DESCRIPTION

ELECTRIC FAN

TECHNICAL FIELD

The present invention relates to an electric fan.

BACKGROUND ART

An electric fan of the related art is configured of a U-shaped base portion made of metal, two support portions that are able to be fixed to the base portion so as to oppose each other, two lower support posts that are able to be respectively fixed to the support portions, and a fan unit fixed to upper ends of the lower support posts. The support portions are fixed to the base portion by first fixing portions. Lower ends of the lower support posts are fixed to the support portions by second fixing portions (for example, see PTL 1).

Citation List

Patent Literature

PTL 1: Japanese Patent Unexamined Publication No. 63-138196

SUMMARY

TECHNICAL PROBLEM

The electric fan of the related art has a problem that it takes time to mount and assemble the lower support posts on the base portion.

Embodiments of the disclosures are to facilitate mounting of the lower support posts on a base portion and to further improve an assembling property.

In an aspect, an electric fan of the invention includes a base portion;

two support portions that are provided in the base portion to oppose each other; and fixing portions that are provided in each of the support portions. In addition, the electric fan includes two lower support posts which have the lower ends fixed by the fixing portions; and a fan unit that is fixed to the upper ends of the lower support posts. The base portion is formed integrally with the support portions with resin.

According to various embodiments, wherein a base portion ;

two support portions that are provided in the base portion to oppose each other;

a fixing portion that is provided in each of the support portions;

two lower support posts which have lower ends fixed by the fixing portions; and

a fan unit that is fixed to upper ends of the lower support posts,

wherein the base portion is formed integrally with the support portions with resin, if the lower support posts are fixed to the base portion, it is possible to fix the lower support posts by the fixing portions. Therefore, mounting of the lower support posts on the base portion is facilitated and it is possible to further improve the assembling property.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective view illustrating an appearance of an electric fan of an embodiment of the invention.

FIG. 2 is an exploded view of the electric fan of the embodiment of the invention.

FIG. 3 is a perspective view of a base portion of the electric fan of the embodiment of the invention which is viewed from a bottom surface.

FIG. 4 is an enlarged perspective view of a support portion of the base portion of the electric fan of the embodiment of the invention which is viewed from the bottom surface.

FIG. 5 is an enlarged perspective view illustrating the support portion of the base portion of the electric fan of the embodiment of the invention.

FIG. 6 is an enlarged perspective view illustrating a connecting portion of the electric fan of the embodiment of the invention.

FIG. 7 is a schematic view of the base portion of the electric fan of the

CLAIMS

1. An electric fan comprising:

a base portion (1);

two support portions (2) that are provided in the base portion (1) to oppose each other;

a fixing portion (3) that is provided in each of the support portions (2);

two lower support posts (4) which have lower ends fixed by the fixing portions (3); and

a fan unit (5) that is fixed to upper ends of the lower support posts (4),

wherein the base portion (1) is formed integrally with the support portions (2) with resin, wherein each of the support portions (2) has a recessed shape in which a vertical cross-section is opened downward, and is configured of a cylindrical upper support portion (10) extending upward from an upper surface of the base portion (1) and a cylindrical lower support portion (11) extending downward from a lower surface of the base portion (1),

wherein the upper support portion (10) and the lower support portion (11) communicate with each other,

wherein a lower end of each of the lower support posts (4) is inserted into the upper support portion (10) and the lower support portion (11),

wherein the upper support portion (10) includes the fixing portion (3); and the lower support portion (11) is provided with a planar reinforcing portion connected to the base portion (1) and a reinforcing rib (9) of the base portion (1).

.

2. The electric fan of Claim 1,

wherein a distance between an axial center of the fixing portion (3) and the lower end of the lower support portion (11), and a distance between the axial center of the fixing portion (3) and the lower end of the lower support portion (4) are longer than a distance between the axial center of the fixing portion (3) and an upper end of the upper support portion (10).

3. The electric fan of Claim 2,

wherein the fixing portion (3) is configured of a hole (27) that is provided inwardly in the upper support portion (10), a screw hole (28) that is provided in a lower portion of the lower support post (4) to oppose the hole (27), and a screw that is screwed into the screw hole (28) via the hole (27),

wherein the two support portions (2) oppose each other in a rightward and leftward direction in the base portion (1), and

wherein an axial direction of the hole (27) is the rightward and leftward direction in the base portion (1).

4. The electric fan of any one of claims 2 to 3,

wherein center axes of the upper support portion (10) and the lower support portion (11) are closer to an inner peripheral surface of the base portion (1) than to a midpoint of a line segment perpendicular to the inner peripheral surface and an outer peripheral surface of the base portion (1).