

We claim:

1. A grip assist apparatus for weight lifting, wherein said grip assist apparatus is dimensioned to cover a palm of a hand of a user from at least one finger to below a wrist joint such that movement of a thumb of the user is not impeded, wherein said hand
5 comprises a thumb fat pad, a pinky fat pad, a metacarpal fat pad series, and an area of vulnerability therebetween, said grip assist apparatus comprising:

a gripping portion formed by affixing first and second halves of flat material of a same shape and size to one another such that said first and second halves are flush, said gripping portion comprising:

10 a finger end;

a wrist end opposite from said finger end, said wrist end comprising first and second wrist end flanks;

a first attachment edge disposed adjacent to said first wrist end flank of said wrist end;

15 a second attachment edge disposed adjacent to said second wrist end flank of said wrist end;

first and second sides extending between said first and second attachment edges and said finger end, wherein each of said first and second sides comprises concave contouring proximate to said first and second attachment edges, such that
20 when said grip assist apparatus is worn over the palm as intended, movement of the thumb of the user is not impeded;

a U-shaped insert disposed between said first and second halves comprising a gap, wherein when said U-shaped insert is disposed between said first and second halves:

25 said gripping portion comprises three layers comprising said first half, said insert, and said second half in all locations of said gripping portion except where said gap of said insert is disposed between said first and second halves;

30 said gripping portion comprises only two layers comprising said first and second halves where said gap of said insert is disposed between said first and second halves; and

when said grip assist apparatus is worn over the palm as intended, said gap is disposed on top of at least a portion of the area of vulnerability proximate to the metacarpal fat pad series and extending from the

metacarpal fat pad series towards the pinky fat pad and the thumb fat pad;
and

wherein said U-shaped insert comprises:

a first U side, comprising:

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a first U outer side;

a first U inner side opposite from said first U outer side; and

a first U top connecting said first U outer and inner sides;

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a second U side, comprising:

a second U outer side;

a second U inner side opposite from said second U outer side; and

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a second U top connecting said second U outer and inner sides;

a connecting portion connecting said first and second U sides, comprising:

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a wrist end side, wherein said wrist end side intersects with said first and second outer U sides of said first and second U sides; and

a gap side, wherein said gap side intersects with said first and second inner U sides of said first and second U sides; and

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said gap formed between said first and second U sides;

wherein, when said grip assist apparatus is worn over the palm as intended:

said wrist end side of said connecting portion is proximate to said wrist end of said gripping portion;

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said first U outer side follows said contouring of said first side of said gripping portion;

said second U outer side follows said contouring of said second side of said gripping portion;

- at least a portion of said first and second U tops are disposed on top of at least a portion of the metacarpal fat pad series;
- 5 at least a portion of one of said first and second U sides is disposed on top of at least a portion of the pinky fat pad;
- at least a portion of the other of said first and second U sides is disposed on top of at least a portion of the thumb fat pad; and
- 10 at least a portion of said connecting portion is disposed on top of at least a portion of the pinky fat pad and the thumb fat pad;
- a wrist portion comprising a first strap and a second strap, wherein:
- each of said first strap and said second strap comprises an attachment end
- 15 and a free end;
- said attachment end of said first strap extends from said first attachment edge of said gripping portion; and
- said attachment end of said second strap extends from said second attachment edge of said gripping portion; and
- 20 a releasable wrist fastener attached to said first and second straps, said wrist fastener being dimensioned and shaped to fasten said first strap to said second strap such that said grip assist apparatus is secured around a wrist of the user.
2. The grip assist apparatus as claimed in claim 1, wherein said flat material from which said gripping portion is formed comprises first and second flat material sides and at
- 25 least one of said first and second flat material sides is non-slip.
3. The grip assist apparatus as claimed in claim 1, further comprising an end piece disposed between said first and second halves at said finger end of said gripping portion.
4. The grip assist apparatus as claimed in claim 1, further comprising stitching to hold said first and second halves against one another and to hold said U-shaped insert in
- 30 place between said first and second halves, wherein said stitching comprises at least:
- a first outer section between said first side of said gripping portion and said first U outer side of said first U side of said U-shaped insert, wherein said first outer section follows said contour of said first side of said gripping portion and stitches through said first and second halves only;

a second outer section between said second side of said gripping portion and said second U outer side of said second U side of said U-shaped insert, wherein said second outer section follows said contour of said second side of said gripping portion and stitches through said first and second halves only;

5 a first inner section parallel to said first outer section, wherein at least a portion of said first inner section stitches through said first and second halves and said first U outer side of said first U side of said U-shaped insert;

 a second inner section parallel to said second outer section, wherein at least a portion of said second inner section stitches through said first and second halves and said
10 second U outer side of said second U side of said U-shaped insert;

 first and second top sections above said first and second U tops of said first and second U sides of said U-shaped insert, wherein said first and second top sections stitch through said first and second halves only; and

 a gap defining section adjacent to said first and second inner U sides of said first
15 and second U sides and said gap side of said connecting portion of said U-shaped insert, wherein said gap defining section stitches through said first and second halves only.

5. The grip assist apparatus as claimed in claim 1, wherein each of said first and second attachment edges of said gripping portion are angled such that when said first strap and said second strap of said wrist portion are secured about the wrist of the user via said
20 wrist fastener, said first and second straps and said gripping portion form a funnel-shaped enclosure around the wrist and base of the hand, said enclosure having an opening that is larger at a distal end than at a proximal end.

6. The grip assist apparatus as claimed in claim 1, wherein said first strap and said second strap of said wrist portion are each substantially rectangular in shape.

25 7. The grip assist apparatus as claimed in claim 1, wherein said gripping portion has a rigidity such that said gripping portion is self-supporting and will remain extended in front of the palm and of the fingers to allow said gripping portion to be manipulated by the human hand on which said grip assist apparatus is worn, and wherein said gripping portion is sufficiently flexible to allow said gripping portion to be easily wrapped around a lifting
30 bar using only the tip of said at least one finger of the human hand on which said grip assist apparatus is worn.

8. A grip assist apparatus for pulling and pushing movements, wherein said grip assist apparatus is dimensioned to cover a palm of a hand of a user from at least one finger

to below a wrist joint such that movement of a thumb of the user is not impeded, said grip assist apparatus comprising:

a gripping portion formed by affixing first and second halves of flat material of a same shape and size to one another such that said first and second halves are flush, said gripping portion comprising:

a finger end, wherein said finger end comprises a first gripping portion edge of said gripping portion;

a wrist end opposite from said finger end, said wrist end comprising first and second wrist end flanks;

a first attachment edge disposed adjacent to said first wrist end flank of said wrist end;

a second attachment edge disposed adjacent to said second wrist end flank of said wrist end;

first and second sides extending between said first and second attachment edges and said finger end, wherein said first and second sides comprise second and third gripping portion edges of said gripping portion;

a U-shaped insert disposed between said first and second halves, wherein:

said gripping portion comprises three layers comprising said first half, said U-shaped insert, and said second half where said U-shaped insert is disposed between said first and second halves;

said U-shaped insert comprises:

a first U side;

a second U side; and

a connecting portion connecting said first and second U sides, wherein said connecting portion is disposed proximate to said wrist end of said gripping portion and said first and second U sides extend between said connecting portion and said finger end of said gripping portion, such that said first U side follows said first side of said gripping portion and said second U side follows said second side of said gripping portion;

a gap disposed between said first U side, said second U side, and said finger end, wherein said gripping portion comprises only two layers comprising said first and second halves where said gap is disposed;

a wrist portion comprising a first strap and a second strap, wherein:

each of said first strap and said second strap comprises an attachment end and a free end;

said attachment end of said first strap extends from said first attachment edge of said gripping portion; and

5 said attachment end of said second strap extends from said second attachment edge of said gripping portion; and

a releasable wrist fastener attached to said first and second straps, said wrist fastener being dimensioned and shaped to fasten said first strap to said second strap such that said grip assist apparatus is secured around a wrist of the user.

10 9. The grip assist apparatus as claimed in claim 8, wherein each of said first and second sides comprises concave contouring.

10 10. The grip assist apparatus as claimed in claim 9, wherein said contouring is such that said gripping portion comprises:

a narrowing between said finger end and said wrist end;

15 a first widening between said narrowing and said finger end; and

a second widening between said narrowing and said wrist end.

11. The grip assist apparatus as claimed in claim 8, wherein said flat material from which said gripping portion is formed comprises first and second flat material sides and at least one of said first and second flat material sides is non-slip.

20 12. The grip assist apparatus as claimed in claim 8, further comprising an end piece disposed between said first and second halves at said finger end of said gripping portion.

13. The grip assist apparatus as claimed in claim 8, further comprising stitching to hold said first and second halves against one another and to hold said U-shaped insert in place between said first and second halves, wherein said stitching comprises at least:

25 a first outer section between said first side of said gripping portion and said first U outer side of said first U side of said U-shaped insert, wherein said first outer section follows said contour of said first side of said gripping portion and stitches through said first and second halves only;

30 a second outer section between said second side of said gripping portion and said second U outer side of said second U side of said U-shaped insert, wherein said second outer section follows said contour of said second side of said gripping portion and stitches through said first and second halves only;

a first inner section parallel to said first outer section, wherein at least a portion of said first inner section stitches through said first and second halves and said first U outer side of said first U side of said U-shaped insert;

5 a second inner section parallel to said second outer section, wherein at least a portion of said second inner section stitches through said first and second halves and said second U outer side of said second U side of said U-shaped insert;

first and second top sections above said first and second U tops of said first and second U sides of said U-shaped insert, wherein said first and second top sections stitch through said first and second halves only; and

10 a gap defining section adjacent to said first and second inner U sides of said first and second U sides and said gap side of said connecting portion of said U-shaped insert, wherein said gap defining section stitches through said first and second halves only.

14. The grip assist apparatus as claimed in claim 8, wherein said gripping portion has a rigidity such that said gripping portion is self-supporting and will remain extended in front
15 of the palm and of the fingers to allow said gripping portion to be manipulated by the human hand on which said grip assist apparatus is worn, and wherein said gripping portion is sufficiently flexible to allow said gripping portion to be easily wrapped around a lifting bar using only the tip of said at least one finger of the human hand on which said grip assist apparatus is worn.

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