It is an object of embodiments of the invention to provide an improved descent device, for example that is capable of maintaining a continuous descent speed as described above, and/or at least mitigate one or more problems that are associated with known arrangements.

SUMMARY

According to an aspect of the invention, there is provided a descent device comprising: a body for attachment to a load; and a series of apertures extending through the body for passage of a line in alternate directions therethrough, from a first aperture to a final aperture, such that regions of the body delimiting and extending between the apertures provide a discontinuous contact surface for frictional engagement with the line, wherein the series of apertures comprises a first group of apertures providing a first frictional resistance and including the first aperture, and a second group of apertures providing a second frictional resistance greater than the first frictional resistance and including the final aperture, and wherein the first group of apertures comprises one or more apertures having a first height less than a height of one or more of the remaining apertures of the first group of apertures, the one or more apertures having the first height including the first aperture. Generally, the first group of apertures may provide a base amount of frictional resistance and function primarily as a guide, and the second group of apertures may provide a relatively higher amount of frictional resistance dependent upon the load and function primarily as brake. The device may be for emergency use, such as to allow a person to descend from one position to another to escape a dangerous environment. In particular, the device may be operated without user intervention, allowing a person to descend from one position to another at a controlled speed of descent, over a range of loads.

In certain examples, the first group of apertures may comprise one or more apertures having a first height less than a height of one or more of the remaining apertures of the first group of apertures. The one or more apertures having the first height may include the first aperture, and in certain examples may

include the first aperture only. Additionally, or alternatively, the second group of apertures may comprise one or more apertures having a second height less than a height of one or more of the remaining apertures of the second group of apertures (the height of the

one or more of the remaining apertures of the second group of apertures may be the same as or different to the height of the one or more of the remaining apertures of the first group of apertures). The one or more apertures having the second height may include the final aperture and one other aperture, and in certain examples may include the final aperture and one other aperture and only. The first height may be equal to the second height and/or each aperture of the series of apertures may have a height other than the first or second heights has a third height. The body may be substantially planar.

In certain examples, the first group of apertures may be spaced from one another by a first spacing and the second group of apertures are spaced from one another by a second spacing greater than the first spacing. The first group of apertures and the second group of apertures may be spaced from one another by the first spacing. Additionally, or alternatively, the series of elongate apertures may comprise five apertures, the first group of apertures comprising three apertures and the second group of apertures comprising two apertures. In certain examples, the series of elongate apertures may consist of six apertures, the first group of apertures consisting of three apertures and the second group of apertures consisting of three apertures.

In certain examples, one or more of the apertures may comprise a rounded or chamfered edge extending about a periphery thereof on a first side of the body and/or on an opposing second side of the body. The apertures of the series of apertures may be a series of parallel elongate slots. One or more of the slots of the series of parallel elongate slots may have a first width.

In certain examples, the device comprises a line passing in alternate directions through the series of apertures, i.e. from the first aperture to the final aperture. The line may have a thickness that is at least 50% of the first height and/or

the second height. The line may have a width approximately equal to the first width. The line may comprise a length of woven flat webbing or woven tubular webbing.

In certain examples, the first height and/or the second height may be approximately 4 mm (for example, 4 mm +/- 0.5 mm) and the thickness of the line is approximately 2 mm (for example, 2 mm +/- 0.5 mm). Additionally, or alternatively, the first spacing may be approximately 9 mm (for example, 9 mm +/- 2 mm) and the second spacing may be approximately 11 mm (for example, 11 mm +/- 2 mm).

In certain examples, the device may comprise a further aperture (i.e. a connection aperture) extending through the body to attach a load thereto, including an aperture for connecting a quick-release shackle, or similar, to the body. Additionally, or alternatively, the device may comprise a further aperture (i.e. a handle aperture) extending through the body to provide a handle.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention will be described, by way of example only, with reference to the accompanying figures, in which:

Figure 1 is a perspective view of a descent system according to the prior art, including a descent device according to the prior art;

Figure 2 is a front view of a descent device according to an embodiment of the invention, the device comprising first and second groups of apertures;

Figures 3 is a cross-sectional view of the descent device of Figure 2 taken through the centre of the apertures; and

Figure 4 is an enlarged partial view of the descent device of Figure 2 denoting heights of and spacings between the apertures.