amount of CO_2 emission is increased.

It is, therefore, desirable to provide an optical body, a wall member, a fitting, a solar shading device, and a building, which can ensure high upward reflection performance, and which can reduce absorption of light by a reflecting layer.

~~According to one embodiment of the present technology,~~ there is provided an optical body including a substrate having a concave-convex surface, a reflecting layer formed on the concave-convex surface, and an optical layer formed on the reflecting layer to embed the concave-convex surface, wherein the reflecting layer directionally reflects light, the concave-convex surface is made up of a plurality of triangular pillars arrayed in a one-dimensional pattern, and the triangular pillar has an apex angle α and a slope angle β, the apex angle α and the slope angle β satisfying a formula (1) or (2) given below:

$$30 \leq \beta \leq 4.5\alpha - 285 \quad (70 \leq \alpha \leq 80) \qquad \ldots(1)$$

$$30 \leq \beta \leq -1.5\alpha + 195 \quad (80 \leq \alpha \leq 100) \qquad \ldots(2)$$

According to another embodiment of the present technology, there is provided an optical body including a substrate having a concave-convex surface, and a reflecting layer formed on the concave-convex surface, wherein the reflecting layer directionally reflects light, the concave-convex surface is made up of a plurality of triangular

~~pillars arrayed in a one-dimensional pattern, and the~~ triangular pillar has an apex angle α and a ~~slope~~ angle β, the apex angle α and the slope ~~angle~~ β satisfying a formula (1) or (2) given below:

$30 \leq \beta \leq 4.5\alpha - 285$ $(70 \leq \alpha \leq 80)$ …(1)

~~$30 \leq \beta \leq -1.5\alpha + 195$ $(80 \leq \alpha \leq 100)$ …(2)~~

According to a first aspect, there is provided an optical body comprising:

a substrate having a concave-convex surface;

a reflecting layer formed on the concave-convex surface; and

an optical layer formed on the reflecting layer to embed the concave-convex surface,

wherein the reflecting layer directionally reflects all of the incident light regardless of the wavelength band and has a reflectance of 30% or more at a wavelength of 1500 nm,

the concave-convex surface is made up of a plurality of triangular pillars arrayed in a one-dimensional pattern at a pitch of 5 μm or larger and 5 mm or smaller, and

the triangular pillar has an apex angle α and a slope angle β, the apex angle α and the slope angle β satisfying a formula (1) or (2) given below:

$30 \leq \beta \leq 4.5\alpha - 285$ $(70 \leq \alpha \leq 80)$ …(1)

$30 \leq \beta \leq -1.5\alpha + 195$ $(80 \leq \alpha \leq 100)$ …(2)

According to a second aspect, there is provided an optical body comprising:

a substrate having a concave-convex surface; and

a reflecting layer formed on the concave-convex surface,

wherein the reflecting layer directionally reflects at

a pitch of 5 μm or larger and 5 mm or smaller light regardless of the wavelength band and has a reflectance of 30% or more at a wavelength of 1500 nm,

the concave-convex surface is made up of a plurality of triangular pillars arrayed in a one-dimensional pattern at a pitch of 5 μm or larger and 5 mm or smaller, and

the triangular pillar has an apex angle α and a slope angle β, the apex angle α and the slope angle β satisfying a formula (1) or (2) given below:

$$30 \leq \beta \leq 4.5\alpha - 285 \quad (70 \leq \alpha \leq 80) \qquad \ldots(1)$$

$$30 \leq \beta \leq -1.5\alpha + 195 \quad (80 \leq \alpha \leq 100) \qquad \ldots(2)$$

According to a third aspect, there is provided a wall member including the above optical body.

According to a fourth aspect, there is provided a fitting including a shading portion provided with the above optical body.

According to a fifth aspect, there is provided a solar shading device comprising one or more solar shading members to cut off sunlight, wherein the solar shading member includes the above optical body.

According to a sixth aspect, there is provided a building including the above optical body, wherein the optical body is arranged such that, in each of the triangular pillars, the slope angle β is positioned above the apex angle α.

With the optical body according to the embodiment of the present invention~~technology~~, the concave-convex surface is formed by arraying asymmetrical triangular pillars in a one-dimensional pattern, and the reflecting layer is formed on the concave-convex surface. Therefore, when the optical body according to the embodiment of the present technology is applied to an adherend (i.e., an affixing target), such as a wall member, the incident light can be reflected upward.

Further, with the optical body according to the embodiment of the present invention~~technology~~, the apex angle α and the slope angle β of the triangular pillar satisfy the predetermined relationship. Therefore, when the optical body according to the embodiment of the present technology is applied to the adherend, such as the wall member, a high upward reflectance can be obtained.

According to the embodiments of the present invention~~technology~~, as described above, since heat generation caused with absorption of light is reduced in the optical body capable of directionally reflecting the incident light, energy