

Assignment of Invention and Patent Application

For value received,

Alfred A. Rizzi

of 901 Wellesley Road, Pittsburgh, PA 15206

(hereinafter ASSIGNOR), hereby sells, assigns, transfers, and sets over unto

Ralph L. Hollis, Jr.

of 215 Springhouse Lane, Pittsburgh, PA 15238

and his successors or assigns (hereinafter ASSIGNEE) 100% of the following: (A) ASSIGNOR'S right, title and interest in and to the invention entitled "CLOSED-LOOP PLANAR LINEAR MOTOR WITH INTEGRAL MONOLITHIC THREE-DEGREE-OF-FREEDOM AC-MAGNETIC POSITION/ORIENTATION SENSOR" co-invented by ASSIGNOR; (B) the provisional application for United States patent therefor, signed by ASSIGNOR on 1998 May 7, U.S. Patent and Trademark Office Serial Number 60/084 866 filed 1998 May 8; (C) the application for United States patent therefor, signed by ASSIGNOR on 1999 May 3, U.S. Patent and Trademark Office Serial Number 09/303 874, filed 1999 May 3; (D) any patent or reissues of any patent that may be granted thereon; and (E) any applications which are continuations, continuations-in-part, substitutes, or divisions of said application. ASSIGNOR authorizes ASSIGNEE to enter the date of signature and/or Serial Number and Filing Date in the spaces above. ASSIGNOR also authorizes and requests the Assistant Commissioner for Patents to issue any resulting patent(s) as follows: 0% to ASSIGNOR and 100% to ASSIGNEE. (The singular shall include the plural and vice versa herein.)

ASSIGNOR hereby further sells, transfers, and sets over unto ASSIGNEE, the above percentage of ASSIGNOR'S entire right, title, and interest in and to said invention in each and every country foreign to the United States; and ASSIGNOR further conveys to ASSIGNEE the above percentage of all priority rights resulting from the above-identified application for United States patent. ASSIGNOR agrees to execute all papers, give required testimony and perform other lawful acts, at ASSIGNEE'S expense, as ASSIGNEE may require to enable ASSIGNEE to perfect ASSIGNEE'S interest in any resulting patent of the United States and countries foreign thereto, and to acquire, hold, enforce, convey, and uphold the validity of said patent and reissues and extensions thereof, and ASSIGNEE'S interest therein.

In testimony whereof ASSIGNOR has hereunto set its hand and seal on the date below.

[Signature]
August 3, 1999

State: Pennsylvania

County: Allegheny

Subscribed and sworn to before me August 3, 1999.

Carolyn S. Krawczykiewicz
Notary Public

Notarial Seal
Carolyn S. Krawczykiewicz, Notary Public
Pittsburgh, Allegheny County
My Commission Expires May 29, 2000
Member, Pennsylvania Association of Notaries

SEAL

Assignment of Invention and Patent Application

For value received,

Arthur E. Quaid, III

of 2338 Murray Avenue #1, Pittsburgh, PA 15217

(hereinafter ASSIGNOR), hereby sells, assigns, transfers, and sets over unto

Ralph L. Hollis, Jr.

of 215 Springhouse Lane, Pittsburgh, PA 15238

and his successors or assigns (hereinafter ASSIGNEE) 100% of the following: (A) ASSIGNOR'S right, title and interest in and to the invention entitled "CLOSED-LOOP PLANAR LINEAR MOTOR WITH INTEGRAL MONOLITHIC THREE-DEGREE-OF-FREEDOM AC-MAGNETIC POSITION/ORIENTATION SENSOR" co-invented by ASSIGNOR; (B) the provisional application for United States patent therefor, signed by ASSIGNOR on 1998 May 7, U.S. Patent and Trademark Office Serial Number 60/084 866 filed 1998 May 8; (C) the application for United States patent therefor, signed by ASSIGNOR on 1999 May 3, U.S. Patent and Trademark Office Serial Number 09/303 874, filed 1999 May 3; (D) any patent or reissues of any patent that may be granted thereon; and (E) any applications which are continuations, continuations-in-part, substitutes, or divisions of said application. ASSIGNOR authorizes ASSIGNEE to enter the date of signature and/or Serial Number and Filing Date in the spaces above. ASSIGNOR also authorizes and requests the Assistant Commissioner for Patents to issue any resulting patent(s) as follows: 0% to ASSIGNOR and 100% to ASSIGNEE. (The singular shall include the plural and vice versa herein.)

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In testimony whereof ASSIGNOR has hereunto set its hand and seal on the date below.

Arthur E. Quaid, III
8/3/99

State: Pennsylvania

County: Allegheny

Subscribed and sworn to before me August 3, 1999.

Carolyn S. Krawczykiewicz
Notary Public

Notarial Seal
Carolyn S. Krawczykiewicz, Notary Public
Pittsburgh, Allegheny County
My Commission Expires May 29, 2000
Member, Pennsylvania Association of Notaries

SEAL

Assignment of Invention and Patent Application

For value received,

Zachary J. Butler

of 5621 Melvin Street, Pittsburgh, PA 15217

(hereinafter ASSIGNOR), hereby sells, assigns, transfers, and sets over unto

Ralph L. Hollis, Jr.

of 215 Springhouse Lane, Pittsburgh, PA 15238

and his successors or assigns (hereinafter ASSIGNEE) 100% of the following: (A) ASSIGNOR'S right, title and interest in and to the invention entitled "CLOSED-LOOP PLANAR LINEAR MOTOR WITH INTEGRAL MONOLITHIC THREE-DEGREE-OF-FREEDOM AC-MAGNETIC POSITION/ORIENTATION SENSOR" co-invented by ASSIGNOR; (B) the provisional application for United States patent therefor, signed by ASSIGNOR on 1998 May 7, U.S. Patent and Trademark Office Serial Number 60/084 866 filed 1998 May 8; (C) the application for United States patent therefor, signed by ASSIGNOR on 1999 May 3, U.S. Patent and Trademark Office Serial Number 09/303 874, filed 1999 May 3; (D) any patent or reissues of any patent that may be granted thereon; and (E) any applications which are continuations, continuations-in-part, substitutes, or divisions of said application. ASSIGNOR authorizes ASSIGNEE to enter the date of signature and/or Serial Number and Filing Date in the spaces above. ASSIGNOR also authorizes and requests the Assistant Commissioner for Patents to issue any resulting patent(s) as follows: 0% to ASSIGNOR and 100% to ASSIGNEE. (The singular shall include the plural and vice versa herein.)

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In testimony whereof ASSIGNOR has hereunto set its hand and seal on the date below.

Zachary J. Butler
August 3, 1999

State: Pennsylvania

County: Allegheny

Subscribed and sworn to before me August 3, 1999.

Carolyn S. Krawczykiewicz
Notary Public

Notarial Seal
Carolyn S. Krawczykiewicz, Notary Public
Pittsburgh, Allegheny County
My Commission Expires May 29, 2000
Member, Pennsylvania Association of Notaries

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