AIR CONDUCTION DEVICE

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An air conduction device includes a main body defining a first passage through which airflow passes, and two adjusting members. A top of the main body defines a cutout communicating with the first passage. The cutout includes two opposite slanted sidewalls, and each slanted sidewall defines a plurality of slots aligned in a line along a slanted direction of the slanted sidewall. An elastic hook extends from each adjusting member. The adjusting members are accommodated in the cutout, with the elastic hooks selectively engaged in one of the corresponding slots.
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BACKGROUND

[0001] 1. Technical Field
[0002] The present disclosure relates to air conduction devices, and particularly to an air conduction device used in a computer.

[0003] 2. Description of Related Art
[0004] Electronic devices, such as computers, use heat dissipation assemblies for dissipating heat generated by components therein, thus preventing the components from becoming overheated. An air conduction device is often used in a computer with a fan to assist in heat dissipation. The air conduction device includes an airduct covering the heat generating components of the computer, and a fan installed at or near the inlet of the airduct to generate airflow to dissipate heat from the heat generating components covered by the airduct. However, airflow from the airduct is non-variant, if the heat generating components generate more heat, the components may still be overheated, which may harm the components.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Many aspects of the present embodiments can be better understood with reference to the following drawings. The components in the drawings are not necessarily drawn to scale, the emphasis instead being placed upon clearly illustrating the principles of the present embodiments. Moreover, in the drawings, all the views are schematic, and like reference numerals designate corresponding parts throughout the several views.

[0006] FIG. 1 is an exploded, isometric view of an air conduction device, and a circuit board with two heat sinks and two heat generating members.

[0007] FIG. 2 is an assembled, isometric view of the air conduction device and the circuit board of FIG. 1.

[0008] FIGS. 3 and 4 are cross-sectional views of FIG. 2, but respectively showing different usage states of the air conduction device.

DETAILED DESCRIPTION

[0009] The disclosure, including the accompanying drawings, is illustrated by way of examples and not by way of limitation. It should be noted that references to “an” or “one” embodiment in this disclosure are not necessarily to the same embodiment, and such references mean at least one.

[0010] Referring to FIGS. 1 and 2, an air conduction device is provided to dissipate heat from a first heat generating member 10 and a second heat generating member 20 mounted on a circuit board 11 of an electronic apparatus. The air conduction device includes a main body 30, and first and second adjusting members 40.

[0011] A first heat sink 13 and a second heat sink 14 are mounted to the circuit board 11. The first heat sink 13 is adjacent to the first heat generating member 10 and diagonal to the second heat sink 14, and aligns with the second heat generating member 20. The second heat sink 14 is adjacent to the second heat generating member 20, and aligns with the first heat generating member 10.

[0012] The main body 30 includes a top plate 31, and two side plates 32 extending downward from opposite sides of the top plate 31. A plurality of protrusions 322 extends from a bottom of each side plate 32. A clapboard 33 extends downward from the top plate 31, between the side plates 32, therefore, a first passage 35 and a second passage 34 are formed between the clapboard 33 and the side plates 32. A plurality of protrusions 332 extends from a bottom of the clapboard 33.

The top plate 31 defines a substantially trapezoidal-shaped cutout 36 communicating with the first passage 35. The cutout 36 includes two opposite slanted sidewalls 362 connected between the clapboard 33 and the corresponding side plate 32. Each slanted sidewall 362 defines a plurality of slots 364 aligned in a slanting line from an upper portion to a lower portion of the slanted sidewall 362. Two bar-shaped guide members 334 extend from the clapboard 33, facing the cutout 36. Each guide member 334 is adjacent and parallel to the corresponding slanted sidewall 362.

[0013] Each adjusting member 40 includes a substantially L-shaped connection portion 42 and a lock portion 44. The connection portion 42 includes a connection board 422 and a guide board 424 substantially extending down from a side of the connection board 422. A depressed portion 426 is defined in the connection portion 42, extending from a first side of the connection board 422 opposite to the lock portion 44 to the guide board 424. A gap 43 is defined between the connection board 422 and a side of the depressed portion 426 opposite to the guide board 424.

[0014] The lock portion 44 slantingly extends from a second side of the connection board 422 opposite to the first side, at an angle equaling to the slanting angle of the corresponding slanted sidewall 362. An elastic hook 442 extends from the lock portion 44.

[0015] Referring to FIG. 2, in assembly, the connection board 422 of the second adjusting member 40 extends through the gap 43 of the first adjusting member 40. Therefore, the adjusting members 40 are mounted together, and slidable relative to each other along a length direction of the gap 43. The guide boards 424 can be adjusted to slide to resist against each other. The lock portions 44 can be moved towards or away from each other, while the adjusting members 40 are slid. The adjusting members 40 are received in the cutout 36. The lock portion 44 of each adjusting member 40 is sandwiched between the guide member 334 and the slanted sidewall 362, and the lock portion 44 is slidable along the slanted sidewall 362. The elastic hook 442 is selectively engaged in any one of the slots 364, and the guide boards 424 of the adjusting members 40 abut against an inner side of the side plate 32. Ends of the adjusting members 40 opposite to the corresponding guide boards 424 resist against the clapboard 33.

[0016] In use, the protrusions 322 and 332 are engaged in the circuit board 11, and the main body 30 of the air conduction device covers the first and second heat generating members 10 and 20, and the first and second heat sinks 13 and 14. The first heat generating member 10 and the second heat sink 14 are accommodated in the second passage 34. The second heat generating member 20 and the first heat sink 13 are accommodated in the first passage 35, and the cutout 36 of the main body 30 is located above the second heat generating member 20.

[0017] Referring to FIGS. 3 and 4, the adjusting members 40 are slid relative to each other, with the lock portions 44 sliding up or down along the slanted sidewall 362, to move the connection boards 422 of the adjusting members 40 up or down relative to the second heat generating member 20. Therefore, a distance between the second heat generating member 20 and the connection boards 422 can be adjusted, to
adjust airflow flowing through the first and second passage 35 and 34. After the adjusting members 40 are moved to an appropriate height, the elastic hook 442 of each adjusting member 40 is engaged in a corresponding one of the slots 364.

[0018] It is believed that the present embodiments and theirs advantages will be understood from the foregoing description, and they will be apparent that various changes may be made thereto without departing from the spirit and scope of the description or sacrificing all of their material advantages, the examples hereinbefore described merely being exemplary embodiment.

What is claimed is:
1. An air conduction device comprising:
a main body defining a first passage for airflow pass through, a top of the main body defining a cutout communicating with the first passage, the cutout comprising two opposite slanted sidewalls, wherein each slanted sidewall defines a plurality of slots aligned in a line along a slanted direction of the slanted sidewall; and two adjusting members each comprising an elastic hook extending therefrom;
wherein the adjusting members slidably and respectively mounted to the slanted walls of the cutout to cover the cutout, with the elastic hook of each adjusting member selectively engaged in one of the corresponding slots.
2. The air conduction device of claim 1, wherein each adjusting member comprises a connection portion and a lock portion slantingly extending from a first side of the connection portion, when the adjusting members are slid to retract or extend, the lock portions move down or up along the corresponding slanted sidewalls, the elastic hook extends from the corresponding lock portions.
3. The air conduction device of claim 2, wherein each connection portion is substantially L-shaped, and comprises a connection board and a guide board substantially perpendicularly extending down from a first end of the connection board, the guide boards abut against each other, and then resist against a side bounding the first passage, in response to the adjusting members retract maximally
4. The air conduction device of claim 3, wherein each connection board defines a depressed portion, away from the lock portion, a gap is defined between the depressed portion and the connection board, the connection board of one of the adjusting members extends through the gap of the other adjusting member.
5. The air conduction device of claim 1, wherein the main body comprises a top plate and two side plates extending downward from opposite sides of the top plate, a clapboard extends downward from the top plate, between the side plates, the first passage and a second passage are formed at opposite sides of the clapboard.
6. The air conduction device of claim 5, wherein each adjusting member comprises a connection portion and a lock portion, the lock portions slidably mounted on the slanted sidewalls, the elastic hooks extend from the corresponding lock portions.
7. The air conduction device of claim 6, wherein each connection portion is substantially L-shaped, and comprises a connection board and a guide board extending from one side of the connection board, the lock portion slantingly extends upward from the connection board, the guide boards of the adjusting members abut against each other, and resist against a side bounding the first passage.
8. The air conduction device of claim 7, wherein the lock portion has an angle equaling to a slanting angle of the corresponding slanted sidewall.
9. The air conduction device of claim 7, wherein each connection board defines a depressed portion, away from the lock portion, a gap is defined between the depressed portion and the connection board, the connection board of one of the adjusting members extends through the gap of the other adjusting member.
10. The air conduction device of claim 5, wherein two guide members extend from the clapboard, facing the cutout, each adjusting member comprises a lock portion sandwiched between the corresponding guide member and the slanted sidewall.
11. The air conduction device of claim 10, wherein each adjusting member comprises a connection portion, and the lock portion slantingly extends upwards from the connection portion, the guide member has an angle equaling to a slanting angle of the corresponding slanted sidewall.

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