

once it has been threaded through the integral slot **53**, forming a fixed engagement with the hook **50**. In the preferred embodiment, the hook comprises a metal flat hook, also known in the art as a gutter hook, curved hook, or vehicle hook.

[0030] This design allows the tourniquet **1** to be applied at a level above the injury instead of passing the injured limb through the loop of the traditional ratchet tourniquet. Referring to FIGS. **4** and **5**, during application, the hook **50** and the second end **15** of the belt **5** are fed under the injured extremity **60** (shown with dashed lines to indicate transparency) with one hand **65**. The broad curved portion of hook **66** wraps partially around fingertips **67**, providing protection for leading fingers. Meanwhile, the other hand **68** retrieves the hook **50** and advances the belt **5** further from the other side of the injured extremity **60**. Only the fingertips of the hand are needed to identify and retrieve the curved portion of hook.

[0031] Turning now to FIG. **6**, once the hook **50** and second end **15** of the belt **5** is passed around the extremity **60**, the hook **50** is fastened into the ratchet-action mechanism **35** by clasping the coupling pin **47**. The tourniquet **1** is now cinched down using the ratchet-action mechanism **35** as described herein. The tension in the tightened belt **5** and the outward force from the compressed tissue of the extremity **60** keep the hook **50** securely fastened to the coupling pin **47**.

[0032] In an alternative embodiment the tension producing mechanism may comprise a windlass as disclosed in U.S. patent application Ser. No. 11/147,806 to Esposito and Ser. No. 11/410,638 to Rutherford and U.S. Pat. No. 6,899,720 to McMillan and (which are incorporated by reference in their entirety herein).

[0033] In yet another alternate embodiment, the tension to the belt may be applied using hook-and-loop means as described above with respect to the Combat Application Tourniquet (CAT) (see also, FIGS. **1A** and **1B**).

[0034] In yet a further alternate embodiment, the tension producing mechanism may comprise a slip buckle with frictional bias means as disclosed in U.S. Pat. No. 6,960,223 to Ambach, U.S. Pat. No. 6,217,601 to Chao, U.S. Pat. No. 6,884,254 to Brooks, U.S. Pat. No. 1,447,967 to Davis and U.S. Pat. No. 2,113,534 to Brown (which are incorporated by reference in their entirety herein).

[0035] The use of a metal hook **50** at the second end **15** of the belt **5** offers several advantages over the prior art. When the belt **5** is held in the palm of the hand **70**, the flat hook curves **50** over the fingertips of the middle and ring fingers **67** (see FIGS. **5** and **6**). The flat portion **75** of the hook **50** "locks" the hook against the palm side of the fingers **67**, keeping the belt from twisting while passing under the extremity (see FIGS. **5** and **6**). Unlike the cloth belt of the CAT, the flat metal hook **50** covers and protects the driving fingertips **67**, forming a strong metal interface to separate the injured extremity **60** from dirt, rocks, seat cushions, etc. (not shown) that surrounds the patient (not shown).

[0036] With the hook **50** passed to the maximal extent, the fingertips on the retrieving hand **78** easily grasp around the hook **50** and pull the belt **5** around the remainder of the injured extremity **60** (FIG. **5**). Unlike the cloth belt of the CAT, the metal hook **50** is easily distinguishable from the surrounding clothes, tissue, and equipment belts (not shown) that may make finding the tip of a cloth belt difficult. Once passed around the extremity, the hook **50** is fastened into the ratchet-action mechanism **35** by clasping it to the coupling pin **47**. Fastening the hook to the ratchet is much simpler and quicker

than feeding a cloth belt through the friction buckle of the CAT. The tourniquet **1** is now cinched down and tightened just like a regular ratchet tourniquet.

[0037] While a specific embodiment of the invention will be shown and described in detail to illustrate the application of the principles of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A tourniquet device comprising:
 - a flexible element with at least a first end and a second end;
 - a fastening element integral with the first end of the flexible element, said fastening element comprising a flat hook;
 - a locking element integral with the second end of the flexible element, said locking element being operative to removably relate to the fastening element;
 - a tension producing mechanism operative to apply tension to said flexible element.
2. The device of claim 1 wherein the flexible element comprises a flexible polymeric material.
3. The device of claim 2, wherein the flexible polymeric material comprises a material selected from a group consisting of acetal, nylon, polypropylene, and polyethylene.
4. The device of claim 1, wherein the locking element comprises a pin.
5. The device of claim 1, wherein the tension producing mechanism is a ratchet.
6. The device of claim 1, wherein the tension producing mechanism is a windlass.
7. The device of claim 1, wherein the tension producing mechanism is a slip buckle with frictional bias means.
8. The device of claim 1, wherein the tension producing mechanism is a hook-and-loop fastener.
9. A tourniquet device comprising:
 - a flexible element with a first end and a second end;
 - a fastening element integral with the first end of the flexible element, said fastening element comprising a flat hook;
 - a locking element being operative to removably relate to the fastening element, said locking element forming a first part of an assembly;
 - a tension producing mechanism that is integral with the locking element, said tension producing mechanism forming a second part of the assembly, said assembly being integral with the second end of the flexible element.
10. The device of claim 9 wherein the flexible element comprises a flexible polymeric material.
11. The device of claim 10, wherein the flexible polymeric material comprises a material selected from a group consisting of acetal, nylon, polypropylene, and polyethylene.
12. The device of claim 9, wherein the locking element comprises a pin.
13. The device of claim 9, wherein the tension producing mechanism is a ratchet.
14. The device of claim 9, wherein the tension producing mechanism is a windlass.
15. The device of claim 9, wherein the tension producing mechanism is a slip buckle with frictional bias means.
16. The device of claim 9, wherein the tension producing mechanism is a hook-and-loop fastener.
17. A method of applying a tourniquet comprising:
 - providing a constriction device having a belt;
 - a coupler configured to couple a first end of said belt with a second