There are five components to the prosthetic: the band, the socket, knee, pylon, and foot. The prosthetic is modular and each component can be replaced as needed by the user, to extend the life and lower the cost of the leg.

**< BAND**
The band straps around the user's waist, and connects to the socket via nylon straps to secure the socket to the residual limb during parts of the gait cycle.

**< SOCKET**
The socket is how the prosthetic attaches to the residual limb. It is comprised of three elements: the fiberglass socket, the foam liner, and the nylon straps.

**< FIBERGLASS SOCKET**
Formed from layered fiberglass for strength and flexibility, the socket cradles and supports the residual limb.

**< FOAM LINER**
The foam liner provides comfort for the user while using the prosthetic. The user can customize the placement and amount of padding.

**< NYLON STRAPS**
The straps tighten and loosen the fit of the socket by contracting or relaxing the socket's slits. Multiple straps allow the user to customize their fit.

**< KNEE**
Based off the existing Jaipur Knee, the mechanical knee will mimic normal human gait by providing stability and easy movement.

**< PYLON**
The pylon provides structural support to the leg and connects the joints together. The pylon is comprised of a 1.5" polyvinyl chloride pipe, mechanically fastened to the knee, and fit into a rubber end cap.

**< FOOT**
The foot is comprised of a band-seal end cap to connect to the pylon, the steel foot, and the tread.

**< END CAP**
The band-seal end cap fastens the pylon to the foot, and can be loosened and re-tightened for access to the pylon.

**< STEEL FOOT**
The foot is made of 1075 spring steel, stamped to form and heat-treated for rigidity. The front and back have prongs to allow for flexibility.

**< TREAD**
The tread is made from salvaged steel-belted automobile tires, providing support, flexibility, and traction for the user.

**CONCLUSION**
Each component of the prosthetic is designed to best fit the user and reduce complexity. Simplifying the design reduces overall costs and points of failure. In addition, the use of modular components will allow inexpensive part changes as needed over time. At an estimated total cost of $27, the prosthetic will be more accessible to those in impoverished areas.

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