ANTENEH ENGINEERING

NEW CONSERVATION MECHANISM FOR PROTECTION OF LIFE DURING OPERATION

1. Problem statement

According to recent researches “Light pollution now affects a quarter of the planet’s land surface. The falling cost of lighting and the expansion of human infrastructure is to blame. Human illumination is rising in range and intensity by approximately 2% every year. Biologists from the University of Exeter are comparing the problem to climate change. They say that artificial light should be treated like any other type of pollution because its impact on the natural world causes severe systemic disruptions. A broad range of species is suffering interruptions in their activity patterns, breeding cycles, hormone levels, and falling vulnerable to predators. Light pollution is being described as the bringer of the insect apocalypse because it’s causing rapid declines in insect populations. Many bugs fly to the light and burn to death on a hot bulb. The Exeter biologists gathered 126 research papers relating to artificial light and nature to assess the impact and wrote a report on their analysis. They found that all the animal species reported on had reduced melatonin levels – a sleep-regulating hormone – caused by artificial light at night. All animals suffered from disturbing behavioral patterns as well.”

The research concluded by stating “Solving the lighting problem is much easier than the climate crisis, and it would save money rather than cost money. All people have to do is use fewer lights – and when they do, they’ll save money and lower their carbon footprint.”

This is the next big problem on energy companies because the more conservationalist push this problem like the bird collusion on wind turbine and other problems it will force regulation on power minimization which will lower demand for energy providers.

2. Our Solution

This project is about building a new system that can give protection for insects and bugs from flying into street light and burn to death on the hot bulb.

This is done by building a street light cover that can absorb the majority of the heat generated by the hot bulb while fully allowing the light to pass through. This can be achieved using a vacuum technology. Meaning, in this mechanism there are two fully transparent glasses and in between them there is a vacuum. As the light generated by the hot bulb start to be functional it reaches the first fully transparent glass and the majority of the heat is absorbed at this stage because the inner glass is attached with the pole for heat exchange. The major role of the vacuum is to contain the heat from getting out in to the second fully transparent glass. This way the second layer of the fully transparent glass will have low surface temperature while the heat is made to be dissipated in the pole via the heat exchange.

This will solve the problem mentioned above while perfectly preserving demand of street light.

The following diagrams show the basic structure and working principle of the system when the wind turbine is stationary and rotating.

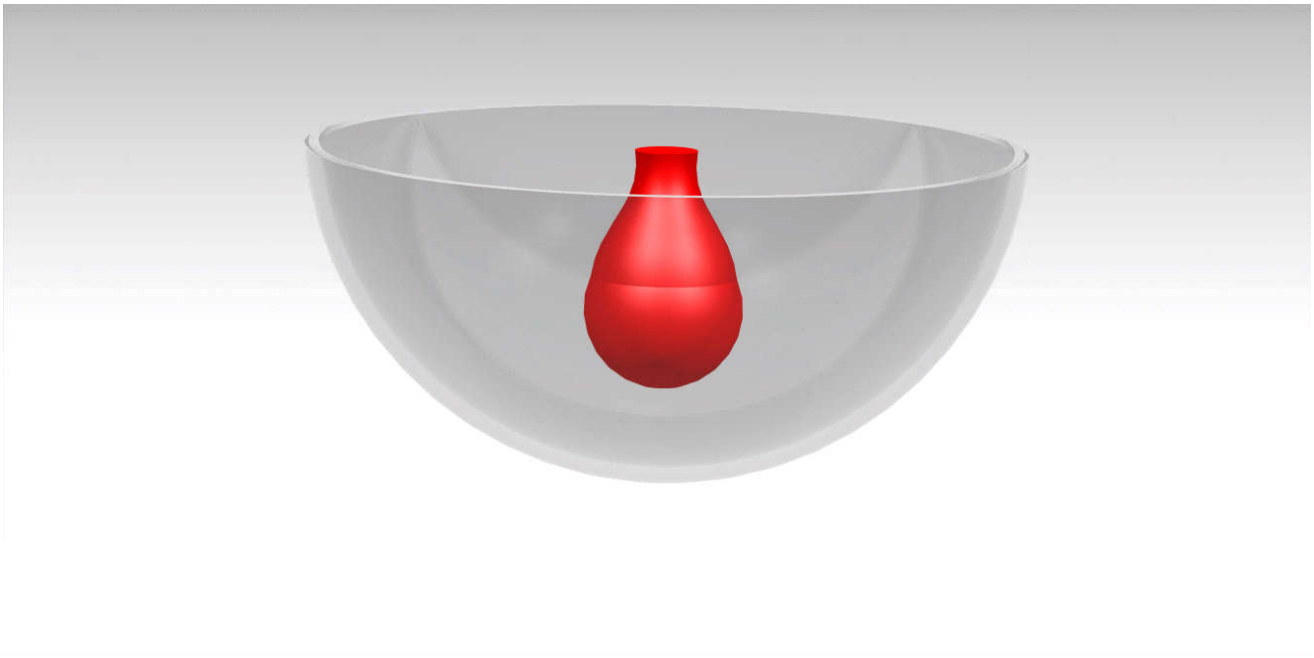

Figure 1 – 3D model of the product

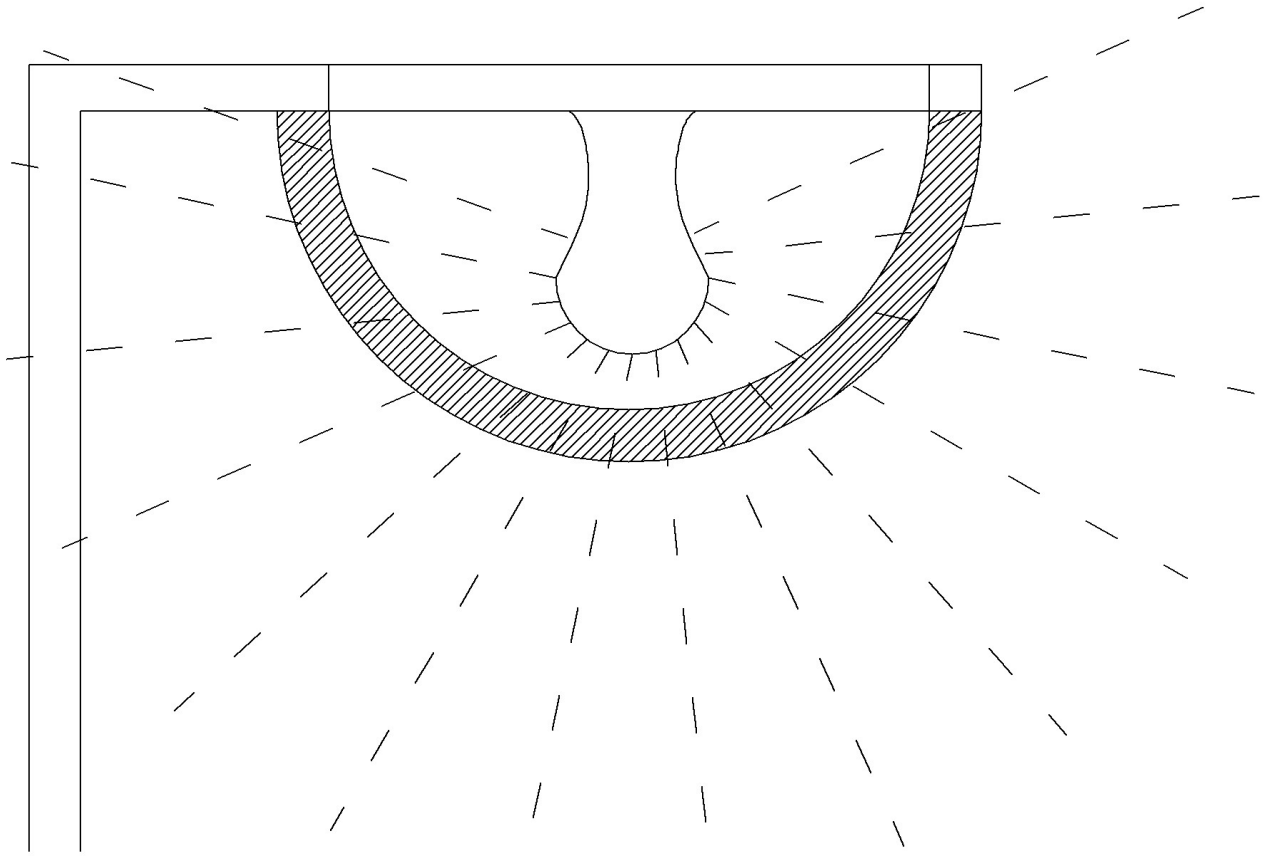

Figure 2 – 2D model of the product

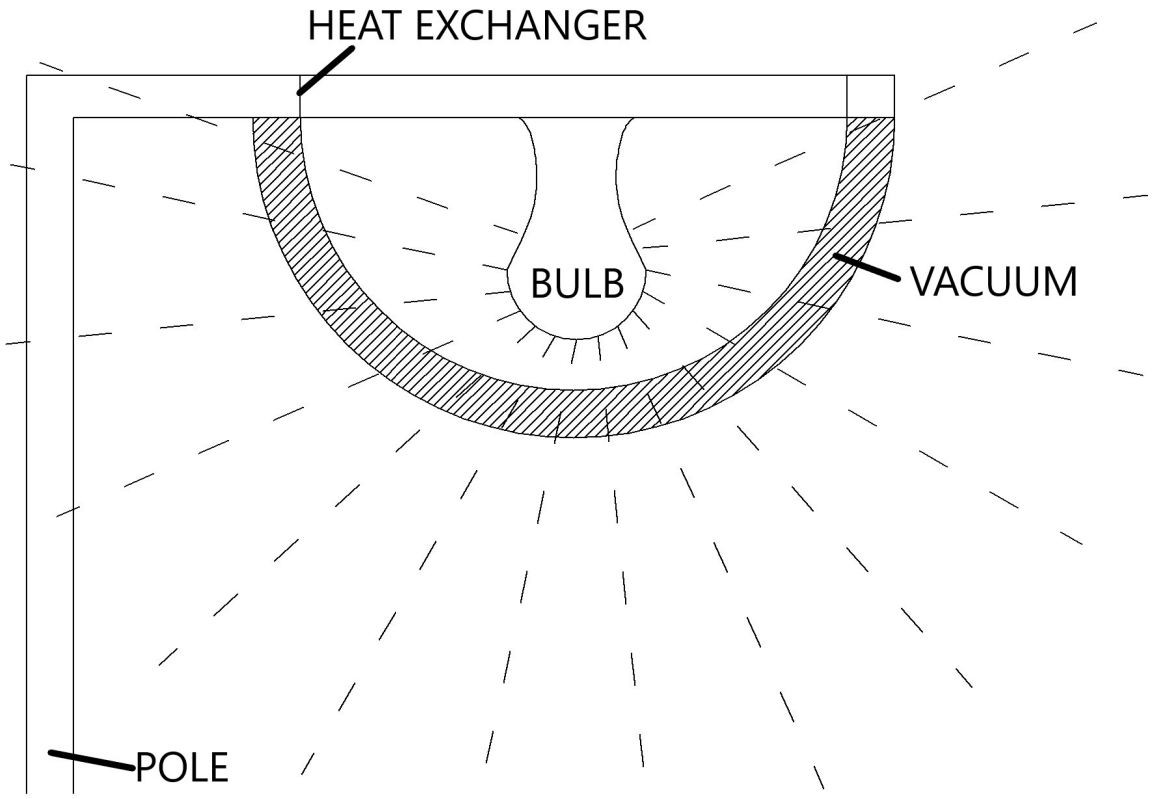

Figure 3 – 2D model of the product

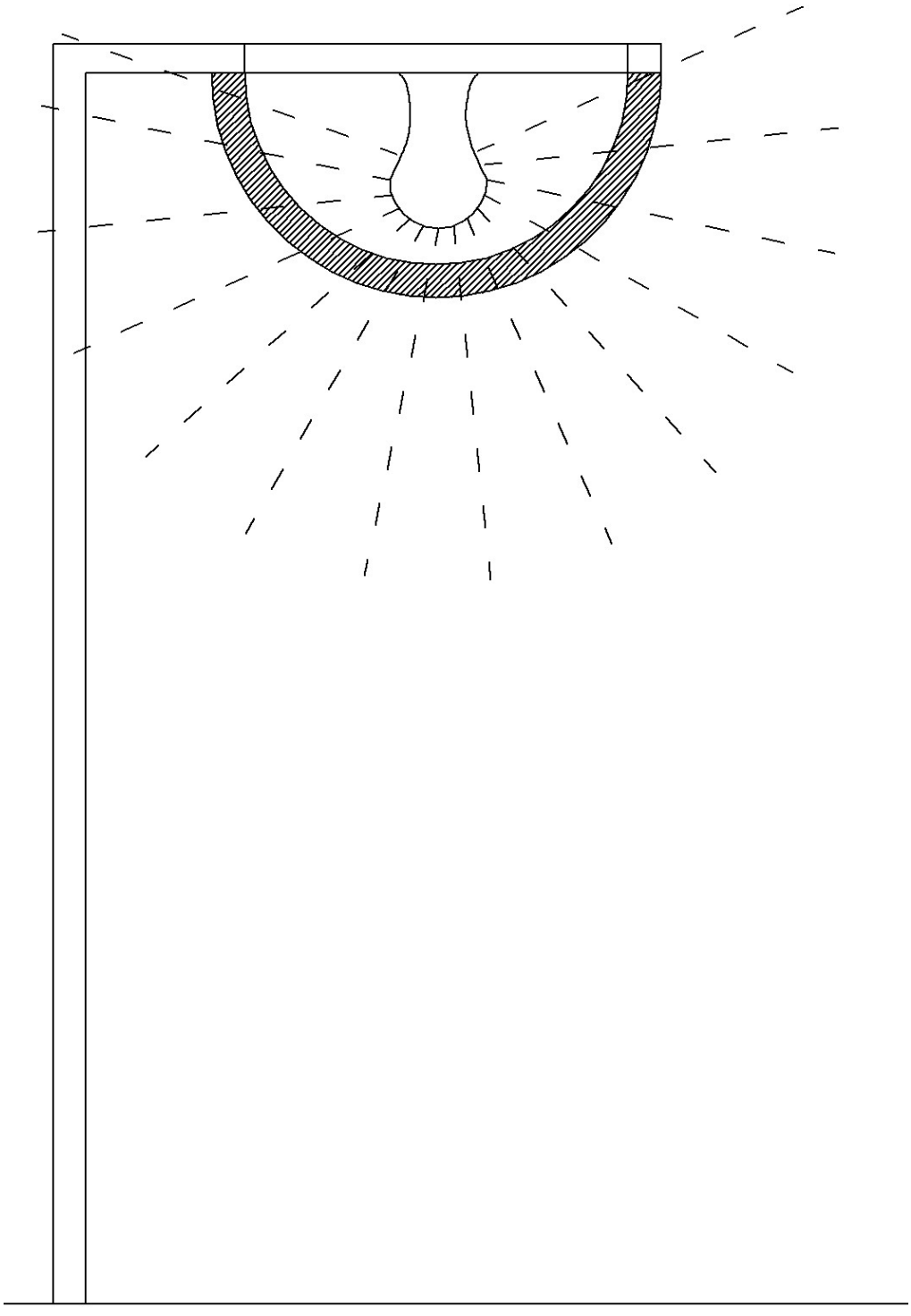

Figure 4 – 2D model of the product

Inventor profile

To say few words about my background, I have dedicated my life for invention and research because not only I have big dreams but also it is my only way out of poverty. We all have a talent we know or did not find out yet. Mine happens to be inventing. I discovered this talent of mine when I was in second year student during my university life. Starting from that point everything seemed not important except creating new ideas. So, until now I have invented more than 70 inventions.

You can find some of my inventions via
https://contest.techbriefs.com/profile?user=89682
https://www.herox.com/crowdsourcing-community/antenehgashaw-123126
https://desall.com/User/AntenehGashaw/Portfolio
https://challenges.openideo.com/profiles/antenh.g/contributions#recent-contributions

My latest big international honors are

- Winner of Mechanical maker challenge by NASA/ JPL- 2019 with my design invention “Mechanical eye”
- Finalist for the TIC AMERICAS 2020 competition with my project “Caribbean Sargassum Problem” project
- Finalist in TKF plastic innovation challenge 2019 with my invention “Smart green washer”
- Top 100 inventions of 2019 by create the future contest by tech briefs with my project “Cone solar panel”
- Top 10 winner of TIA challenge 2019 with my multiple unique solutions and invention
- Finalist in Enel challenge on MV & LV distribution challenge 2019 with my invention “Turbine for avoiding birds in MV & LV distribution lines”

I believe that I have made many contributions to science so far and just to mention some,

- In the recent Hawaii natural problem challenge which is the saving the Ohi'a challenge (https://conservationx.com/challenge/invasives/ohia), I submitted more than 30 possible solution which you can see via https://conservationx.com/challenge/invasives/ohia/projects
- I have developed more that 20 inventions for solution, management and prevention of the Coronavirus (COVID-19) which you can see via https://solve.mit.edu/challenges/health-security-pandemics/solutions/22229 or https://contest.techbriefs.com/profile?user=89682
- I have designed a Green- technology that will solve the micro fiber problem in the oceans which you can see via https://2019.spaceappschallenge.org/challenges/earths-oceans/trash-cleanup/teams/the-saviors/project
- I have designed a Green- technology that will solve the micro Plastic problem in the oceans which you can see via https://contest.techbriefs.com/2019/entries/medical/9465
- I have many contribution for agriculture industry with my multiple project like https://challenges.openideo.com/challenge/food-system-vision-prize/open-submission/isolation-farming
- I have contributed to Teraforming Mars with my project Melting mars polar ice cap https://www.globalinnovationexchange.org/innovation/melting-mars-polar-ice-cap
- I have contributed on reduction of plastics in packaging in beverage industries with my project bottle belt https://contest.techbriefs.com/2019/entries/sustainable-technologies/9466

- I have invented a mechanism that will solve the hurricane crisis of the USA for good and I am looking for a department to submit my white paper which you can see via https://www.herox.com/ideas/128-solving-us-hurricane and few of my honorary certificates are shown below.

Figure 5 – NASA / JPL winners' certificate

Certificate of Achievement

This Certificate of Achievement Presented to

Anteneh Gashaw

Recognizing your submission as a Top 100 Entry in the
Create the Future 2019 Design Contest

Cone Solar Panel

Presented
November 2019

Joseph T. Pramberger
President, Tech Briefs Media Group

Figure 6 - Certificate of achievement for top 100 inventions of 2019

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TIC AMERICAS 2020 Talent and Innovation Competition of the Americas · startup challenge · eco challenge11 Sustainability Awards · Caribbean 2020 Innovation Competition

2020

TIC AMERICAS

Talent and Innovation Competition of the Americas

CERTIFICATE OF PARTICIPATION

Awarded to:

Caribbean Sargassum Problem

For your participation as a Finalist of the Caribbean Innovation Competition during the Talent and Innovation Competition of the Americas (TIC Americas 2020).

Washington, DC, United States of America, July 2, 2020.

Luis A. Viguria
Chief Executive Officer
Young Americas Business Trust

Valerie Lorena
Executive Director
Young Americas Business Trust

Figure 7- Certificate of participation for the TIC AMERICAS 2020 contest finial