Autocool

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A car is Man's second home. Throughout the years, it has proven to be a significant tool to attain his goals and desires. Unfortunately, a car can heat up to a fatal temperature within 10 to 15 minutes on a hot day. Needless to say, parents are somehow forgetting their child in a car, which is closed and exposed to sunlight; moreover, the child will die due to the high temperature trapped in the car. After several experiments, my invention, a simple yet important solar powered cooler, aims to maintain the car interior’s temperature at an acceptable condition when the car is parked in sunlight to save lives of forgotten children or pets and make passengers feel comfortable while entering the car. My work is based on a peltier module, a small squared electrical component. When it’s connected to an electrical current, the peltier gets hot on one side and very cold on the other side, but heatsink1and fan1 must be placed on top of each other on the hot side to prevent over heating. Then, I put another aluminum heatsink2 above the cold side, and I placed fan2 in front of this heat sink. Making the necessary electrical wiring, I put insulation materials between the peltier and the heatsink1to prevent the mixing of cold and hot air. Finally, I performed several experiments to check the temperature of the air produced and the system's efficiency. The results were positive; the temperature of the air as well as the temperature of the car decreased.

Awards Won: