F-4229
PCT/JP2012/051471

CLAIMS

1. (Amended) A sound barrier using a sound absorber, the sound absorber comprising:

a plate member having a rigidity for causing a pressure gradient by generating a sound pressure difference between a front side and a back side around an end edge of the plate member; and

a sound absorbing material arranged in the vicinity of the end edge of the plate member, the sound absorbing material being configured to consume velocity energy of air particles accelerated by the pressure gradient, wherein

the sound absorbing material is provided extending outwardly from the end edge of the plate member along a plane direction of the plate member, and

at least one of values of surface density and flow resistance of the sound absorbing material is set lower in an outer portion in a plane direction of the sound absorbing material than in an inner portion in the plane direction of the sound absorbing material.

2. (Amended) The sound barrier according to claim 1, wherein

the sound absorbing material has a thickness smaller than the thickness of the plate member.

3. (Amended) The sound barrier according to claim 1 or 2, wherein

the sound absorbing material has a thickness decreasing upward.

4. (Added) The sound barrier according to claim 1 or 2, wherein

the sound absorbing material has the same thickness and is formed into a multi-step shape having a plurality of steps in the up-down direction.

5. (Added) The sound barrier according to claim 1 or 2, wherein

the sound absorbing material has the same thickness in the up-down direction and is configured so that, in the up-down direction, the values of

surface density and flow resistance are highest in a lower region, the values of surface density and flow resistance are lower in a middle region than in the lower region, and the values of surface density and flow resistance are lowest in an upper region.

CLAIMS

1. A sound barrier using a sound absorber, the sound absorber comprising:

a plate member having a rigidity for causing a pressure gradient by generating a sound pressure difference between a front side and a back side around an end edge of the plate member; and

a sound absorbing material arranged in the vicinity of the end edge of the plate member, the sound absorbing material being configured to consume velocity energy of air particles accelerated by the pressure gradient, wherein

the sound absorbing material is provided extending outwardly from the end edge of the plate member along a plane direction of the plate member, and

at least one of values of surface density and flow resistance of the sound absorbing material is set lower in an outer portion in a plane direction of the sound absorbing material than in an inner portion in the plane direction of the sound absorbing material.

2. The sound barrier according to claim 1, wherein

the sound absorbing material has a thickness smaller than the thickness of the plate member.

3. The sound barrier according to claim 1 or 2, wherein

the sound absorbing material has a thickness decreasing upward.

4. The sound barrier according to claim 1 or 2, wherein

the sound absorbing material has the same thickness and is formed into a multi-step shape having a plurality of steps in the up-down direction.

5. The sound barrier according to claim 1 or 2, wherein

the sound absorbing material has the same thickness in the up-down direction and is configured so that, in the up-down direction, the values of surface density and flow resistance are highest in a lower region, the values of surface density and flow resistance are lower in a middle region than in the lower region, and the values of surface density and flow resistance are lowest in an upper region.