

## **LLS Machine**

### I. ABSTRACT

Over the years we have noticed that pollution getting worse and making people get lung cancer. It is important to solve because 4.6 million people die each year and you wouldnt want to be that person who died because of air pollution. Our vision is to create a machine that removes air pollution and filters the air. In addition, we can put air medicine in the air using the filter to help get rid of pollutants inside you.

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### II. DESCRIPTION

#### 1. PRESENT TECHNOLOGY

“ Air **pollution** is caused by solid and liquid particles and certain gases that are suspended in the air. These particles and gases can come from car and truck exhaust, factories, dust, pollen, mold spores, volcanoes and wildfires.”<sup>1</sup> today air filters work but we want to make them better to remove pollution and clean the air. If you want to help your neighborhood, you can put it outside.

I personally think that people should walk, bike, paddle and run anywhere and rarely ride cars to stop pollution. Here are some other things you can do to help reduce pollution:

- “Conserve energy - at home, at work, everywhere.”
- “Look for the ENERGY STAR label when buying home or office equipment.”
- “Carpool, use public transportation, bike, or walk whenever possible.”
- “Follow gasoline refueling instructions.”

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<sup>1</sup> <https://climatekids.nasa.gov/air-pollution/>

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### 2. HISTORY

Air filters were used back in the 16 century. Lewis P. Haslett in 1848 patented the very first air purifier. 1879, Hutson Hurd patented the cushioned mask.

Over the years people have died because of air pollution and other pollutants because air pollution can cause lung cancer and that's a serious problem. So we all agreed to try to make a stop to this cause places where there's a heck lot of air pollution people have to wear masks that get rid of 50% of the air pollution and it's not okay. The date of when pollution was discovered was 1948.

### 3. FUTURE TECHNOLOGY

We want people to not always worry about pollution hurting them so, we made a machine that filters and shoots out medicine. The filter has a tiny space that will have medicine in it and there would be a button that would make a little medicine come out. The filter will clean the air and slowly put the medicine out if needed.

The air pollution is causing cancer and diseases along with affecting the earth. What effect does it have on the Earth? Well it makes warmer oceans which can affect water and animals and warmer water and worse air. How do we stop it? The LLS machine that will stop it.

We will make it work by making a rectangle shaped box filled with an air filter and there will be a tiny pocket that you can insert some powdered medicine. You can turn the machine and tiny little holes inside the tiny pocket will allow a fan to slowly go on and push the powder out

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using a tiny mist. It is invisible so it doesn't make a mess. It would also have a water slot to put in so the invisible mist would come out because without water, there would be know mist.

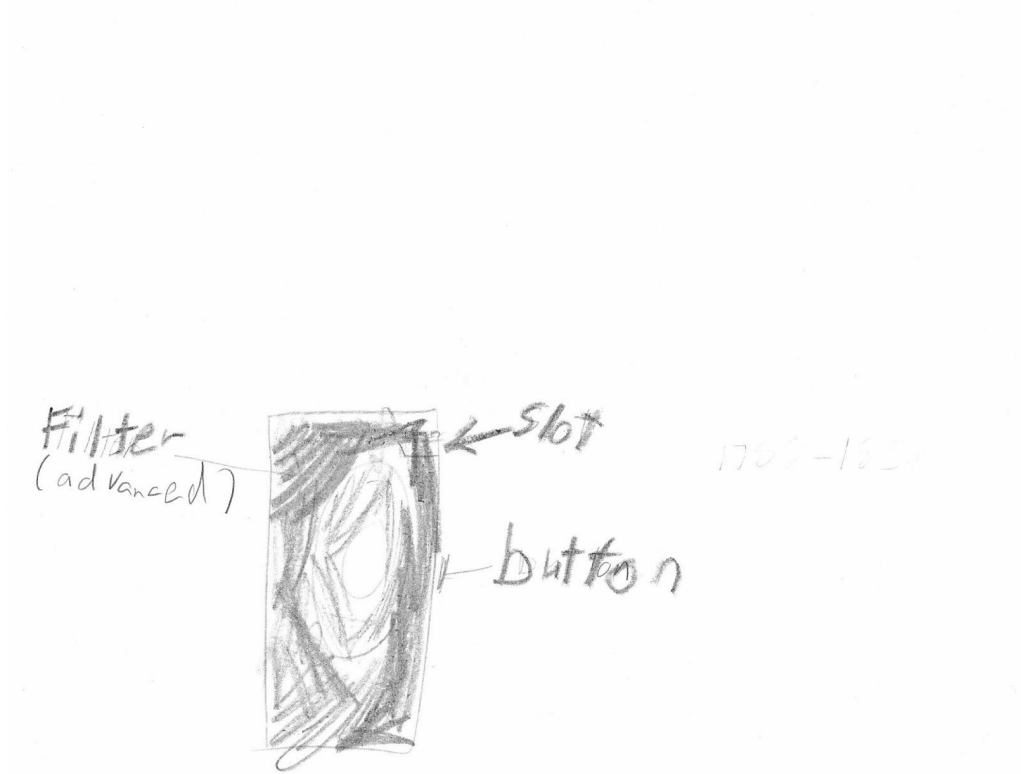


Figure 1:

### 4. BREAKTHROUGHS

We don't need any of the elements required to make the filter and bring this idea to life. The most important thing we need for this to work is the motor or electricity. We would need breakthroughs in the medicine to clean the pollution, especially inside of you. We would test our

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idea by finding an area with bad air pollution. We understand the pollution in the air and run our filter. We would see how much of the pollution is filtered after running it.

### 5. DESIGN PROCESS

I thought about this idea when I was outside and saw pollution. I was like hey dad what is that and he said air pollution. The idea shot through my mind that I should do my steam report on pollution!

At first we watched some videos to refresh our memories about air pollution because it is important to research. Then we started to print down websites and pictures, we got to work on our idea. We put together a plan and started to and work on the stuff we have to do.

We added an advanced motor and are design is a box that will be packed with a motor, a slot, a button, and a water proof out line so it wont blow up or spark if in the rain

### 6. CONSEQUENCES

Our filter could have a negative impact because we will use lots of electricity. The medicine we spray in the air may have negative impacts for some people if you are near it for too long. So I don't recommend sleeping near it. It helps take away pollution in the air so you can breathe better and if you put powdered medicine in it you can get healthier.

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### III. BIBLIOGRAPHY

<https://www.scimagojr.com/journalsearch.php?q=23918&tip=sid>

[https://www.flickr.com/photos/schlesinger\\_library/9555659003](https://www.flickr.com/photos/schlesinger_library/9555659003)

<https://www3.epa.gov/region1/airquality/reducepollution.html>

- Share

<https://www.aireserv.com/about/blog/2014/december/what-will-air-filters-be-like-in-100-years/>

Here are some websites that you can see

try <https://www.youtube.com/watch?v=qN4hiHXQF2I>

<https://www.youtube.com/watch?v=qN4hiHXQF2I>

[https://www.flickr.com/photos/schlesinger\\_library/9555659003](https://www.flickr.com/photos/schlesinger_library/9555659003)

those are some good websites we used.

<https://climatekids.nasa.gov/air-pollution/>

<http://polution.com/>

## **LLS Machine**

Here is my favorite website on pollution

<https://www.nationalgeographic.com/environment/global-warming/pollution/>

I think this website really helped me learn alot about pollution.

[https://www.sciencedaily.com/terms/air\\_pollution.htm](https://www.sciencedaily.com/terms/air_pollution.htm)

<photo-1526951521990-620dc14c214b>

# LLS Machine

## IV. SAMPLE WEB PAGES


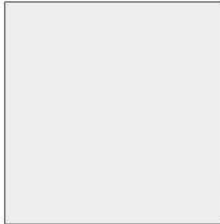
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HISTORY

Today we have really cool filters.but there still not fully reduced air pollution,so we are trying to make a more of a better filtered one that will be waterproof and you can insert medicine to help. It is called an LLS Machine.

Here will be a video with our team summarizing our project.

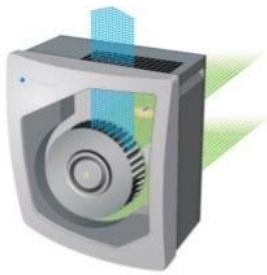


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**Home Present Technology Future Technology Design Process Breakthroughs**

Today air filters work but we want to make them better to remove pollution and clean the air.



<https://air-purifier-reviewsite.com/wp-content/uploads/2010/07/RoomAirPurifier.jpg>

# LLS Machine

Page 3.

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We want people to not always worry about pollution hurting them so, we made a machine that filters and shoots out medicine by having a tiny space that will have medicine in it and there would be a button that would make a little medicine come out and go into where the filter and the filter would go on and slowly put the medicine out.

{FUTURE TECHNOLOGY ABOVE}



If you hover your mouse over the picture it will play a video explaining it. When you click on the button in, there will be a pop up with more details.

**Home**    **Present Technology**    **Future Technology**    **Design Process**    **Breakthroughs**

I thought about this idea when I was outside and saw pollution. I was like hey dad what is that and he said air pollution. The idea shot through my mind that I should do my steam report on pollution!so i talked to my team and we worked on air pollution

## DESIGN PROCESS

1. At first we watched some videos to refresh our memories about air pollution.
2. We started to print down websites and pictures, we got to work on our idea. We put together a plan and started to and work on  
The stuff we have to do.
3. We added an advanced motor and are design is a box that will be packed with a motor,a slot, a button, and a waterproof outline so  
it won't blow up or spark if in the rain

If you click on sources, that will show are sources

**HOME**    **Present Technology**    **Future Technology**    **Design Process**    **Breakthroughs**

We would need breakthroughs in the medicine to clean the pollution, especially inside of you. We would test our idea by finding an area with bad air pollution. We understand the pollution in the air and run our filter. We would see how much of the pollution is filtered after running it.

<https://static.techspot.com/images2/news/bigimage/2019/05/2019-05-24-image.jpg>

