way of limitation. It is merely provided to aid the reader in understanding some of the aspects of the invention.

[0005] In one aspect, a safety harness comprises shoulder straps, a D-ring connected to the shoulder straps, a waist strap, and a weight distribution assembly interconnecting the shoulder straps proximate the D-ring and the waist strap. The weight distribution assembly is loaded in compression when in use to transfer weight applied to the D-ring from proximate the shoulder straps to proximate the waist strap.

[0006] In another aspect, a safety harness comprises a dorsal pad assembly, at least one of a waist belt and a hip pad, shoulder straps interconnecting the dorsal pad assembly and the at least one of the waist belt and the hip pad, and a support assembly interconnecting the dorsal pad assembly and the at least one of the waist belt and the hip pad. The support assembly is loaded in compression when in use and is configured and arranged to transfer a majority of an applied weight from proximate the dorsal pad assembly to proximate the at least one of the waist belt and the hip pad.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The present invention can be more easily understood, and further advantages and uses thereof can be more readily apparent, when considered in view of the detailed description and the following Figures in which:

[0008] Figure 1 is a rear view of a safety harness including a weight distribution assembly constructed in accordance with the present invention and donned by a user;

[0009] Figure 2 is a side view of the safety harness donned by the user shown in Figure 1;

[0010] Figure 3 is a rear view of the safety harness donned by the user shown in Figure 1 with padding removed;

[0011] Figure 4 is a side view of the safety harness donned by the user shown in Figure 3;

[0012] Figure 5 is a rear plan view of the safety harness shown in Figure 1;

[0013] Figure 6 is a side view of the safety harness shown in Figure 5;

[0014] Figure 7 is a rear perspective view of the safety harness shown in Figure 1;

CLAIMS

1. A safety harness, comprising:

shoulder straps;

a D-ring connected to the shoulder straps;

a waist strap; and

a weight distribution assembly interconnecting the shoulder straps proximate the D-ring and the waist strap, the weight distribution assembly being loaded in compression when in use to transfer weight applied to the D-ring from proximate the shoulder straps to proximate the waist strap.

2. The safety harness of claim 1, wherein the weight distribution assembly includes a dorsal pad assembly interconnecting the shoulder straps proximate the D-ring.

3. The safety harness of claim 2, wherein the weight distribution assembly includes a support assembly and the dorsal pad assembly includes the D-ring, the support assembly being operatively connected to the dorsal pad assembly in at least one of an upper position above the D-ring and a lower position below the D-ring.

4. The safety harness of claim 1, wherein the weight distribution assembly includes a hip pad through which the waist strap is routed.

5. The safety harness of claim 4, wherein the weight distribution assembly includes a support assembly being operatively connected to the hip pad in a center position on the hip pad.

6. The safety harness of claim 4, wherein the weight distribution assembly includes a support assembly having a first support member and a second support member, the first support member being operatively connected to the hip pad in a first offset position and the second support member being operatively connected to the hip pad in a second offset position, the first and second offset positions being relative to a center position on the hip pad.

7. The safety harness of claim 4, wherein the weight distribution assembly includes a dorsal pad assembly and a support assembly pivotally connected to at least one of the hip pad and the dorsal pad assembly.

8. The safety harness of claim 7, wherein the support assembly pivots in a first direction relative to the dorsal pad assembly and pivots in a second direction relative to the hip pad.

9. The safety harness of claim 1, wherein the weight distribution assembly includes a support assembly comprising a support member and an adjustable member configured and arranged to move along the support member to adjust a length of the support assembly.

10. The safety harness of claim 9, wherein the support member includes a spring biased button and the adjustable member includes a plurality of apertures, the button being configured and arranged to extend through a desired one of the plurality of apertures to adjust the length of the support assembly.

11. A safety harness, comprising:

a dorsal pad assembly;

at least one of a waist belt and a hip pad;

shoulder straps interconnecting the dorsal pad assembly and the at least one of the waist belt and the hip pad; and

a support assembly interconnecting the dorsal pad assembly and the at least one of the waist belt and the hip pad, the support assembly being loaded in compression when in use, the support assembly being configured and arranged to transfer a majority of an applied weight from proximate the dorsal pad assembly to proximate the at least one of the waist belt and the hip pad.

12. The safety harness of claim 11, wherein the support assembly is made from a material selected from the group consisting of a metal, a composite, a plastic, and a carbon fiber.

13. The safety harness of claim 11, further comprising at least one pivot assembly interconnecting the support assembly and at least one of the dorsal pad assembly and the at least one of the waist belt and the hip pad.

14. The safety harness of claim 11, wherein the support assembly is integral with the dorsal pad assembly.

15. The safety harness of claim 11, wherein the support assembly is integral with the hip pad.

16. The safety harness of claim 11, wherein the support assembly is a single component support member, the single component support member being operatively connected to the

at least one of the waist belt and the hip pad proximate a middle rear portion of the at least one of the waist belt and the hip pad.

17. The safety harness of claim 11, wherein the support assembly includes a first support member portion and a second support member portion, the first and second support member portions being operatively connected to the at least one of the waist belt and the hip pad proximate first and second sides of the at least one of the waist belt and the hip pad.

18. The safety harness of claim 11, wherein the support assembly is adjustable in length.

19. The safety harness of claim 18, wherein the support assembly includes a support member with a spring biased button and an adjustable member with a plurality of apertures, the button being configured and arranged to extend through a desired one of the plurality of apertures to adjust the length of the support assembly.

20. The safety harness of claim 11, wherein the dorsal pad assembly further comprises a D-ring.