

Claims:

We claim:

- 5 1. An article comprising,
 a limb component (100) comprising a first metal plate (602) and a second
 metal plate (604) and a filler material (610 a-b, 612a-b) arranged between
 the first metal plate (602) and the second metal plate (603);

 ~~wherein the component has a balance of bending strength and weight.~~
- ~~2. The article as claimed in claim 1,~~ wherein the first metal plate (602)
 and the
10 second metal plate (604) are selected from iron, steel, titanium, aluminium
 or alloys thereof;
 ~~The article as claimed in claim 1,~~ wherein the filler material (610 a-b, 612a-
 ~~b)~~ is selected from wood, polymer or combinations thereof;
 ~~wherein the limb component has a balance of bending strength and weight.~~
- ~~3.~~
- ~~4.2.~~The article as claimed in claim 1, wherein the filler material (610 a-b, 612a-b) has
 a thickness
15 in range of 20 millimetres to 120 millimetres.
- ~~5.3.~~The article as claimed in claim 1, wherein the article is a robotic limb.
- ~~6.4.~~The article as claimed in claim 1, wherein the article comprises a
 tensioner assembly (400).
- ~~7.5.~~The article as claimed in claim 7 4, wherein the tensioner assembly (400) comprises
20 at least two tensioner joints (402a, 402b), a roller chain (404a, 404b) and a
 fastener (406a, 406b) connecting the atleast two tensioner joints (402a,
 402b).
6. A robotic limb comprising,
 a limb component (100) comprising a first metal plate (602) and a
 second metal plate (604) and a filler material (610 a-b, 612a-b)
 arranged between the first metal plate (602) and the second metal plate
 (604); ~~wherein the component has a balance of bending strength and weight~~

wherein the first metal plate (602) and the second metal plate (604) are selected from iron, steel, titanium, aluminium or alloys thereof ;

wherein the filler material (610 a-b, 612a-b) is selected from wood, polymer or combinations thereof ;

wherein the component has a balance of bending strength and weight.

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9.7. The robotic limb as claimed in claim **9.6**, wherein the limb component **100** is a thigh **(600)**, a shank **(700)**, an upper arm, a forearm, or combinations thereof.

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We claim:

1. An article comprising,
 - a limb component (100) comprising a first metal plate (602) and a second metal plate (604) and a filler material (610 a-b, 612a-b) arranged between the first metal plate (602) and the second metal plate (603);
 - wherein the first metal plate (602) and the second metal plate (604) are selected from iron, steel, titanium, aluminium or alloys thereof;
 - wherein the filler material (610 a-b, 612a-b) is selected from wood, polymer or combinations thereof;
 - wherein the limb component has a balance of bending strength and weight.
2. The article as claimed in claim 1, wherein the filler material (610 a-b, 612a-b) has a thickness in range of 20 millimetres to 120 millimetres.
3. The article as claimed in claim 1, wherein the article is a robotic limb.
4. The article as claimed in claim 1, wherein the article comprises a tensioner assembly (400).
5. The article as claimed in claim 4, wherein the tensioner assembly (400) comprises at least two tensioner joints (402a, 402b), a roller chain (404a, 404b) and a fastener (406a, 406b) connecting the atleast two tensioner joints (402a, 402b).
6. A robotic limb comprising,
 - a limb component (100) comprising a first metal plate (602) and a second metal plate (604) and a filler material (610 a-b, 612a-b) arranged between the first metal plate (602) and the second metal plate (604);
 - wherein the first metal plate (602) and the second metal plate (604) are selected from iron, steel, titanium, aluminium or alloys thereof ;
 - wherein the filler material (610 a-b, 612a-b) is selected from wood, polymer or combinations thereof ;
 - wherein the component has a balance of bending strength and weight.
7. The robotic limb as claimed in claim 6, wherein the limb component 100 is

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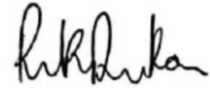
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a thigh (600), a shank (700), an upper arm, a forearm, or combinations thereof.

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