EXHIBIT A

EXHIBIT A
SPECIAL MASTER'S CLAIM CONSTRUCTION FOR U.S. PATENT NO. 4,969,888

'888 Patent Claim	Special Master's Construction
1. A method of fixation of a fracture or impending fracture of an osteoporotic bone having osteoporotic **bone marrow** therein comprising: **forming a passage in the bone marrow**; **compacting the bone marrow to increase the volume of said passage** and filling the passage with a **flowable material capable of setting to a hardened condition.**	a combination of the connective tissue and the cancellous bone framework inside a bone forming a channel in the bone marrow compacting the bone marrow to increase the volume of the created channel filling the created channel with a material that is capable of flowing into the channel and of setting to a hardened condition
3. A method as set forth in claim 1, wherein said compacting step includes **forcing the** osteoporotic **bone marrow outwardly of the central portion of the bone.**	compacting the bone marrow so as to force it outwardly from the central portion of the bone
7. A method as set forth in claim 1, wherein said forming step includes **drilling said osteoporotic bone marrow to form said passage.**	using a drill to form a channel into and through the bone marrow
8. A method as set forth in claim 7, wherein said drilling step includes **guiding a drill through into the proximate cortical bone marrow.**	guiding a drill through the cortical bone into and through the proximate bone marrow

EXHIBIT B

EXHIBIT B
SPECIAL MASTER'S CLAIM CONSTRUCTION FOR U.S. PATENT NO. 5,108,404

'404 Patent Claim	Special Master's Construction
1. A method of fixation of a fracture or impending fracture of a bone having **bone marrow** therein comprising: **forming a passage in the bone marrow**; **compacting the bone marrow to increase the volume of said passage** and filling the passage with a **flowable material capable of setting to a hardened condition.**	a combination of the connective tissue and the cancellous bone framework inside a bone forming a channel in the bone marrow compacting the bone marrow to increase the volume of the created channel filling the created channel with a material that is capable of flowing into the channel and of setting to a hardened condition
3. A method as set forth in claim 1, wherein said compacting step includes **forcing the bone marrow outwardly of the central portion of the bone.**	compacting the bone marrow so as to force it outwardly from the central portion of the bone
8. A method as set forth in claim 1, wherein said forming step includes **drilling said bone marrow to form said passage.**	using a drill to form a passage into and through the bone marrow

EXHIBIT C

EXHIBIT C
SPECIAL MASTER'S CLAIM CONSTRUCTION FOR U.S. PATENT NO. 6,235,043 B1

'043 Patent Claim	Special Master's Construction
2. A method for treating bone comprising the steps of	
inserting inside bone a devise comprising **a body adapted to be inserted into bone and undergo expansion** in cancellous bone to compact cancellous bone, including the body includes material that, during the expansion in cancellous bone, applies a force capable of moving fractured cortical bone, and further **includes an internal restraint coupled to an interior of the body to constrain the expansion** in cancellous bone,	a body adapted so as to be capable of insertion into bone and of expansion in cancellous bone includes an internal restraint coupled to the interior of the body, to constrain the expansion of the body in cancellous bone
causing constrained expansion of the body in cancellous bone,	causing constrained expansion of the body
and **compacting cancellous bone by the constrained expansion**.	compacting cancellous bone by the body's constrained expansion
17. A method for treating bone comprising the steps of	
inserting inside bone a devise comprising **a body adapted to be inserted into bone and undergo expansion** in cancellous bone to compact cancellous bone, the body including at least two materials that, during the expansion in cancellous bone, apply a force capable of moving fractured cortical bone and constrain the expansion in cancellous bone,	a body adapted so as to be capable of insertion into bone and of expansion in cancellous bone
causing constrained expansion of the body in cancellous bone, and	causing constrained expansion of the body
compacting cancellous bone by the constrained expansion.	compacting cancellous bone by the body's constrained expansion

EXHIBIT D

EXHIBIT D
SPECIAL MASTER'S CLAIM CONSTRUCTION FOR U.S. PATENT NO. 6,241,734

'734 Patent Claim	Special Master's Construction
1. Apparatus for introducing material into bone through a subcutaneous cannula, the apparatus including a subcutaneous cannula, a delivery device to convey the material at a delivery pressure of no greater than about 360 psi, a nozzle instrument capable of advancement into the subcutaneous cannula and comprising a proximal fitting to couple the nozzle instrument to the delivery device and a nozzle terminus through which the material conveyed by the delivery device enters bone at the delivery pressure, and **a tamping instrument capable of advancement into the subcutaneous cannula** and having a tamping terminus which, during the advancement, urges **material residing in the subcutaneous cannula into bone**.	a tamping instrument that is capable of advancing through any point into the subcutaneous cannula, where the tamp and the cannula may consist of one or more components, and having a tamping terminus that advances material from the subcutaneous cannula into bone
5. Apparatus according to claim 1 wherein the **tamping instrument includes markings to visually gauge the advancement of the tamping terminus through the subcutaneous cannula**.	the tamping instrument includes markings to visually gauge the advancement of the tamping terminus through the subcutaneous cannula
10. Apparatus according to claim 1 and further including **a cavity forming instrument** capable of advancement through the subcutaneous cannula to compress cancellous bone.	a cavity forming instrument
11. Apparatus according to claim 10 wherein the **cavity forming instrument includes an expandable structure**.	cavity forming instrument includes an expandable structure

'734 Patent Claim	Special Master's Construction
12. Apparatus for introducing material into bone through a subcutaneous cannula, the apparatus including a subcutaneous cannula, a delivery device to convey the material at a delivery pressure of no greater than about 360 psi, a nozzle instrument capable of advancement into the subcutaneous cannula and comprising a proximal fitting to couple the nozzle instrument to the delivery device and a nozzle bore through which the material conveyed by the delivery device enters bone at the delivery pressure, and a **stylet** capable of advancement into the nozzle bore through the proximal fitting to close the nozzle bore and, **with the nozzle instrument, forming a tamping instrument capable of advancement into the subcutaneous cannula to urge residual material from the subcutaneous cannula**.	stylet [capable of advancing into the nozzle bore . . .] that, with the nozzle instrument, forms a tamping instrument capable of advancing into the subcutaneous cannula to urge residual material from the subcutaneous cannula
15. Apparatus for introducing material into bone through a subcutaneous cannula, the apparatus comprising a subcutaneous cannula, a **delivery device to convey the material into the subcutaneous cannula**, at a delivery pressure of no greater than about 360 psi, and **a tamping instrument having a tamping terminus which, during advancement of the tamping instrument in the subcutaneous cannula, urges material residing in the subcutaneous cannula into bone.**	a delivery device to convey the material into the subcutaneous cannula a tamping instrument having a tamping terminus that, as it advances within the subcutaneous cannula, urges material residing in the subcutaneous cannula into bone
17. Apparatus according to claim 15 wherein the **tamping instrument includes markings to visually gauge the advancement of the tamping terminus through the subcutaneous cannula**.	the tamping instrument includes markings to visually gauge the advancement of the tamping terminus through the subcutaneous cannula

'734 Patent Claim	Special Master's Construction
20. Apparatus according to claim 15 and further including **a cavity forming instrument** capable of advancement through the subcutaneous cannula to compress cancellous bone.	a cavity forming instrument
21. Apparatus according to claim 15 wherein the **cavity forming instrument includes an expandable structure**.	cavity forming instrument includes an expandable structure

EXHIBIT E

EXHIBIT E
SPECIAL MASTER'S CLAIM CONSTRUCTION FOR U.S. PATENT NO. 6,613,054

'054 Patent Claim	Special Master's Construction
26. Apparatus for delivering material into bone comprising a cannula for establishing a subcutaneous path into bone,	
and **a tamping instrument having a tamping terminus and including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula**,	a tamping instrument having a tamping terminus and including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula
the tamping instrument being sized and configured for manipulation independent of the cannula to enable insertion of the tamping instrument into the cannula, **advancement of the tamping terminus in the cannula to urge material residing in the cannula into bone**, and withdrawal of the tamping terminus from the cannula.	advancement of the tamping terminus through any point within the cannula, to urge material located at any point within the cannula into bone
27. Apparatus according to claim 26 wherein the **at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument**.	at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument
28. Apparatus according to claim 26 wherein the **tamping instrument includes a set point marking spaced from the terminus at a distance generally equal to the length of the cannula**.	tamping instrument includes a set point marking spaced from the terminus at a distance generally equal to the length of the cannula
29. Apparatus according to claim 27 wherein the **tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula**.	tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula

'054 Patent Claim	Special Master's Construction
36. Apparatus for delivering material into bone comprising a cannula for establishing a subcutaneous path into bone; and **a tamping instrument for advancement through the cannula** **including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula** and comprising a body portion and a handle portion, the handle portion having a cross-sectional area greater than the cross-sectional area of the body portion.	a tamping instrument for advancement through any point within the cannula, where the tamp and cannula may consist of one or more components including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula
37. Apparatus according to claim 36 **wherein the at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument**.	wherein the at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument
38. Apparatus according to claim 36 wherein the **tamping instrument includes a set point marking spaced from the terminus at a distance generally equal to the length of the cannula**.	tamping instrument includes a set point marking spaced from the terminus at a distance generally equal to the length of the cannula

'054 Patent Claim	Special Master's Construction
39. Apparatus according to claim 38 wherein the **tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula**.	tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula
41. Apparatus for delivering material into bone comprising a cannula for establishing a subcutaneous path into bone; and **a tamping instrument for advancement through the cannula** **including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula**, and comprising a body portion and a handle portion, the body portion being sized and configured to substantially fill the cannula when the tamping instrument is fully inserted into the cannula.	 a tamping instrument for advancement through any point within the cannula, where the tamp and cannula may consist of one or more components including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula
42. Apparatus according to claim 41 wherein the **at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument**.	 at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument

'054 Patent Claim	Special Master's Construction
43. Apparatus according to claim 41 wherein the **tamping instrument includes a set point marking spaced from the terminus at a distance generally equal to the length of the cannula**.	tamping instrument includes a set point marking spaced from the terminus at a distance generally equal to the length of the cannula
44. Apparatus according to claim 43 wherein the **tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula**.	tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula
46. Apparatus for delivering material into bone comprising a cannula for establishing a subcutaneous path into bone; and **a tamping instrument for advancement through the cannula** **including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula** and comprising a body portion and a handle portion, the body portion having a substantially constant diameter along its length.	a tamping instrument for advancement through any point within the cannula, where the tamp and cannula may consist of one or more components including at least one marking to visually gauge the advancement of the terminus relative to the distal end of the cannula
47. Apparatus according to claim 46 wherein the **at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument**.	at least one marking indicates when the distal end of the tamping instrument is aligned with the distal end of the cannula instrument

'054 Patent Claim	Special Master's Construction
48. Apparatus for delivering material into bone comprising	
a cannula for establishing a subcutaneous path into bone; and	
a tamping instrument for advancement through the cannula	a tamping instrument for advancement through any point within the cannula, where the tamp and cannula may consist of one or more components
including a set point marking spaced from the terminus at a distance generally equal to the length of the cannula and comprising a body portion and a handle portion, the body portion having a substantially constant diameter along its length.	including a set point marking spaced from the terminus at a distance generally equal to the length of the cannula
49. Apparatus according to claim 48 wherein the **tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula.**	tamping instrument includes at least one additional marking to visually gauge advancement of the terminus relative to the distal end of the cannula