

**PARAMETRIC**  
STUDIO

NEWTON AR 

# Conveyor Maker Kit: Assembly Instructions

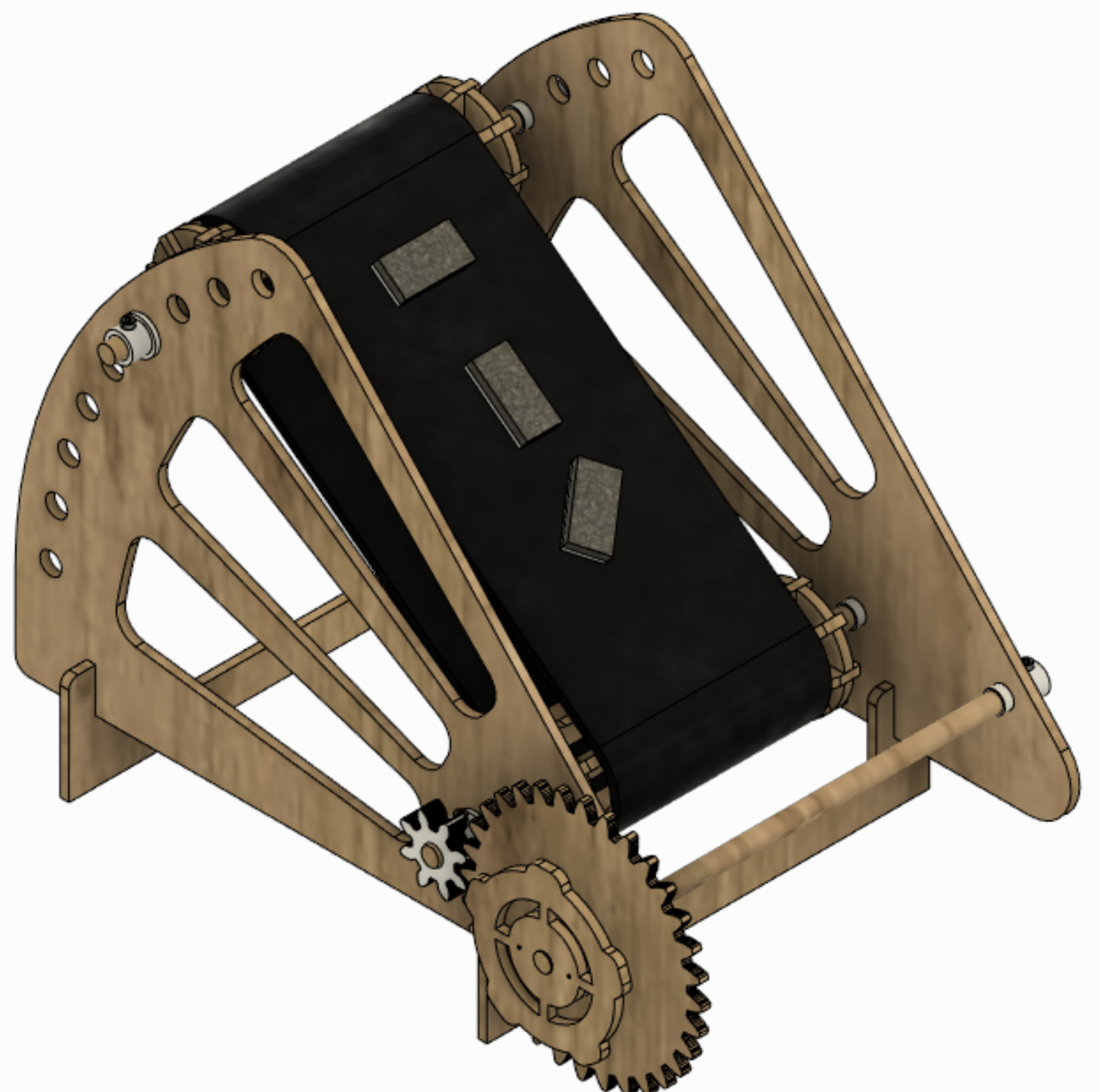
**Not much of a reader? Me neither ...  
thankfully there is a video! To watch  
the assembly video, go to:**

**<https://www.newton-ar.com/projectdocs>**



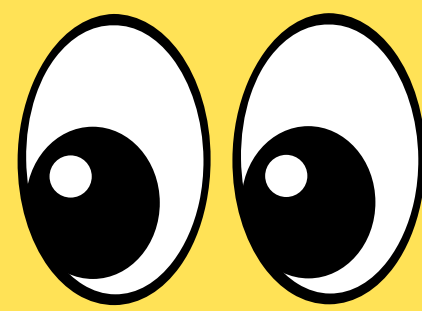
**Oh, you're still here? Excellent!  
Videos are overrated anyway ... but  
if you get stuck make sure to check  
out the video :)**

**Looking for  
something new and  
cool? Build your  
imagination by  
creating the  
Conveyor Kit!**



**<https://www.parametricstudioinc.com/>**

# WHAT'S IN THE BOX?

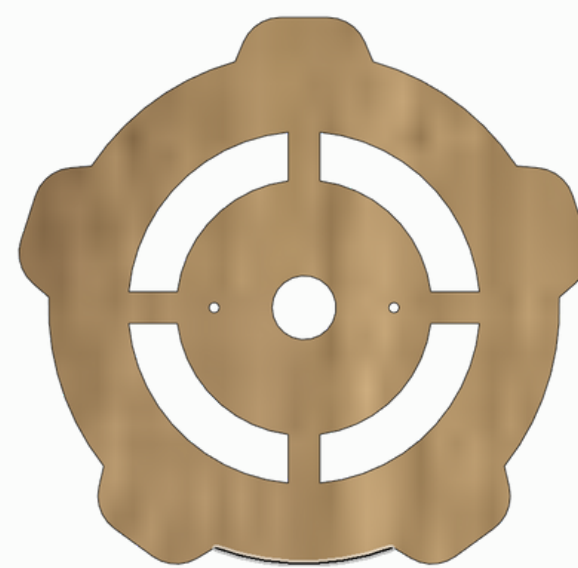


**WARNING!**  
**Small Parts**  
**Present**

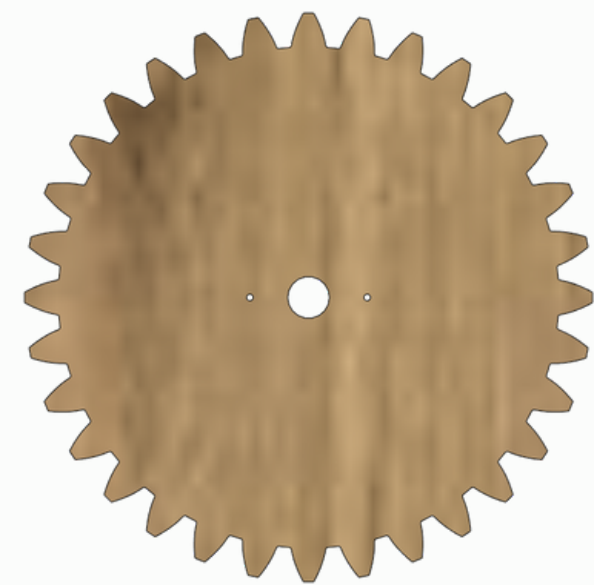


## Content(s):

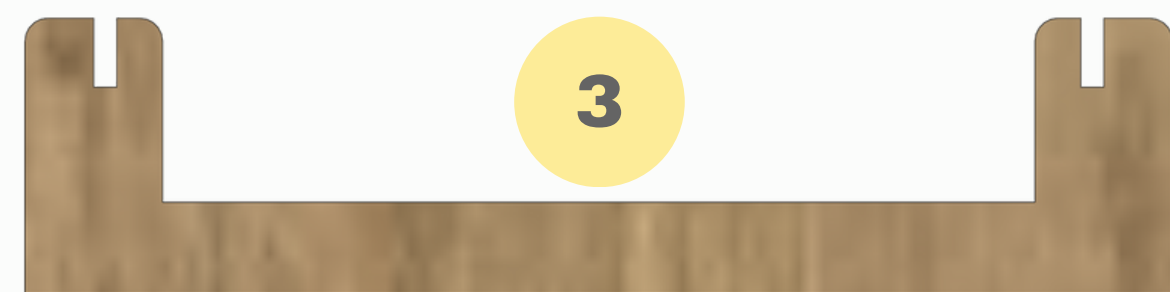
- 01. Crank (x1)
- 02. Driving Gear (x1)
- 03. Leg (x2)
- 04. Idler Drum (x16)
- 05. Frame
- 06. Crank Shaft (x1)
- 07. Idler Shaft (x2)
- 08. Pinion Gear (x1)
- 09. Shaft Locker (x6)
- 10. Gear Collar (x4)
- 11. M2x6 Screw (x10)
- 12. M2x5 Screw (x13)
- 13. Belt (x1)
- 14. Flange Bearing (x6)
- 15. Velcro (x1)
- 16. Rubber Band (x4)
- 17. Hex Key (x1)
- 18. Foam (x1)
- 19. Glue (x10)



1



2



3



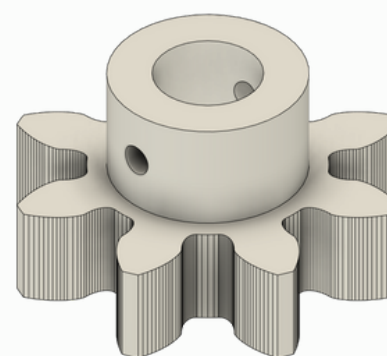
6



4



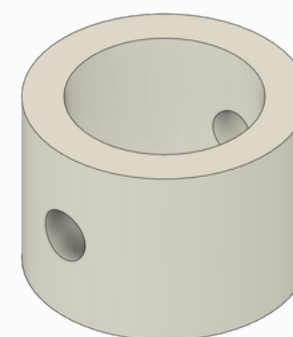
7



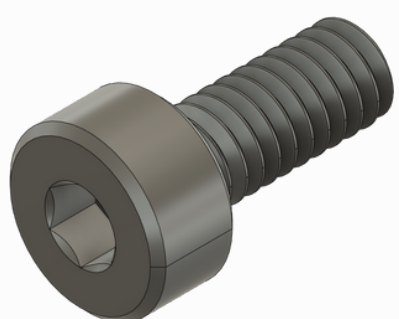
8



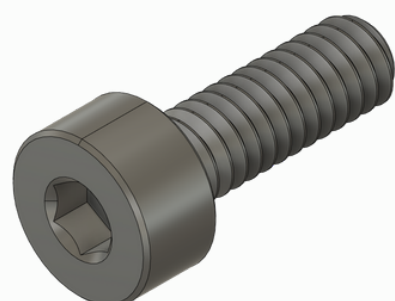
5



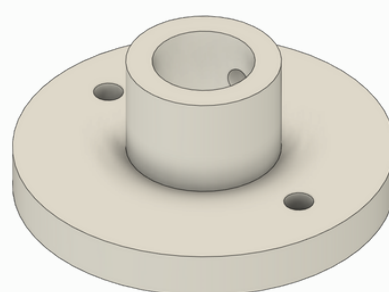
9



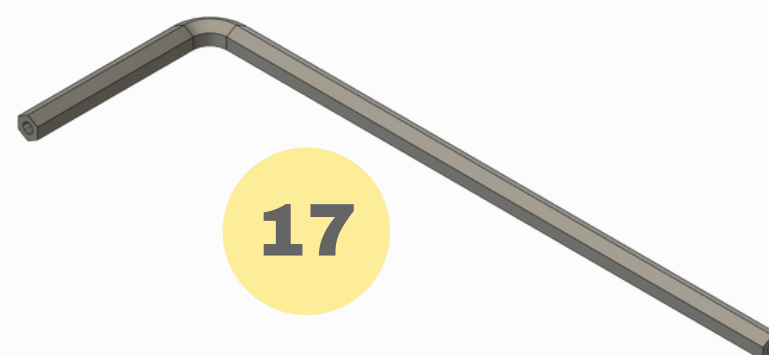
12



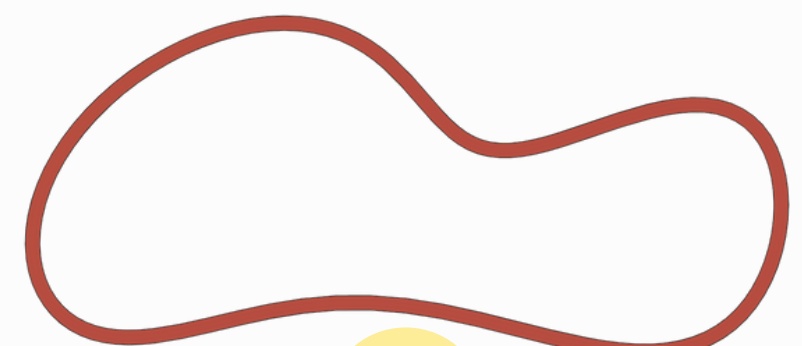
11



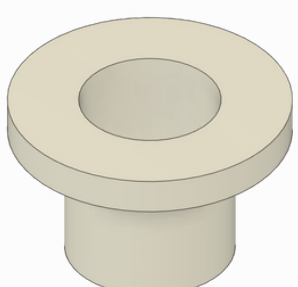
10



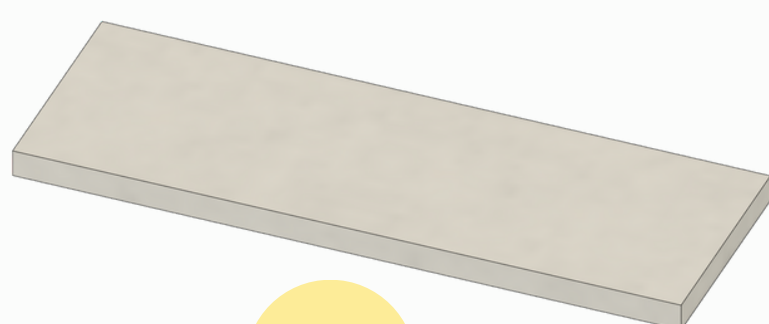
17



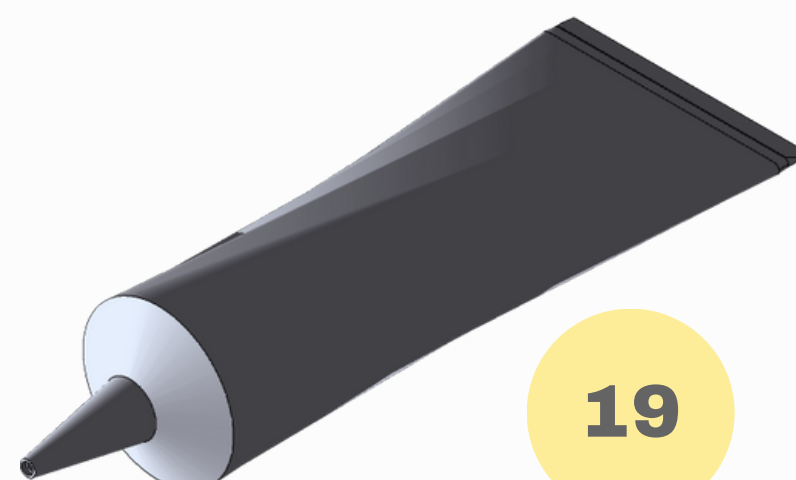
16



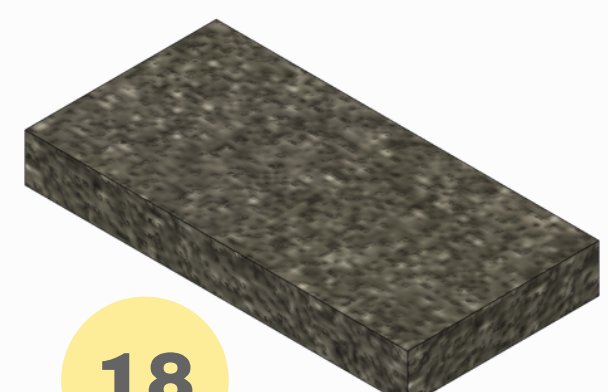
14



15



19

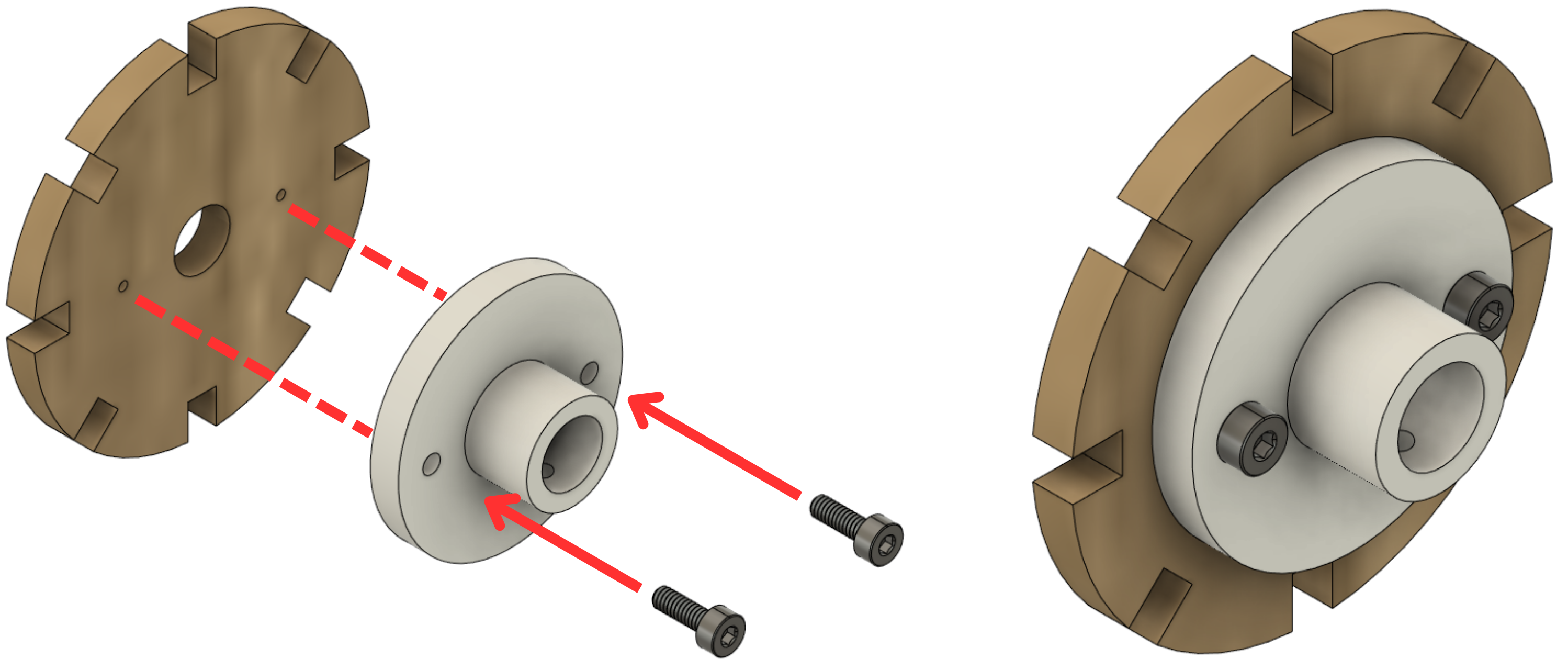


18



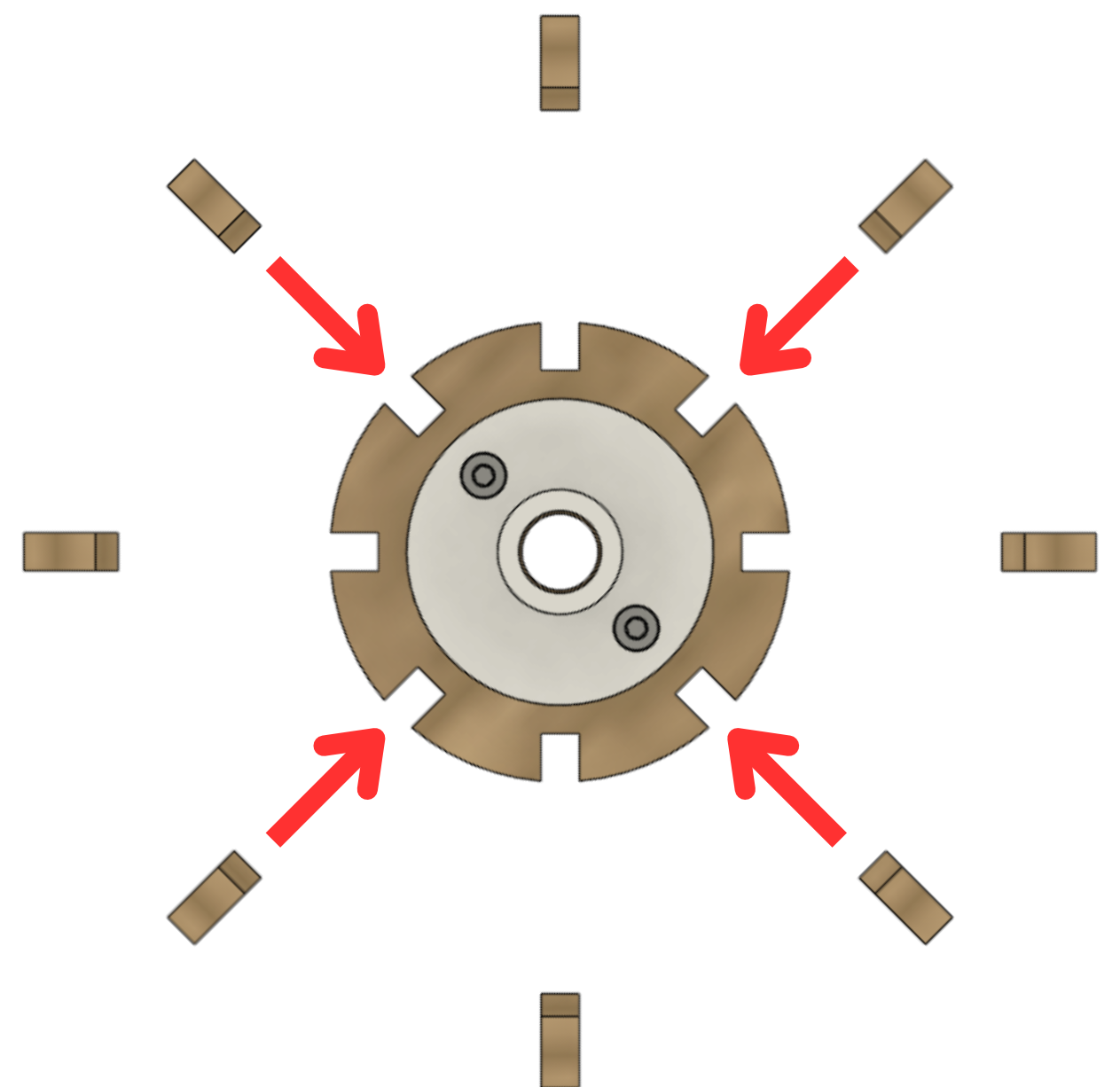
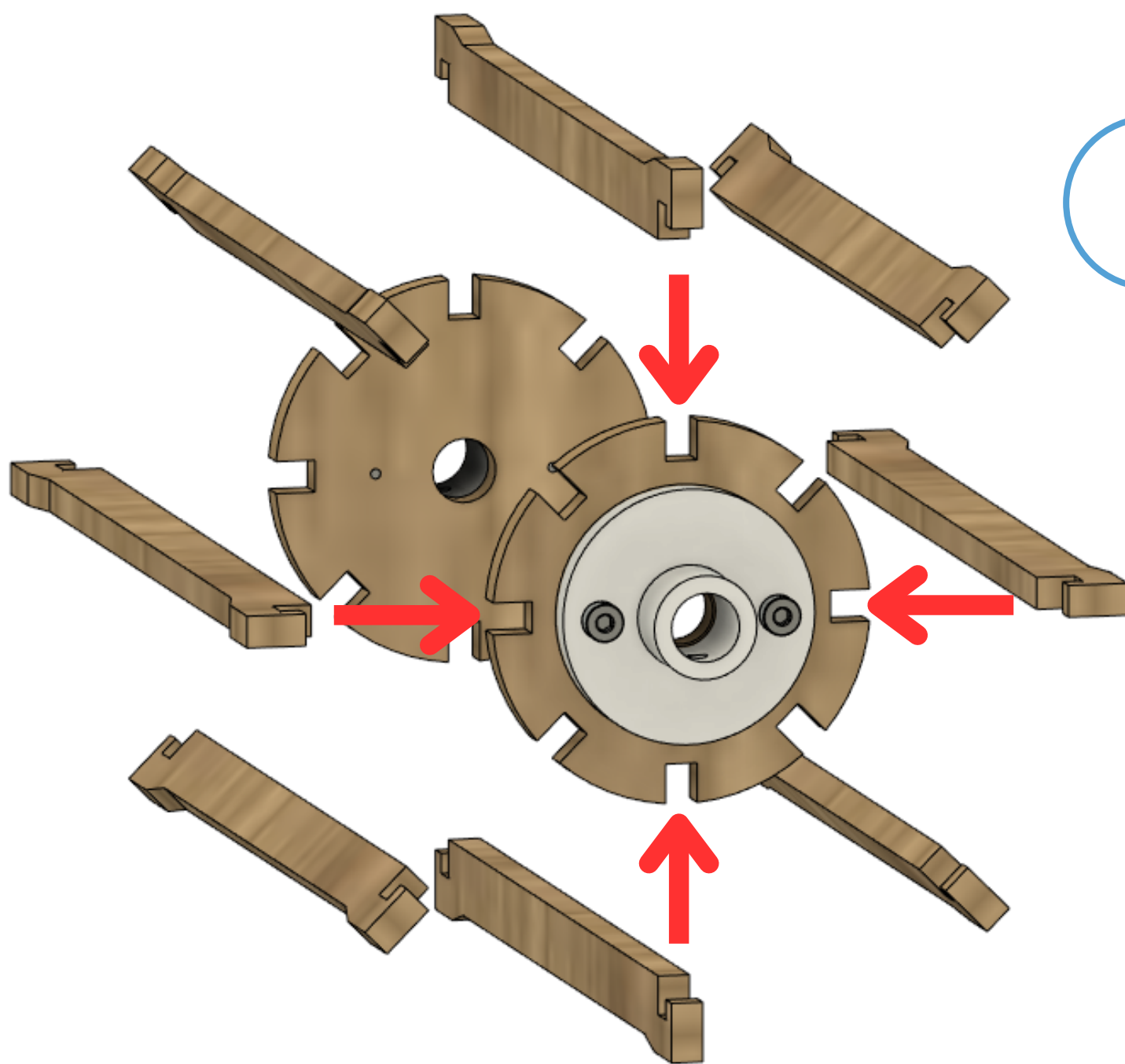
1

**[AS01]** Using the Hex Key, screw one Gear Collar into one Idler Side using 02 M2x6 Hex Screws. Repeat Step 01 2x.

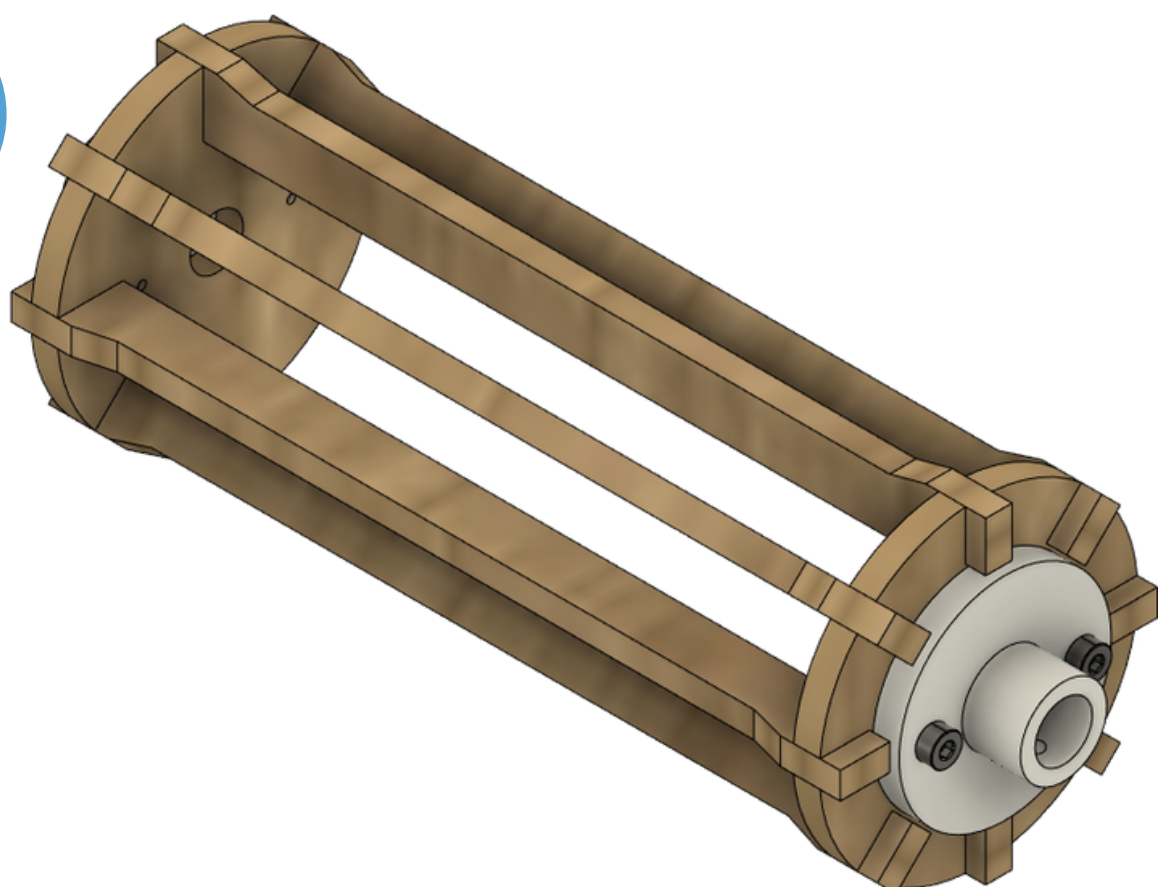


2

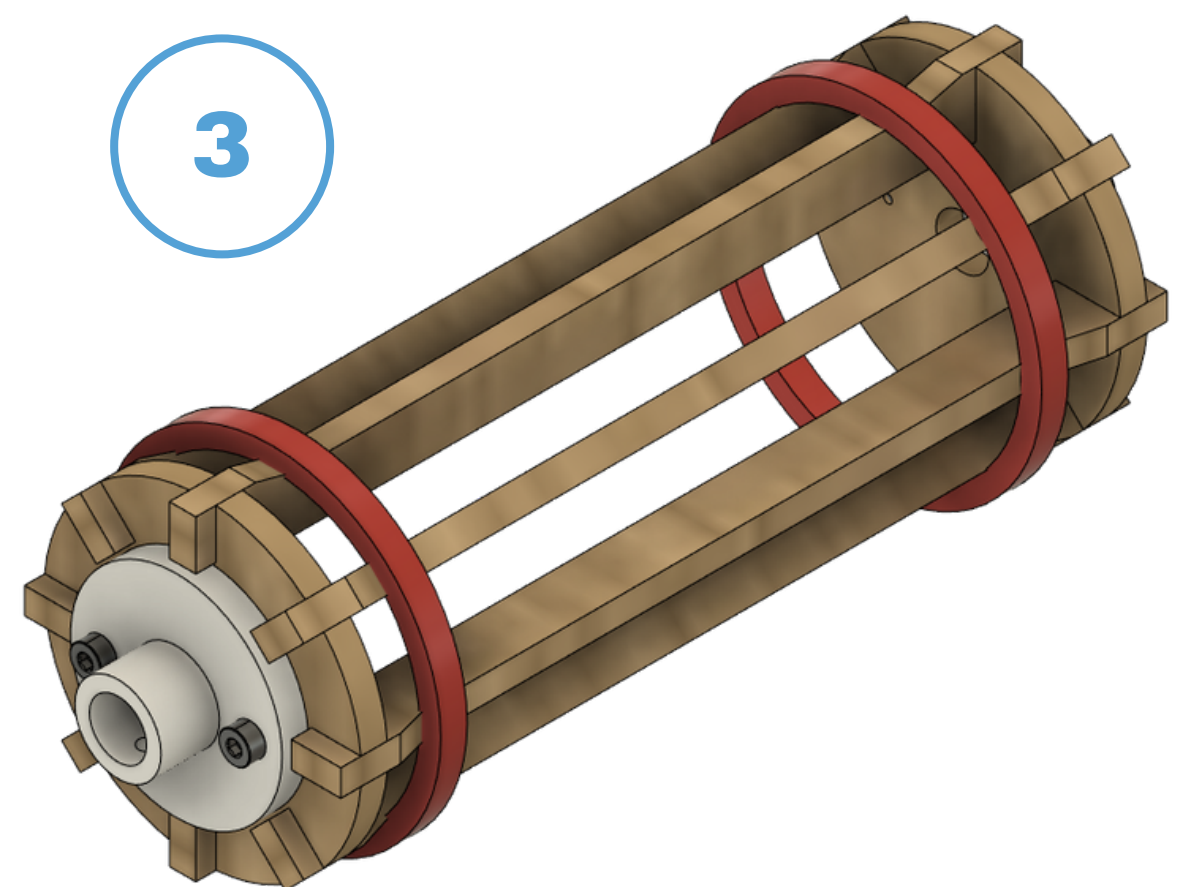
**[Idler 01]** Add Glue into both notches of one Idler Drum and into one notch of each Idler Side [AS01]. Slide each notch in the Idler Drum into one notch in both Idler Sides [AS01] (see images below). Repeat Step 02 8x. Add Rubber Bands around the edges of the Idler to secure the Drum while it's drying.



2



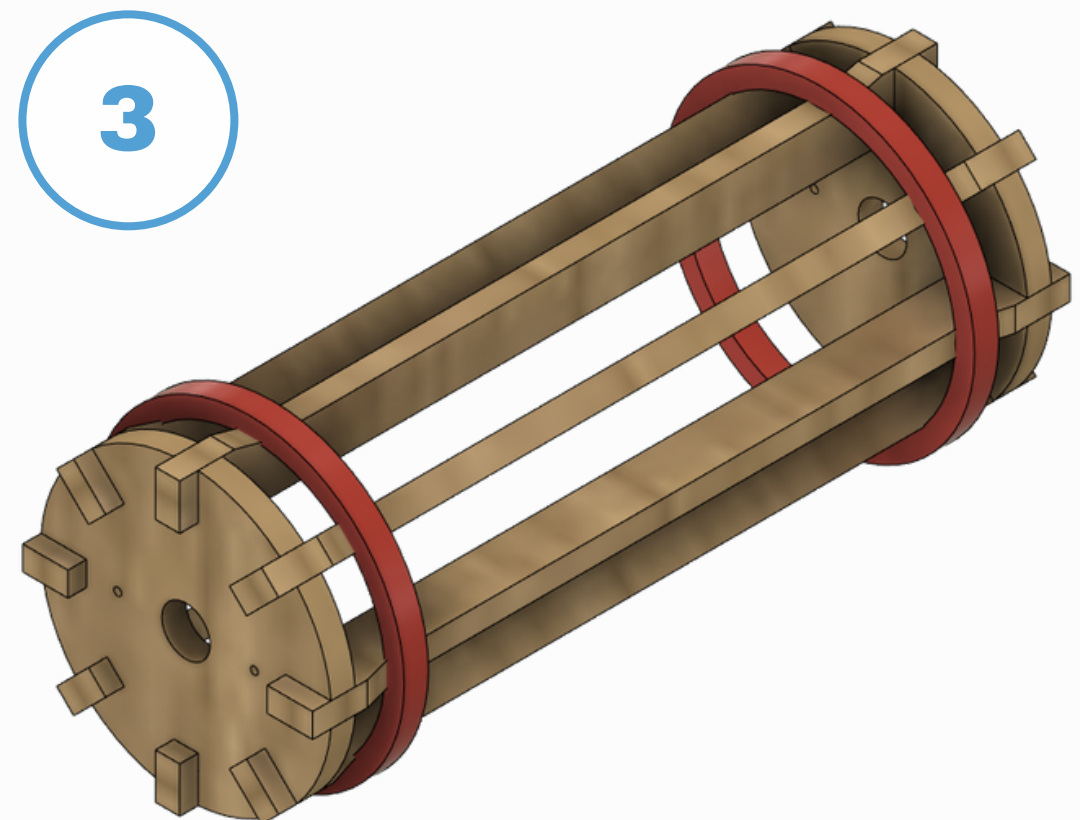
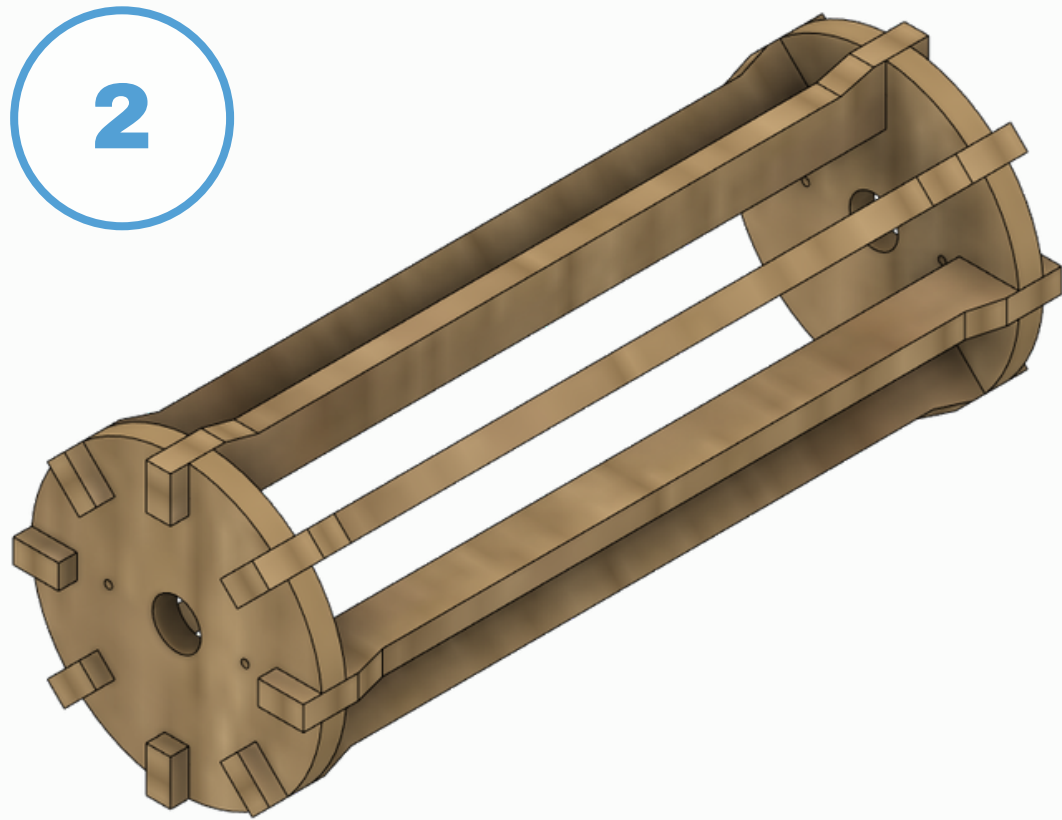
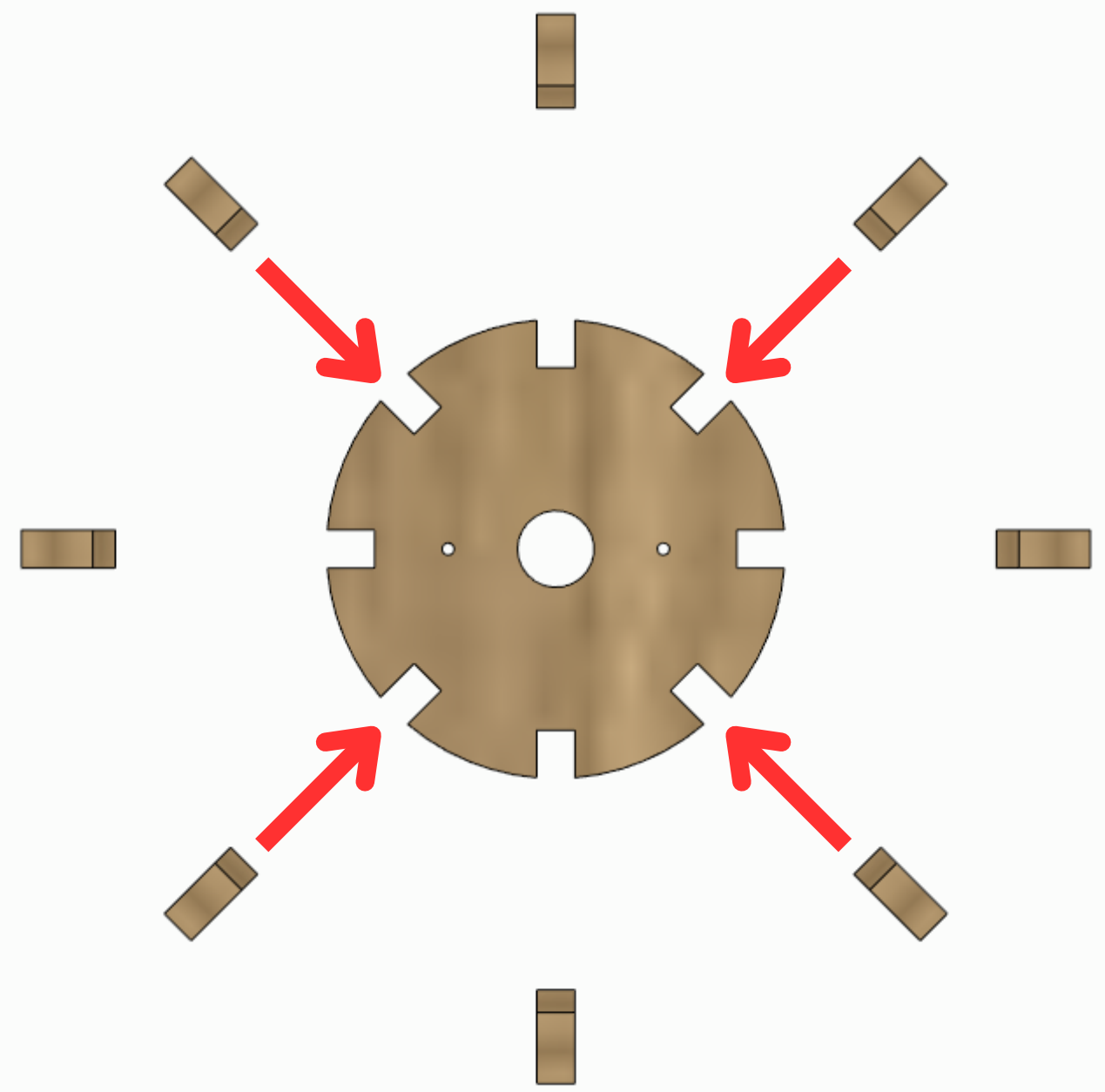
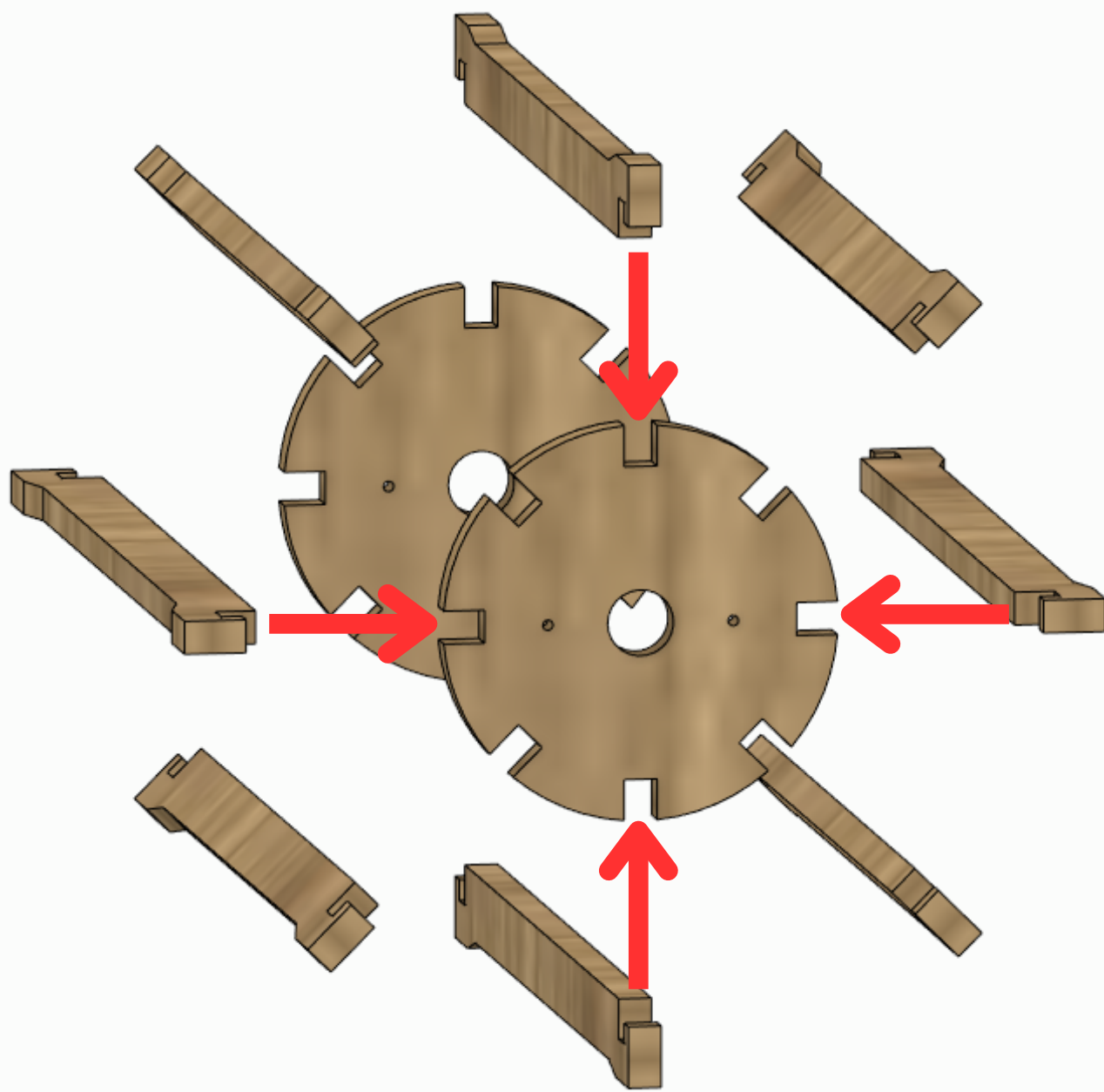
3





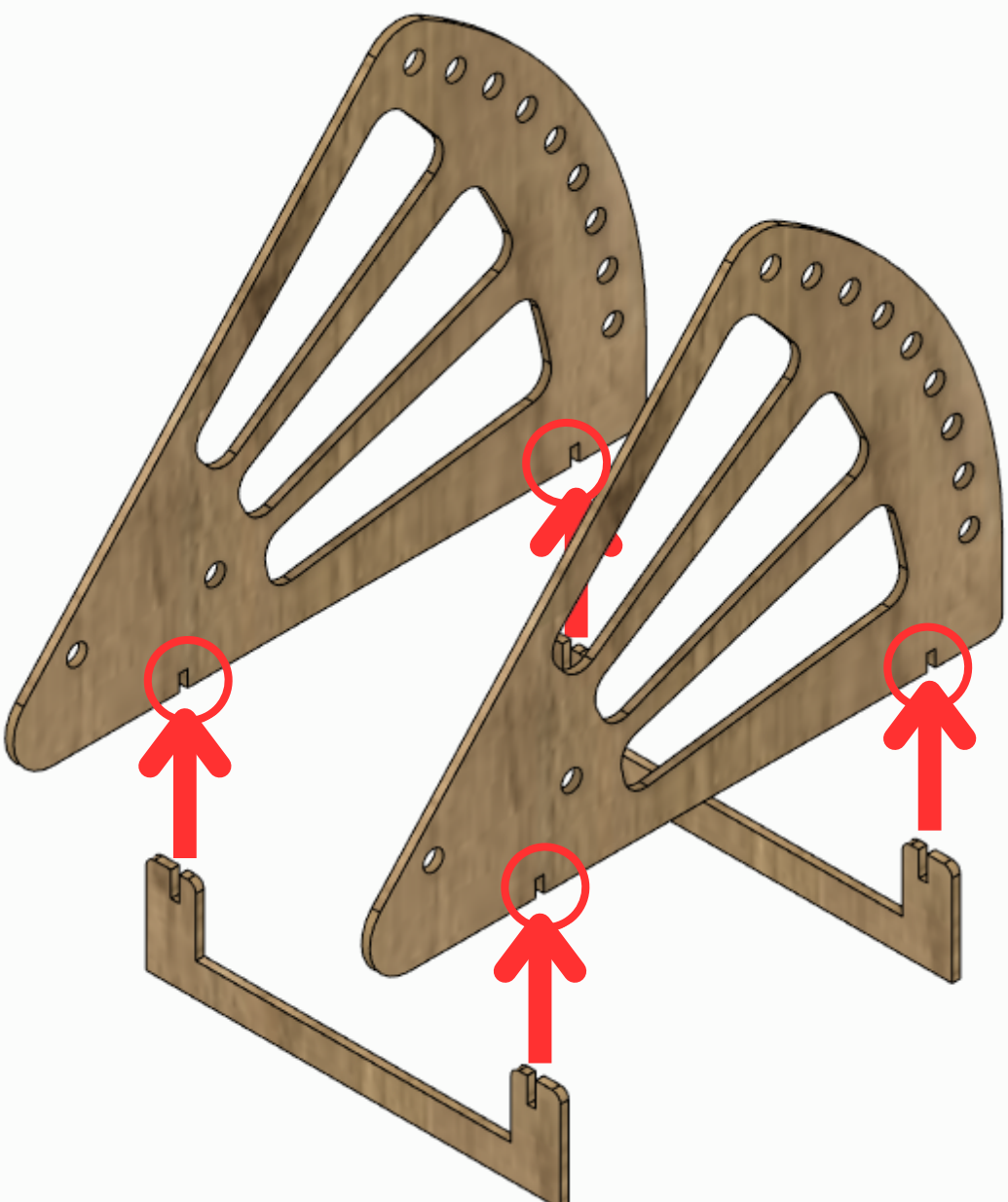
3

**[Idler 02]** Add Glue into both notches of one Idler Drum and into one notch in the remaining two Idler Sides. Slide each notch on the Idler Drum into one notch on both Idler Sides (see images below). Repeat Step 03 8x. Add Rubber Bands around the edges of the Idler to secure the Drum while it's drying.



4

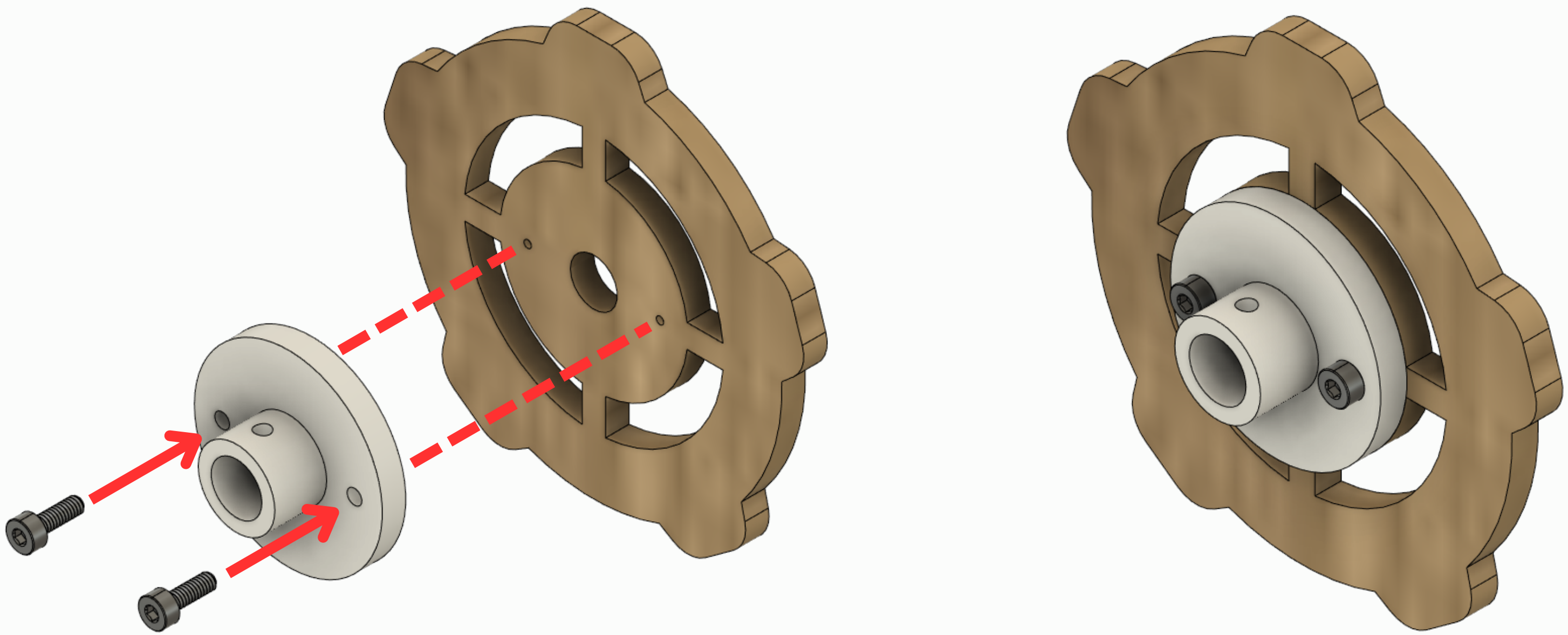
**[Conveyor Body]** Add Glue to the notches at the bottom of each Frame and in the notches in both Legs. Slide the notches of one Leg into the back set of notches in the Frame; repeat Step 04 for the Frame's front notches.





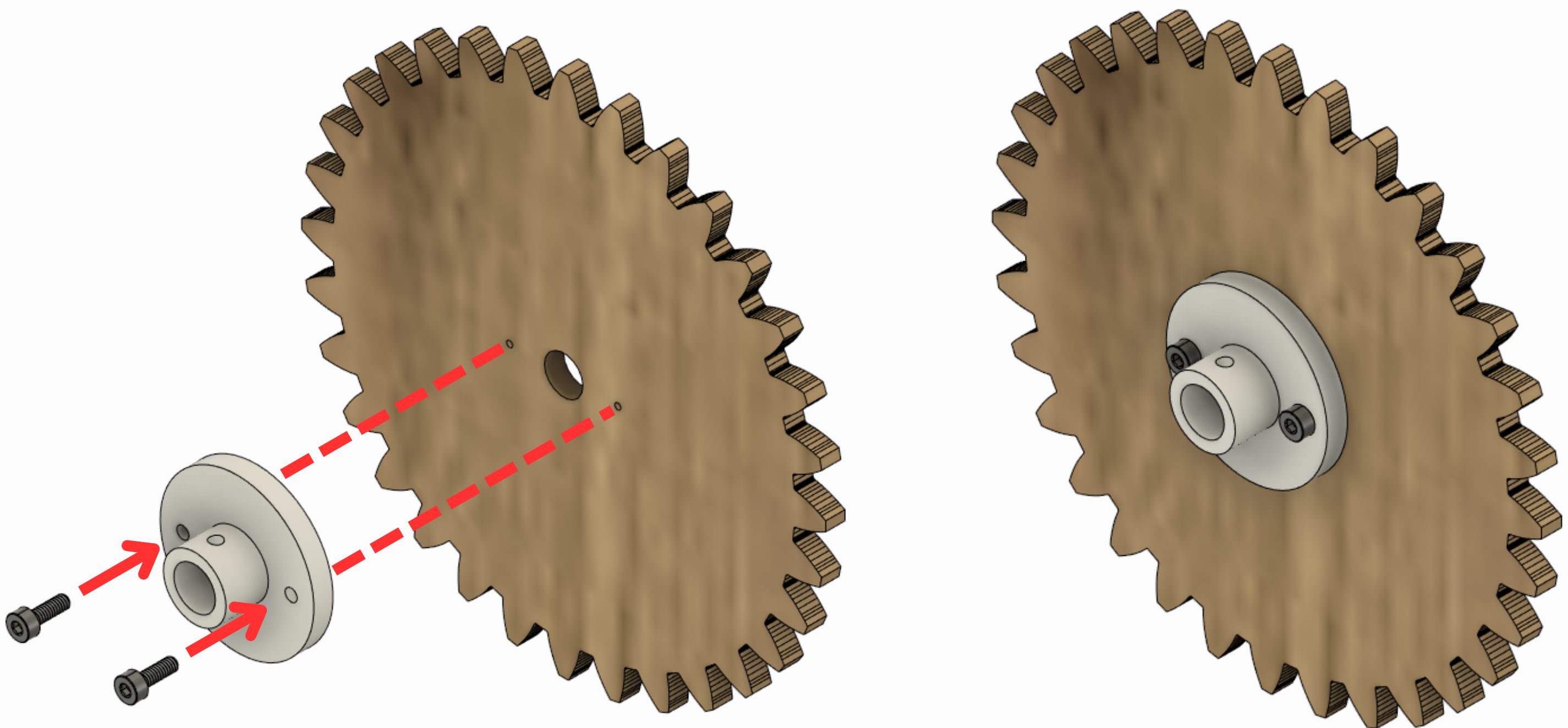
5

**[Crank]** Using the Hex Key, secure one Gear Collar onto the Crank by screwing 02 M2x6 Hex Screws through the pilot holes on the Crank.



6

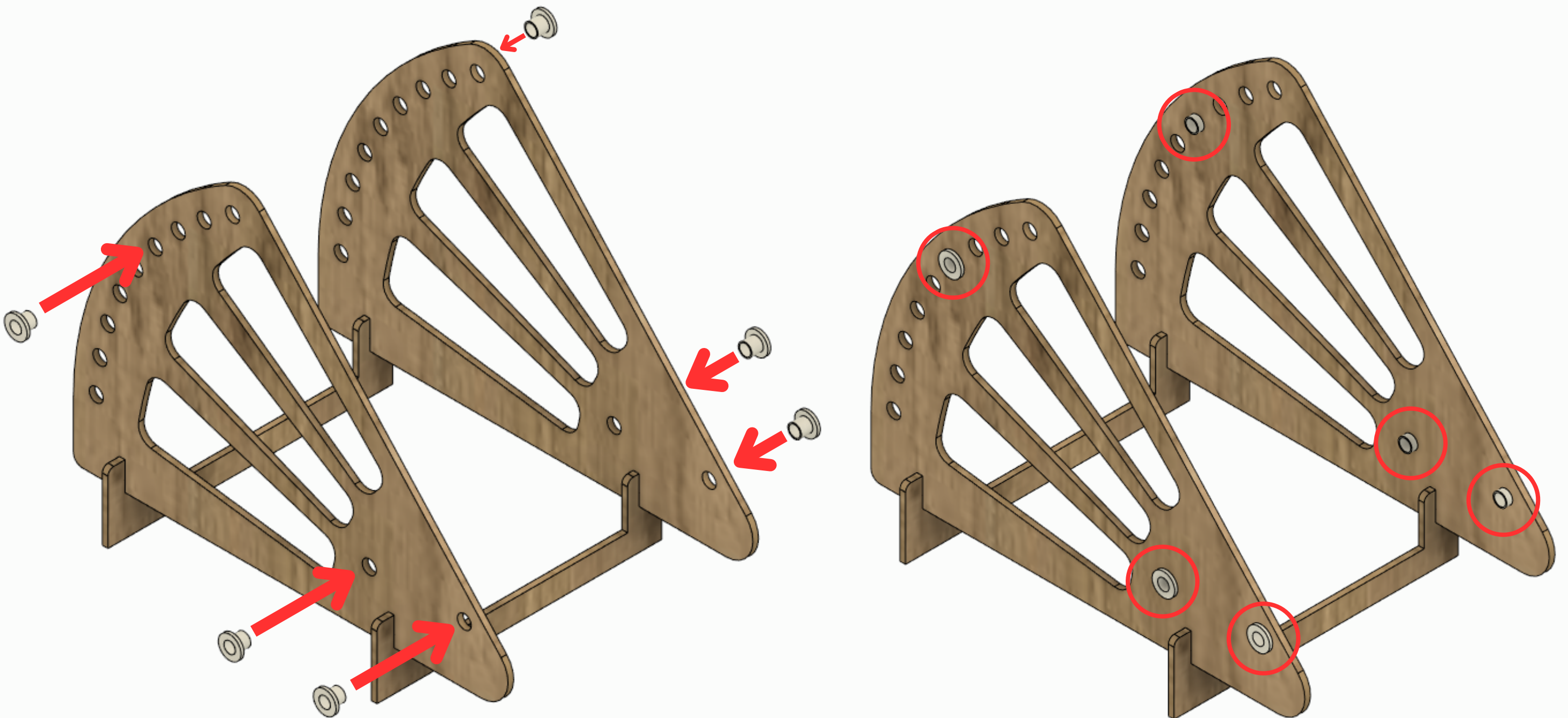
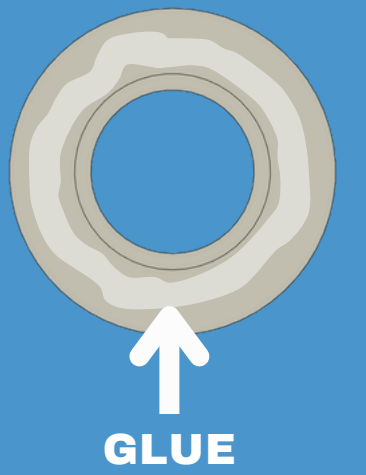
**[Driving Gear]** Using the Hex Key, secure one Gear Collar onto the Driving Gear by screwing 02 M2x6 Hex Screws through the pilot holes on the Driving Gear.





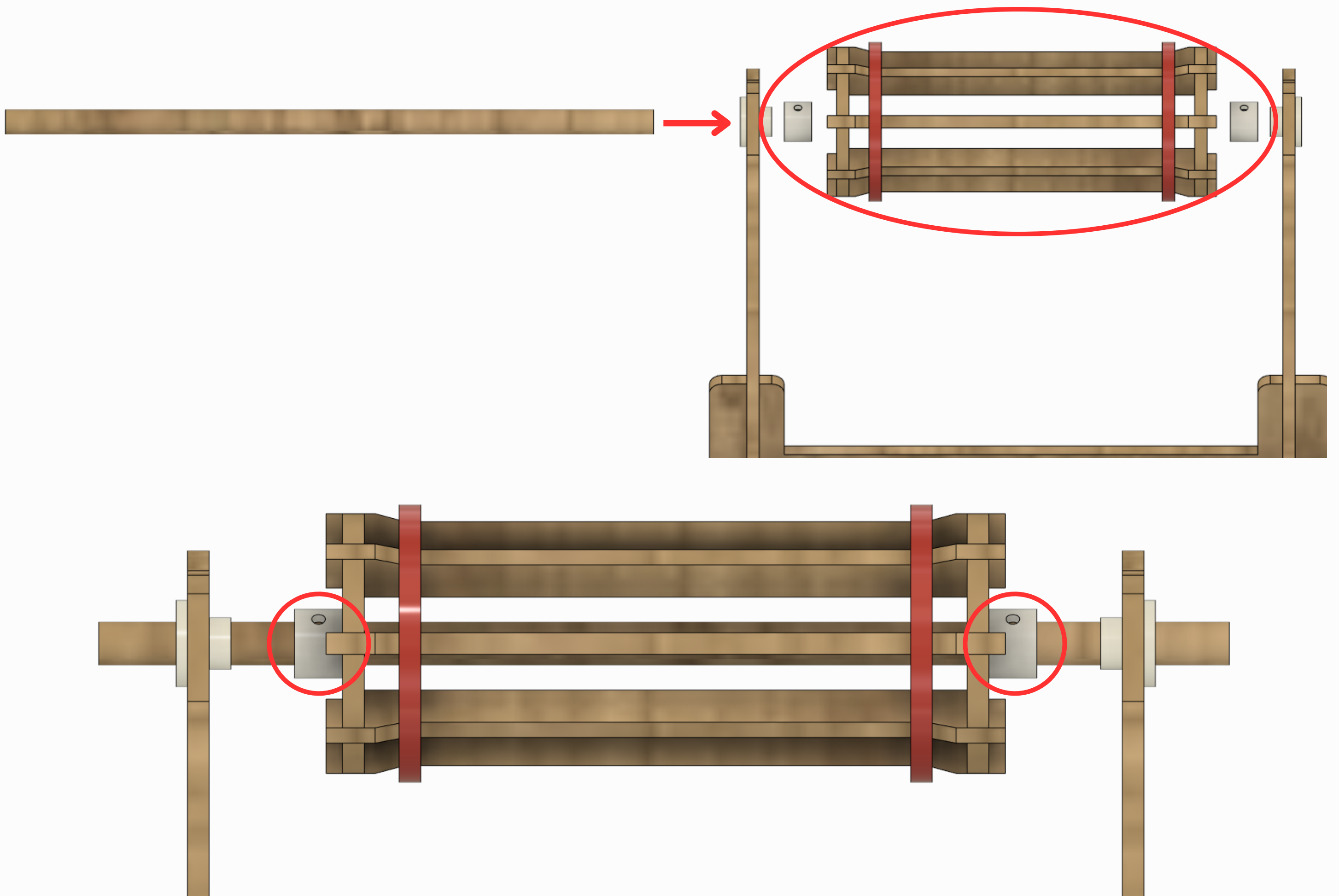
7

Add Glue onto the inside face of each Flange Bearing (See image on the right). Slide the neck of 04 Flange Bearings through the lower two holes within each Frame. Slide the remaining 02 Flange Bearings through one of the holes along the back of each Frame (make sure they are the same hole; e.g., hole 04).



8

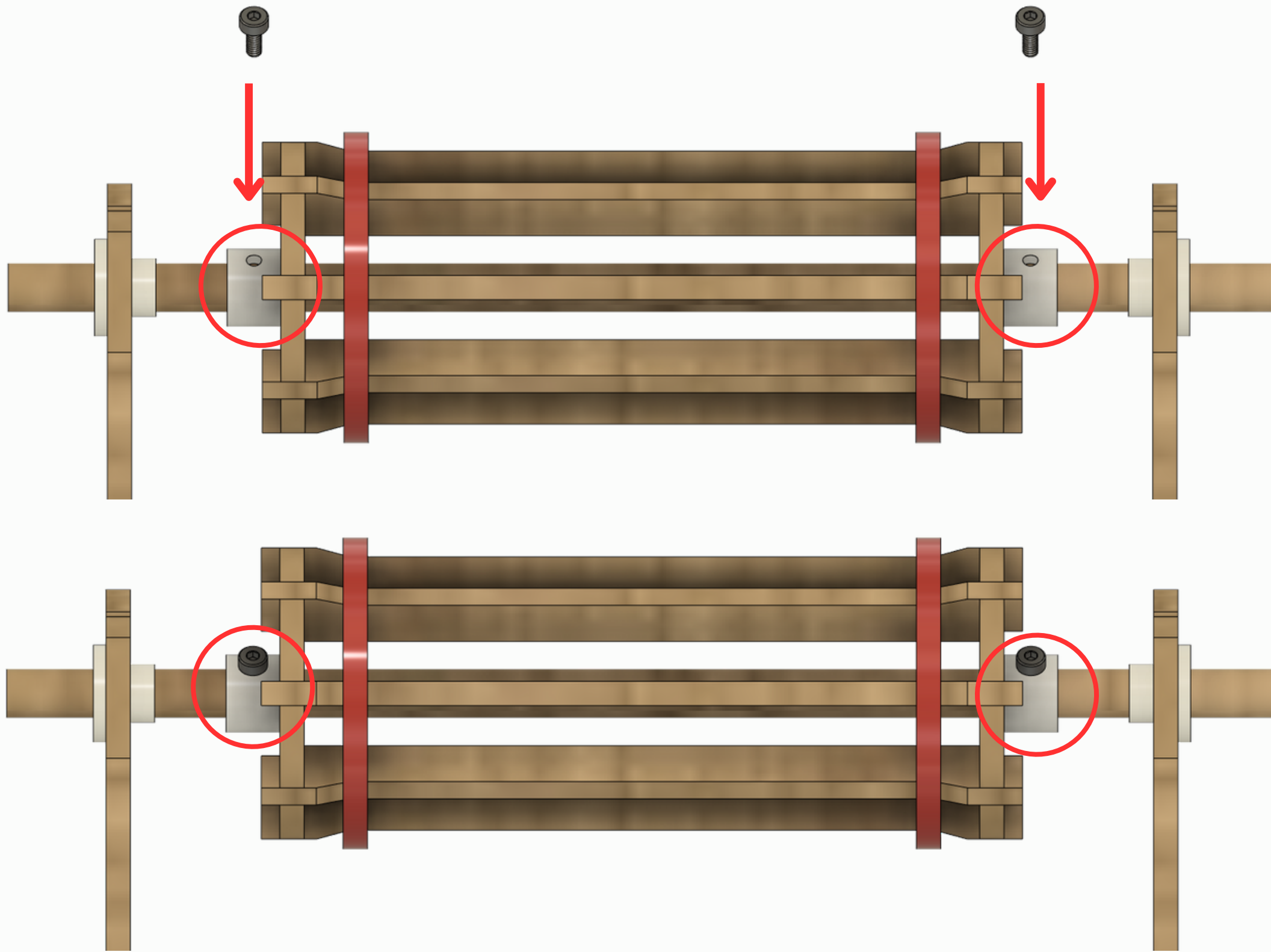
You will need 02 Shaft Lockers, Idler 02, and 01 Idler Shaft for Step 8. (View the images below) Slide the Idler Shaft through the top set of Flange Bearings within the Conveyor Body and through the Shaft Locker, Idler 02, and then the other Shaft Locker (in that order).





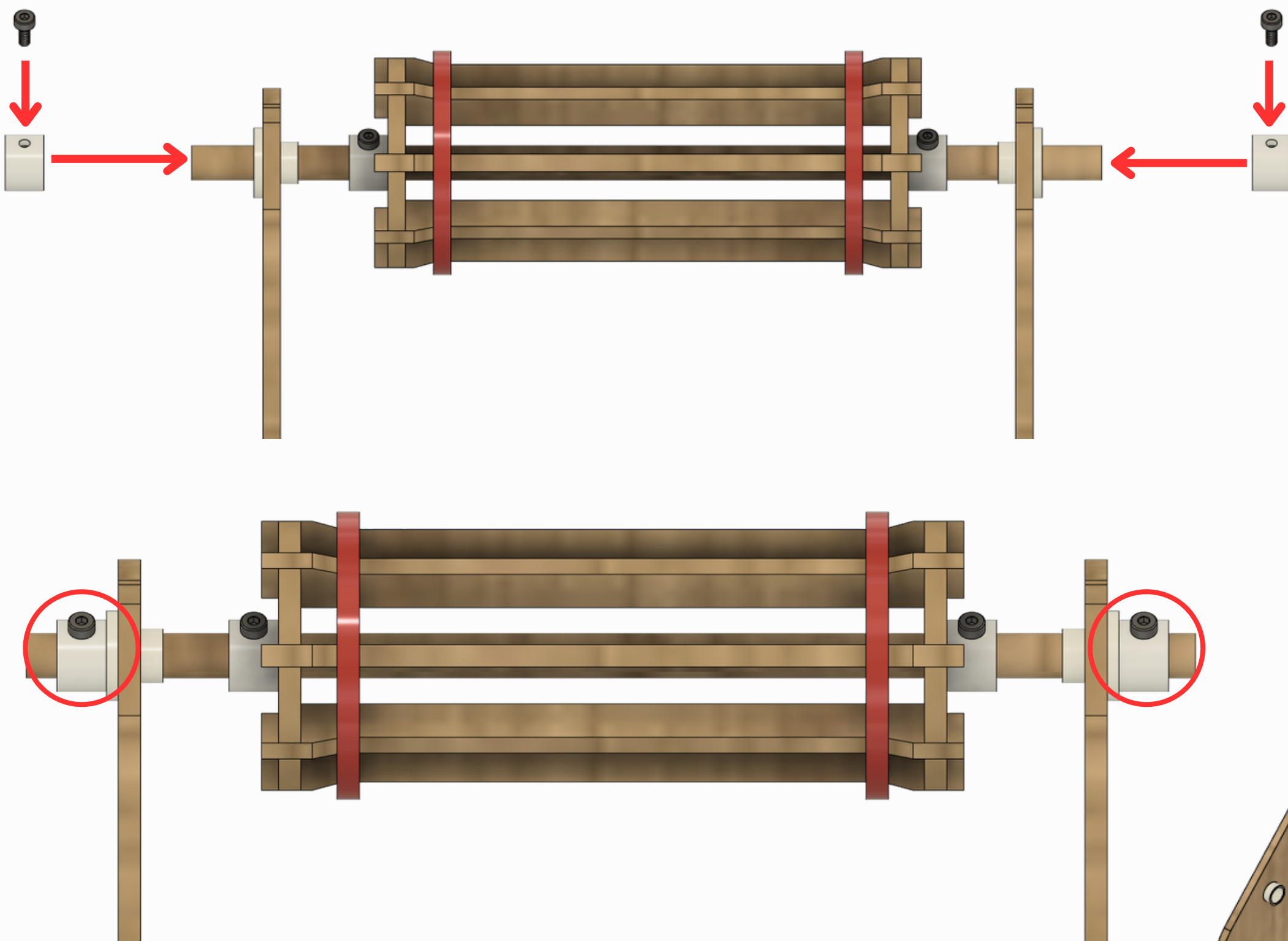
8

(Continued) Make sure that the Shaft Lockers are right next to the sides of the Idler and that the Idler is in the center. Using the Hex Key, screw 02 M2x5 screws into the Shaft Lockers to secure the Idler in place.



8

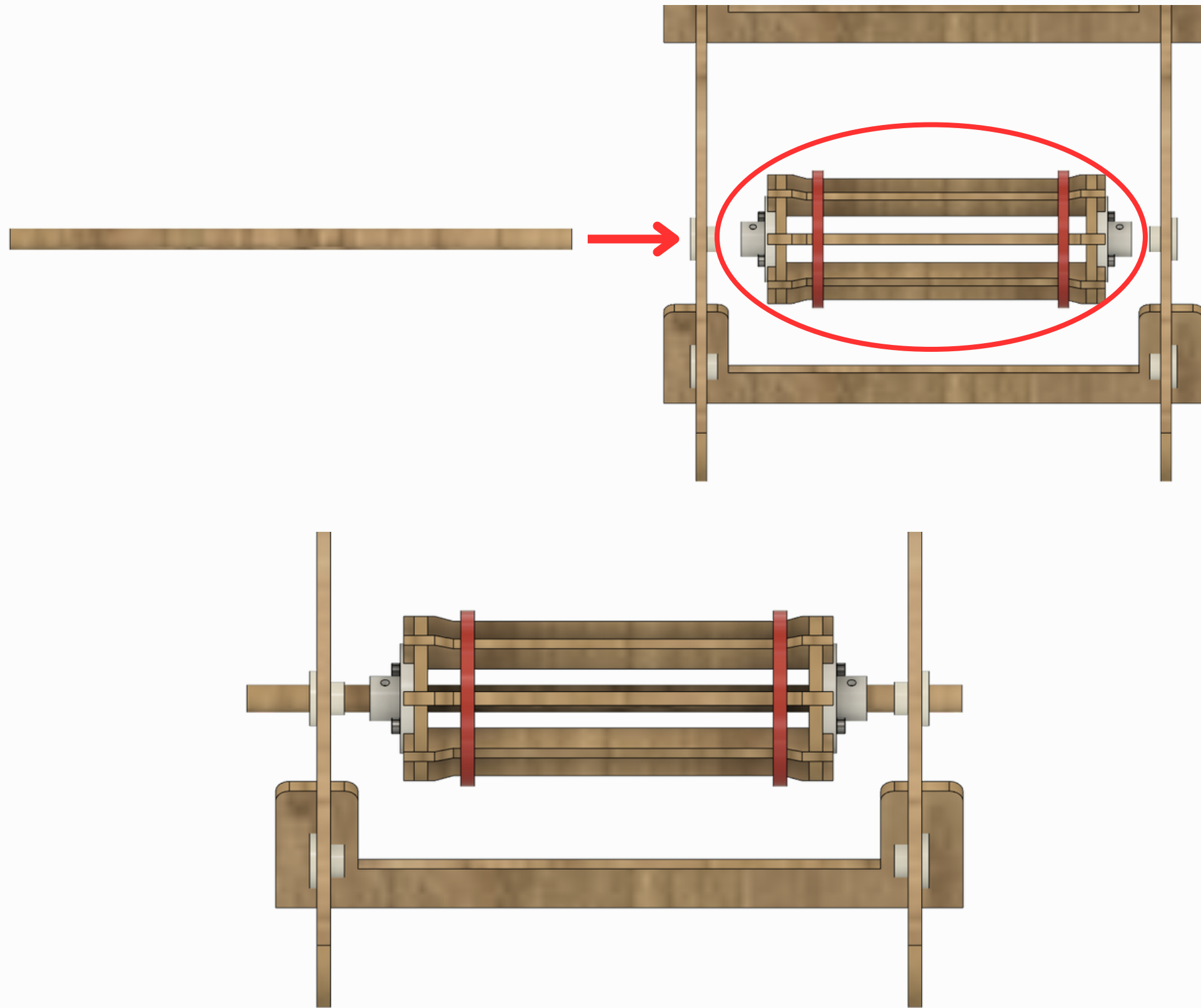
(Continued) Add Shaft Lockers to the ends of the Idler Shaft (outside of the Frames). Using the Hex Key, use 02 M2x5 Screws to secure the Idler Shaft in place. Once done, the assembly should look like image on lower right corner.





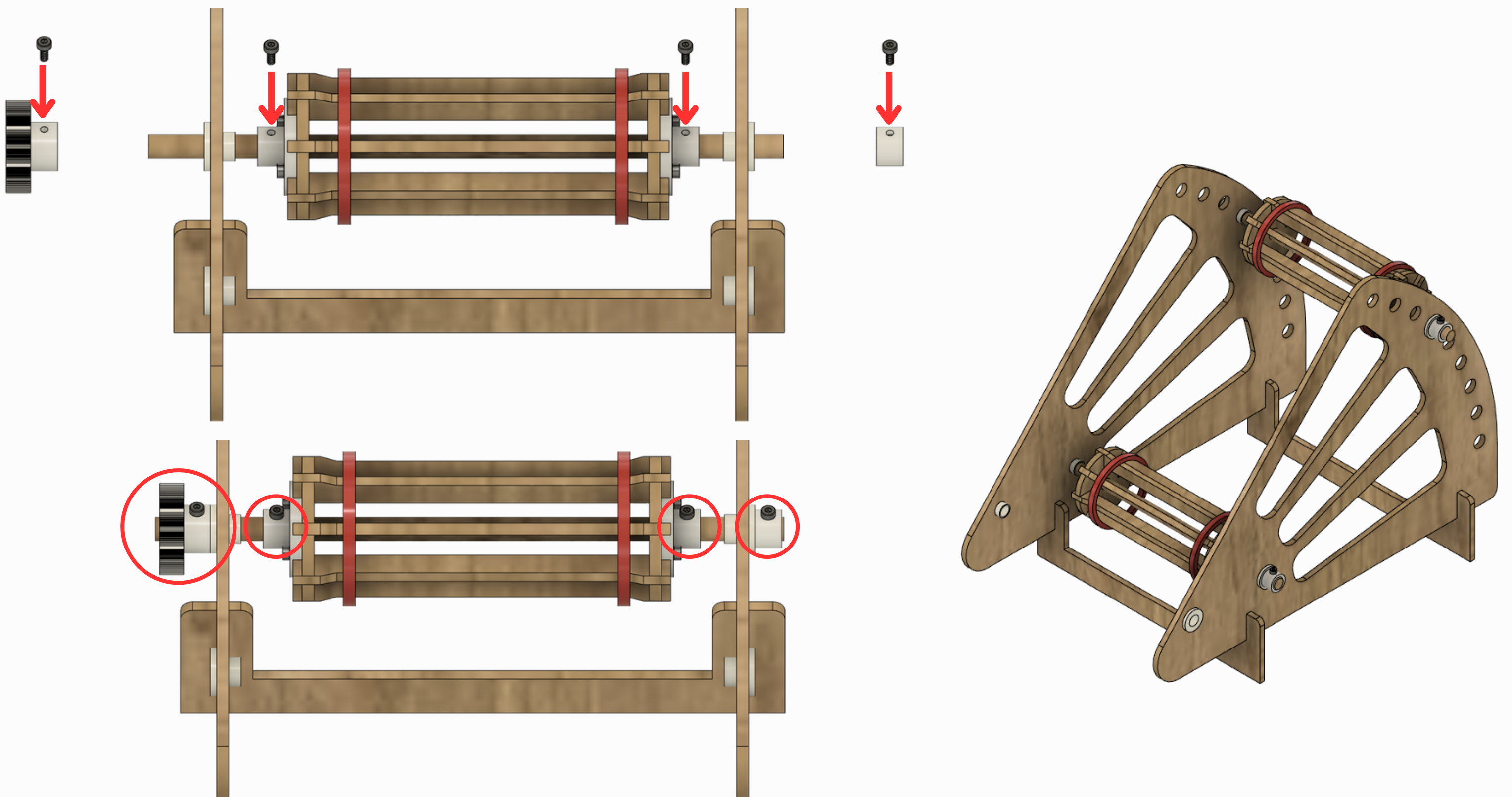
9

You will need 01 Idler Shaft and Idler 01. (View images below) Slide the Idler Shaft through the middle set of Flange Bearings within the Conveyor Body and through Idler 01.



9

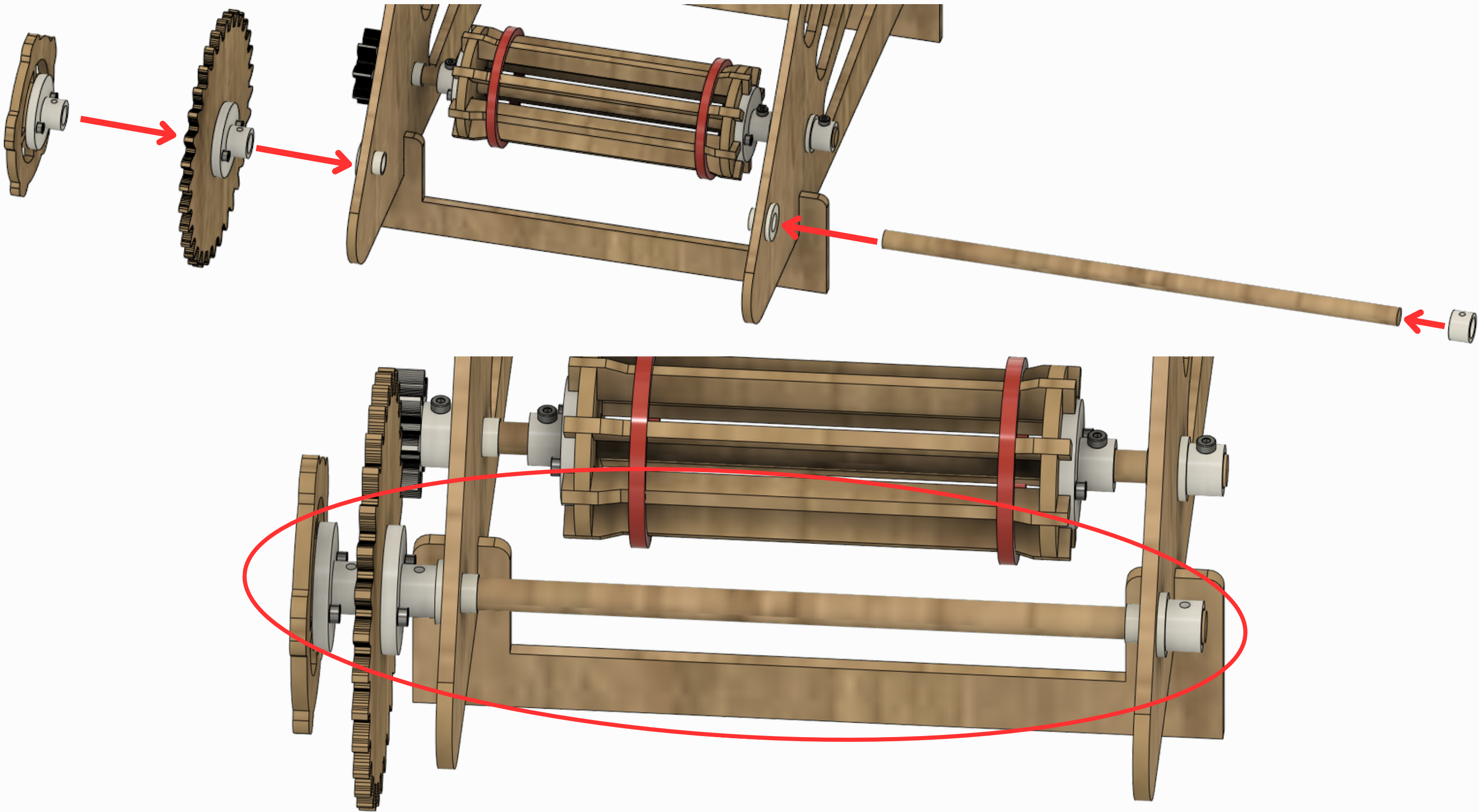
(Continued) Ensure that the Idler is centered on the Idler Shaft. Using the Hex Key, Screw 02 M2x5 screws into the Gear Collars that are on the sides of Idler 01 to secure the Idler in place. Add 01 Shaft Locker to the right end of the Idler Shaft and the Pinion Gear to the left end (pay attention to the direction of the Pinion Gear). Using the Hex Key, use 02 M2x5 Screws to secure the Pinion Gear and Shaft Locker in place. Once done, the assembly should look like image on lower right corner.





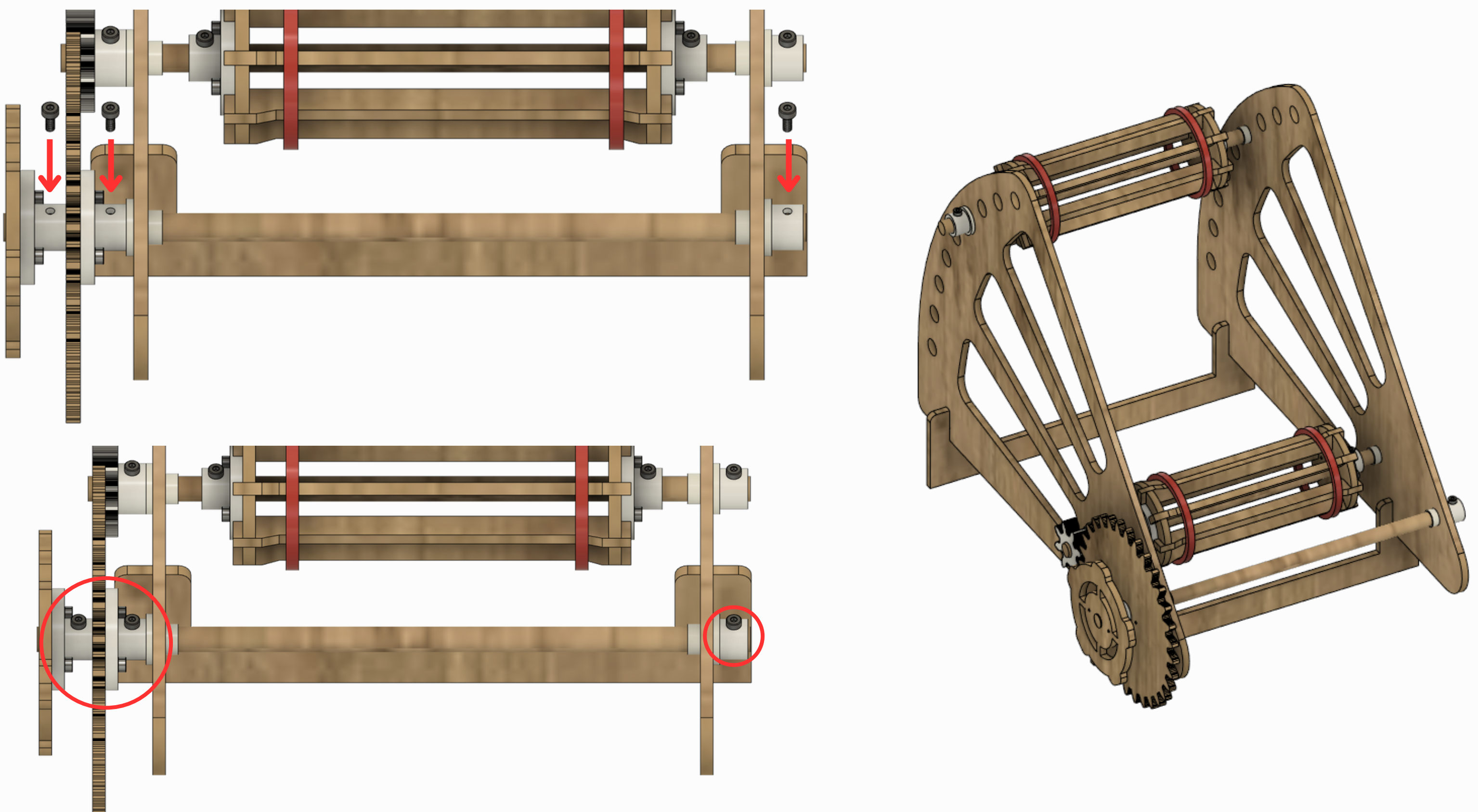
10

You will need the Crank, Driving Gear, Crank Shaft, and 01 Shaft Locker. (View images below) Slide the Crank Shaft through the front set of Flange Bearings within the Conveyor Body and through the Driving Gear and Crank (in that order) that are out on the left side of Conveyor Body. Then slide the Shaft Locker along the right end of the Crank Shaft.



10

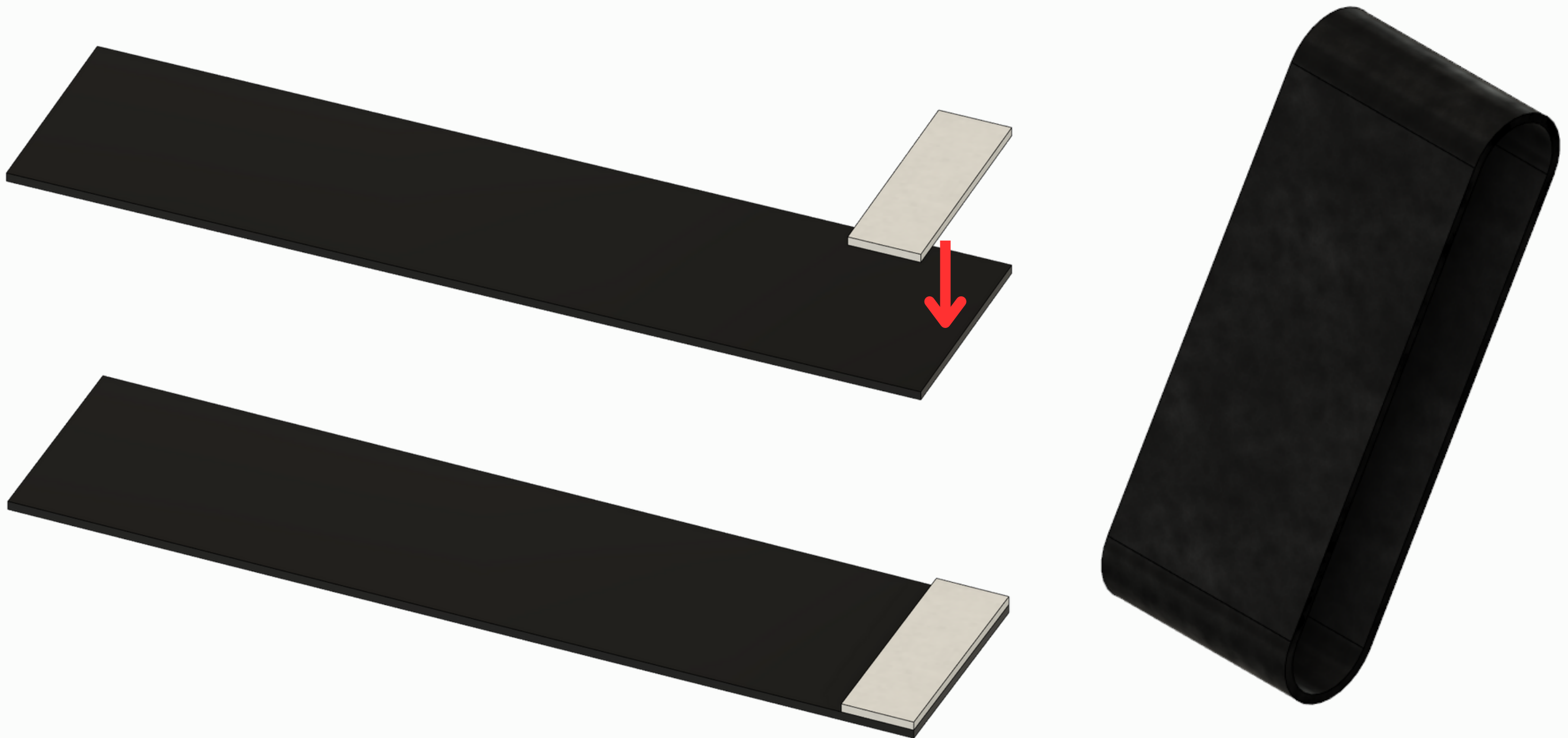
(Continued) Using the Hex Key, screw 03 M2x5 Screws into both Gear Collars that are attached to the Crank and Driving Gear and to the Shaft Locker to secure all parts in place. Once done, your assembly should look like the image in the bottom right.





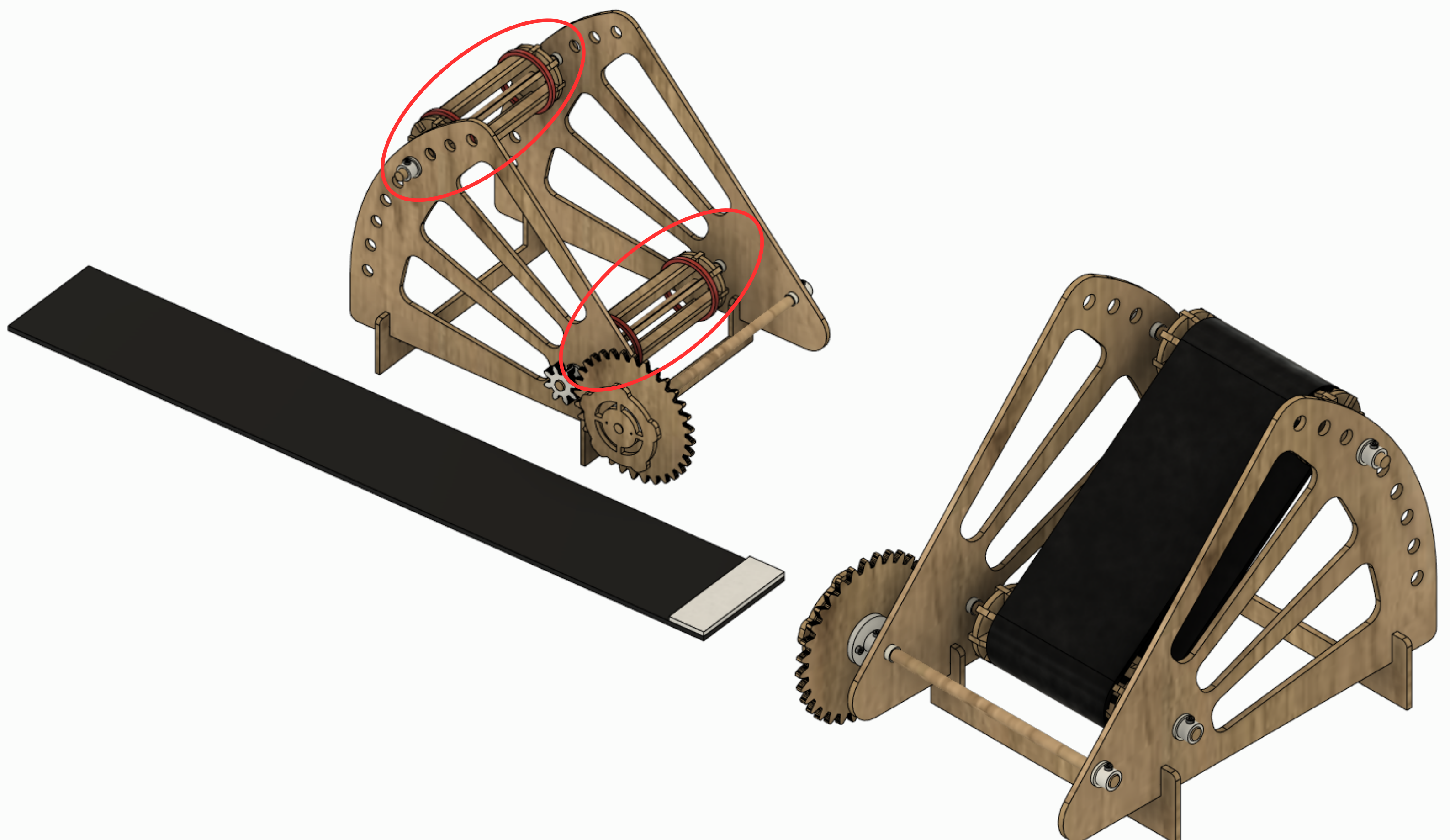
**11**

**Grab the prickly side of the velcro and cut it so that it is 3 in Long. Attach the sticky side of the velcro to one end of the Felt Belt. To enclose the belt, attach the prickly side of the velcro to the other end of the belt (wait to do this last part until the next step).**



**12**

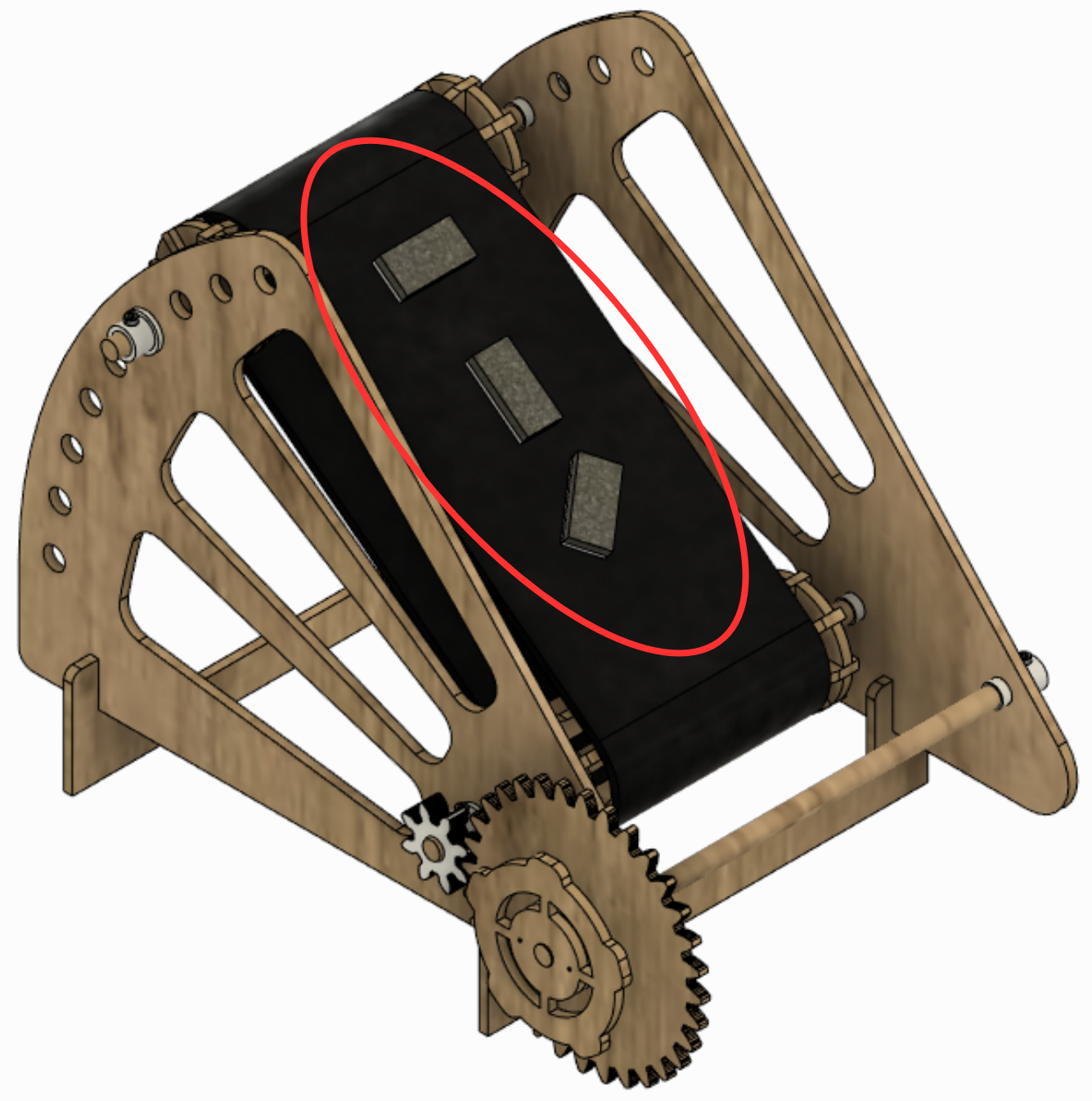
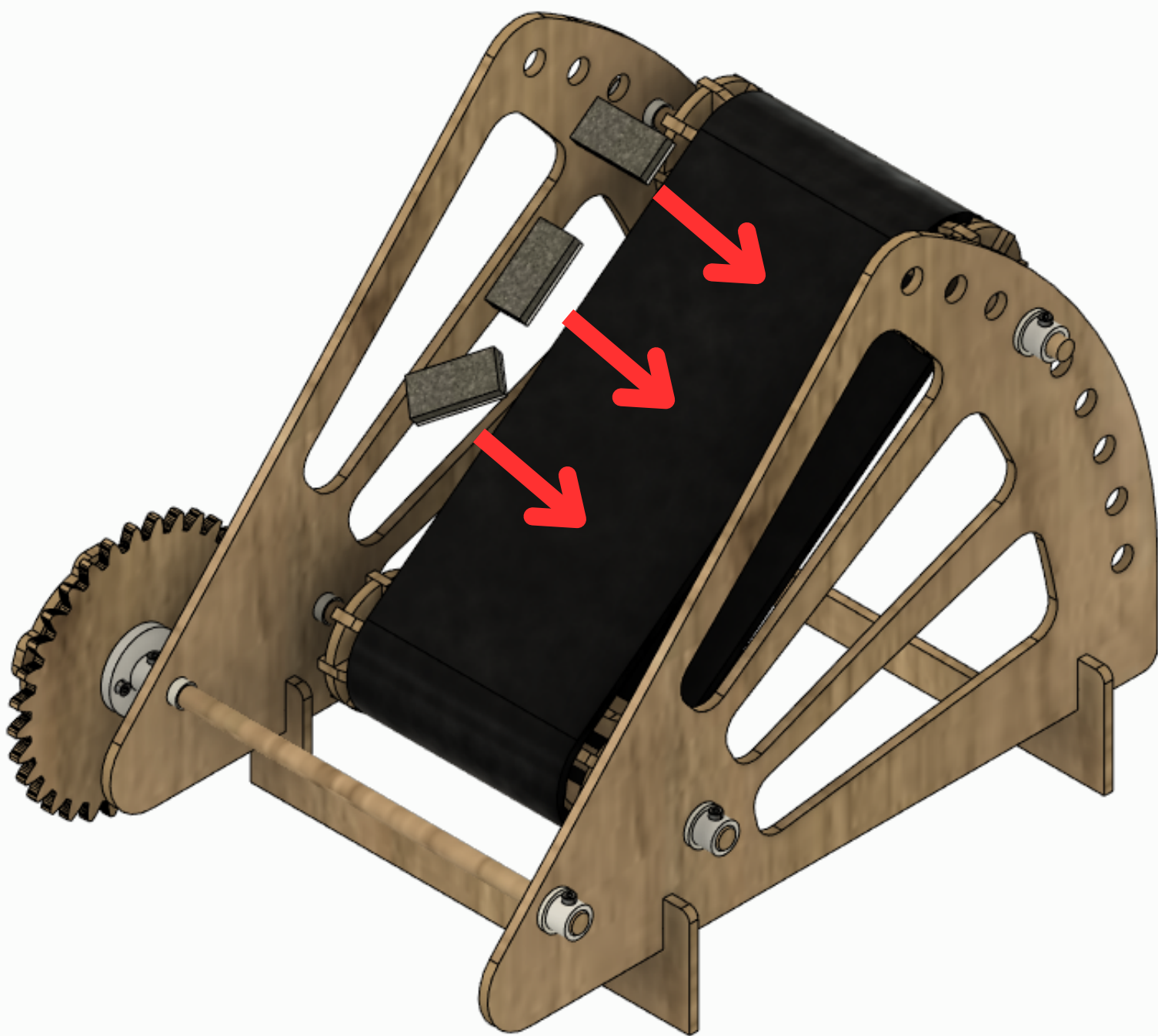
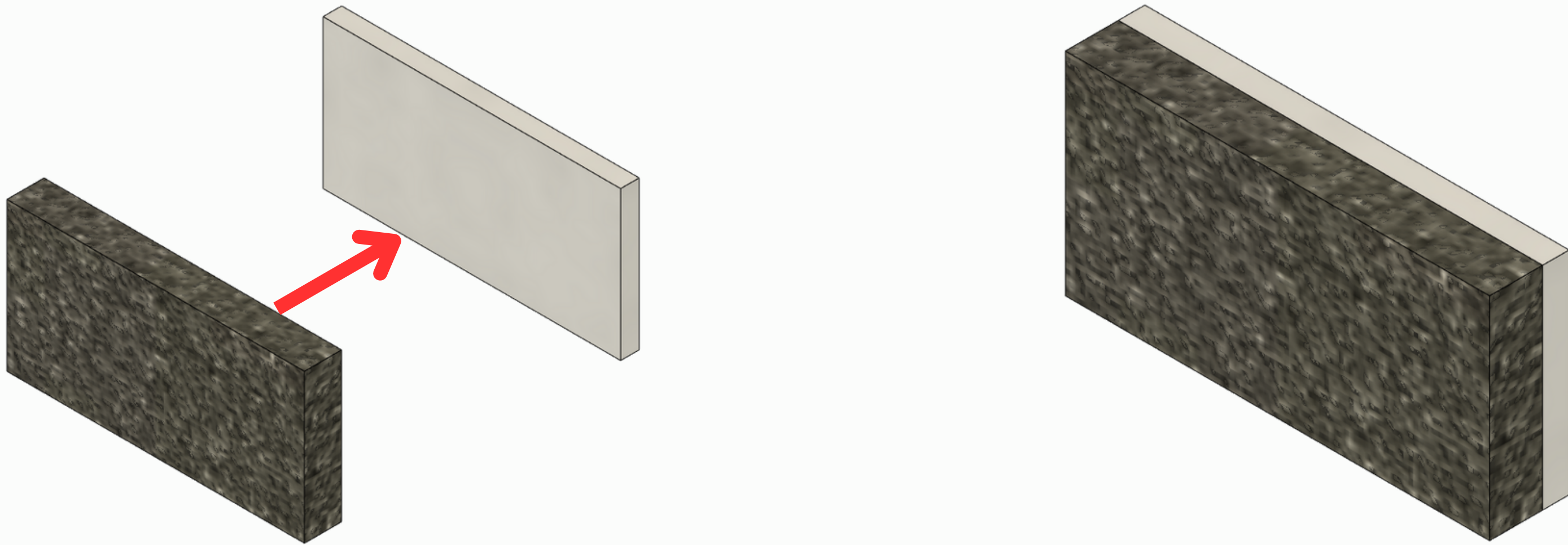
**Wrap the Belt around the two Idlers that are in between the Frames. Make sure that the Belt is semi-TIGHT around both Idlers (don't want it loose or too tight).**





13

To add Rails to the Belt, you will need to cut some Foam and Velcro. Cut the Foam into multiple pieces (any size you want). Then cut the prickly side of the Velcro to the desired size and attach to one side of the cut Foam. To attach to the Belt, attach the Velcro side to Belt.



You're almost done! You've completed the building of the Conveyor Belt, up next is how to use it!





## How to Use - To Use the Conveyor Belt:

- 1) Place the Velcroed Foam Rails along the Belt however you like (Step 14)
- 2) Place a Ping Pong Ball or whatever you find around the house along the Foam Rails on the Belt
- 3) To move/rotate the Belt, rotate the Crank clockwise OR counterclockwise (see images below)

YOUR IMAGINATION IS ENDLESS! HAVE FUN!

