Panacea Challenge

Hi my name is Riema Mukherjee and today I am here to tell you about my idea for an invention that can/could prove to be useful in 2021 pandemic.I know it sounds a bit silly but here it is, a mechanical mask.I know all the questions that are inside your head right now.What is it? How does it work? What does it do? Well, today I am going to answer those questions for you.

A mechanical mask will have the correct mechanisms to be at least 99.9%effective for fighting COVID-19 and other viruses.You may be thinking what things would I include in the structure of the mask that will help it be the best mask possible? Well let me tell you.The first thing I would add to the mask is a nose wire(a nose wire is a wire at the top of your mask that you can bend over your nose to secure your mask).Why a nose wire,well because nose wires can help secure the mask so it will be more effective for fighting COVID-19.A nose wire prevents the germy airborne particles from leaking in and out of the mask. You see, one of the main reasons people don't wear masks is because masks are uncomfortable-and who am I to say that they aren't?That is why along with making the mask more effective for fighting COVID-19, I would also do everything to make the mask comfortable and easy to wear.Nose wires often hurt your nose,so I would also provide a cushion under the nose wire to help it be more comfortable to wear.But a nose wire only prevents air from coming at the top of the mask,so my mask will come with a free mask fitter or brace.[1] That will help keep the air from leaking in and out of the mask.The mask will have layers in it so it will be leak proof.Now that is all the structures I would add to the mask.By this point you're probably wondering why it's called a mechanical mask if there's nothing mechanical about it.Well I'm getting to that part.

So the mechanical portion of the mask will include a sensor that detects how many people are around you. If the mask detects that there are too many people then it will   detect that it needs to go into safe mode.Safe mode is where when you take your mask off it immediately puts itself back on.
If you don't want that to happen then you can press the off button which will turn
that system off .There will be a small light in the middle of the mask that will tell

you what is happening.If the light is yellow that means that there are too many people around you. If the light is red that means that the mask has sensed COVID-19 particles. It also has LED lights around the edges that light up just for fun in any color that you would like.When you are outside and not surrounded by too many people you can press the breaktime button. What this button will do is allow you to take your mask off for 5 minutes for a mask break.You can press the button 4 times per break.

My mask is aimed towards helping children and other people in need.In Israel almost 50% of kids ages 0-19 have COVID-19.[2] I really hope my mask will make a difference.I believe that if we want to make a difference then we have to start now.

Bibliography

1. https://www.cdc.gov/coronavirus/2019-ncov/your-health/effective-masks.html

2. https://www.nature.com/articles/d41586-021-01862-7