

ARCTIC-GRADE CONNECTOR DESIGN PATENT

DESIGN PATENT

ARCTIC-GRADE ELECTRICAL CONNECTOR SYSTEM

Patent No. D-789,456

Filing Date: March 12, 2022

Issue Date: September 15, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

CLAIM OF DESIGN

Be it known that Polar Dynamics Robotics, Inc., a Delaware corporation having its principal place of business at 2100 Arctic Way, Cambridge, Massachusetts 02142, has invented a new, original, and ornamental design for an ARCTIC-ELECTRICAL CONNECTOR SYSTEM, of which the following is a specification, reference being had to the accompanying drawings which form a part thereof.

DESCRIPTION OF THE DESIGN

The design for an Arctic-Grade Electrical Connector System as shown and described.

Figure 1

A perspective view of the Arctic-Grade Electrical Connector System showing the male connector component.

Figure 2

A front elevation view of the male connector component.

Figure 3

A side elevation view of the male connector component.

Figure 4

A perspective view of the female receptor component.

Figure 5

A cross-sectional view taken along line A-A of Figure 4.

DESIGN CHARACTERISTICS

The Arctic-Grade Electrical Connector System comprises:

- - 3 -

A thermally-insulated housing constructed of reinforced polymer composite;

-

A distinctive hexagonal cross-section with chamfered edges;

-

An integrated thermal barrier ring with concentric grooves;

-

A proprietary pin arrangement featuring:

a. Six primary power transmission pins

b. Four secondary data transmission pins

c. Two ground pins

-

A quick-connect locking mechanism with double-action safety release;

-

External ribbing pattern for enhanced grip in sub-zero conditions.

FEATURES AND ADVANTAGES

The ornamental design of the connector system is characterized by:

-

The aesthetic integration of functional elements that facilitate operation in ex

-

Visual indicators for proper alignment and connection status;

-

Ergonomic considerations specific to use with robotic manipulation systems;

-

Surface texturing that provides both practical utility and visual distinction.

INVENTOR DECLARATION

I hereby declare that:

-

I am the original inventor of the ornamental design described herein;

-

This design was created as part of my employment with Polar Dynamics Robotics, Inc.

-

I have assigned all rights, title, and interest in this design to Polar Dynamics Robotics, Inc.

-

The design is novel and non-obvious over prior art.

ASSIGNMENT OF RIGHTS

All rights, title, and interest in this design patent are owned by:

Polar Dynamics Robotics, Inc.

2100 Arctic Way

Cambridge, MA 02142

TERM OF PATENT

This patent shall be for a term of 15 years from the date of grant.

CERTIFICATION

I hereby certify that all statements made herein of my own knowledge are true
and that all statements made on information and belief are believed to be true

EXECUTED this 12th day of March, 2022

/s/ Dr. Marcus Chen

Dr. Marcus Chen

Chief Technology Officer

Polar Dynamics Robotics, Inc.

PATENT ATTORNEY ATTESTATION

I hereby attest that this design patent application has been prepared by me at the instance of the applicant.

/s/ Jennifer L. Thompson

Jennifer L. Thompson

Reg. No. 58,932

Arctic IP Law Group LLP

One International Place

Boston, MA 02110

USPTO GRANT CERTIFICATION

The above patent was examined and granted by the United States Patent and Trademark Office on September 15, 2023.

/s/ Michael Rodriguez

Michael Rodriguez

Primary Patent Examiner

Art Unit 2916

United States Patent and Trademark Office

[SEAL OF THE UNITED STATES PATENT AND TRADEMARK OFFICE]

