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July 2021

FAN PROTECTION SOLUTION FOR HAND-HELD ELECTRONIC DEVICES

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Recommended Citation

INC, HP, "FAN PROTECTION SOLUTION FOR HAND-HELD ELECTRONIC DEVICES", Technical Disclosure Commons, (July 26, 2021)

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Fan Protection Solution for Hand-Held Electronic Devices

Abstract: A lever mechanism adjacent to the fan of a hand-held electronic device provides a withstanding force to the user's fingers so as to prevent interference with, or damage to, the fan.

This disclosure relates to the field of hand-held electronic devices.

A technique is disclosed that protects the fan from force applied by a user's hand when the device is held by the user.

Many hand-held portable electronic devices include a fan to cool the interior of the device. Particularly in (but not limited to) thin devices, the fan may be disposed in the device adjacent an external surface where the user may place his or her hand when holding the device. In order to allow the fan to take in, or exhaust, air, the external surface has openings adjacent the fan. As such, pressure from the user's hand may interrupt the operation of the fan, or even damage it. This, in turn, can overheat or damage the electronic device.

According to the present disclosure, and as understood with reference to the Figure, a lever mechanism is disposed between the fan and a cover of the enclosure.

The mechanism includes a lever 10 in the enclosure, adjacent to the fan 20. A small pillar 30 is disposed on the underside of the cover 40. In operation, the force from a finger is applied at the A point. The pillar 30 pushes one end of the lever 10. The other end (B point) of the lever 10 will be lifted, which provides a withstanding force for the cover 40. This withstanding force protects the fan 20 from being damaged by the cover.

By disposing one or more lever mechanisms in locations where a user's palm or fingers would be placed in holding the electronic device, interference with or damage to the fan will advantageously be reduced or eliminated.

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