

SCIENCE QUTSAV<sup>®</sup>  
Science is awesome

**LED WIZARD**



# **CONTENTS**

**1.OVERVIEW**

**2.ENGINEERING CHALLENGE**

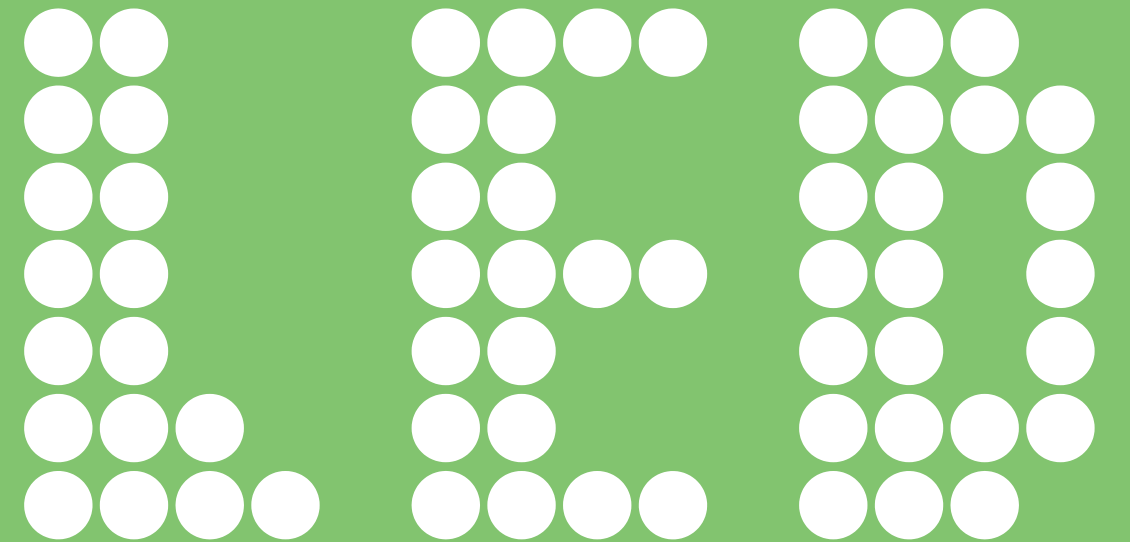
**3.MATERIALS REQUIRED**

**4.PROCEDURE**

**5.HOW IT WORKS**

# Overview

Step into the world of LEDs with the LED Wizard Experiment! Learn how to light up LEDs using simple circuits. Explore colors and patterns in this hands-on adventure. Discover the magic of electronics!"



# Engineering challenge

Design a Dazzling LED Display! Use circuits to create patterns and colors with LEDs. Experiment with connections to craft your unique light show. Unleash your creativity in this illuminating engineering adventure!

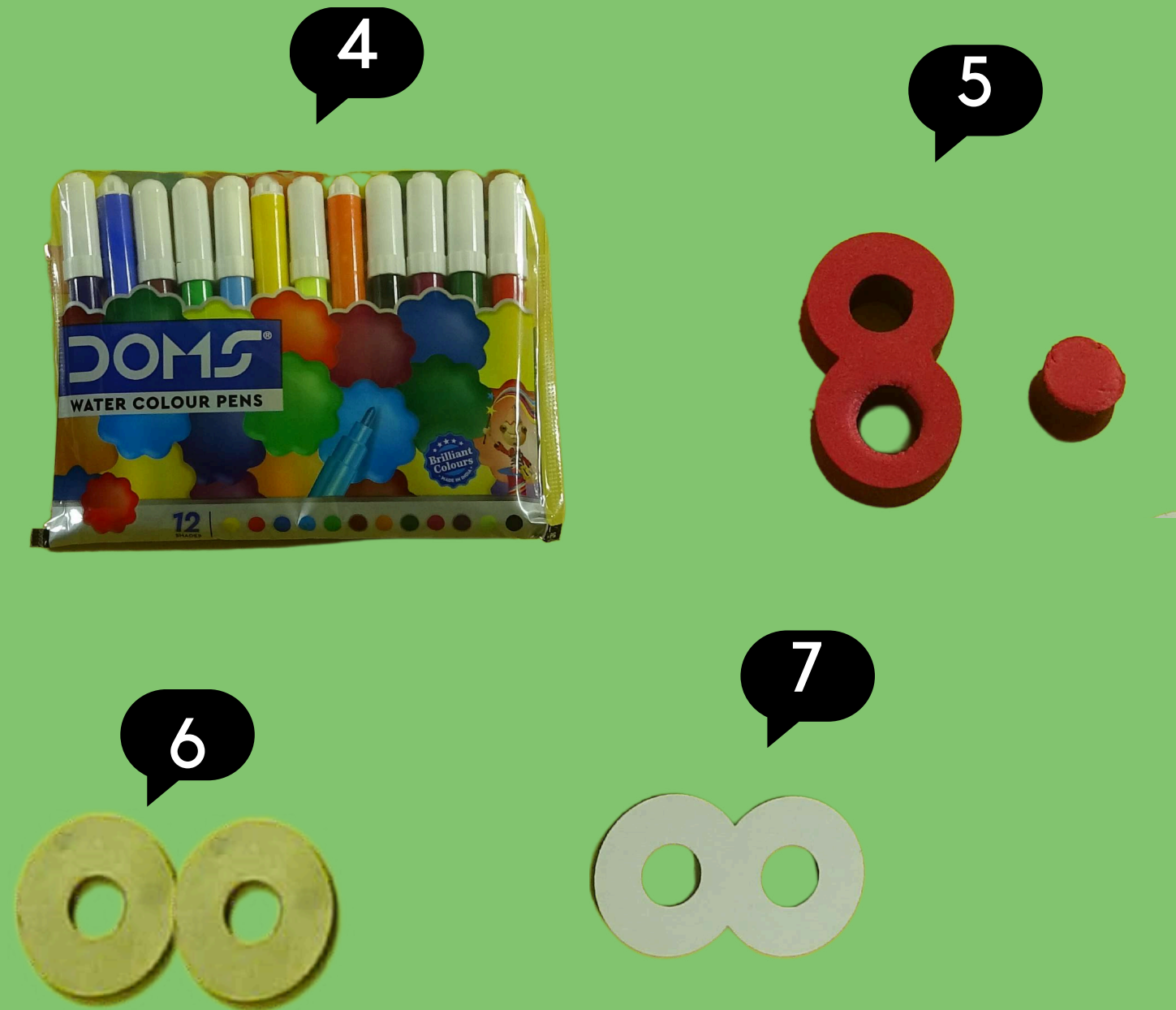


# Materials Required



Sr.No	Name	Qty
1	MDF Parts	1
2	Cell	1
3	LED	1

# Materials Required

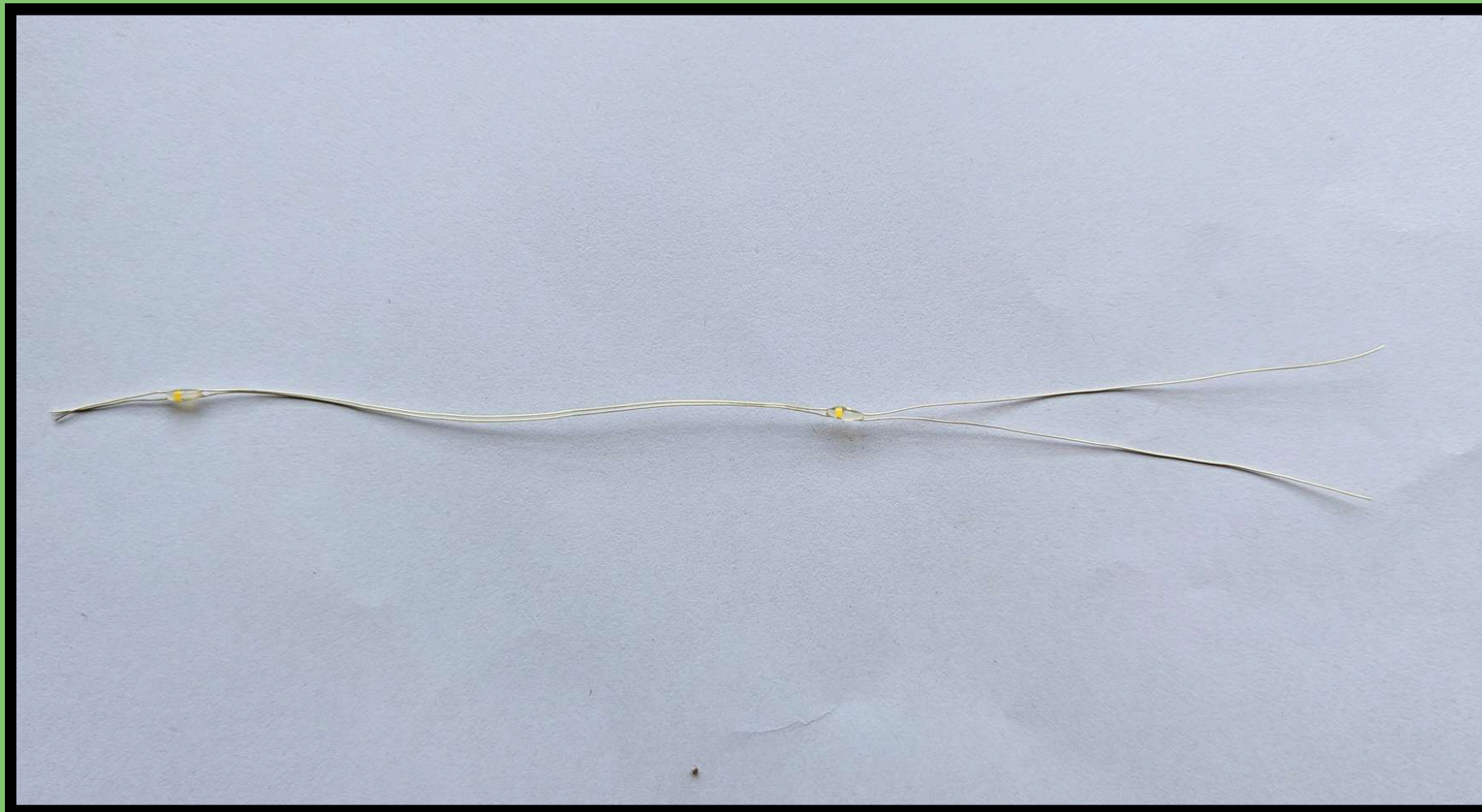


Sr.No	Name	Qty
4	Color Pens	1
5	Cell Holder Foam	1
6	Washer	1
7	Double side sticker	1

**ATTENTION PLEASE**



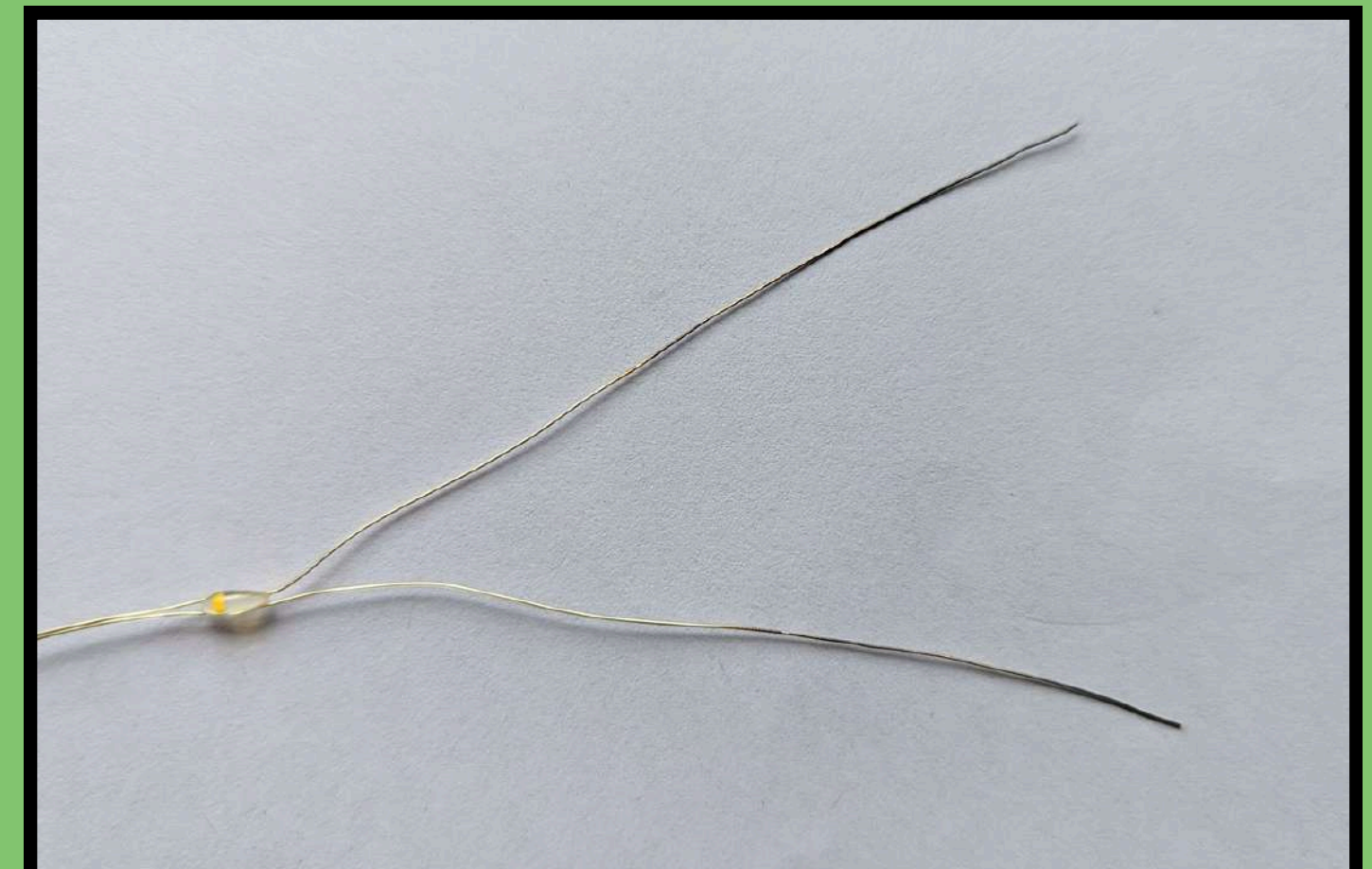
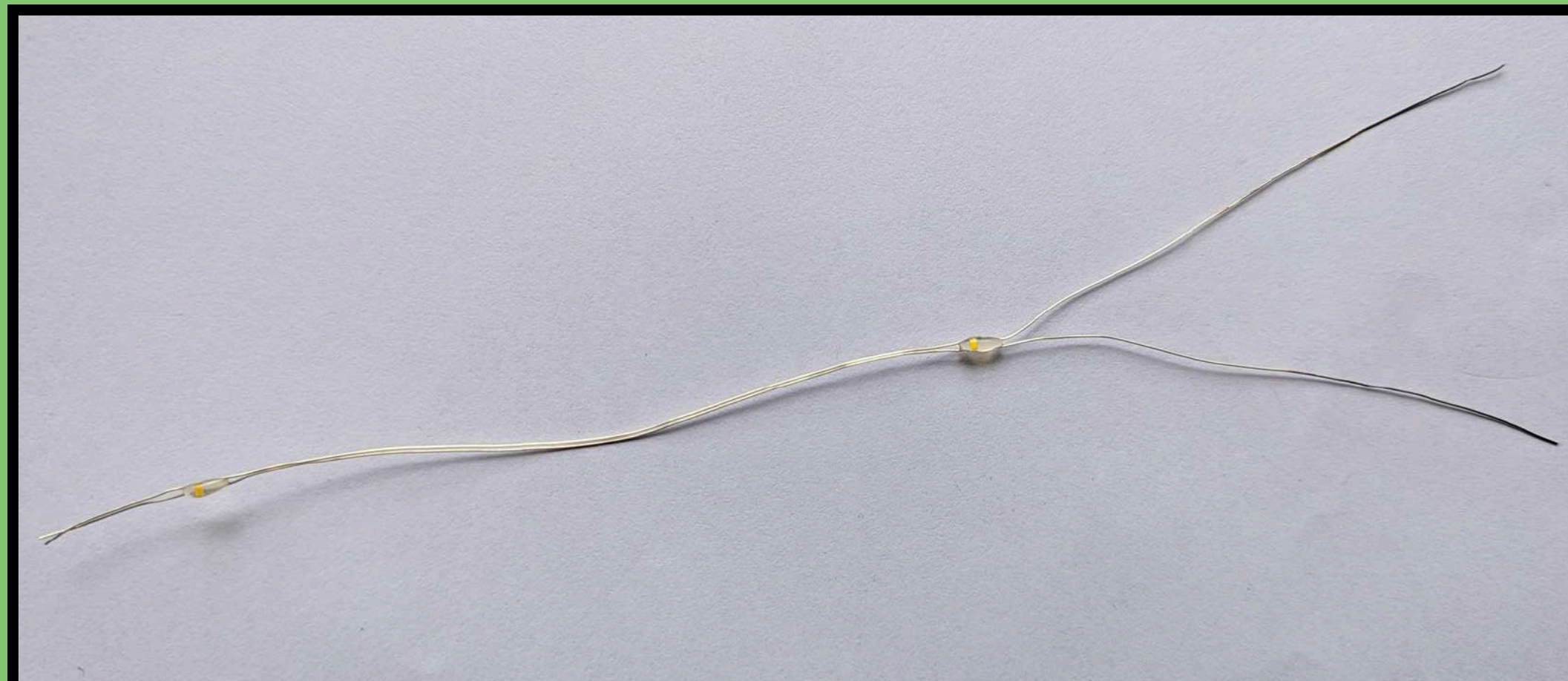
**The LED strip is coated with a golden-colored surface, as shown in the image.**



**ATTENTION PLEASE**



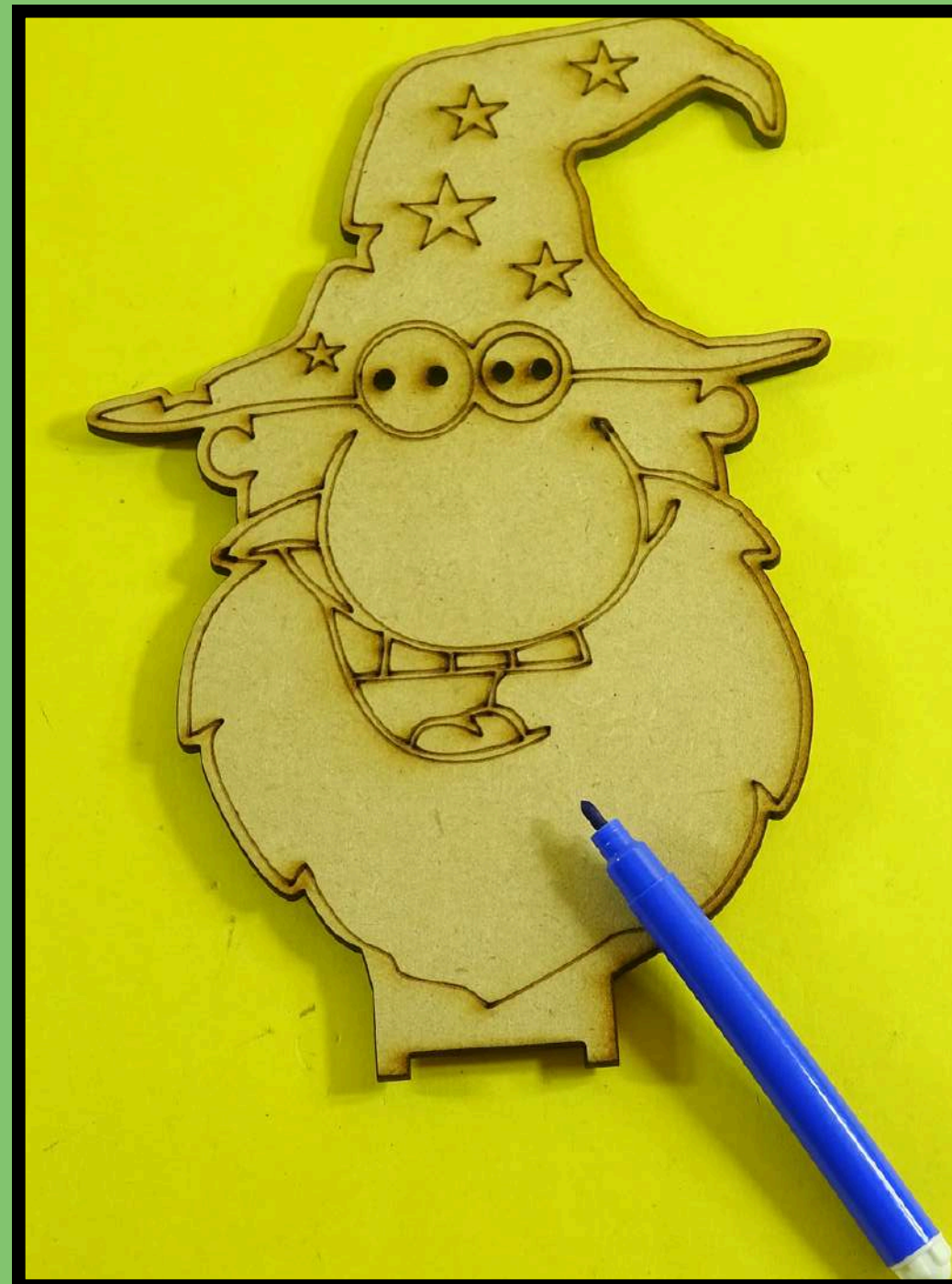
**NOTE - Before connecting the LED in the circuit, check whether the LED's long wire ends are burned or scarred. They should be black in color. If they are still coated with a golden color on both ends, rub or scratch them using scissors or any rough surface material as shown.**



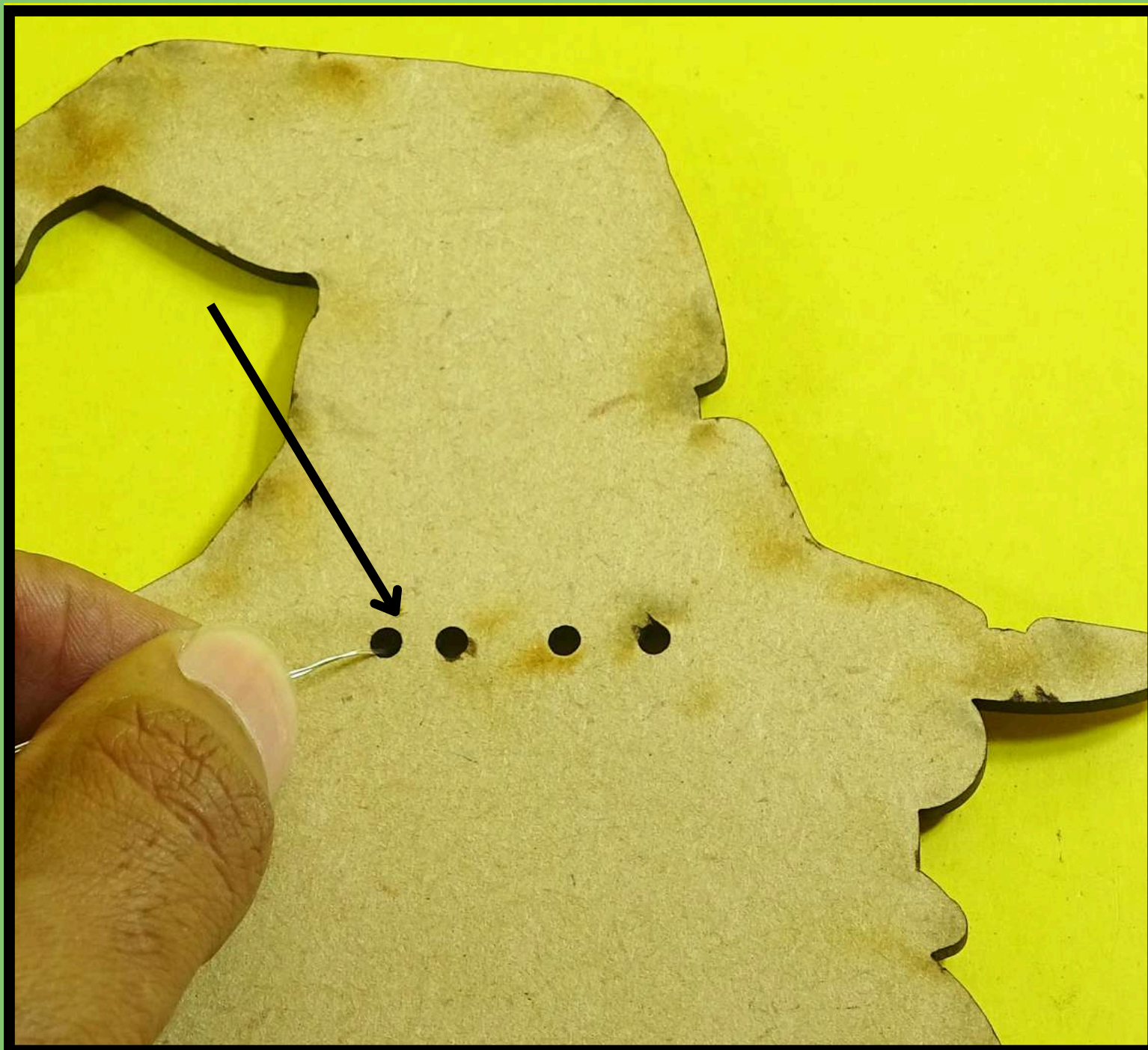


# Procedure

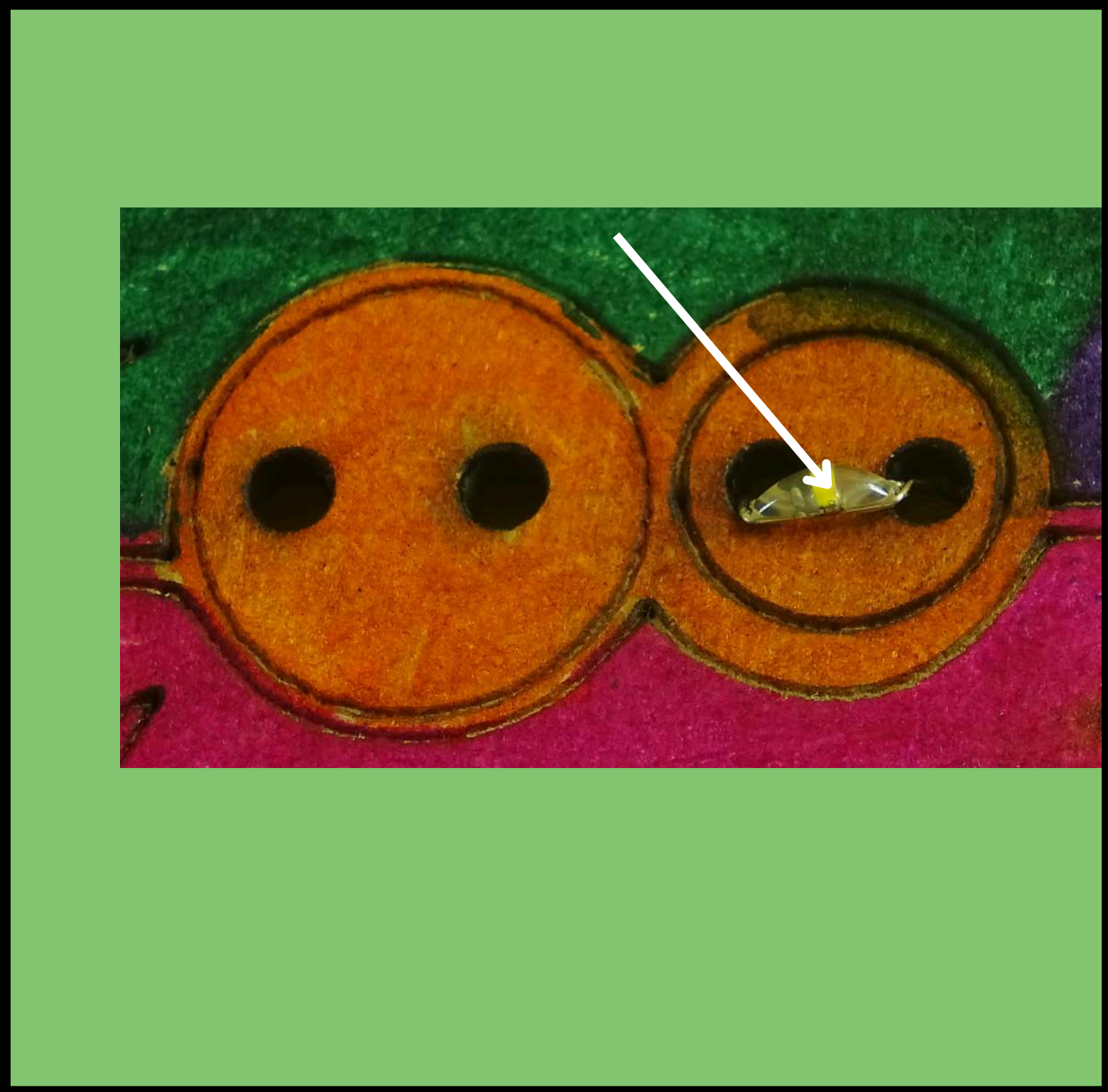
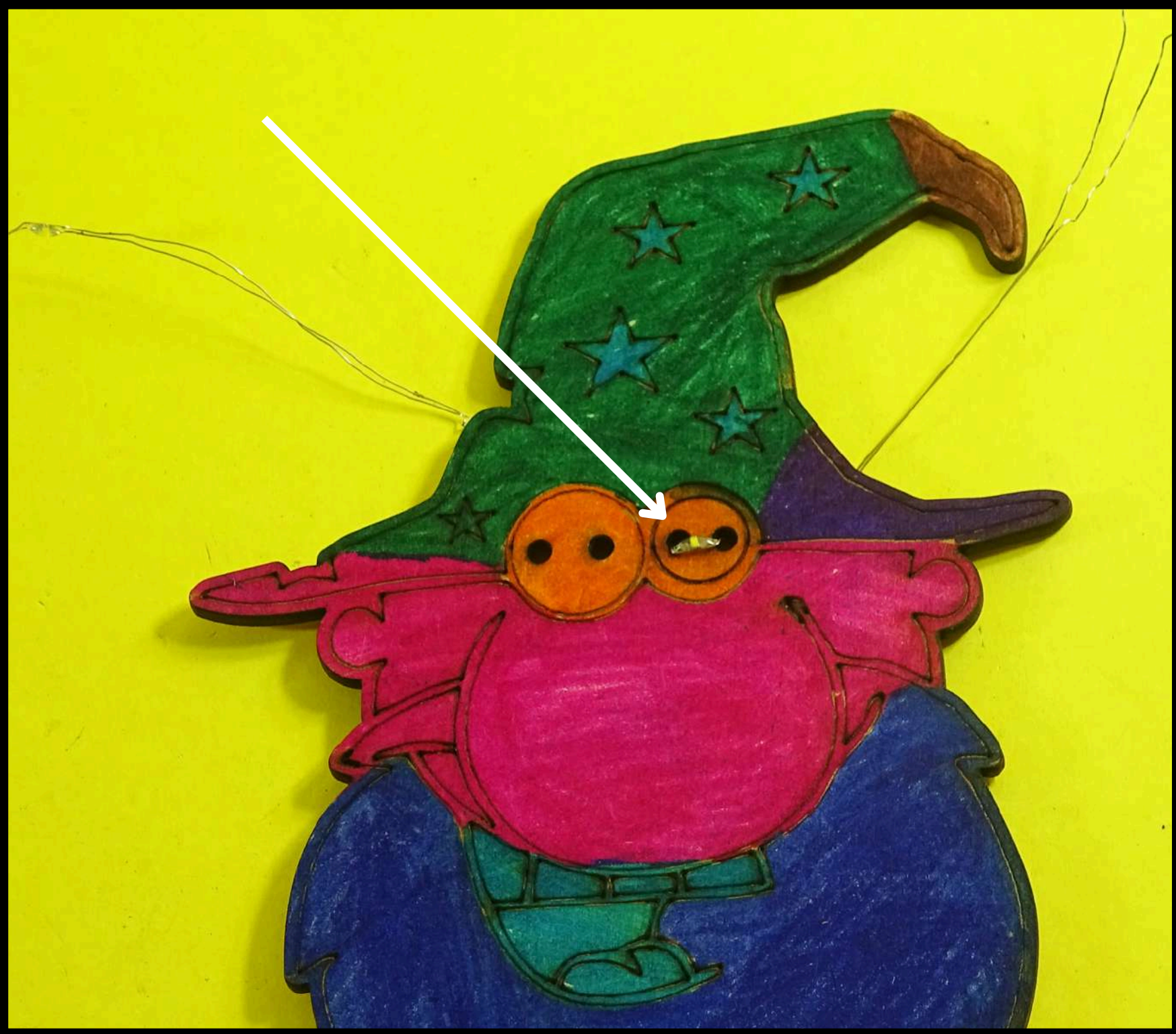
Color the face-shaped MDF using the sketch pens of your choice



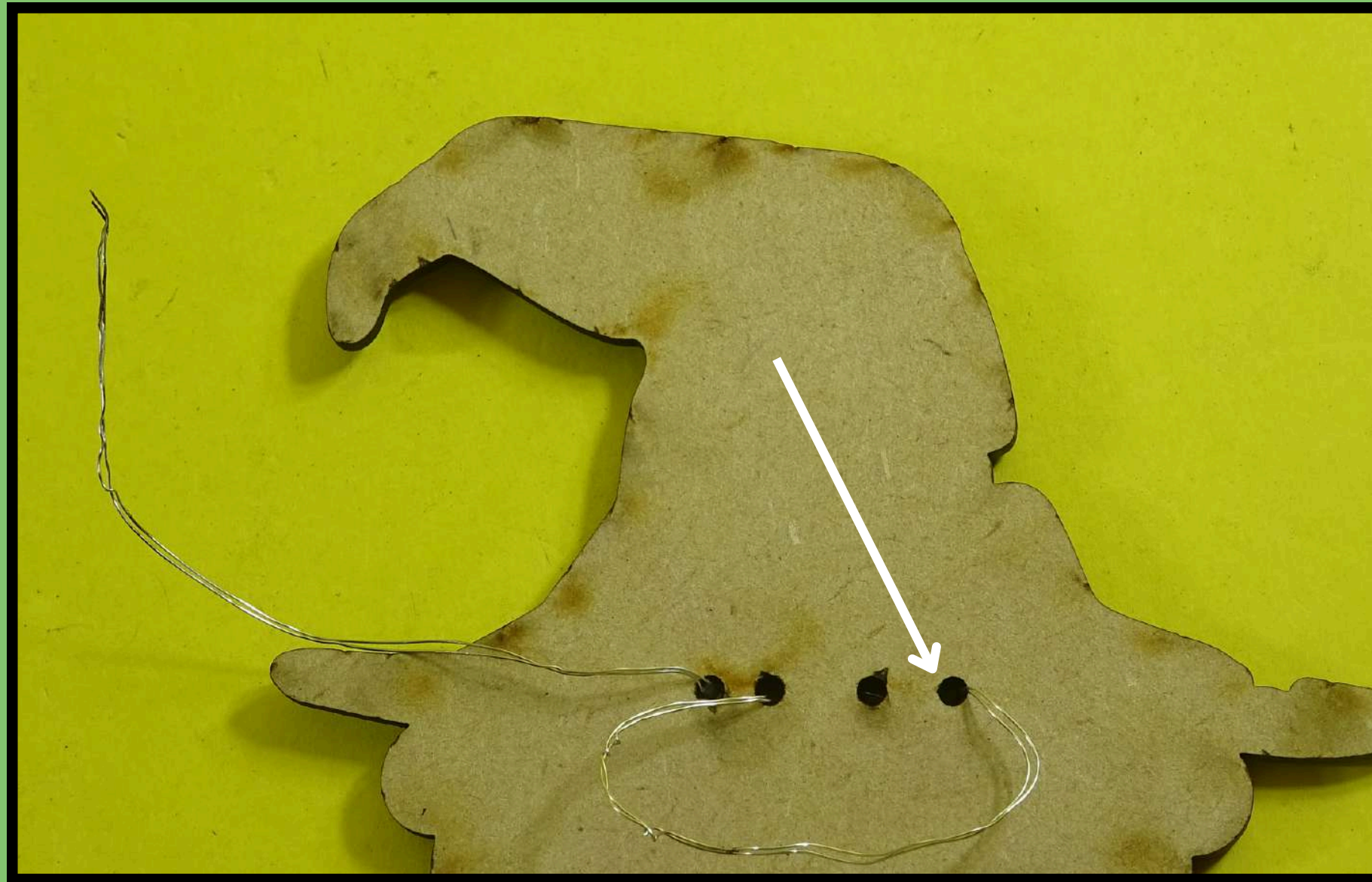
**carefully put the LED wire through the hole as demonstrated.**



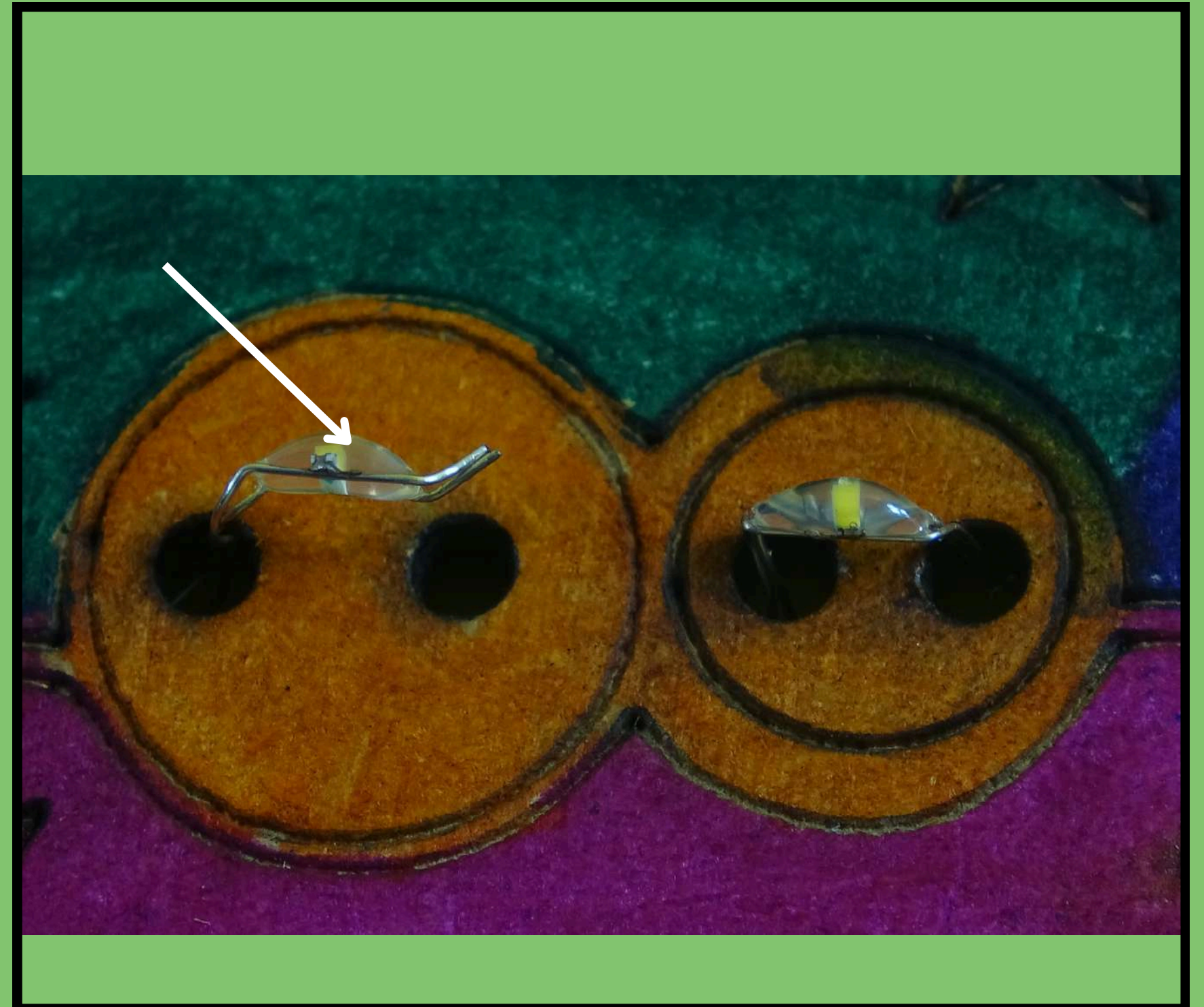
**Place the LED wire into the nearby hole marked by an arrow, then gently pull extra wire through and secure the one LED to the front face of the MDF as demonstrated**



**Put the LED wire into the hole in the MDF  
pointed out by the arrow, just like it's shown**



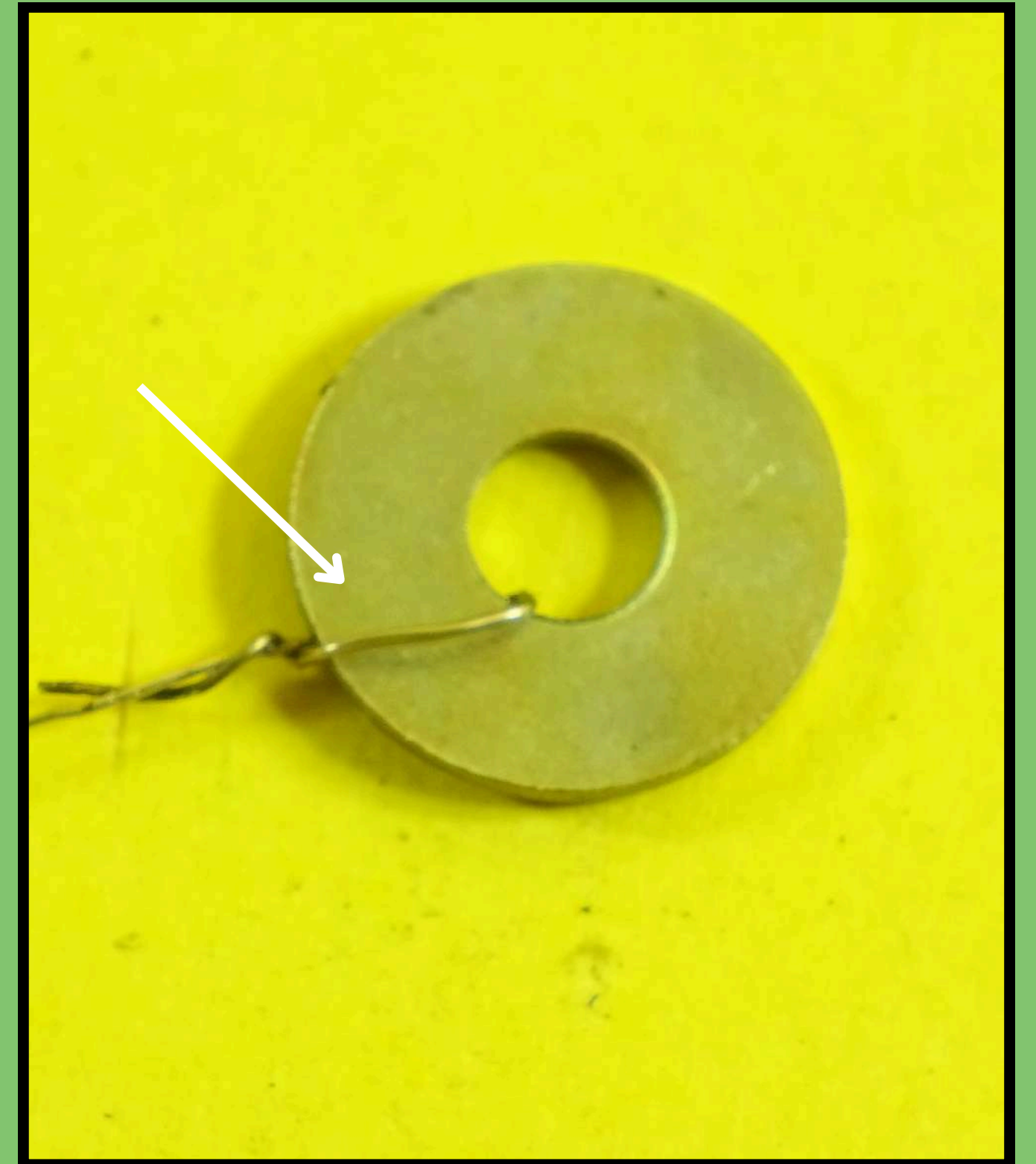
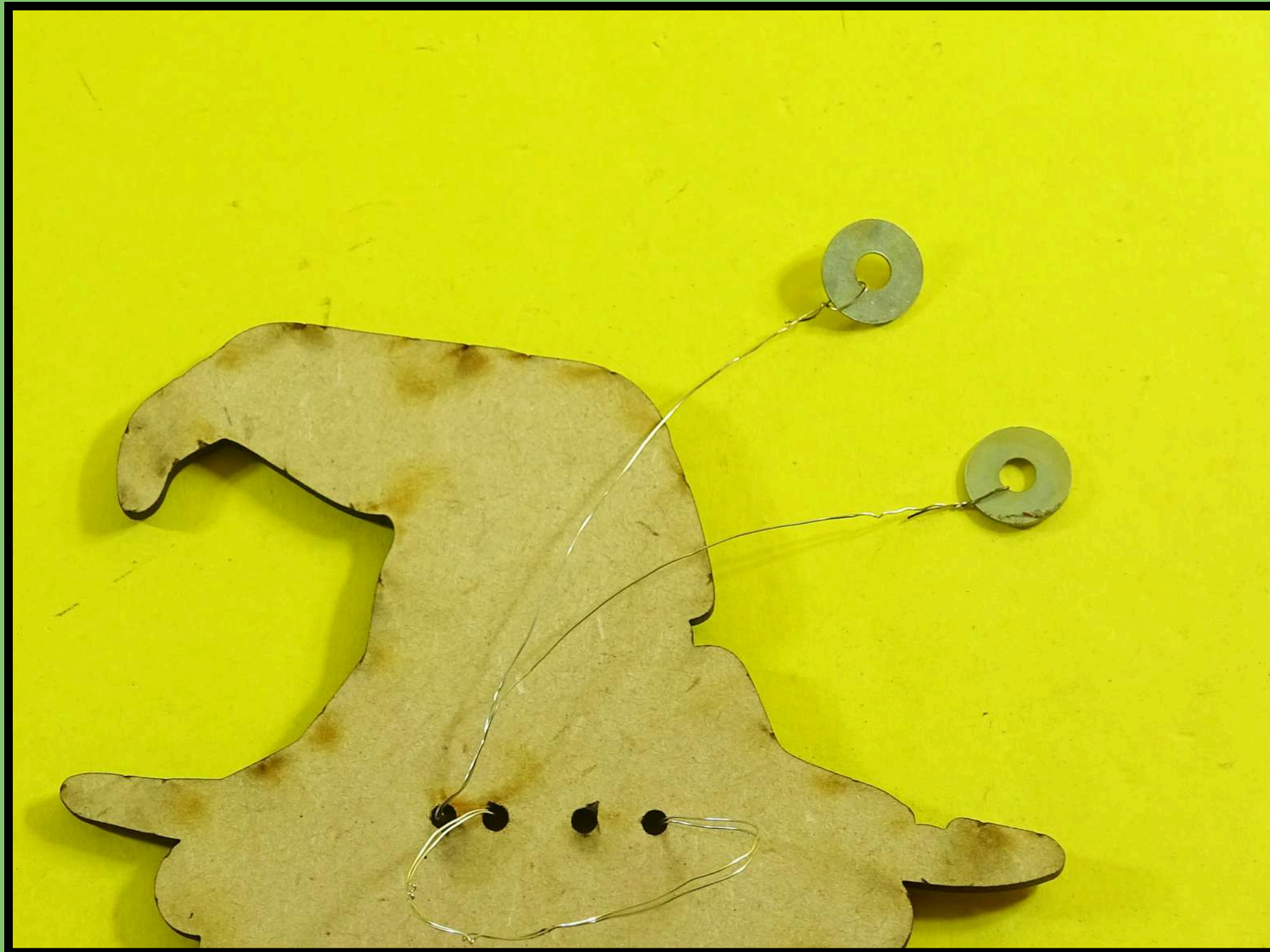
**Fasten the second LED onto the front face of the MDF as demonstrated**



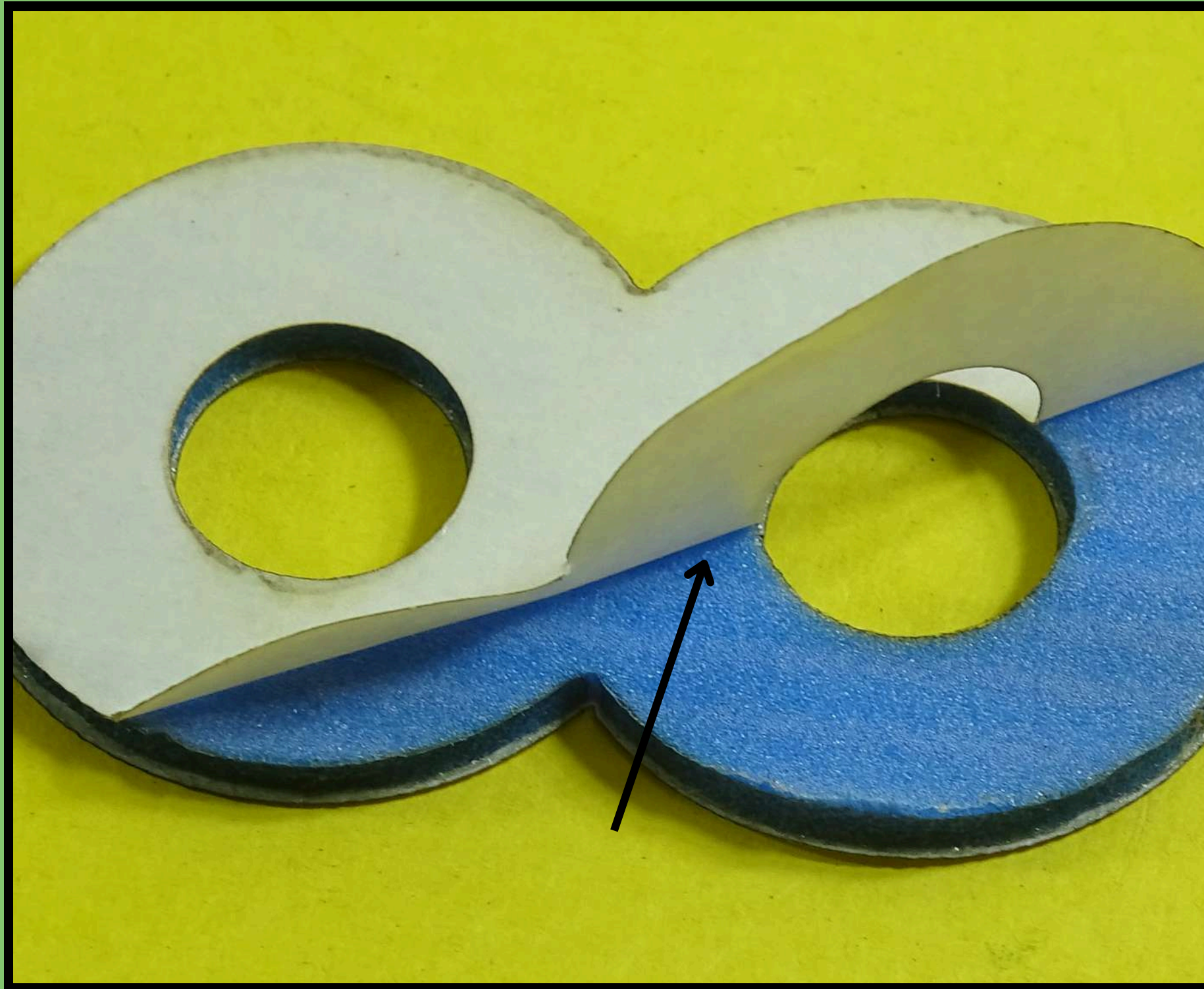
**This is how your MDF looks from the front and rear views after connecting the LED to it**



**Attach the washer to the LED wires just like as shown.**

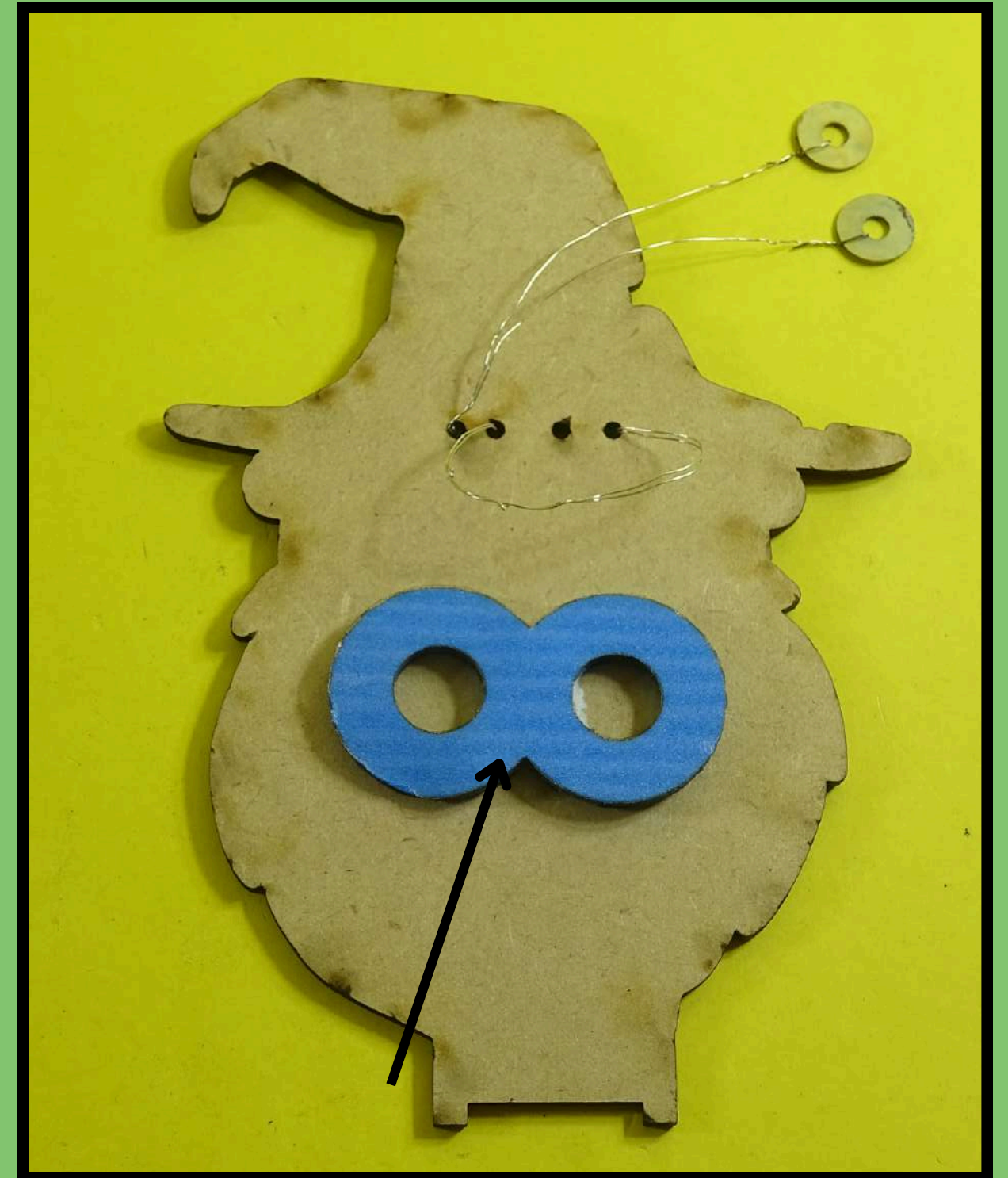
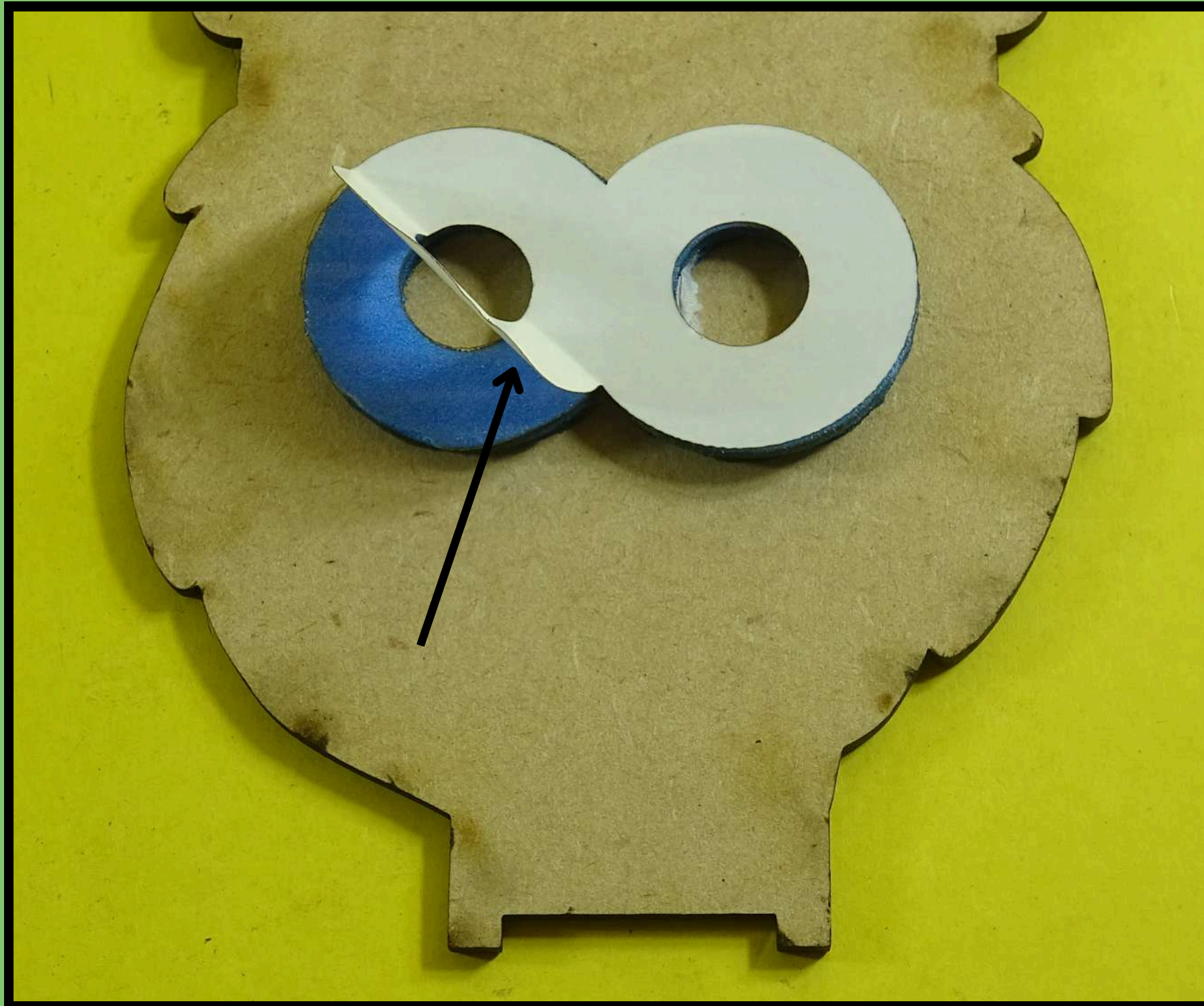


**Remove the double-sided sticker as demonstrated  
and stick it to the backside of the MDF, as shown**

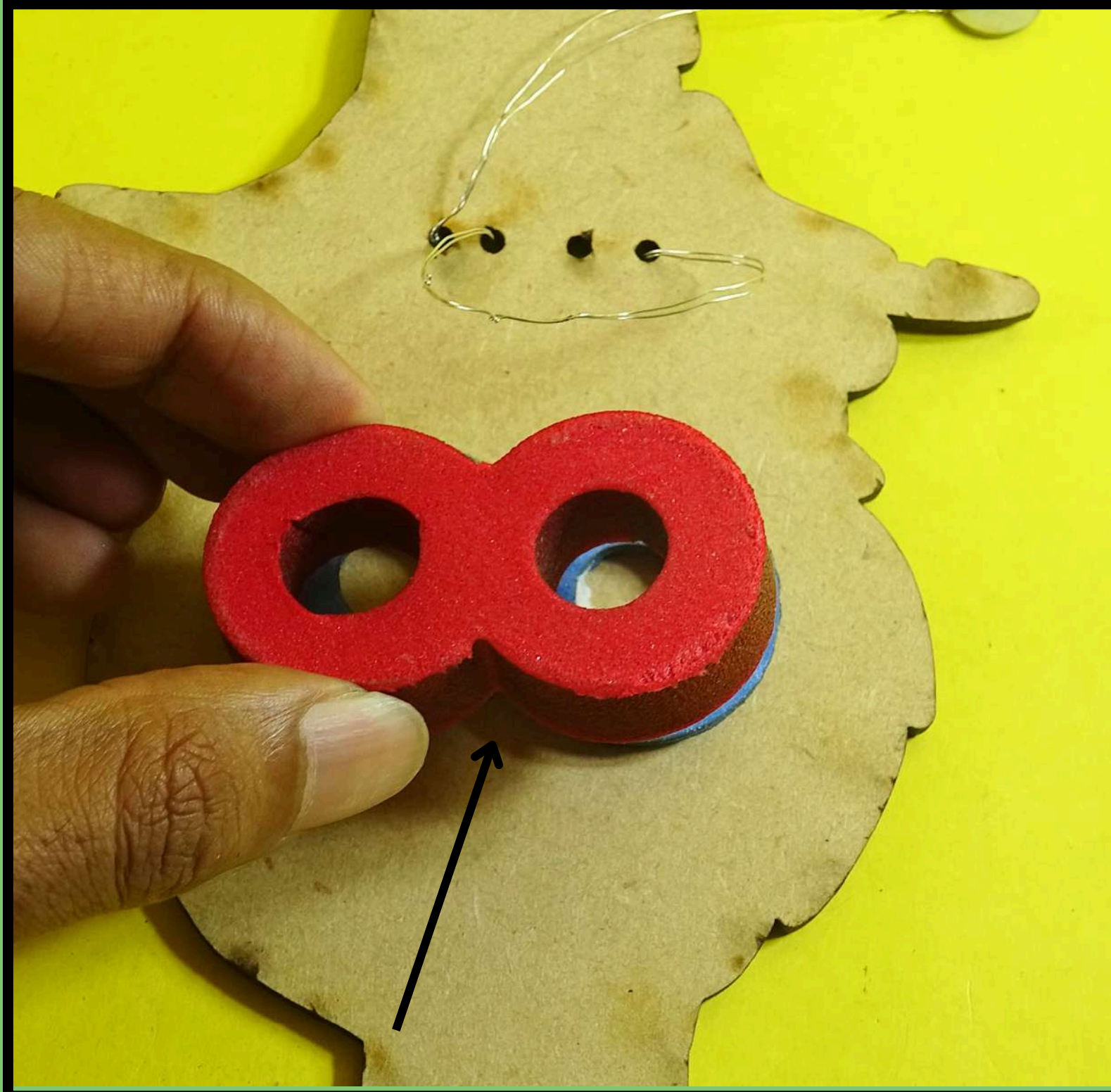




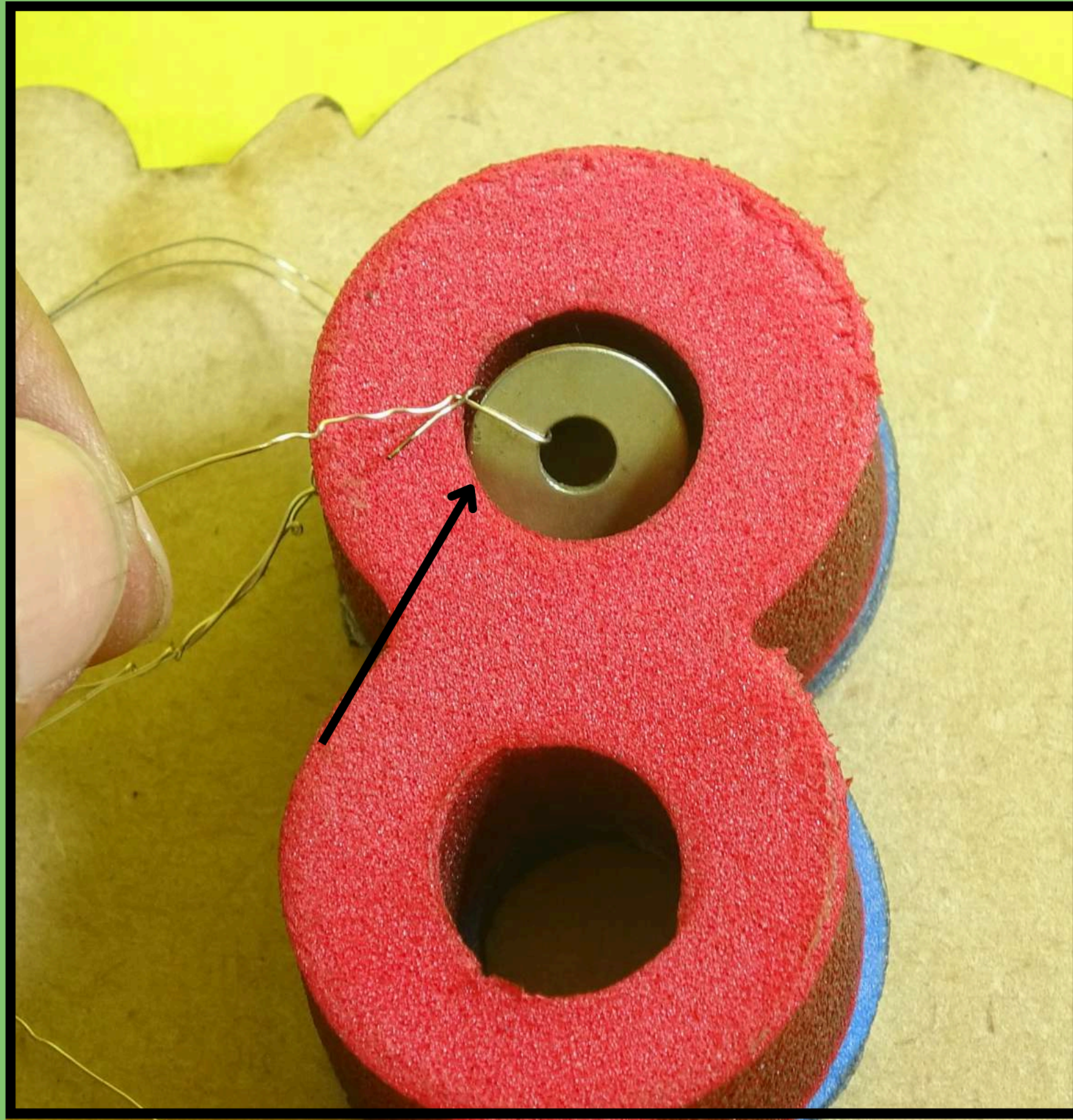
**Remove the double-sided sticker  
other side also as demonstrated**



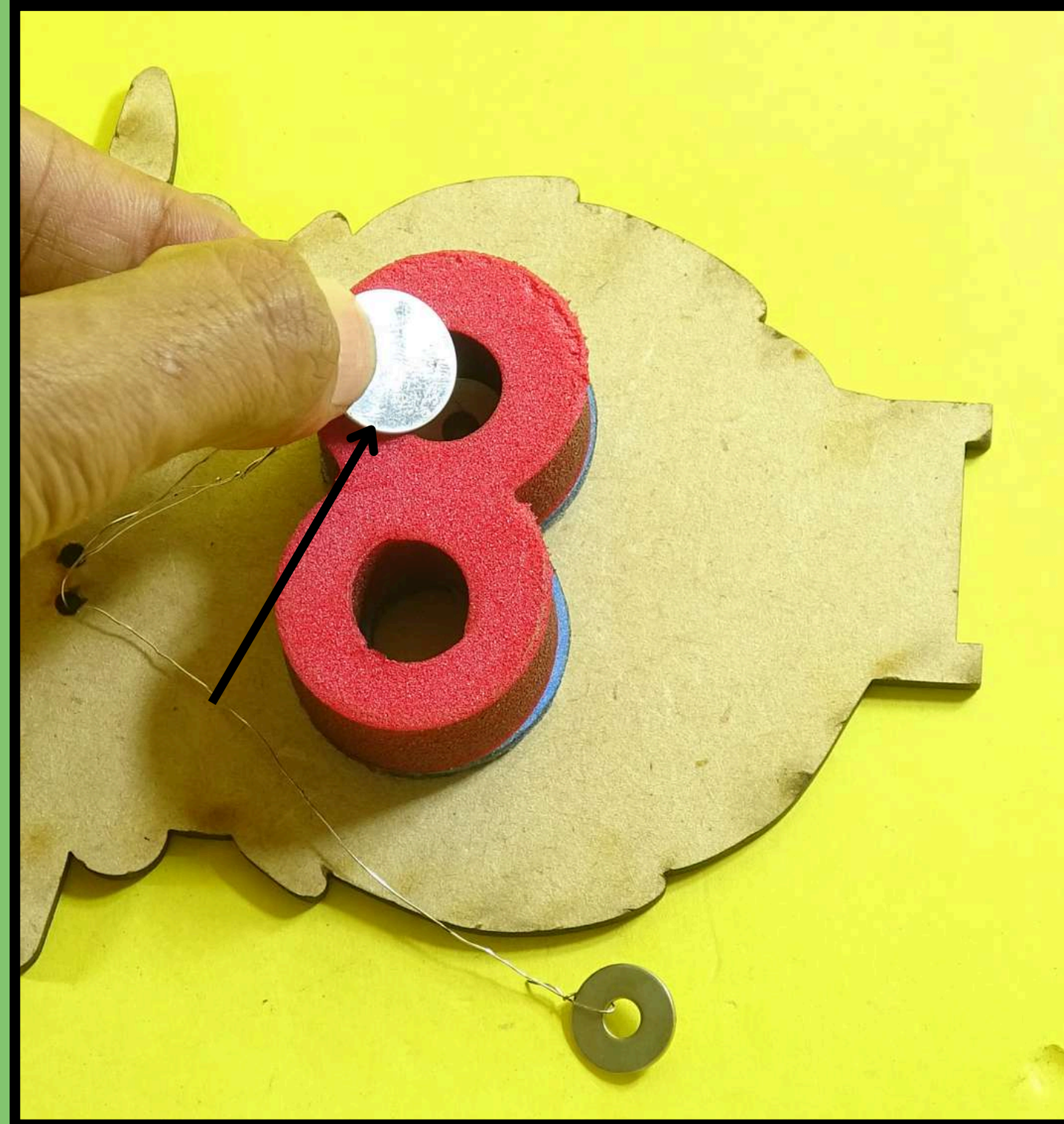
**Stick the foam cell holder onto the  
double-sided sticker as shown**



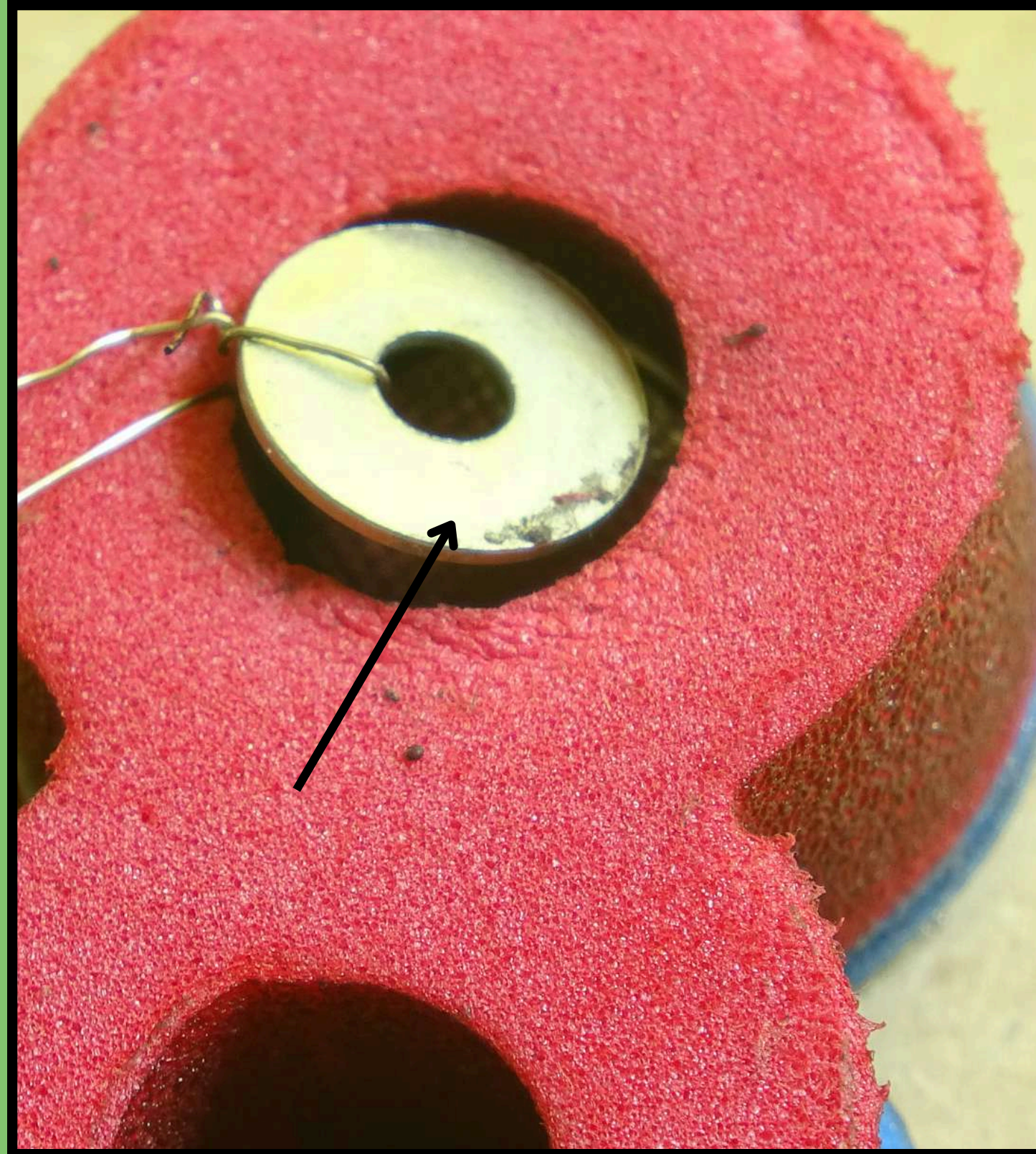
**Put one washer inside the foam, just like it's shown**



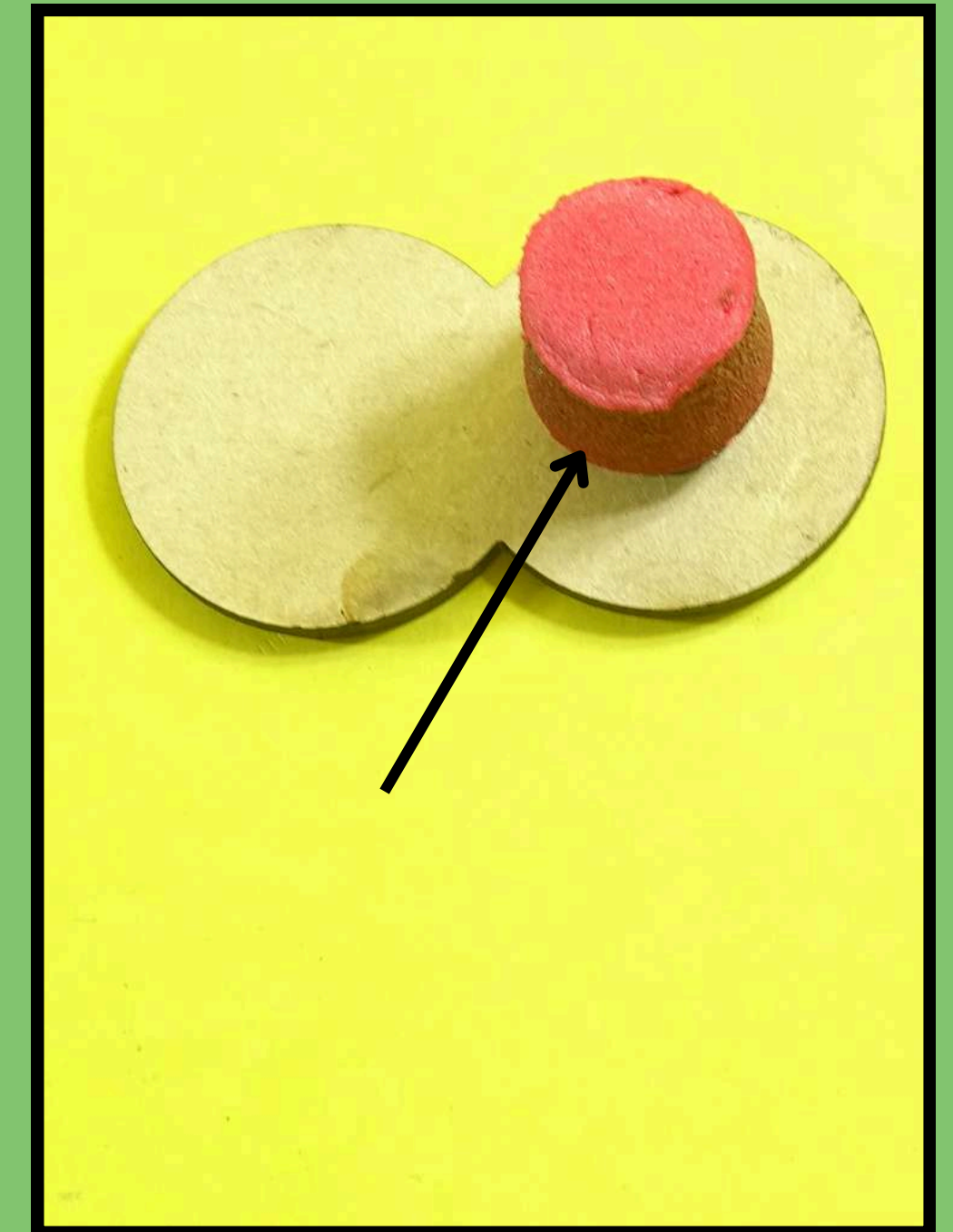
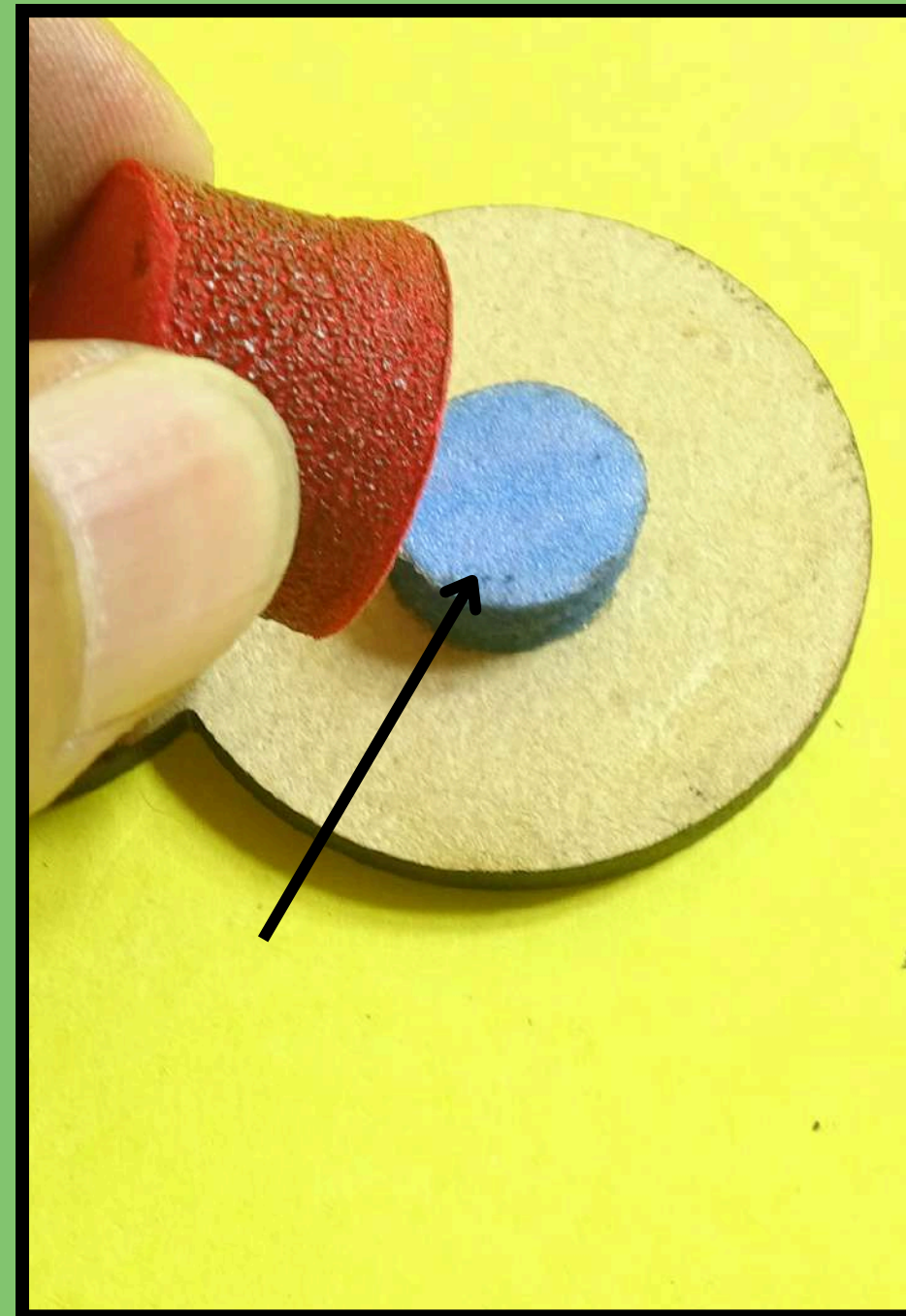
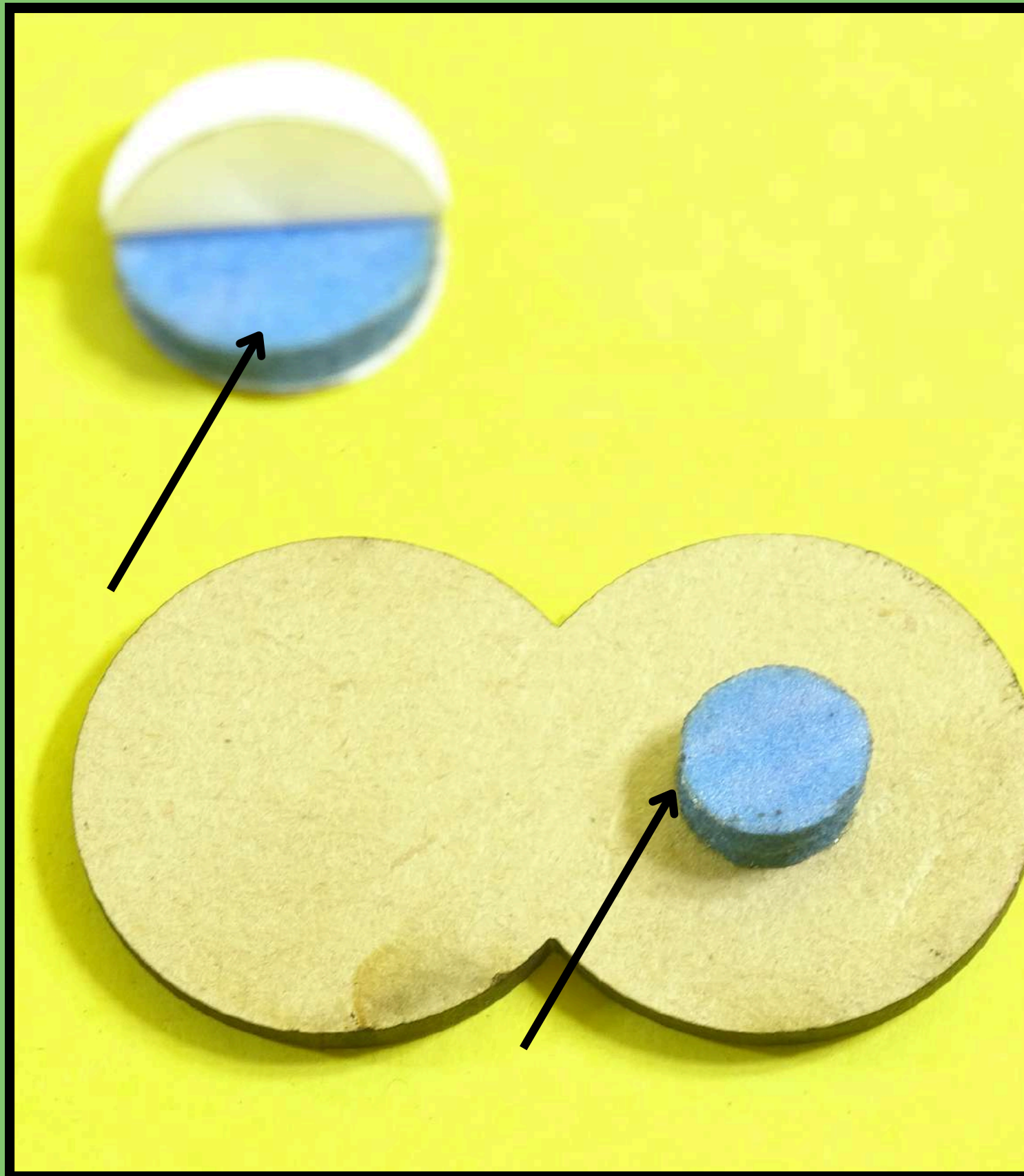
**Add cell to foam cell holder just like it's shown**



**Put another washer inside the foam, just like it's shown**



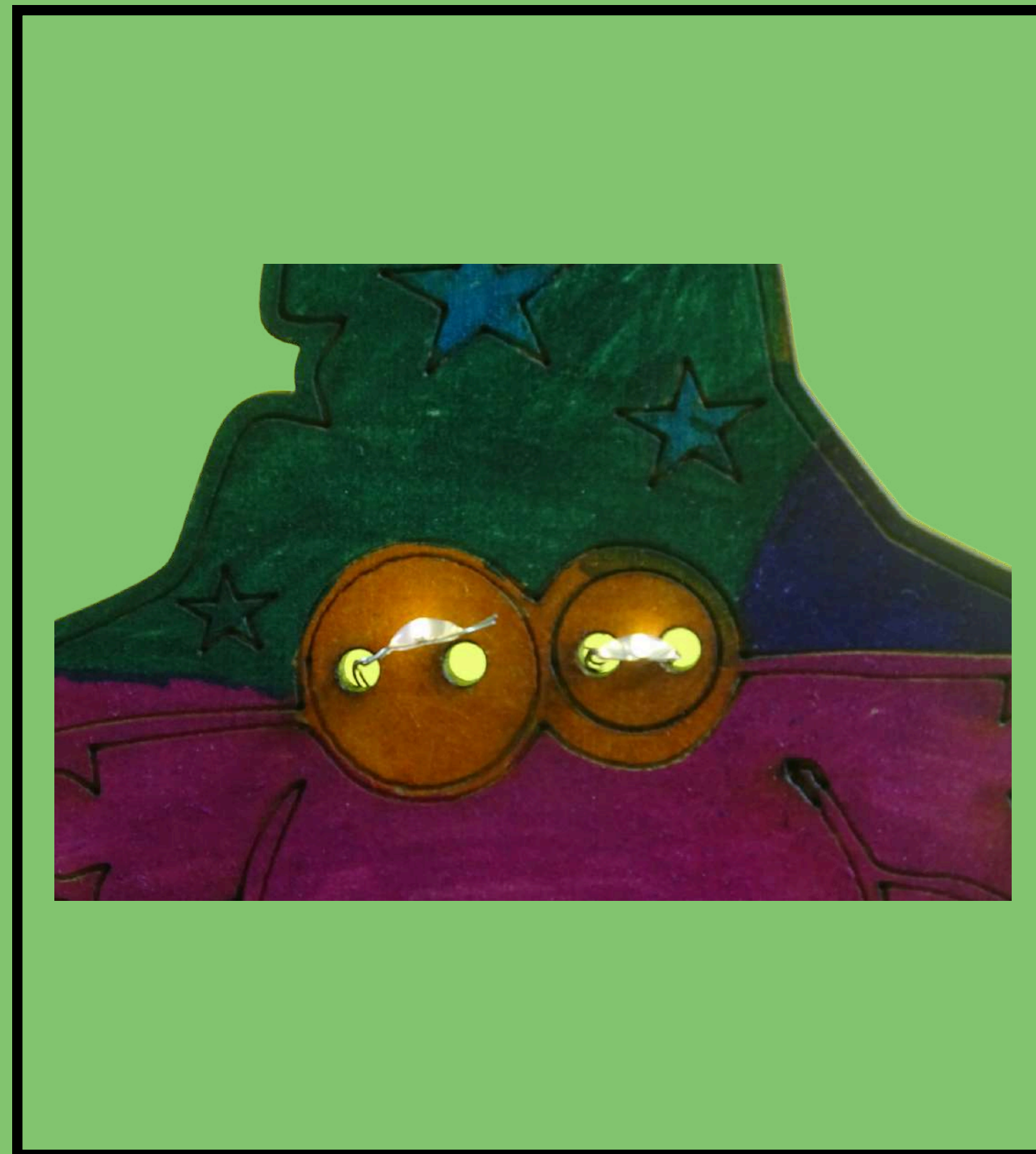
**Take off the small double-sided sticker, stick it to the MDF, and then attach the foam switch to it.**



**Connect the foam switch to the cell holder as demonstrated**

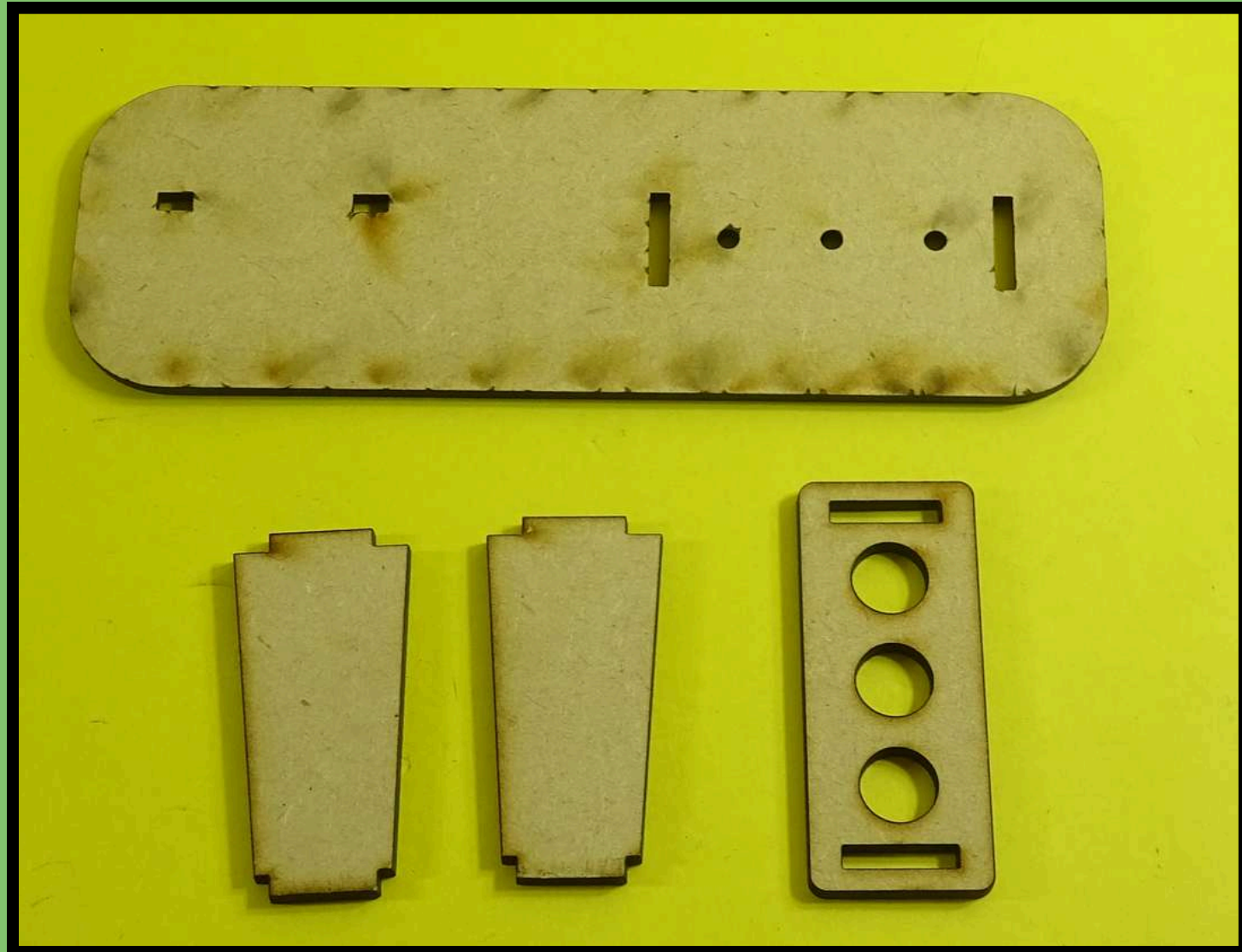


**LED start glowing after connectiong switch to it**





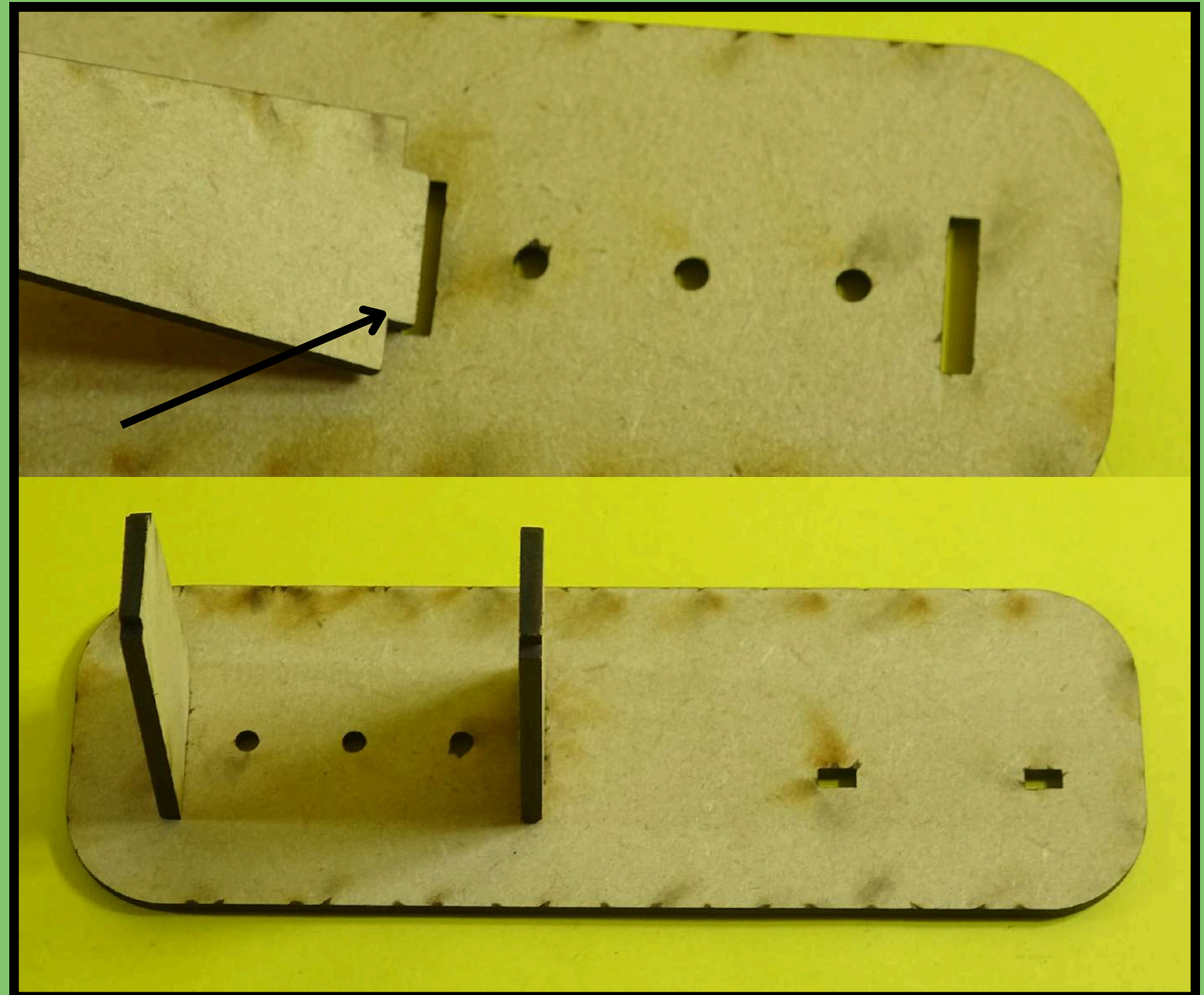
Take the below shown  
mdf segments



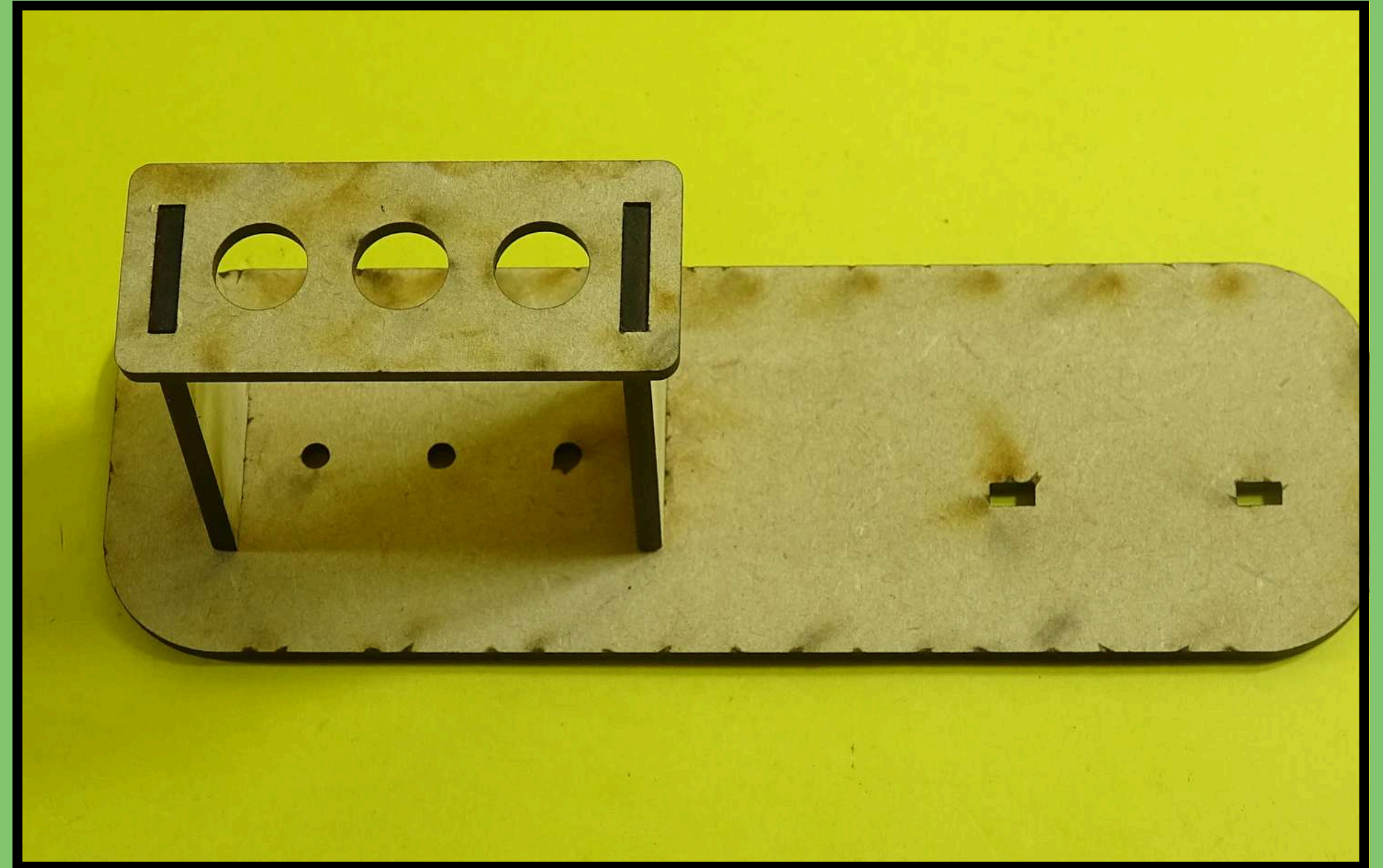
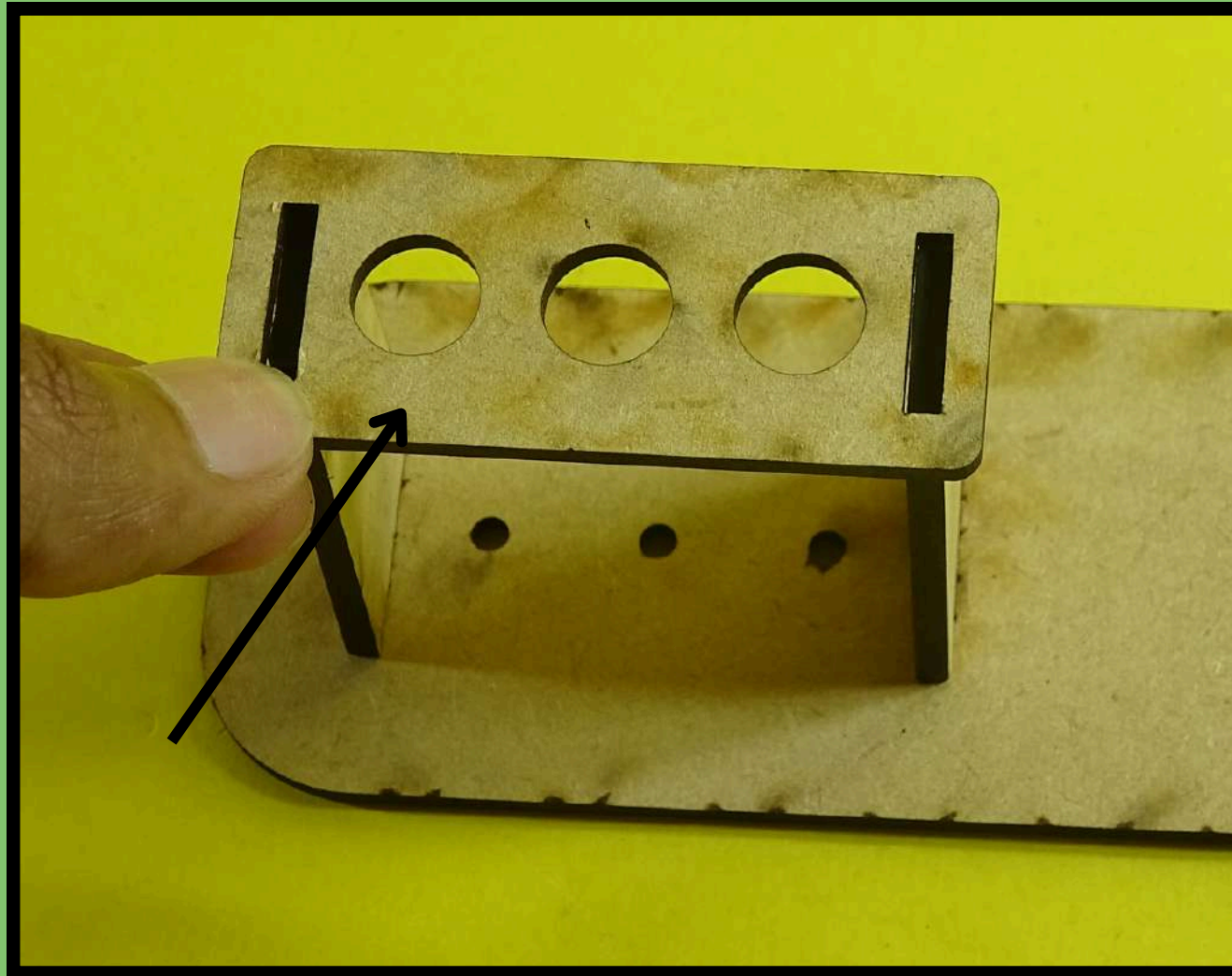
**ALERT**

If the MDF parts are loose, use cello tape.  
If the MDF parts are tight, use sandpaper.

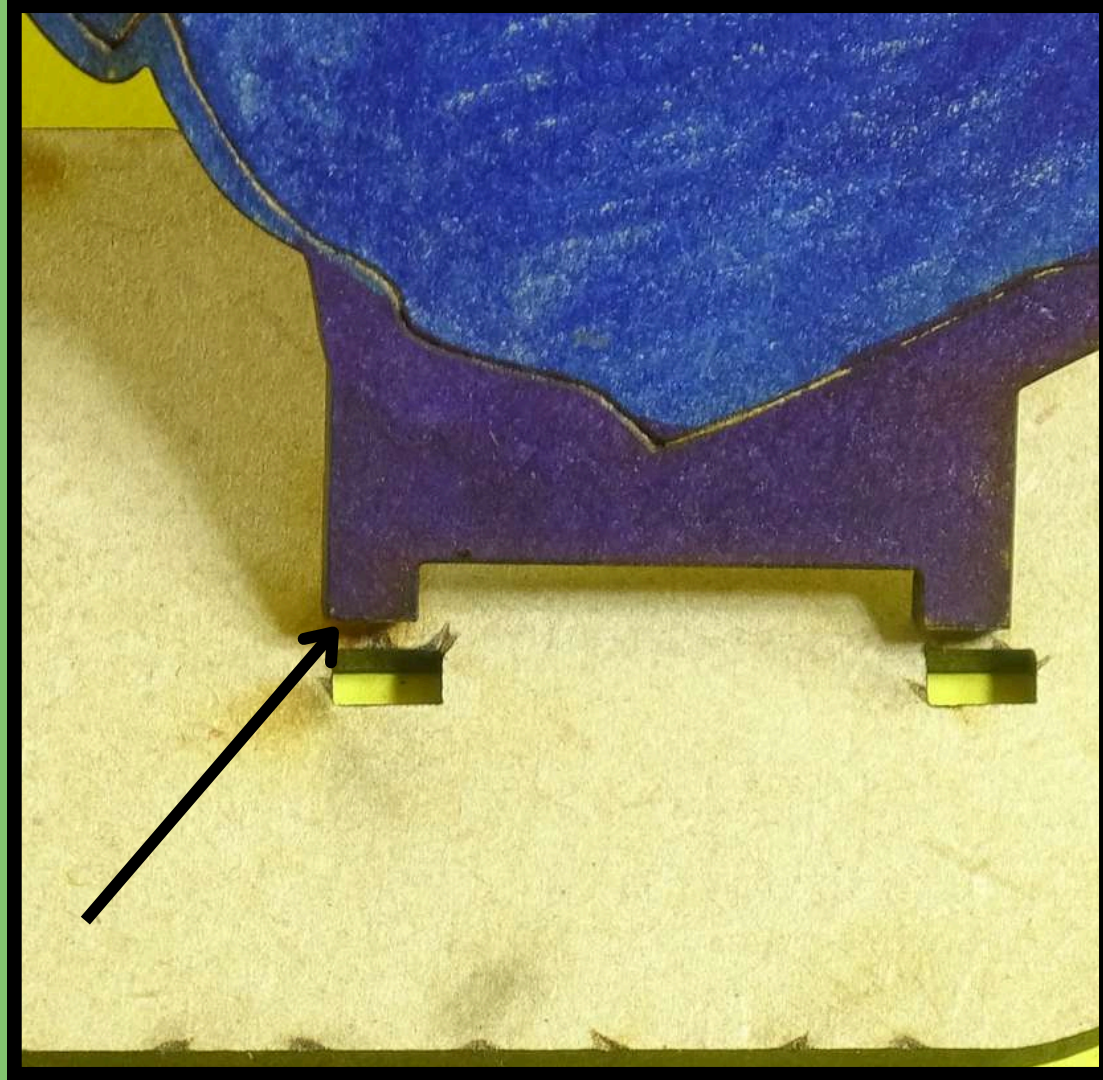
Attach the side part of the  
MDF to the base as shown



**Attach the top part of the side mdf as shown**



**Insert the MDF with the connected LED into the base stand MDF**



**YOUR LED WIZARD IS READY**



**You can put pens in the MDF stand, just like it's shown**

## HOW IT WORKS?

The LED Wizard Experiment is like magic! We connect tiny light bulbs called LEDs to a battery. When we close the circuit, the LEDs light up, creating a beautiful display of colors. It's like making our own light show!

