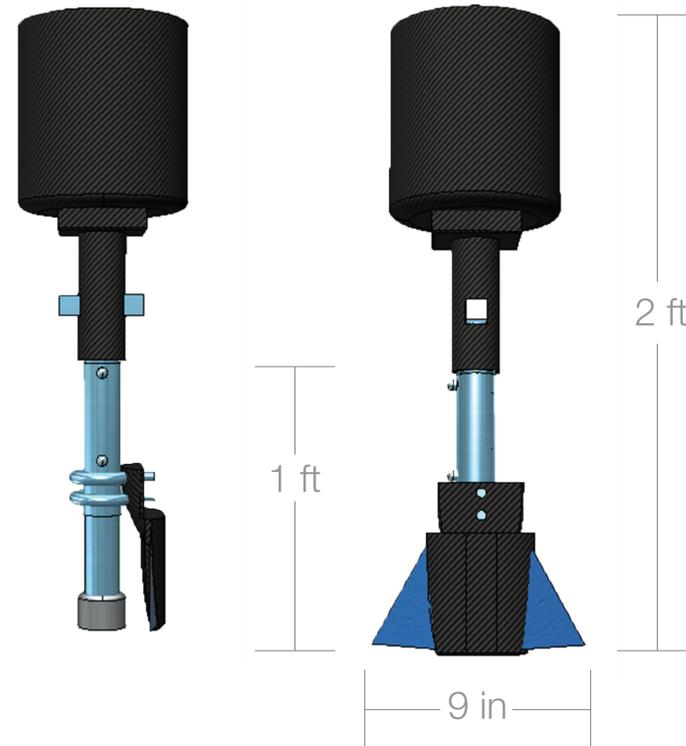


CUSTOMIZING THE **FUTURE FOR PROSTHETICS** IN AQUATICS

Designed by Shawn Jones

TRITON is a customizable prosthetic aqua flipper primarily used for swimming, snorkeling, and scuba diving. The novel design incorporates the ability for walking on all terrains, durability and a flexible dynamic flipper, easily attachable, and a sleek customizable exterior shell.

proposed prototype



On the left are the 3D models from a front and side view of the prosthetic aqua flipper. The flipper is not as long because this is designed for a below leg amputee. Triton is unlike other prosthetic aqua flippers because it allows for being used to walk on all types of terrain. The shaft of the flipper acts like a telescoping cane so that the user can adjust the length with great ease.

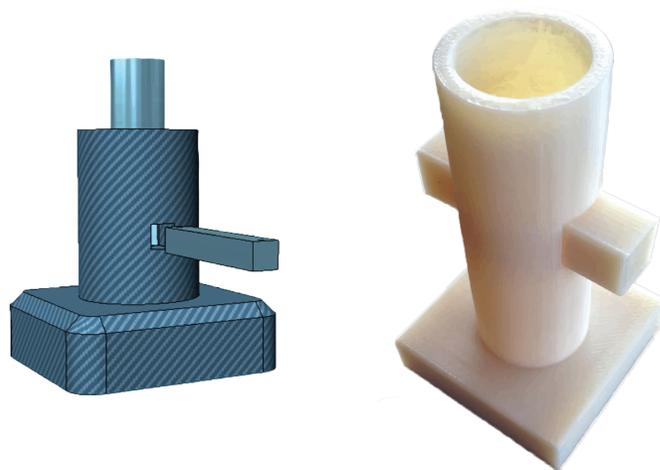
This flipper is something you put on before you get into the water and under your wet suit. All current prosthetic flippers are only attached once in the water or on their prosthetic feet while on a boat.

Since this flipper attaches directly to the socket, it can withstand great depths and with high amounts of pressure. The socket will suction on the thigh, yet will be comfortable and snug at all depths. The tripod base worked best after tested best on small rocks, sand, and pavement. There is a grip on the base of the telescoping shaft to ensure safety when walking.

abstract

Triton was initially developed for a double amputee and United States Army veteran with a passion to scuba dive. After several attempts to dive with his regular heavy prosthetics, he has given up on trying to dive. Triton is the answer to his problem and gives others the chance to take up a new hobby with much ease. It is designed with cost effective, high performance, and durable materials such as aluminum and 3D printed plastics. This approach of the Triton flipper will reduce the cost of a regular prosthetic SCUBA diving attachment and be able to not just dive off a boat, but from the shore.

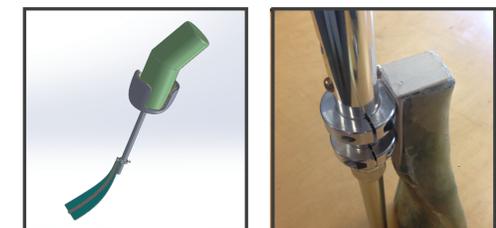
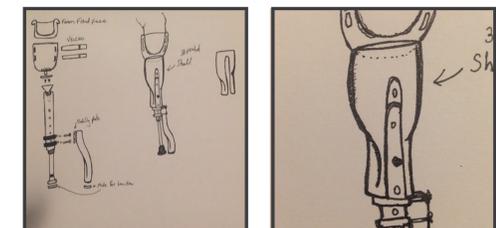
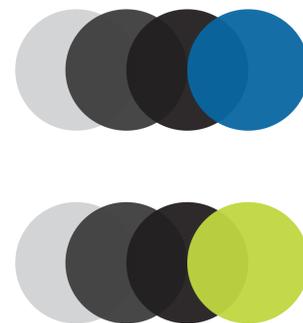
features



The Triton design incorporates an easily attachable 3D printed collar that screws into the same holes as the titanium rotation adapter. This collar is the most essential part because it acts at the only attachment point to the socket. The current component is made out of titanium and is very expensive to produce. The 3D printed collar attaches the socket to the entire flipper.

design aesthetics

I have chosen two color palettes for this design. One that consists of a shade of blue and one with a shade of neon green with black and tones of gray. I used these colors to represent sporty sleekness, as well as aquatic colors. The logo is still being worked on, but for now is a trident over a wave. The name Triton comes from the Greek god and messenger of the sea.



sketches