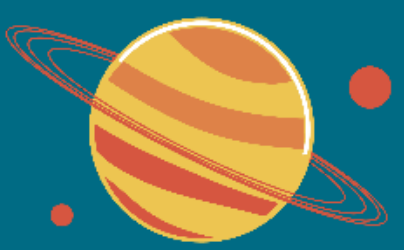


Rotating Carousel

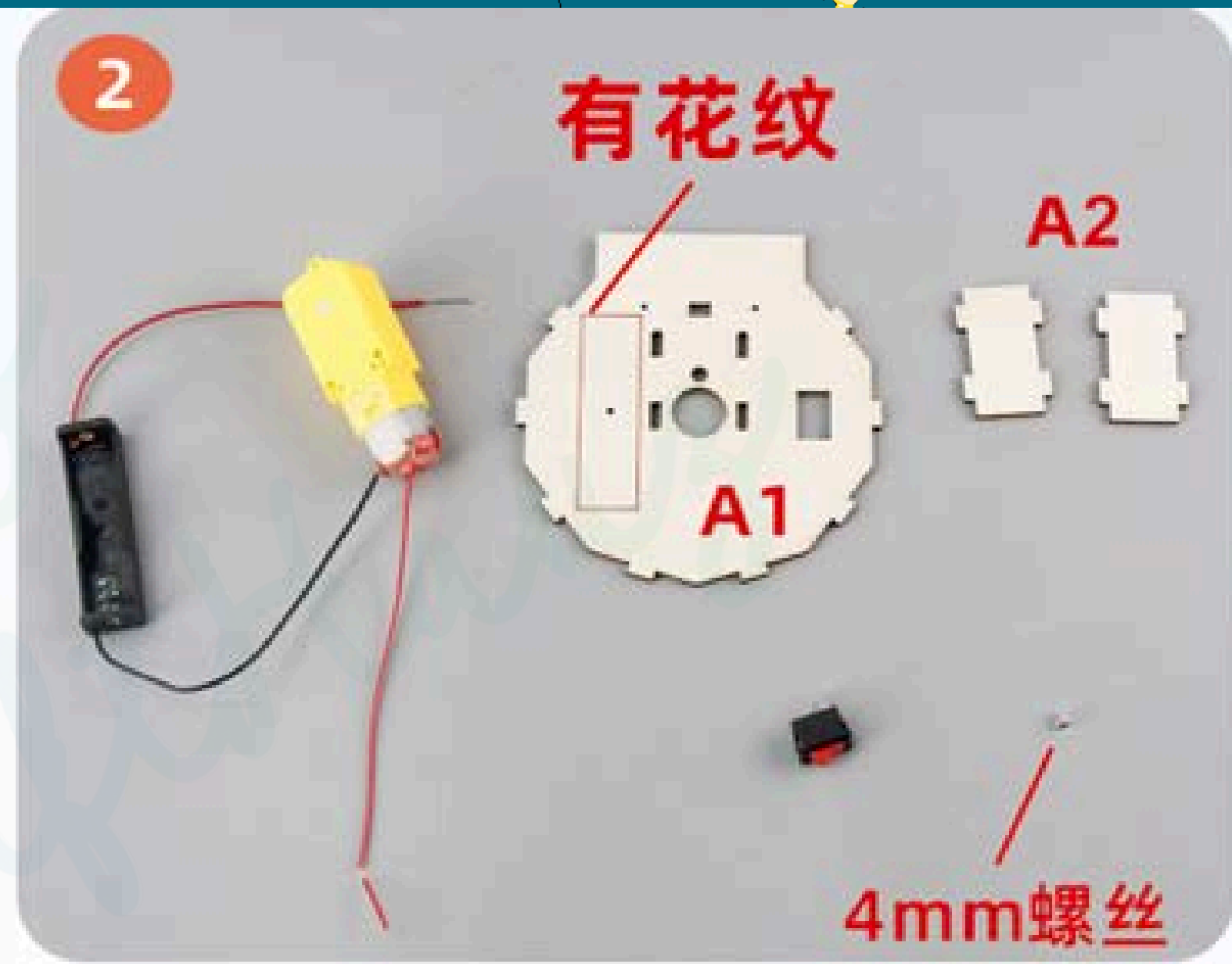
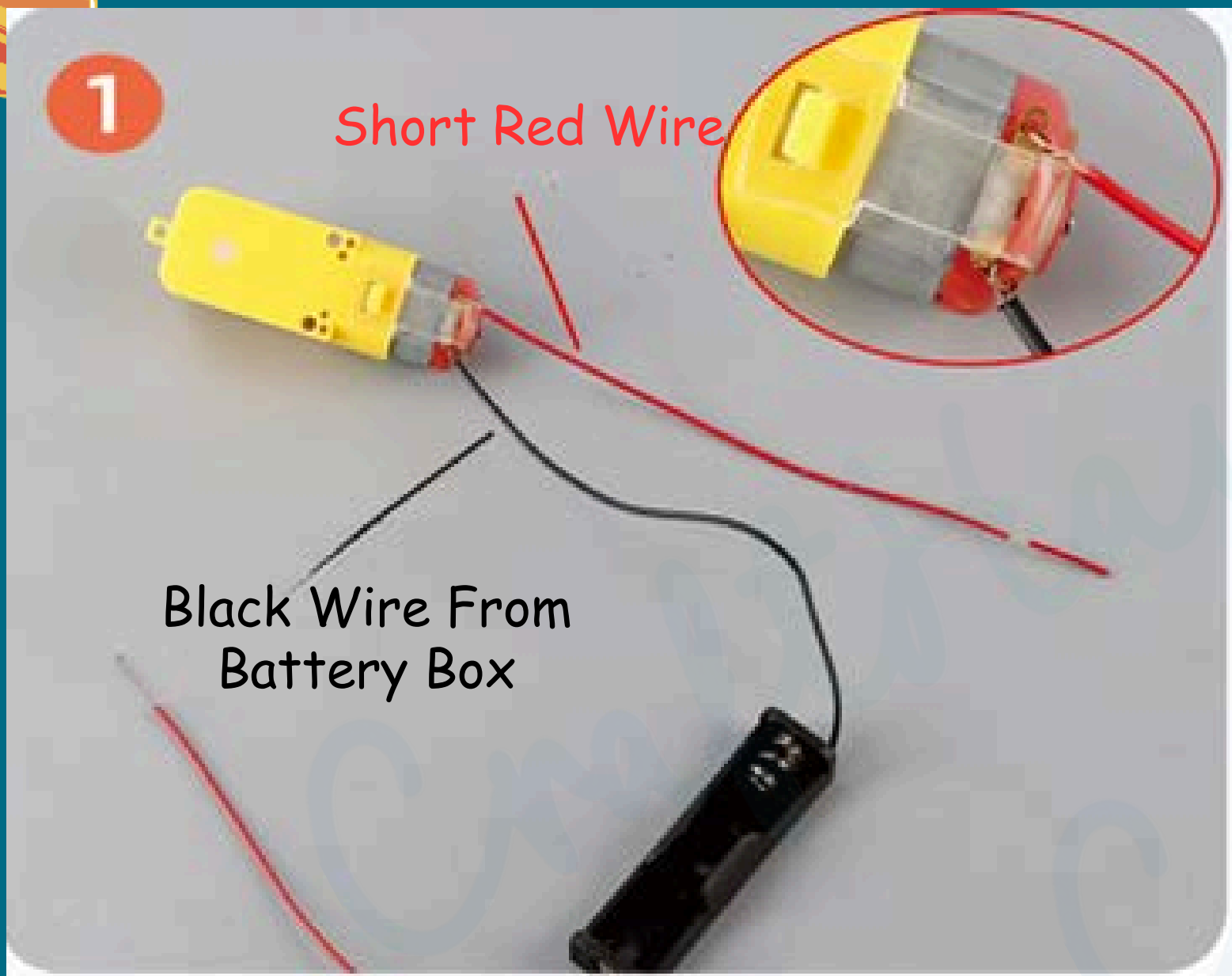




Experiment Materials

wooden boards

- Motor
- Screwdriver
- Battery box
- Red wire
- 4mm screw*1
- 6mm screw*1
- Switch



Connect the battery box black wire and single red wire to the motor

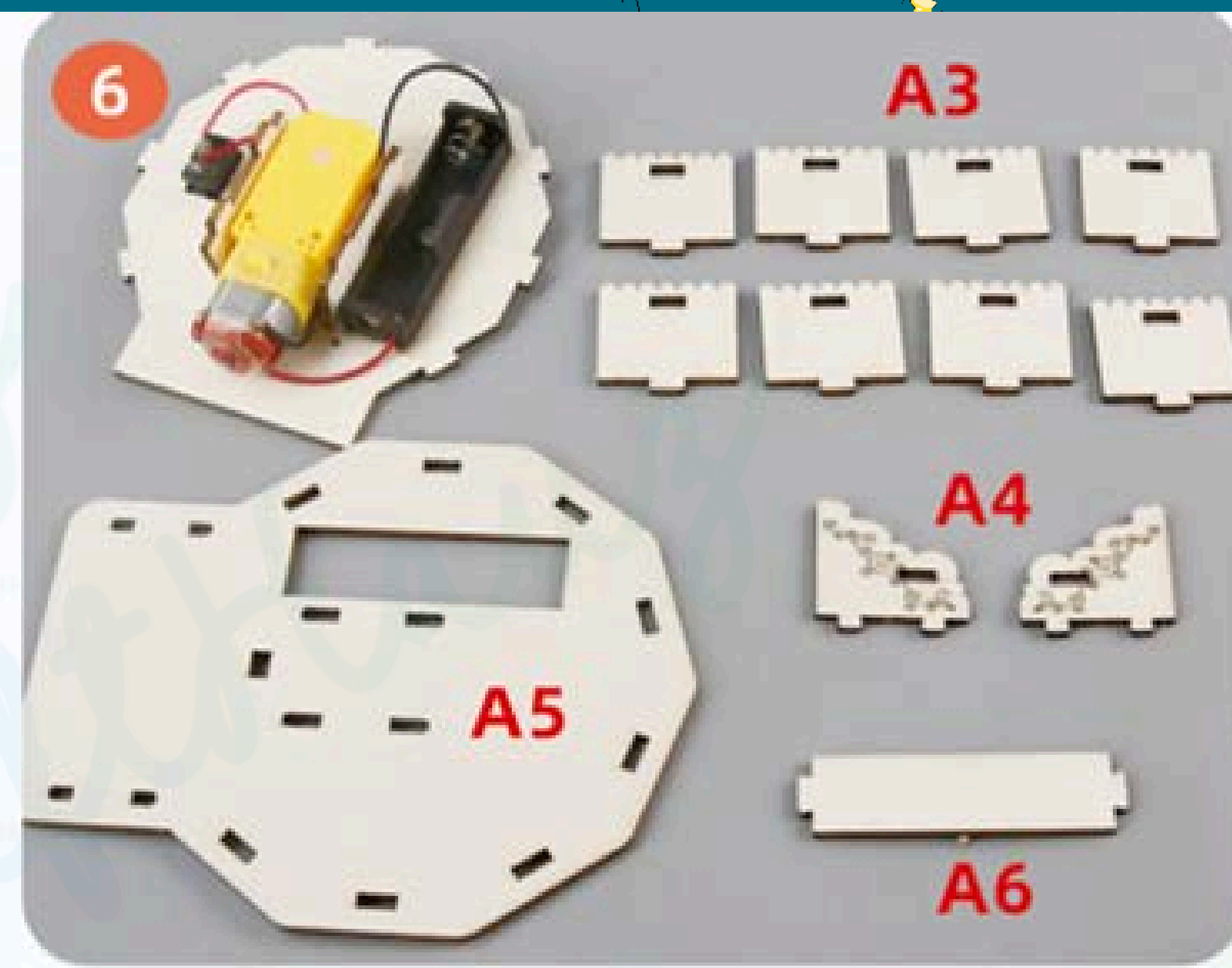
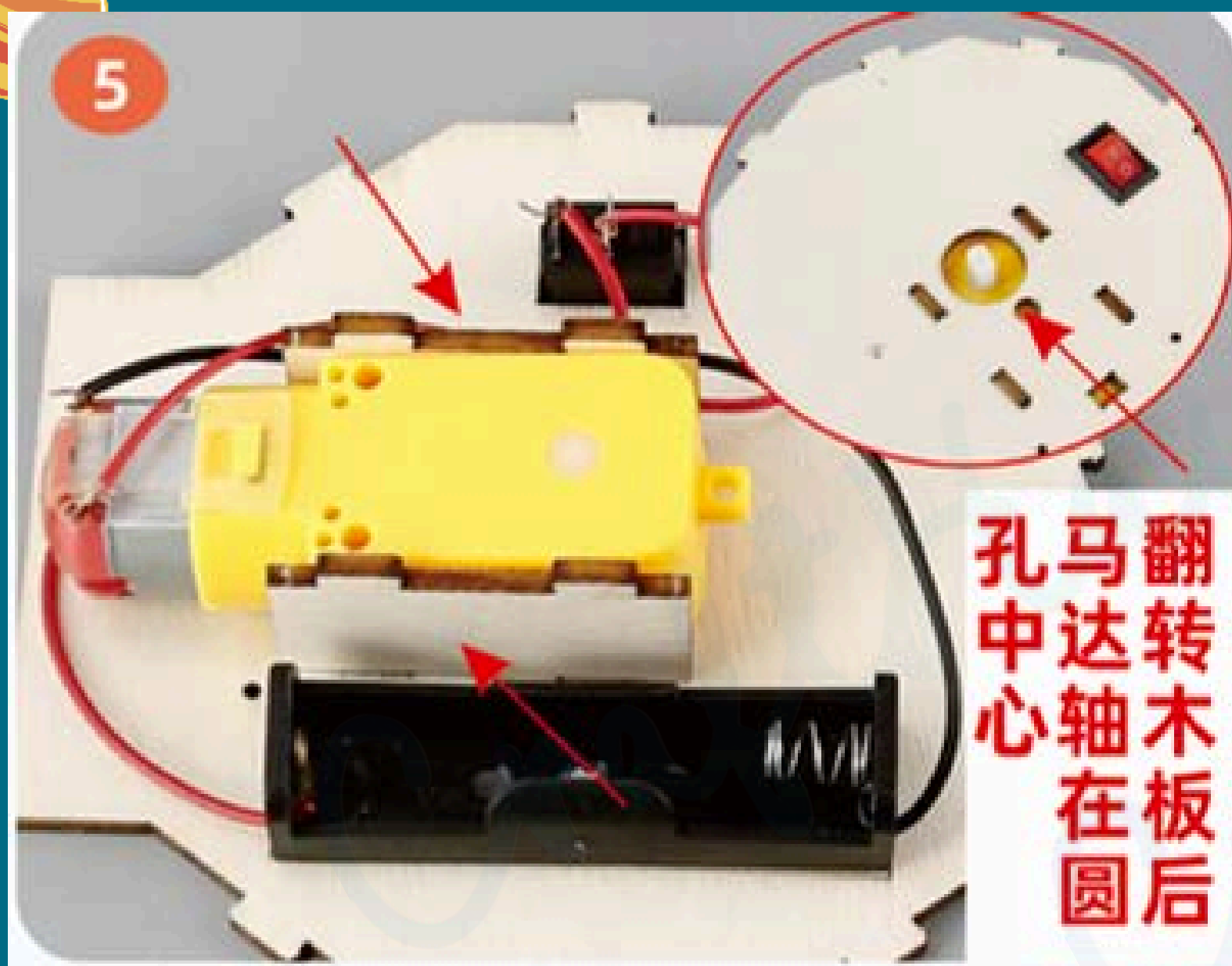
Prepare the above materials With pattern A1, A2 ,4mm screw



As shown, use 4mm screw to secure the battery box on the wooden board with pattern side

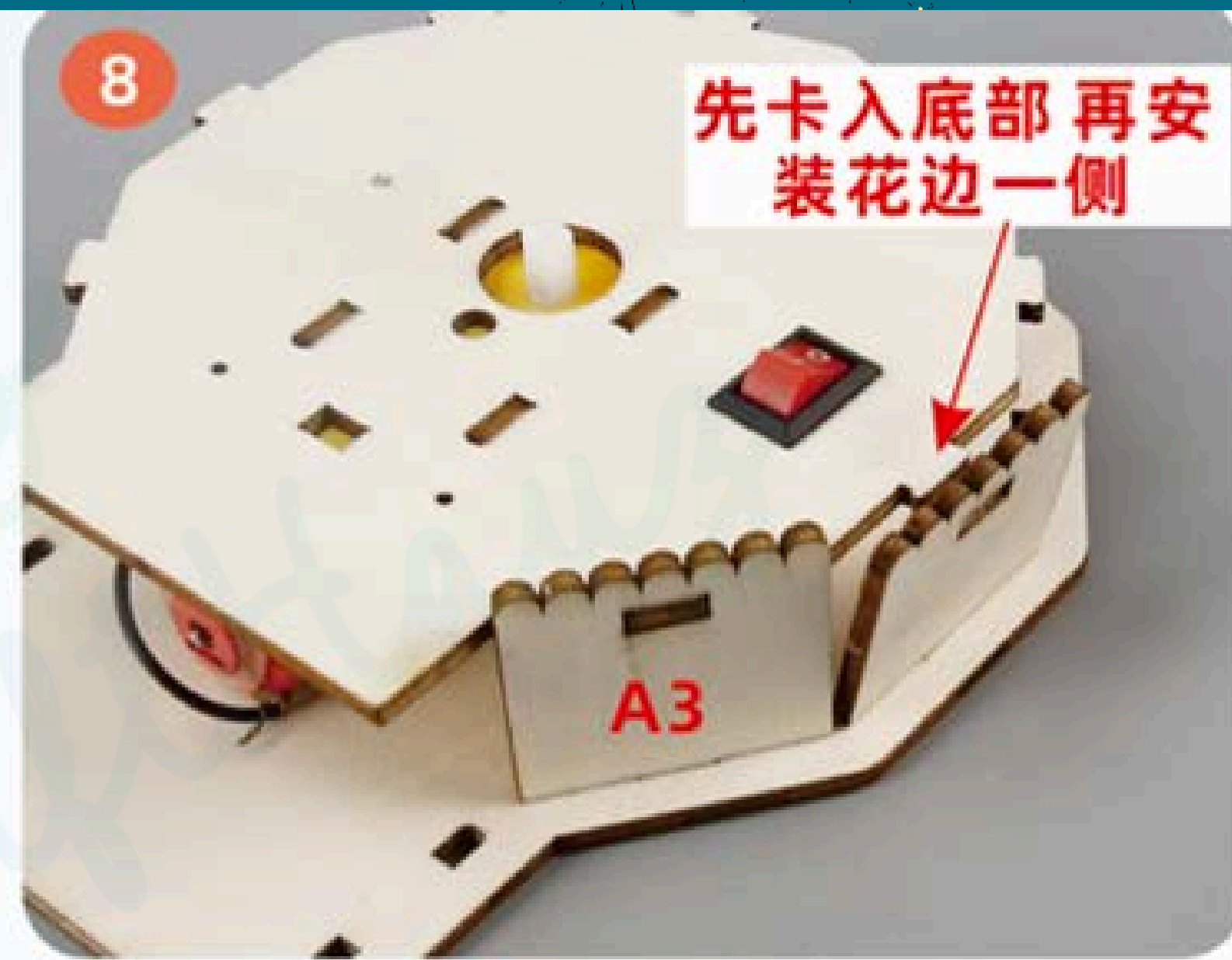


As shown, insert the switch into the non-patterned side of the rotating board



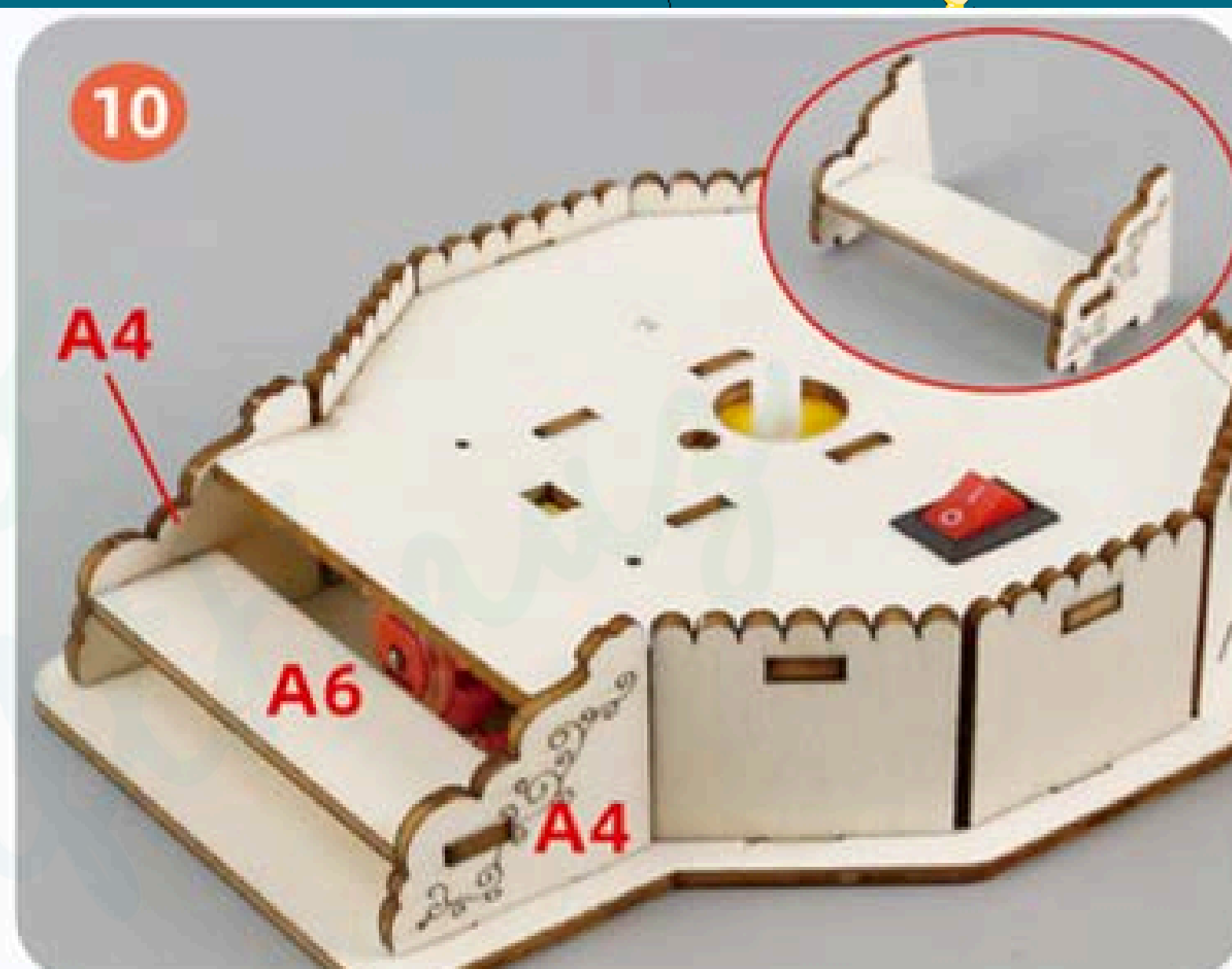
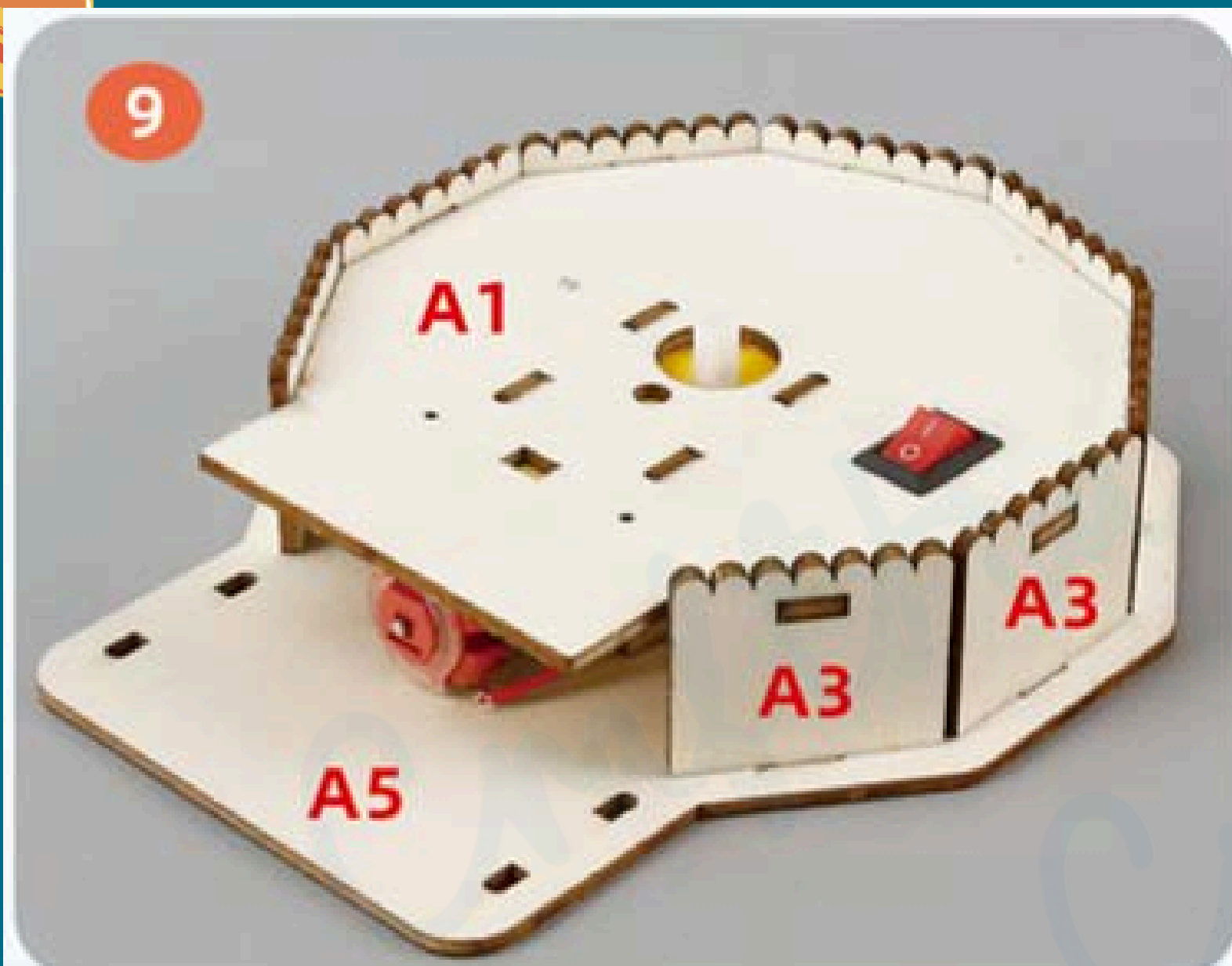
As shown, place the motor on the base board, secure both sides with wooden board clamps (Note: motor shaft facing down)

As shown, prepare the above materials A3, A4, A5, A6



Note: Bottom position aligned with battery box A1, A5

As shown, insert A3 on all side



As shown, install A3 wooden boards in a circle Then compare with reference image to check if boards are installed correctly

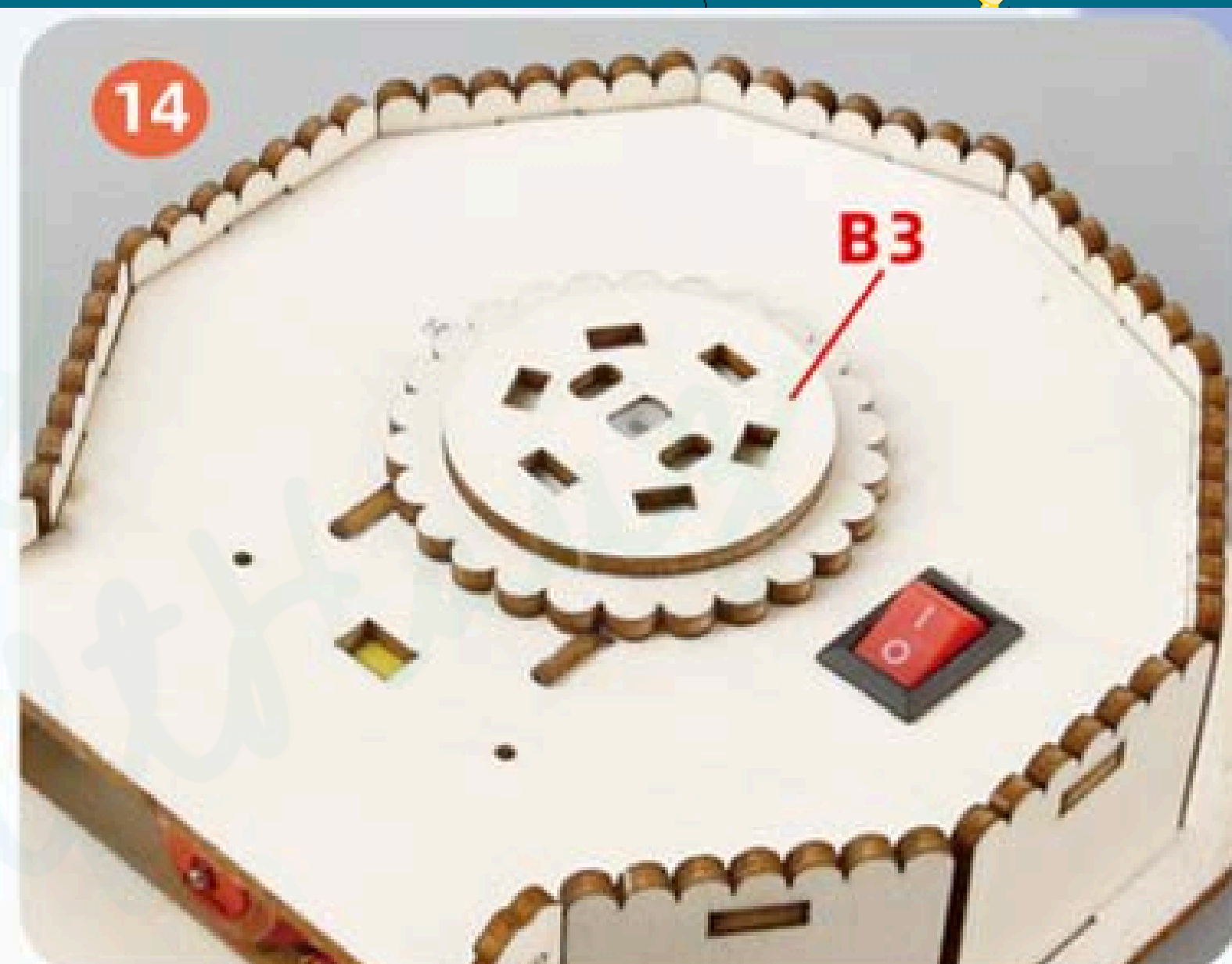
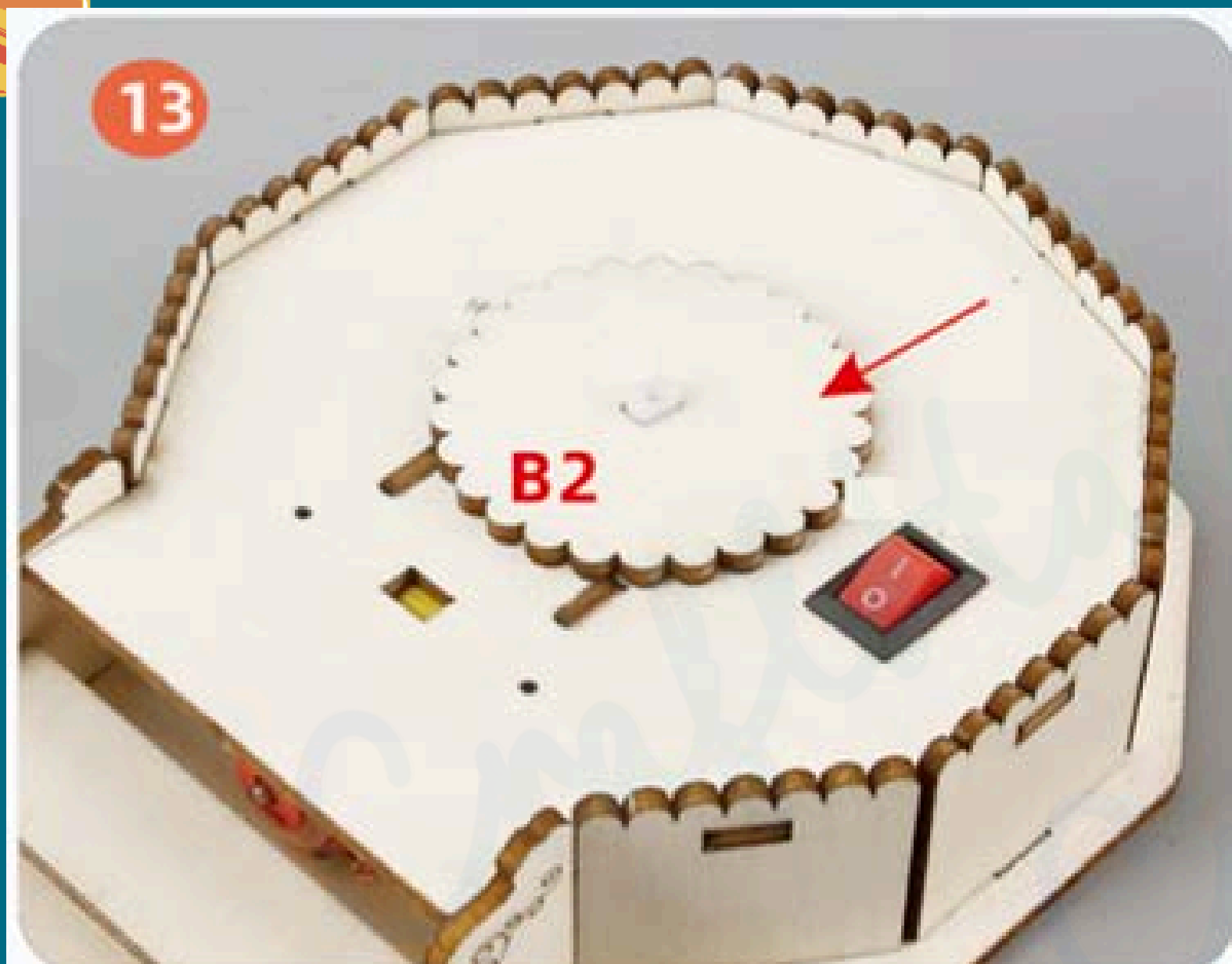
As shown, install A4/A6 wooden boards



As shown, prepare the above materials B1, B2, B3, B4, B5 6mm screw

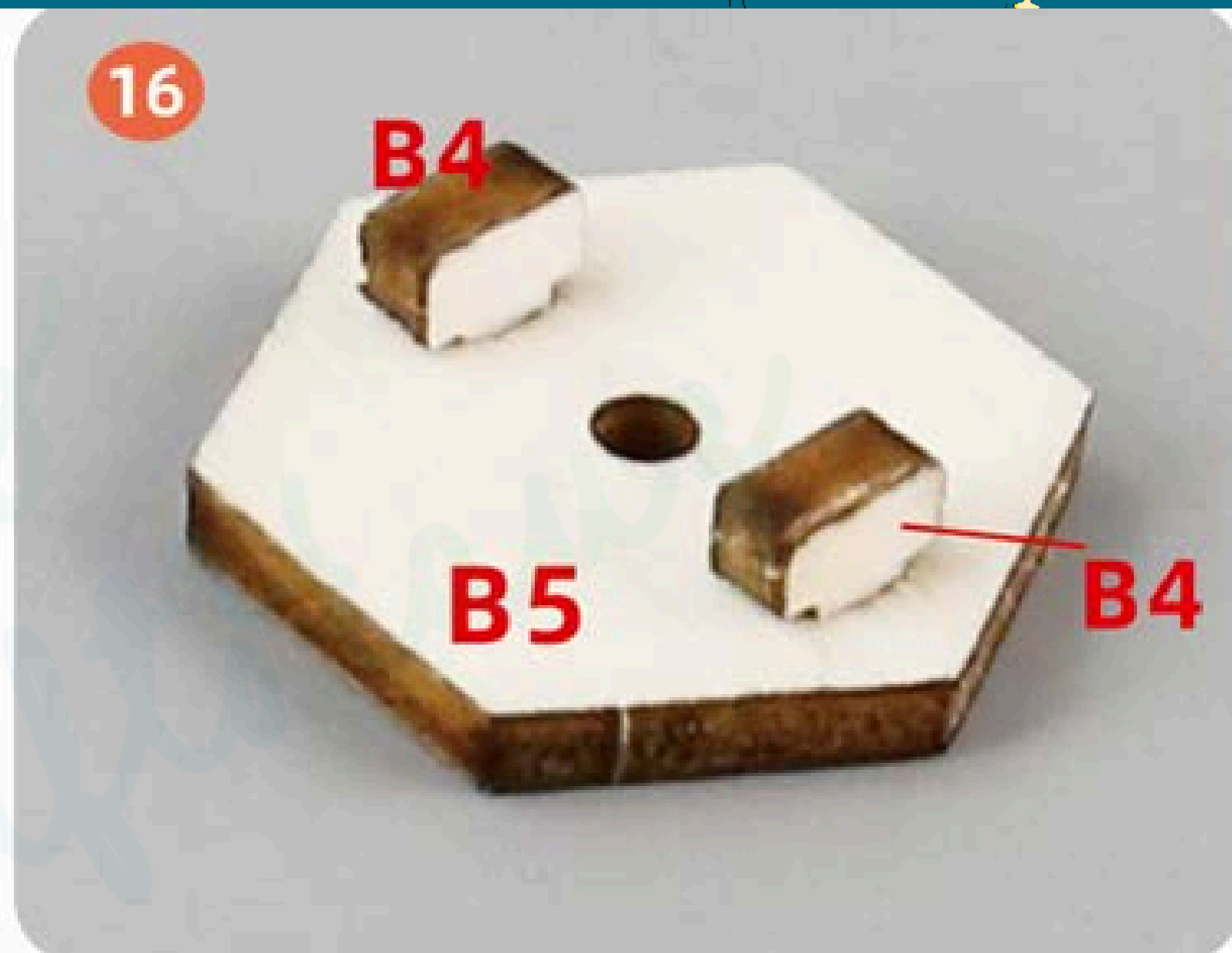


As shown, insert B1 board onto motor shaft



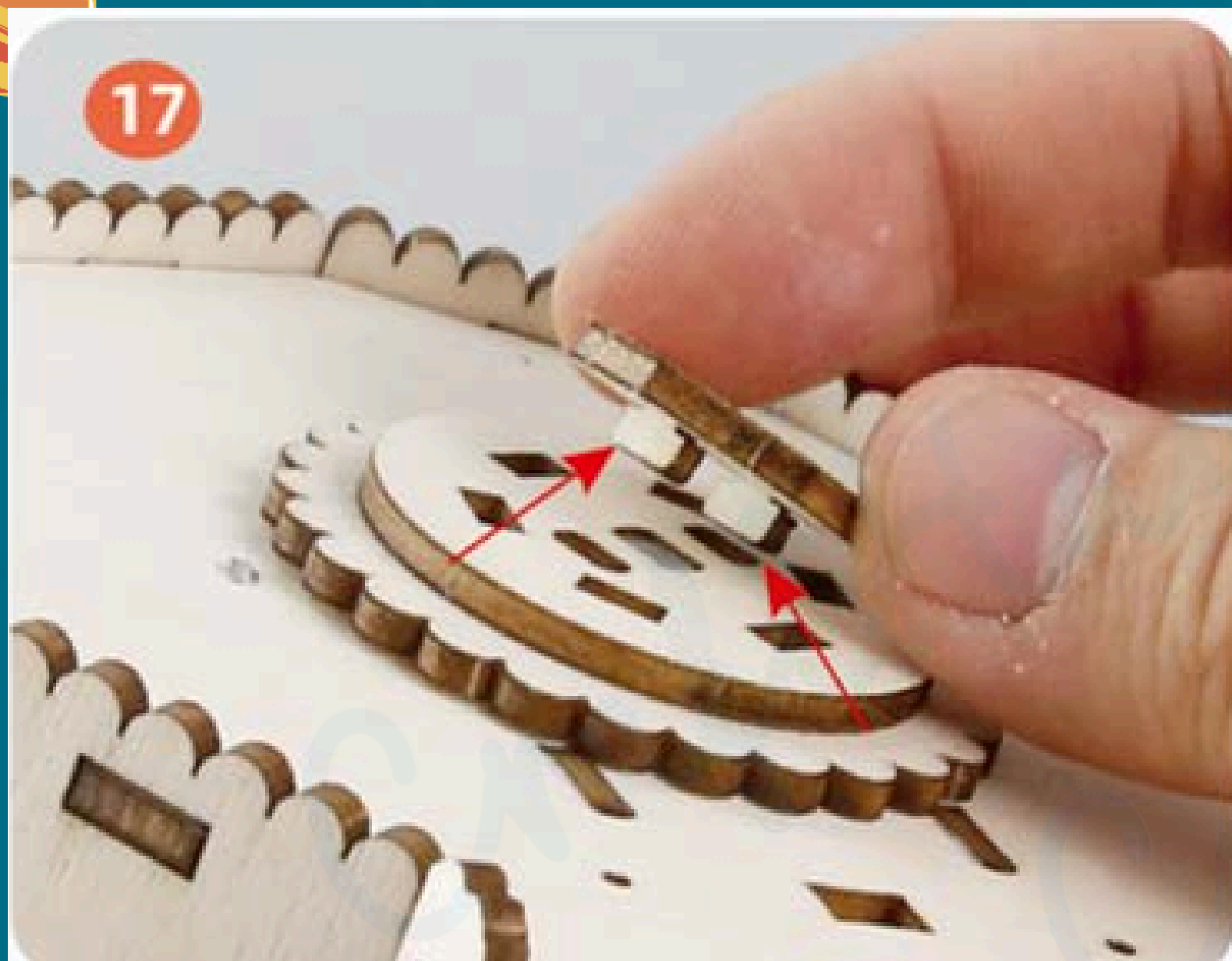
As shown, install B2 wooden board on motor shaft

As shown, install B3 wooden board on motor shaft



As shown, first identify B4 board
Wide head Narrow head "T" shaped
wooden board

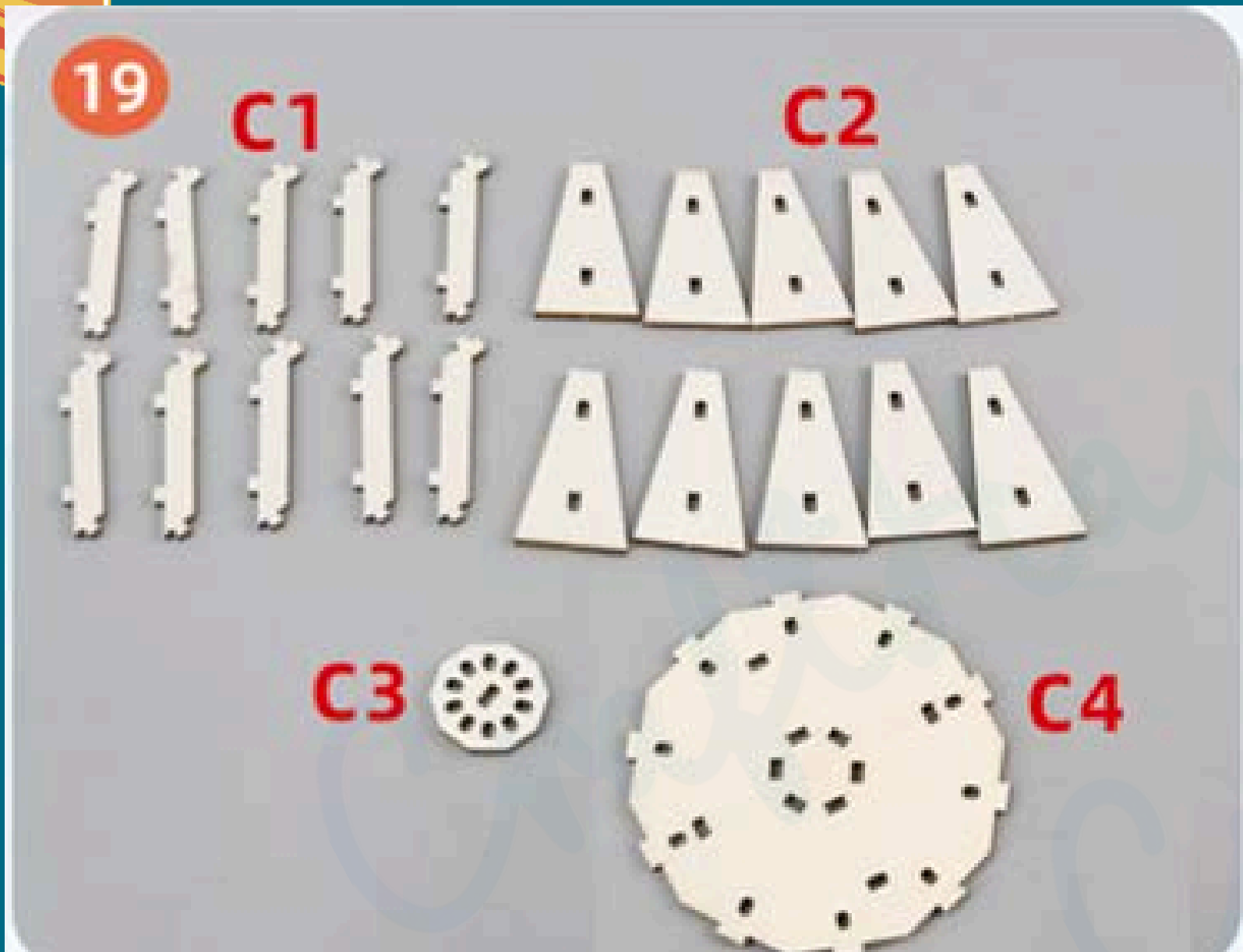
Install B4 on both small holes of B5
board



As shown, align B5 component with hole position and install on B3 wooden board B4 wide head facing down



As shown, install B5 component and secure with 6mm screw
Screw should not be too tight



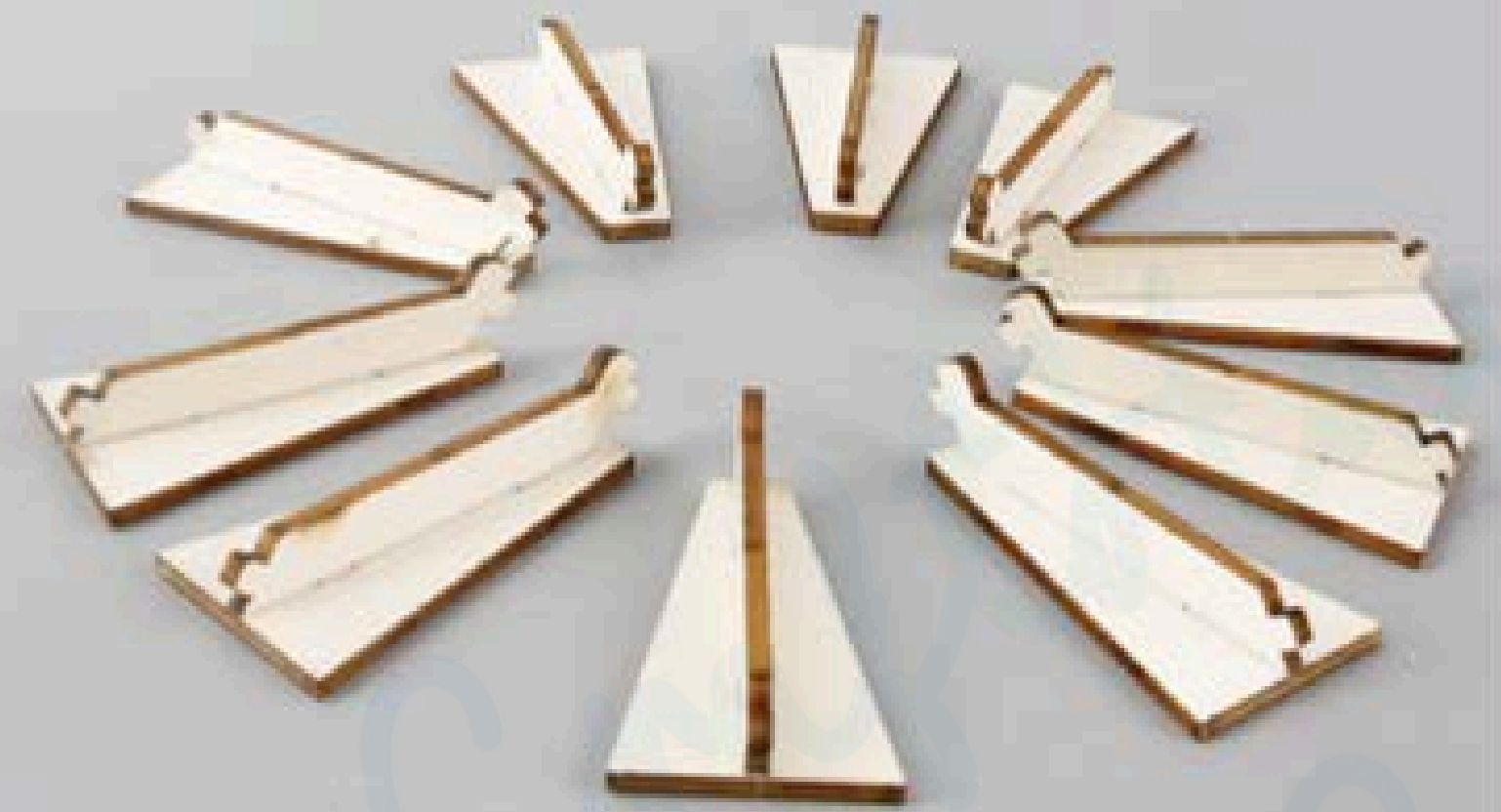
As shown, prepare the above materials C1, C2, C3, C4



As shown, assemble C1/C2 boards
Note installation direction



21



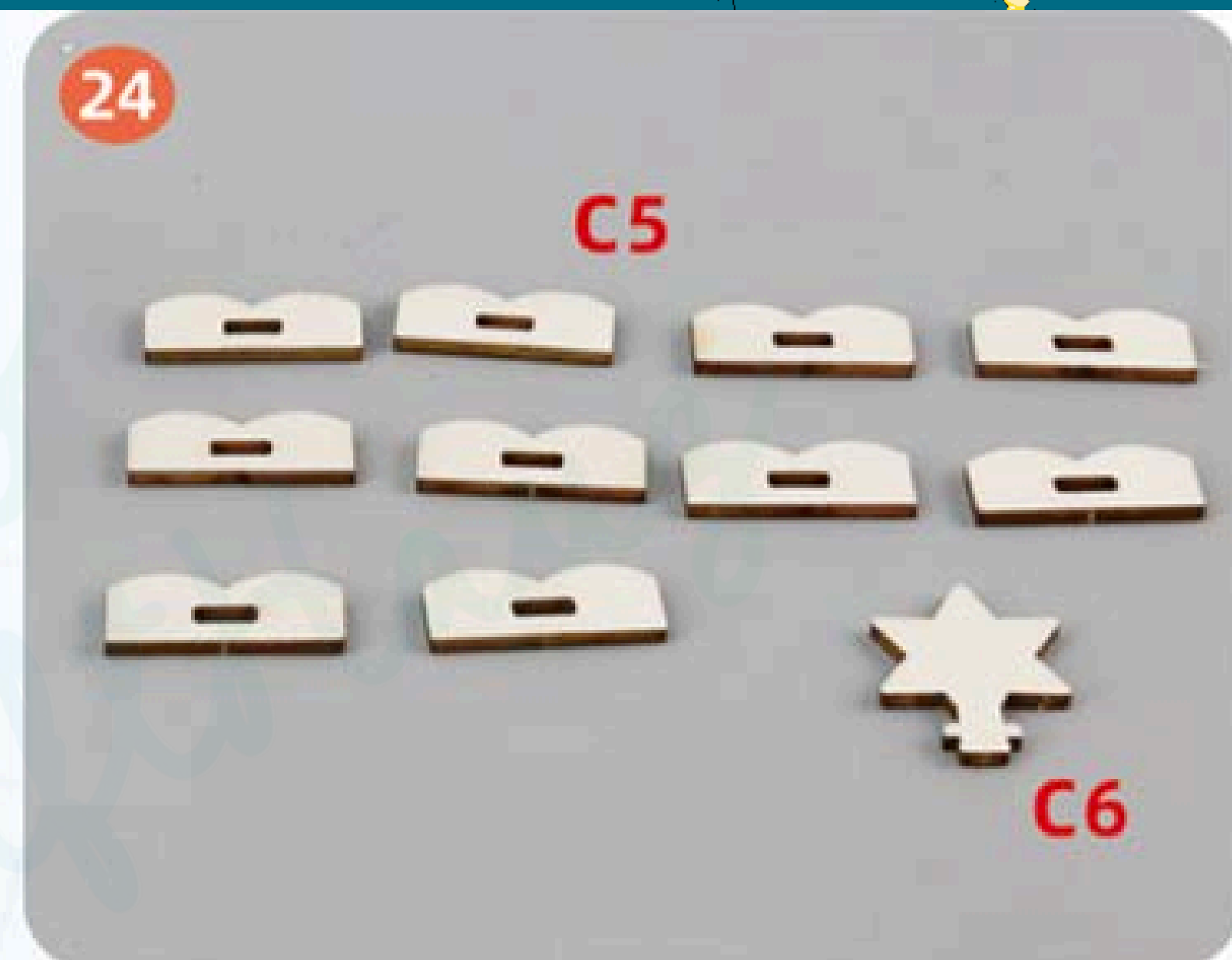
22

请勿重复
插拔木板



As shown, install ten C1/C2 components

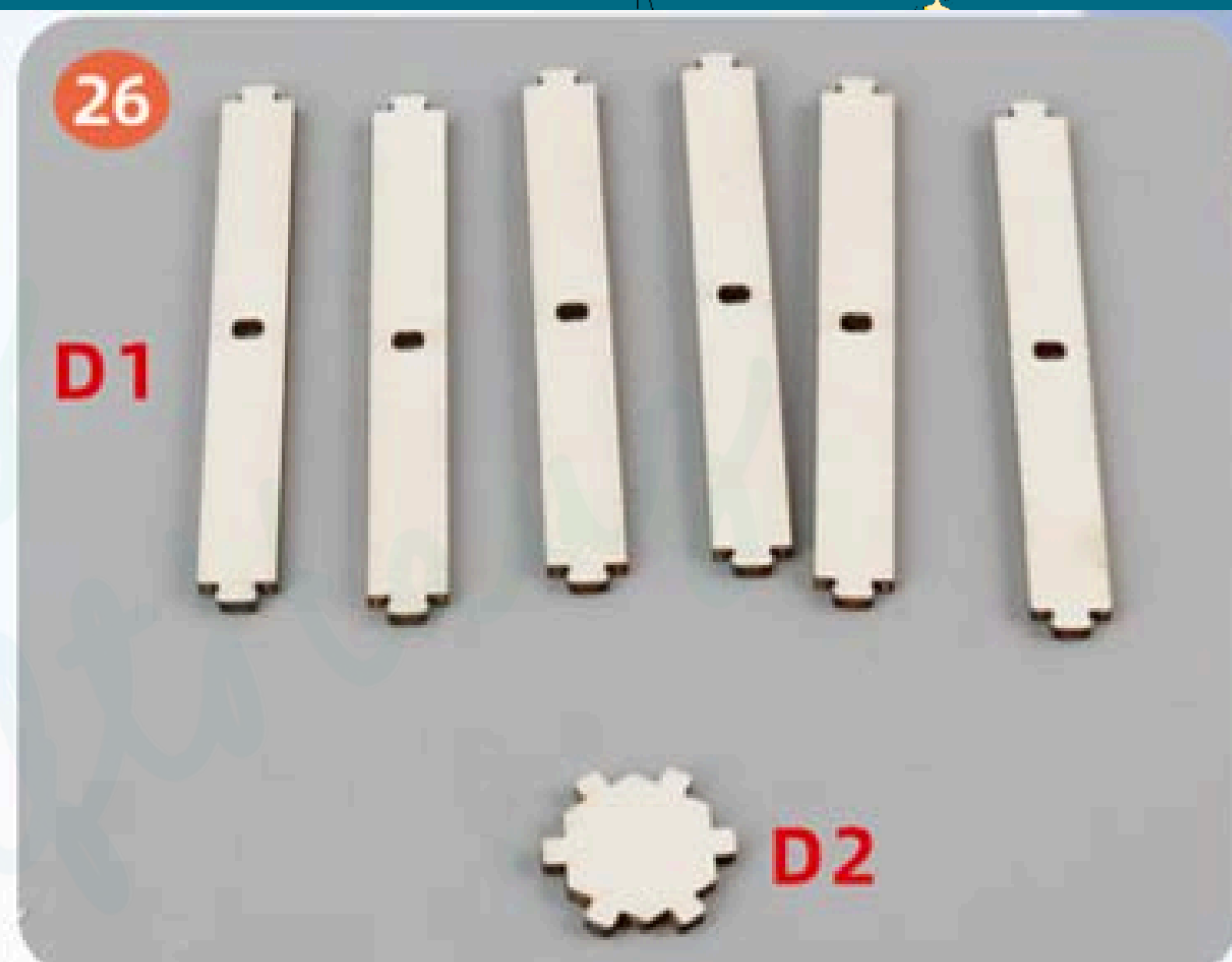
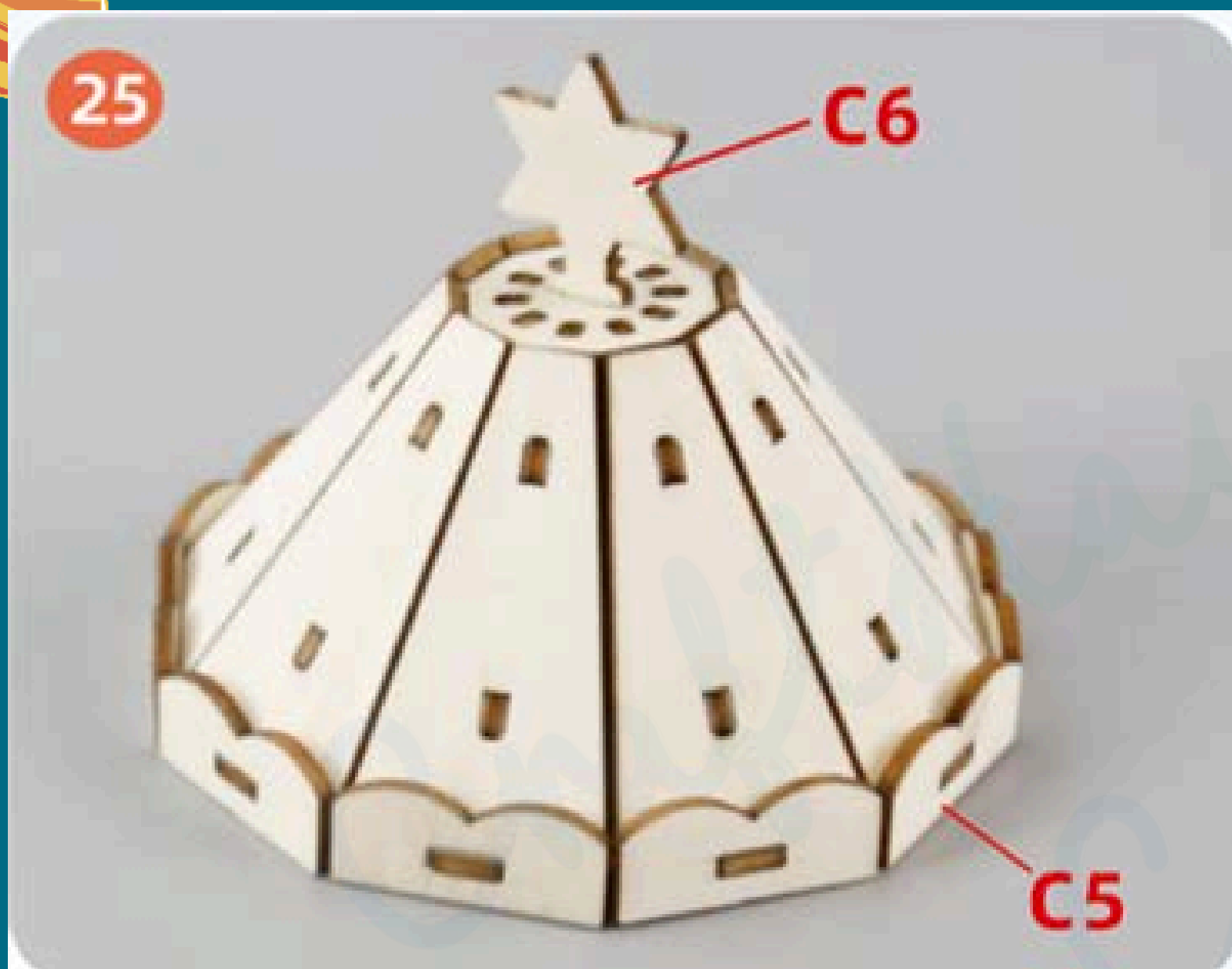
As shown, install ten C1/C2 components around C3 board in a circle
Do not repeatedly insert and remove boards



As shown, combine step 22 components with C4 board assembly

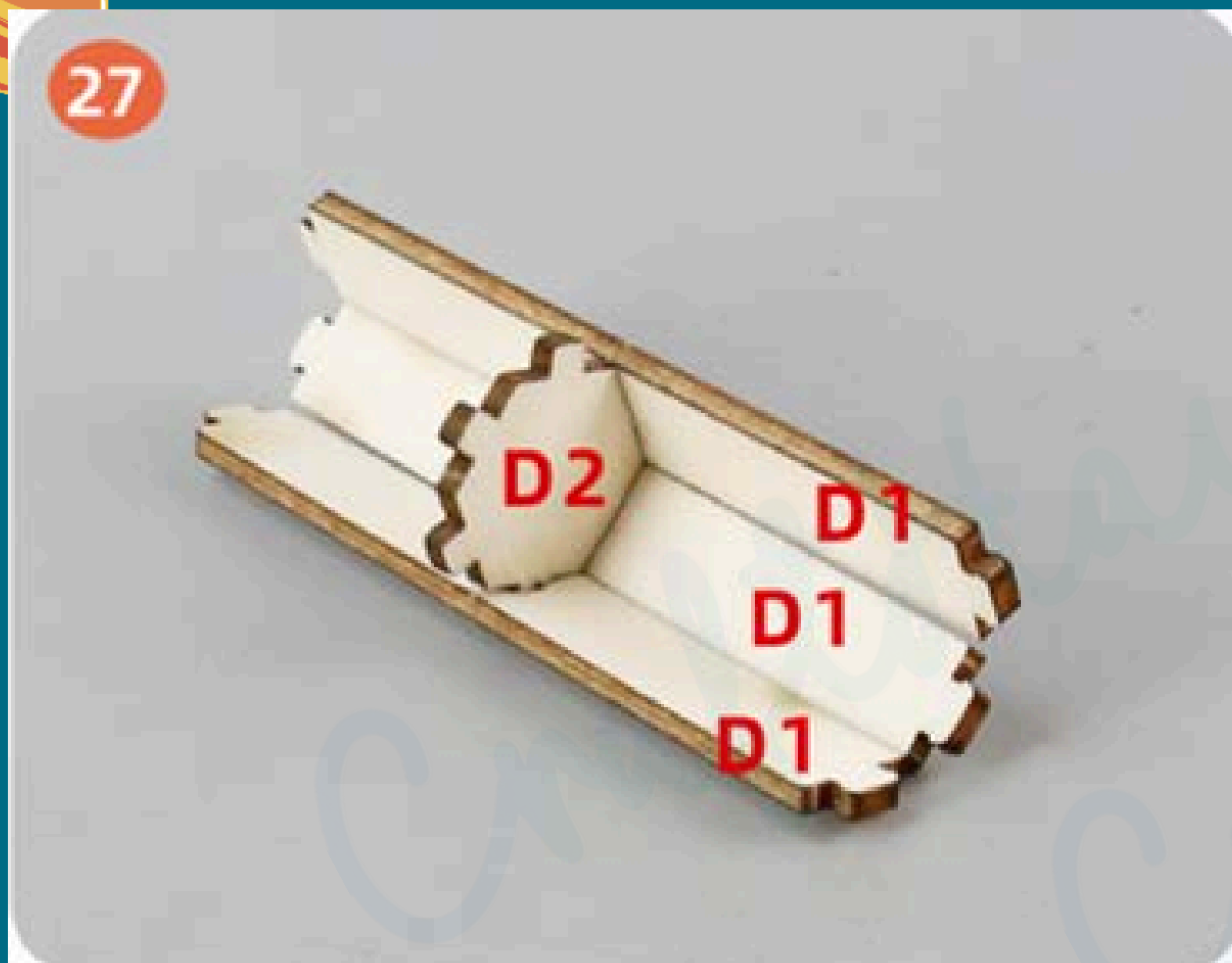
As shown, prepare the above materials C5, C6

This step requires patience to align holes, do not rush

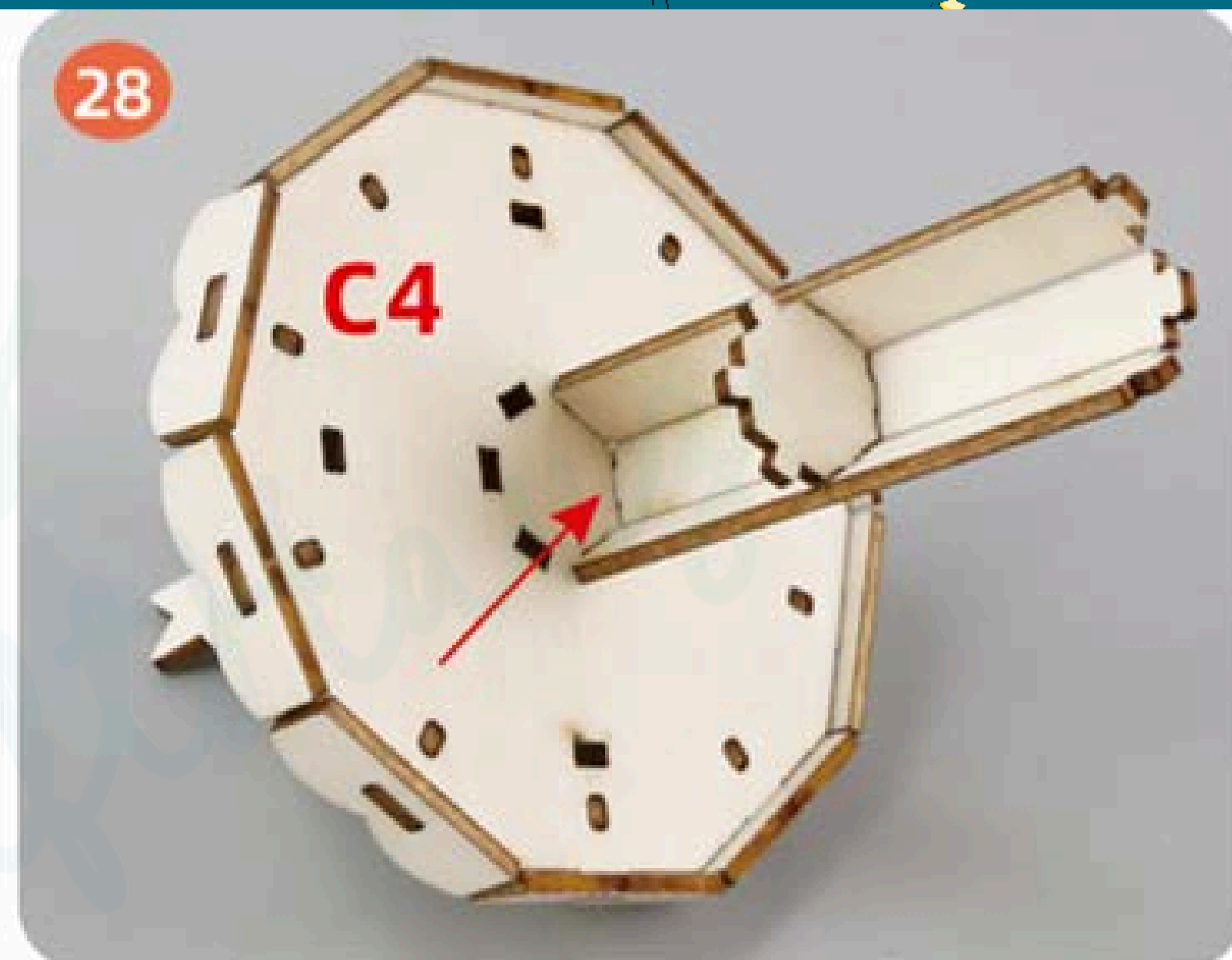


As shown, install C6 board on top,
install C5 boards around bottom in a
circle
Note C5 installation direction

As shown, prepare the above materials
D1, D2



First confirm the position and quantity of wooden pieces to be installed in the diagram D1, D2



As shown, install pillars on C4 wooden board

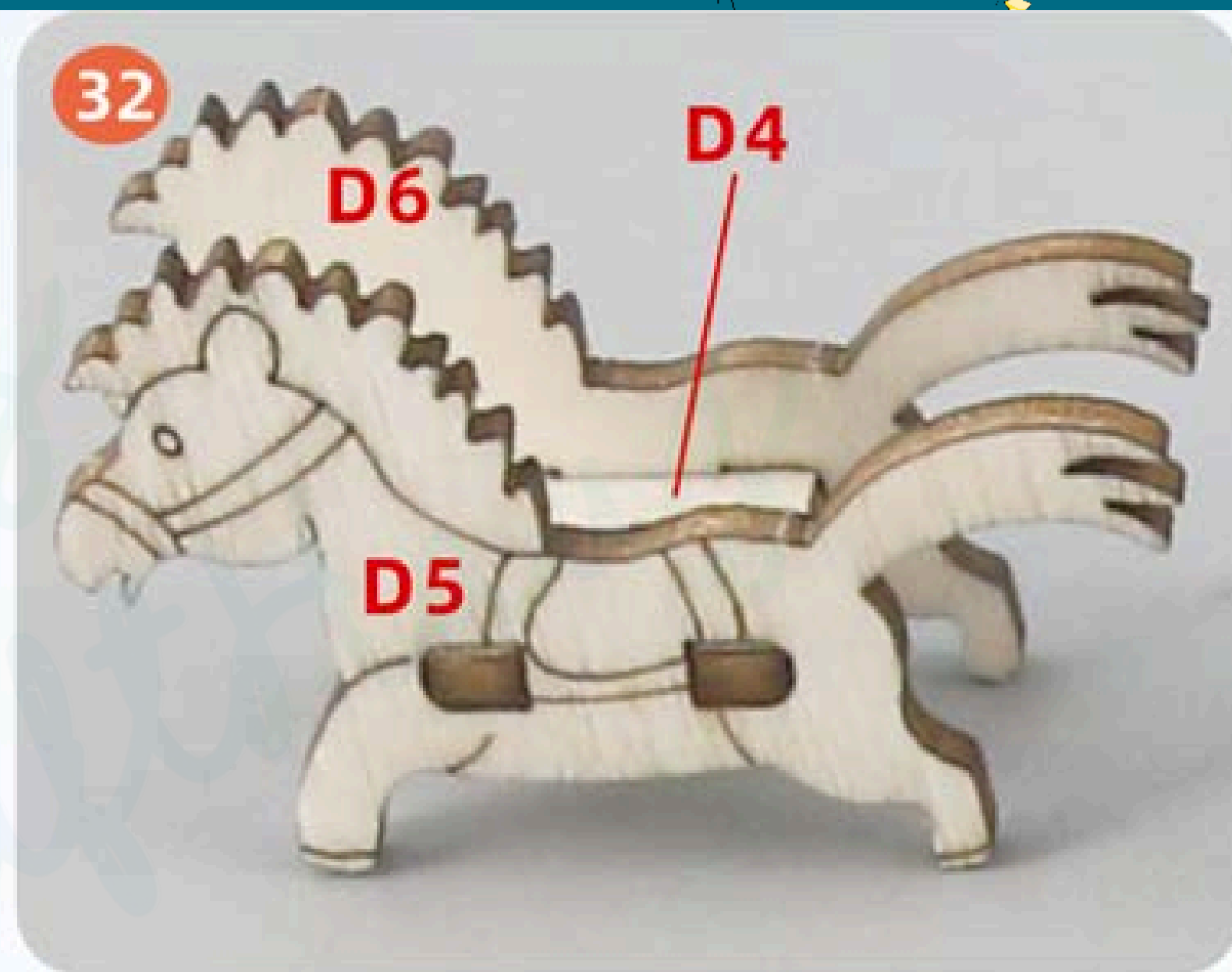


As shown, completely install pillars
Please do not repeatedly insert and
remove boards D2

As shown, prepare the above materials
D3, D4, D5, D6



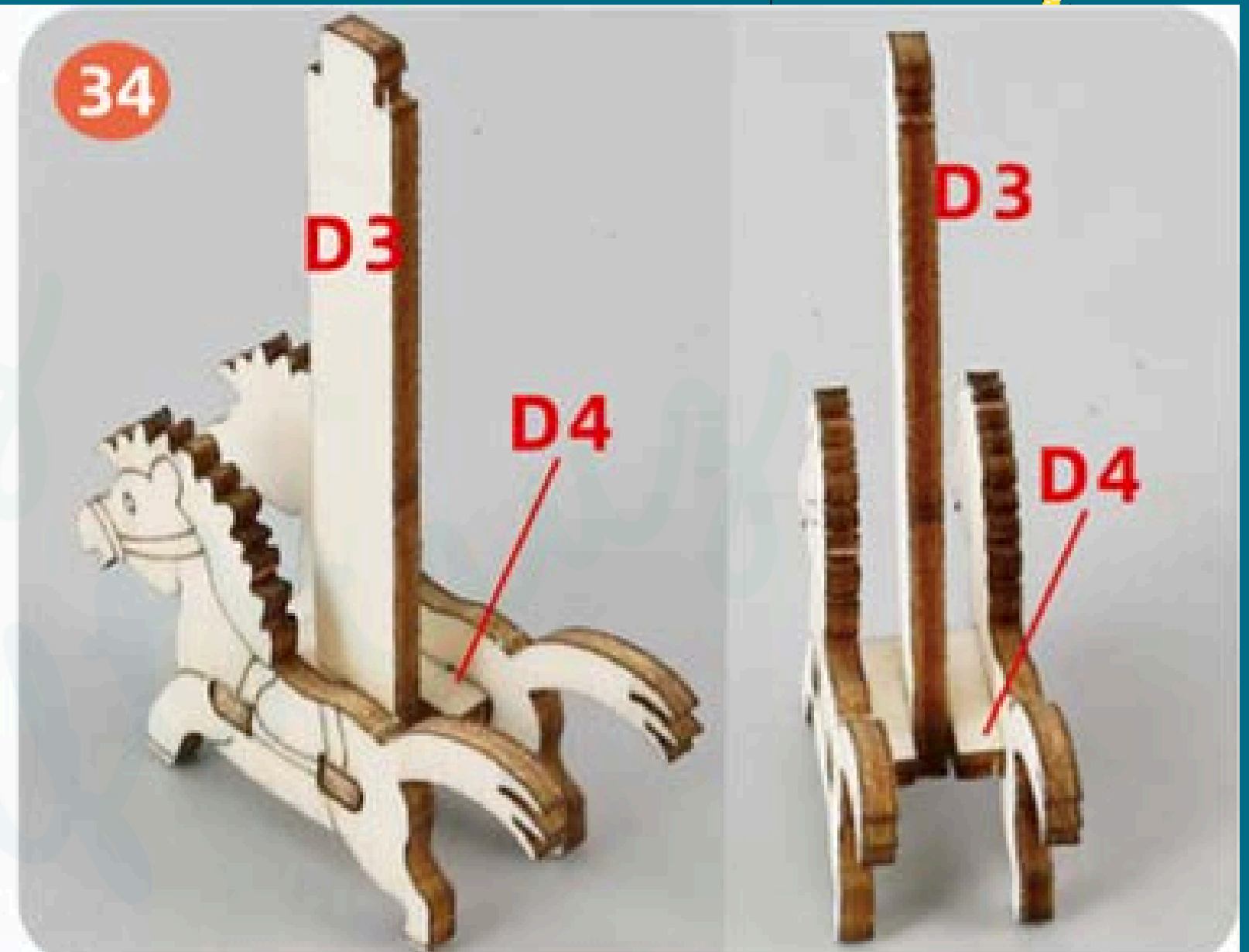
Install wooden boards, note D4 direction



As shown, completely assemble one small horse D4, D5, D6



As shown, assemble four small horses using the same method



As shown, insert D3 into D4 board groove



As shown, assemble four small horses using the same method



As shown, install small horse components on C4 wooden board

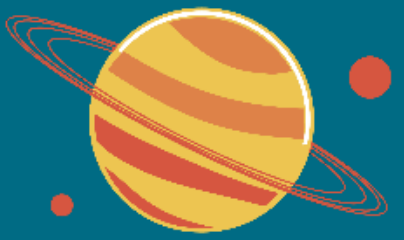
Do not repeatedly insert and remove boards



As shown, install the complete components



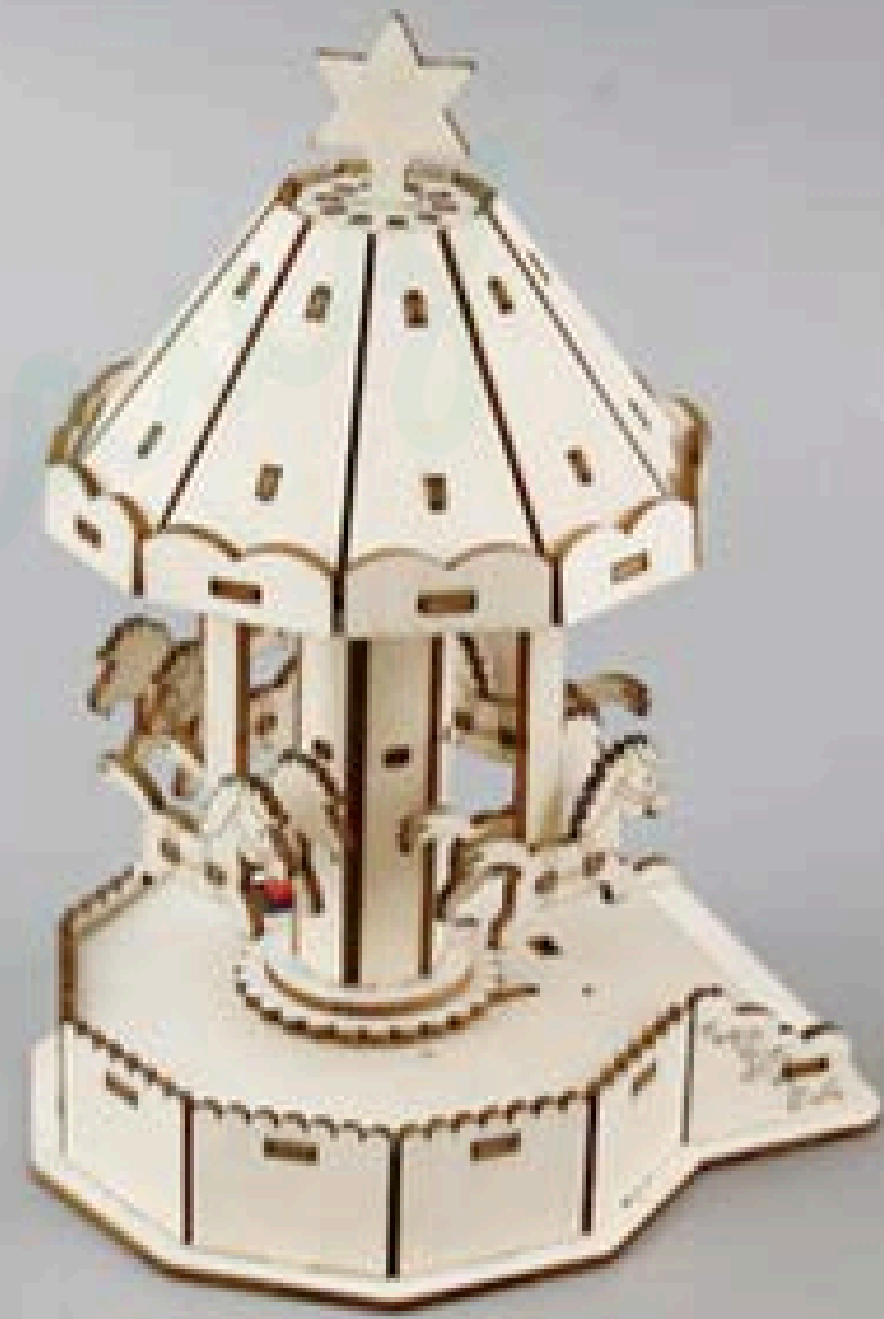
As shown, assemble base and wooden horse components



39



40

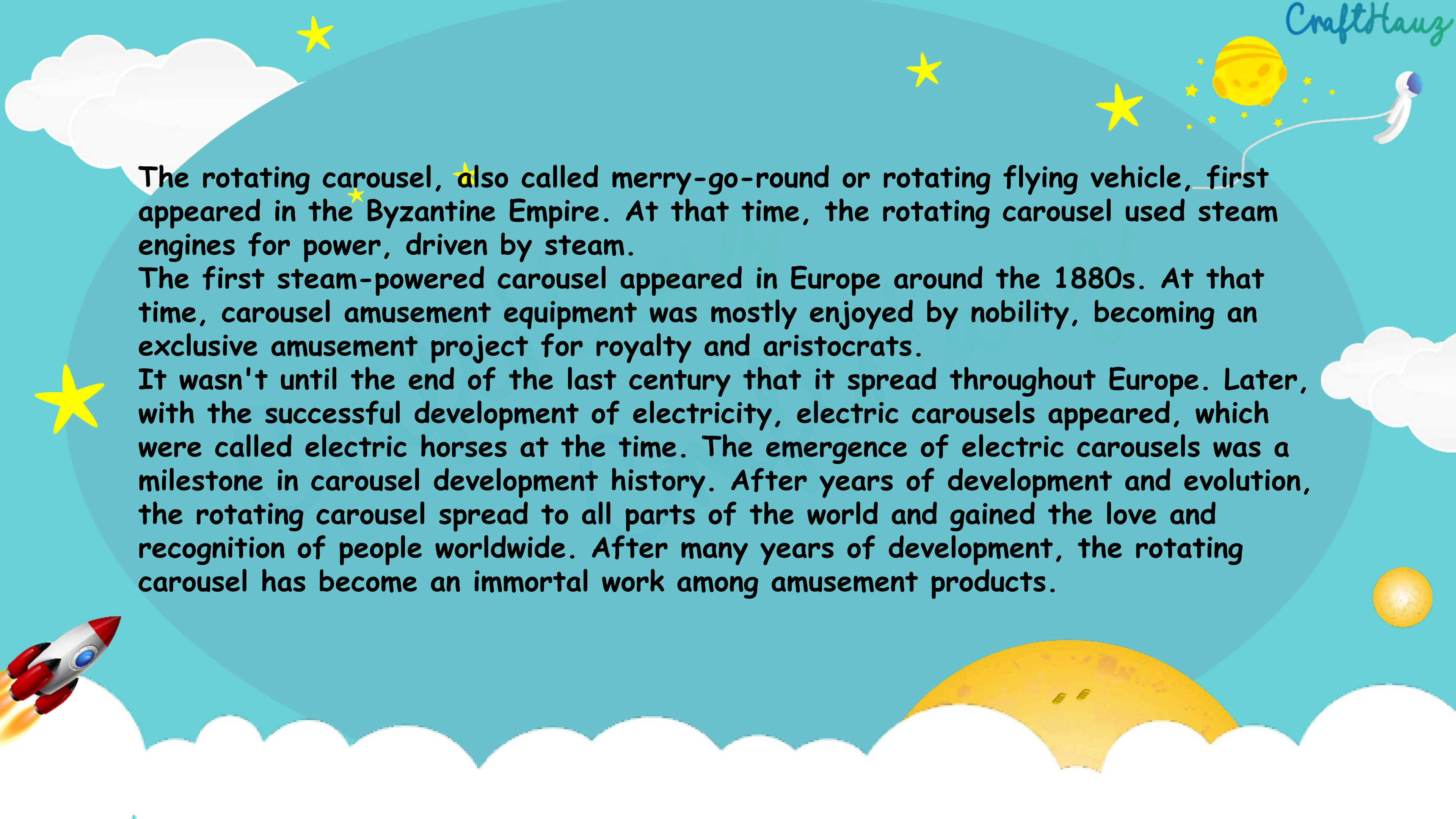


Experiment Principle





This wooden rotating carousel craft uses a DC motor as the core power source. When powered, the coil inside the motor rotates under force in the magnetic field, converting electrical energy into mechanical energy, and transmits power to the central pillar, allowing the pillar to drive the wooden horses to rotate smoothly. The mortise and tenon interlocking structure of the top canopy and the slot counterweight design of the base ensure overall stability, while the circuit formed by the series-connected battery, switch and motor enables the carousel's start, stop and speed adjustment.



The rotating carousel, also called merry-go-round or rotating flying vehicle, first appeared in the Byzantine Empire. At that time, the rotating carousel used steam engines for power, driven by steam.

The first steam-powered carousel appeared in Europe around the 1880s. At that time, carousel amusement equipment was mostly enjoyed by nobility, becoming an exclusive amusement project for royalty and aristocrats.

It wasn't until the end of the last century that it spread throughout Europe. Later, with the successful development of electricity, electric carousels appeared, which were called electric horses at the time. The emergence of electric carousels was a milestone in carousel development history. After years of development and evolution, the rotating carousel spread to all parts of the world and gained the love and recognition of people worldwide. After many years of development, the rotating carousel has become an immortal work among amusement products.