

Freddie Austin
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Alcester Road
Flyford Flavell
Worcestershire
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12 June 2023

Sir James Dyson
James Dyson Foundation
Tetbury Hill
Malmesbury
Wiltshire
SN16 0RP

Dear Sir Dyson

My name is Freddie Austin. I am 8 years old. When I am grown up, I would like to be an Inventor just like you. I live in Flyford Flavell village in Worcestershire. I go to Flyford Flavell Primary School. I am an Eco Councillor and a School Councillor there. I care very much about the environment and I hate litter. This is why I am writing to you.

I have had an idea for a brilliant invention to help the environment, and I was hoping you could help make my idea a reality. I have called it the **'Hover Hoover'**. This is a remote-controlled drone, which has a retractable and extendable vacuum and claw arms attached to it to suck up litter. Once the litter has been sucked up it will go into a little compartment in the back. Then the compartment can be emptied at a bin site. This is a good idea as it will take care of the environment and be a super fun way to do so.

I am going to ask Sir Richard Branson if he might help us too, because he is good at making things that fly.

If you would like to talk to me more about my idea then you can come to my school to meet me. You can also come to my house for tea too.

Yours faithfully

Freddie Austin

THE
JAMES
DYSON
FOUNDATION

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Friday 15th September 2023

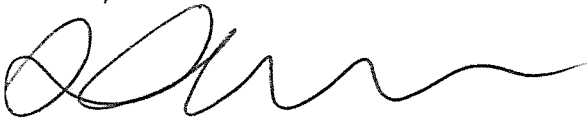
Dear Freddie,

Thank you for your letter to Sir James Dyson about your innovative invention!

Your invention has been reviewed by two Dyson engineers, Freddie and Dan, they have provided you some feedback on the following pages. I hope you find it helpful!

Please do keep on trying out new ideas. I have enclosed a pack of 40 Challenge Cards which you can try at home to learn about engineering and scientific principles, to help you keep inventing.

Best wishes,



Juliet Charman

Global Head of the James Dyson Foundation

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FOUNDATION

I hope that you like the design and that it brings your idea to life! Maybe one day you'll see one flying around near you.

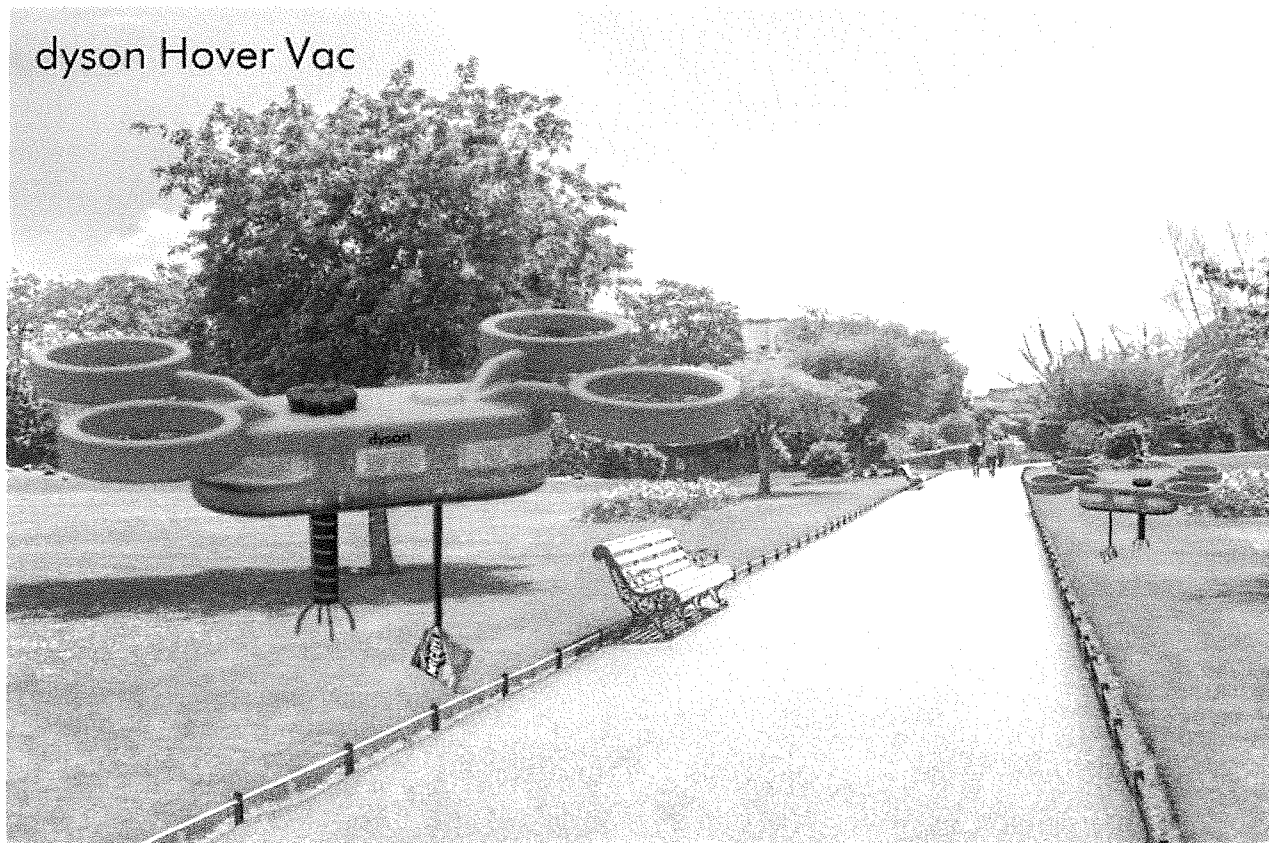
One extra thing is that here at Dyson we call our cleaning products vacuums. So, you could come up with a cool new name to help it fit Dyson. I quickly called it the Hover Vac, but you can call it whatever you like.

I hope that you continue to create great inventions in the future Freddie.

All the best,



Freddie Lock
Design Engineer



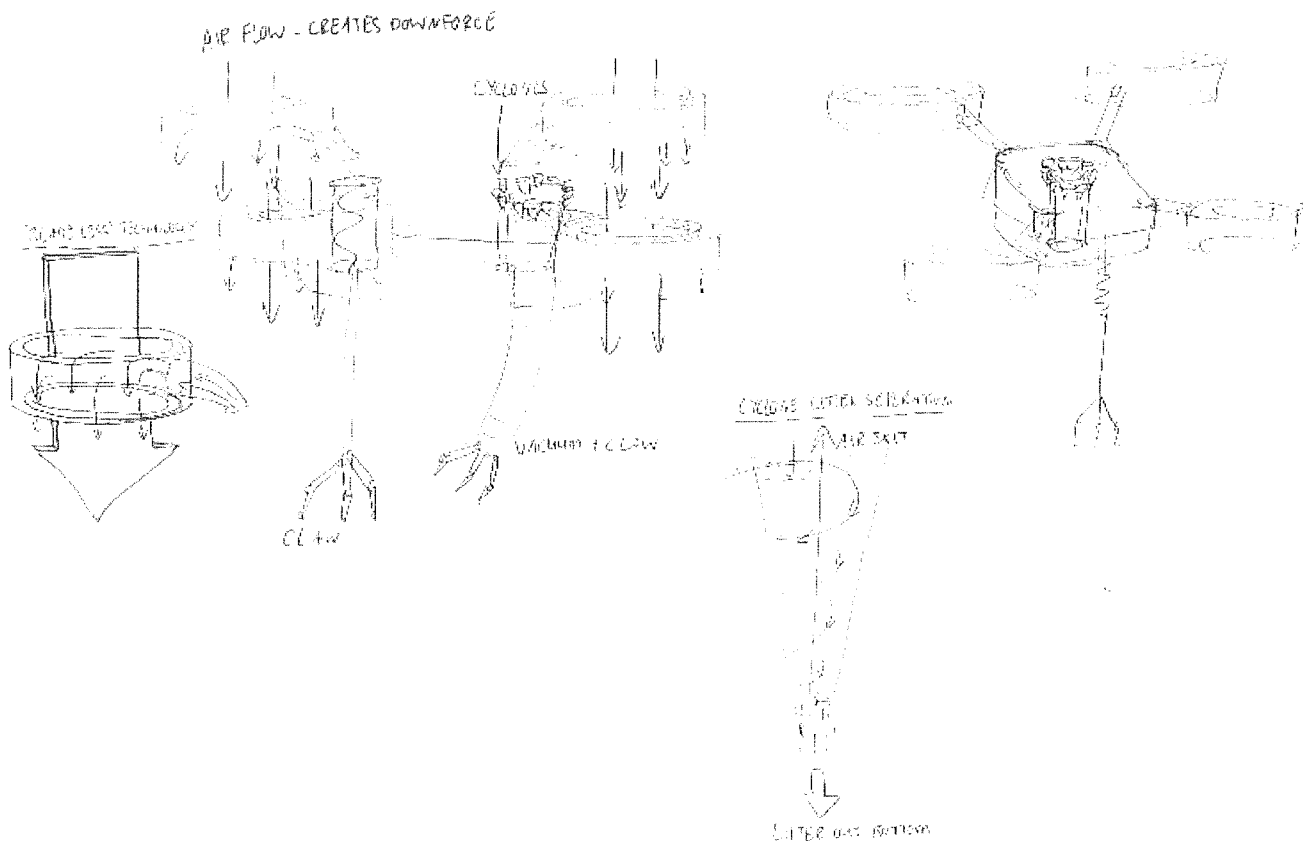
Dear Freddie,

My name is Freddie (Fred), and I am a Design Engineer who works for James Dyson. I work to create exciting new products, just like you have done. I am very impressed with the fantastic invention you have come up with. It's a great idea for a product which could help clean up litter and reduce the impact this has on the beautiful natural environment.

Seeing as it is such a cool idea, I have tried to visualise your invention. I thought that you might like to see what it could look like as a Dyson product and see the process of design.

I started by creating some sketches of a couple of ideas and worked out what technology I would include. The drone could be powered by our amazingly small and lightweight motors which would create the airflow for the 4 bladeless thrusters (like our well know bladeless fans), and we could use our vacuum cyclone technology to pick up and separate the litter.

Then next stage was creating a 3D CAD model on my computer which we use to design all the parts for our products here at Dyson.



JAMES
DYSON
FOUNDATION





Hi Freddie!

I am so happy to hear you would like to be an inventor and take care of our planet, its super important that more people start taking steps to look after our environments in multiple ways; just like your invention!

This is a cool invention that would feel very futuristic and help reduce the litter not only in our countries, but at sea as well and help reduce the rubbish patches we have floating out at sea. I like that you used our vacuum technology and have seen how it could help benefit others, which is what we try to do every day!

I have taken your idea/design and decided to create a computer-generated image which is something we do here at Dyson so we can visualise the design before we build it. As you can see, I have put an extra big vacuum hose on so it can gather big bits of litter and then put two extending claws like you said.

As Design engineers you must take in all the considerations when designing products, especially on a sustainable front. So, I have a couple of ideas to make the design even more environmentally friendly. Firstly, you might want to consider putting solar panels and charging on the drones, that way they aren't using non-renewable resources which is another problem our planet is facing, secondly the vacuum would have to be intelligent, so it doesn't vacuum up the small insects and animals with the litter. Lastly the weight is a big factor to take into consideration, so you will need to get as much power possible to fly and make the drone vacuum as light as possible to carry as much as it can.

I hope you keep pursuing ideas in the future and maybe see you at Dyson when you are old enough, who knows maybe we will work on the drone vacuum together one day. In the meantime, make sure you spread your positivity and let people know the importance of looking after our environment.

Thanks for letting me work on your invention Freddie and keep innovating!

Best wishes,

Dan de Garis
Design Engineer