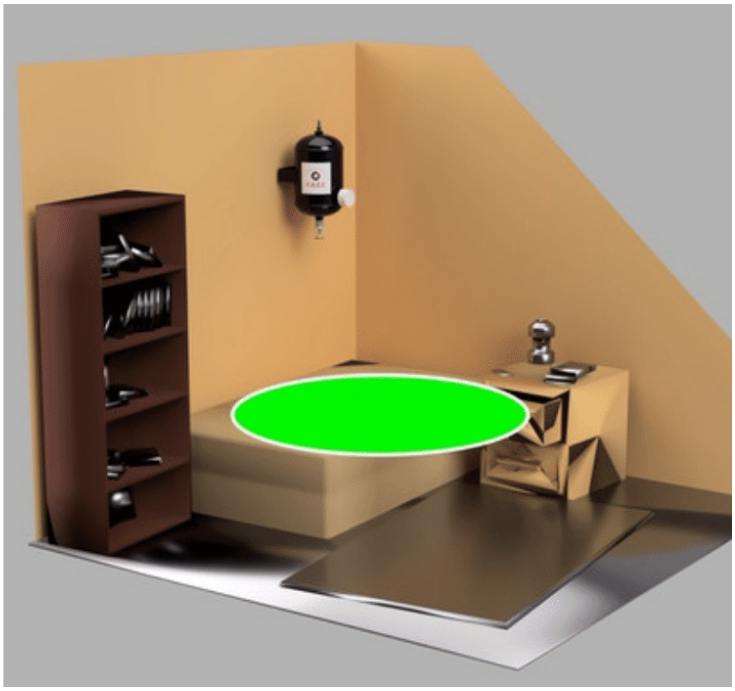

The device is a wall-mounted metal canister consisting of a sprinkler head, a pressure valve and pressure gauge | Photo source Arul Mathur

A SELF-ACTIVATING FIRE EXTINGUISHER THAT DOESN'T NEED ELECTRICITY

HEALTH & WELLBEING

A high school student has designed a self-activating fire extinguisher that can be mounted in the user's home

Spotted: A San Francisco high school student, Arul Mathur, has designed a self-activating fire extinguisher that can be mounted in the user's home. No connection to the home's water supply or electrical system is needed and unlike a handheld fire extinguisher, it can be refilled using a kit.

The device is called F.A.C.E and stands for Fire Activated Canister Extinguisher. The device is based on heat-activated fire suppression technology to help "snuff out fires before they consume your home", according to Mathur.

Mathur was inspired to create the extinguisher when he moved to California, where there have been almost 7,500,000 acres of wildfire in the last three years. Mathur realised that most people can't afford to install fire-extinguishing sprinklers into the ceilings of their homes. This is also why all of the profit will be used to help donate F.A.C.E. devices to fire-prone areas which are in most need.

"I heard about the hundreds of thousands of people who evacuated their homes every year to flee from wildfires, but I never thought that I could be one of those people," he says. "Finally, in the summer of 2019, a wildfire threatened to force my family to evacuate our home. At that moment, it became personal. I knew that I needed to do something about it." Mathur told New Atlas.

The device is a wall-mounted metal canister consisting of a sprinkler head, a pressure valve that allows users to pressurize F.A.C.E. using a traditional bicycle pump/compressor and pressure gauge to always monitor the pressure of fire retardant.

It is often the case that wildfires become hot enough that the heat radiated causes structures to spontaneously combust, especially wood. F.A.C.E. works by covering materials with fire retardant to increasing the resistance to temperature changes and avoid spontaneous combustion. F.A.C.E. becomes active when a temperature of 155 F (68 Celsius) is reached, which is before materials like wood reach their flashpoint.

When the temperature is reached, heat from the flames causes the glycerine-filled bulb in the sprinkler head to burst, spraying 4 to 5 feet (1.2 to 1.5 m) in all directions. Mathur says that "If F.A.C.E. is placed every 10-12 feet around a property, it can create a fire suppressing wall which can help stop fires from advancing through.".

A Kickstarter campaign is currently active to fund FACE. The planned retail price is expected to be $120 (around €100).

Written By: Katrina Lane

21st July 2021
Website: kickstarter.com/projects/arulm/face-a-self-activating-fire-suppression-device
Contact: linkedin.com/in/arulmathur

Takeaway:

According to various predictions, 2021 is projected to be one of the worst wildfire seasons in history. Not only in California, during the past couple of weeks we have seen entire towns in British Columbia, Canada on fire and thousands of people being forced to evacuate. Whilst wildfires have been recorded throughout history, the increase points to the clear effects of climate change. Inclusive, smart devices like Marthur's are much needed. However, it is fundamental that we take a serious look at climate change and what action can be taken.