

An Ankle Prosthesis

Application Number: 201911040321

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ABSTRACT

The present disclosure generally relates an ankle prosthesis (100). The ankle prosthesis (100) comprises a tibial member (110) comprising a base plate (112) having a lateral edge (116) and an opposite medial edge (118) defining the baseplate therebetween. The base plate (112) comprises a top surface (212) having a concave shape, and a bottom surface (214). At least one bone fixation member (114) is disposed on the top surface (212) of the base plate (112). The ankle prosthesis comprises a talar member (130) and a meniscus member (120) interposed between the bottom surface (214) of the base plate (112) and the talar member (130).

KEY APPLICATION AREAS

1. Orthopedic implants and joint replacement.
2. Ankle arthroplasty (Total Ankle Replacement, TAR).
3. Biomedical prosthetic devices.
4. Trauma and arthritis treatment.
5. Medical device design for load-bearing joints.
6. Advanced implant fixation and bone preservation.

POTENTIAL USE

1. Total ankle replacement (TAR) for patients with osteoarthritis, rheumatoid arthritis, post-traumatic arthritis, and severe ankle fractures.
2. Restoration of ankle mobility and gait by replacing damaged ankle joints with a prosthetic implant.
3. Improved implant fixation using a concave tibial component with anchorage bars or a tapered stem for enhanced stability.
4. Bone-preserving ankle surgery through reduced bone resection and increased contact with cancellous bone.

5. Long-life orthopedic implants with improved load distribution, reduced stress shielding, and lower bone resorption, extending implant lifespan.