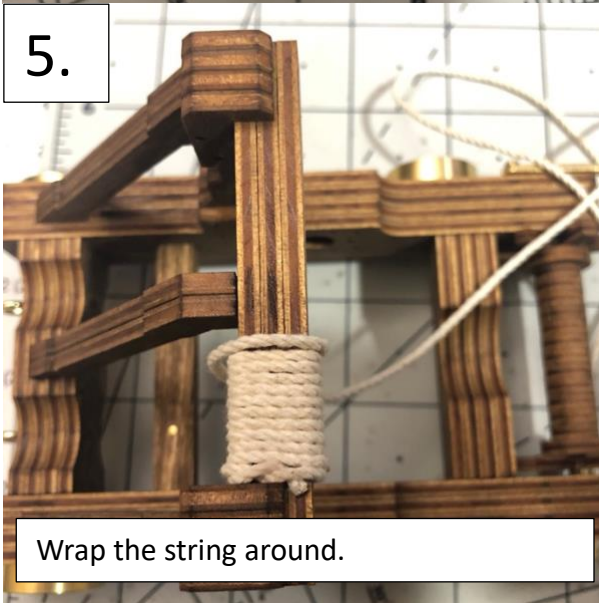
Tie a knot around this part.

4.



Secure the knot with a small amount of superglue.

5.



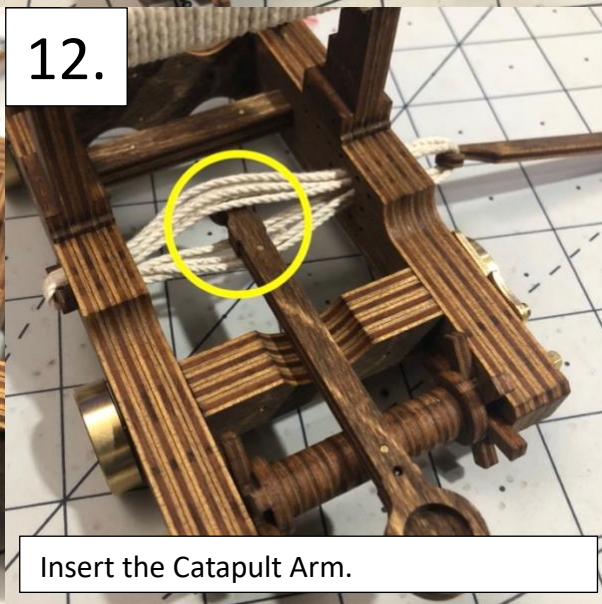
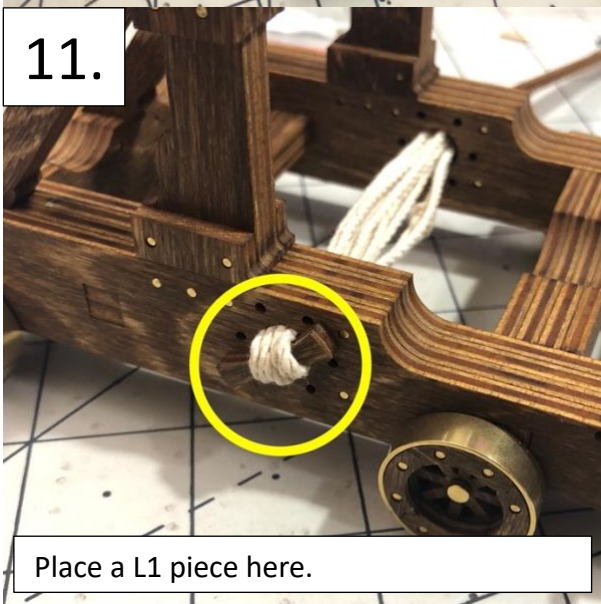
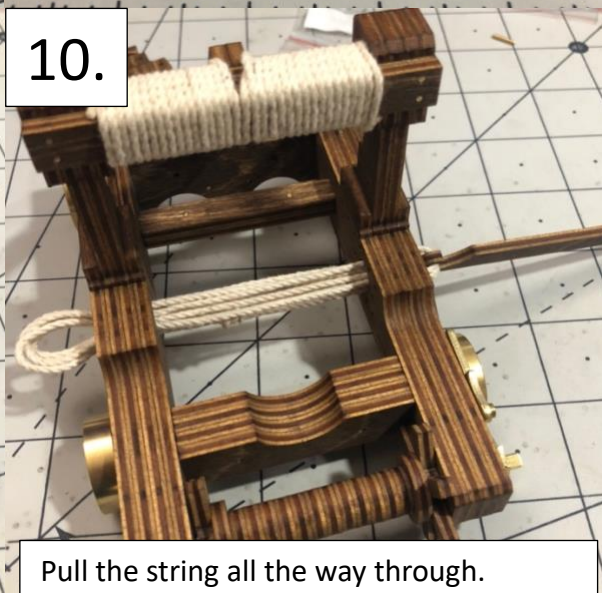
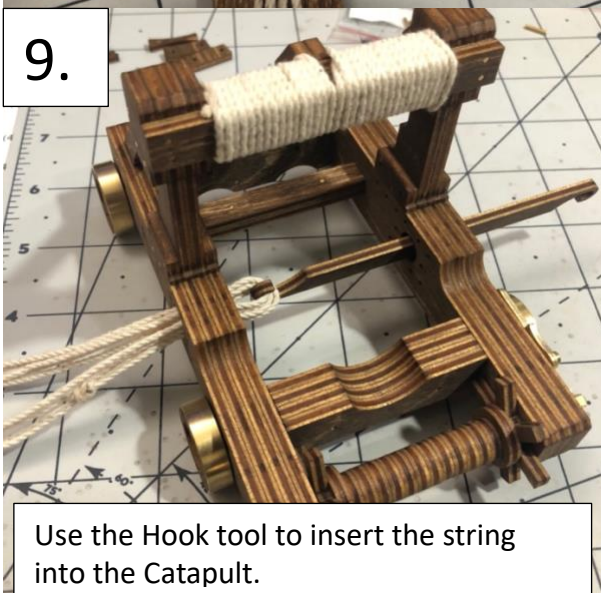
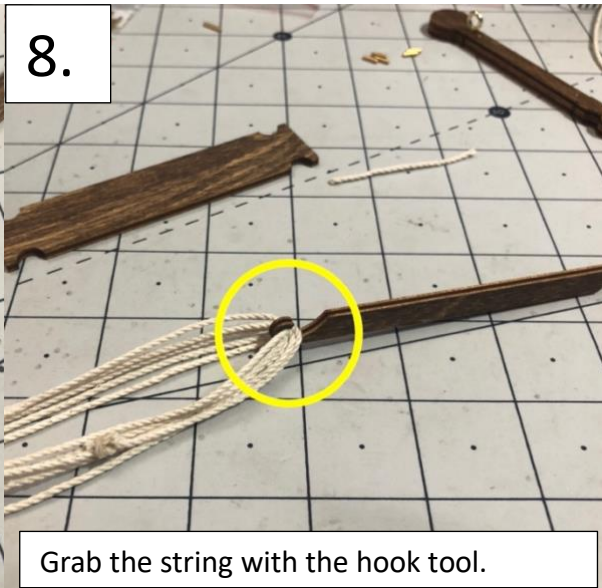
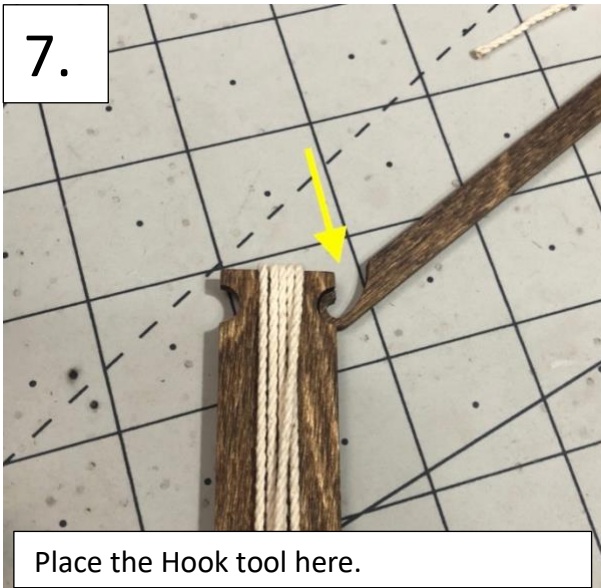
Wrap the string around.

6.

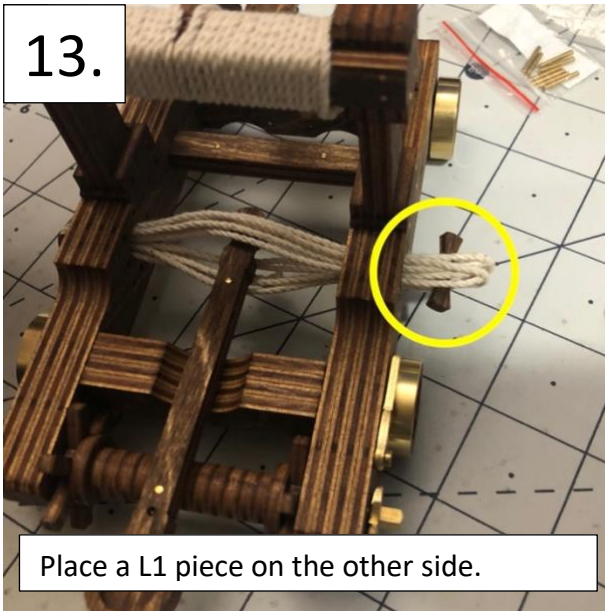


Finish wrapping the part, then tie a knot and apply superglue.

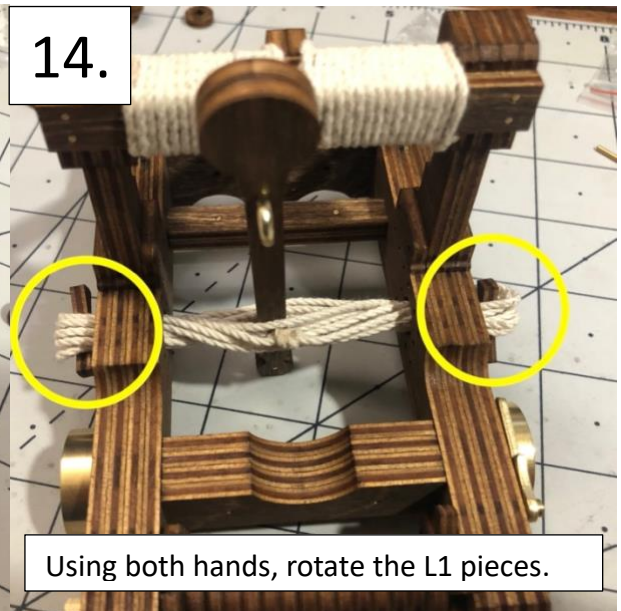




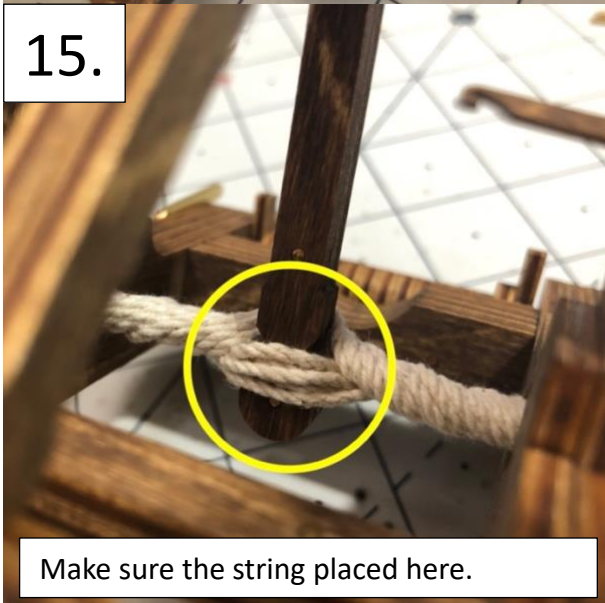




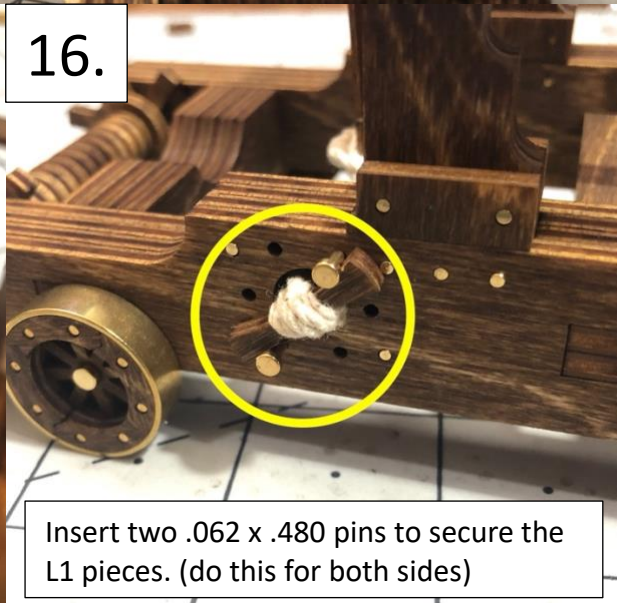
Place a L1 piece on the other side.



Using both hands, rotate the L1 pieces.



Make sure the string placed here.



Insert two .062 x .480 pins to secure the L1 pieces. (do this for both sides)



Tie a knot here.



Secure the knot with a small amount of superglue.



19.

Thread the string through the Sliphook.



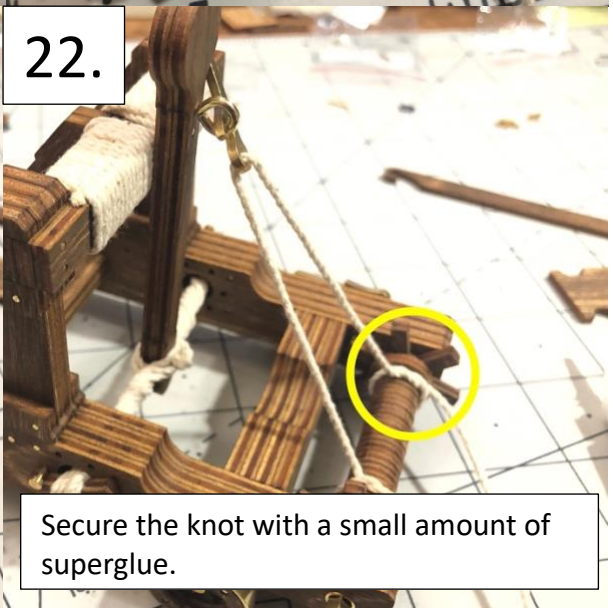
20.

Tie a loose knot here (do not glue yet).



21.

Place the Sliphook here and adjust the knot.



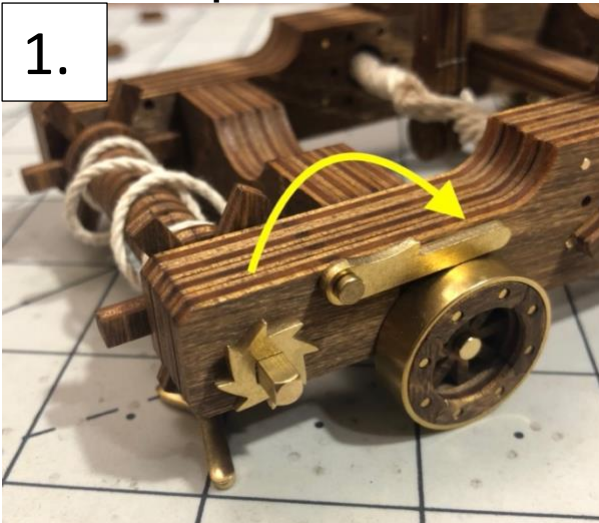
22.

Secure the knot with a small amount of superglue.



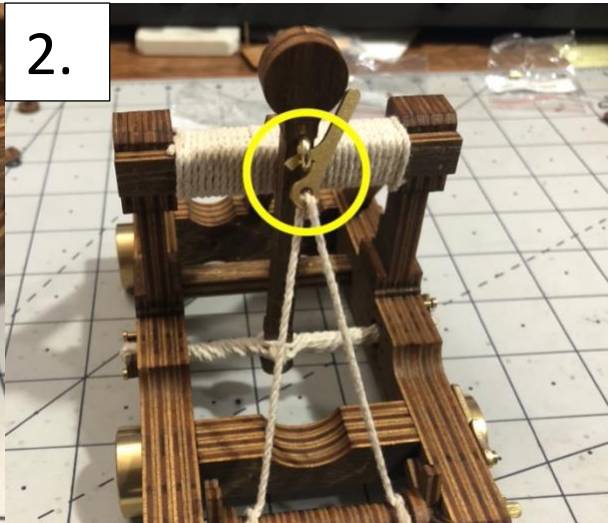
### Section 3 – Operation

1.



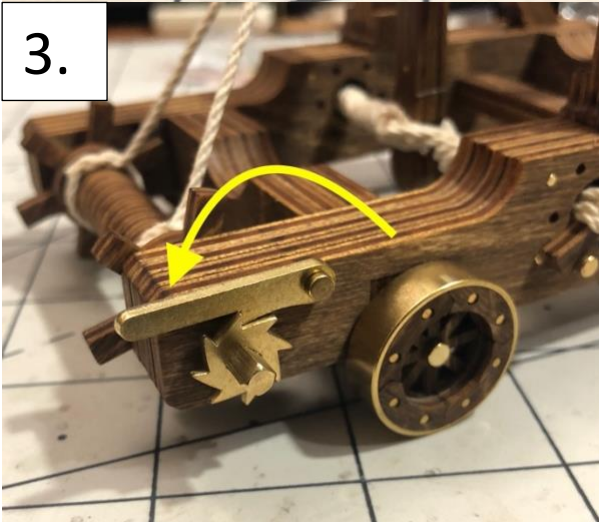
Disengage the Pawl.

2.



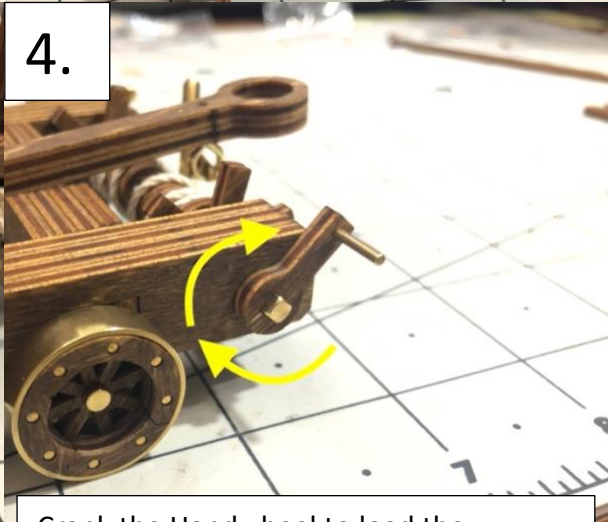
Attach the Sliphook to the Arm.

3.



Engage the Pawl.

4.



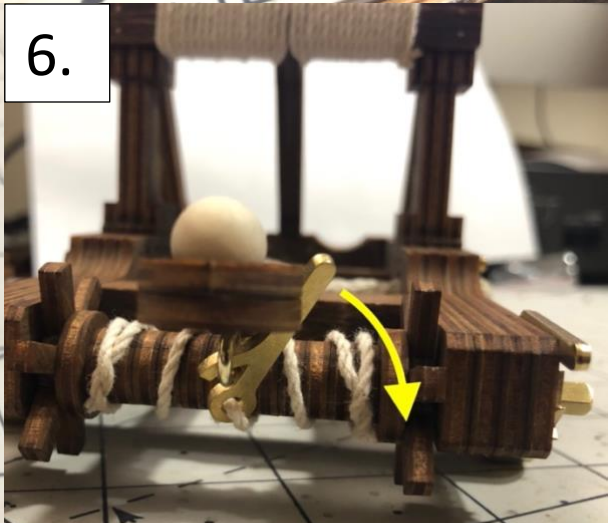
Crank the Handwheel to load the Catapult.

5.



Place the wood projectile here.

6.



Pull the Sliphook to launch the projectile.