PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5959968

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LARRY S. HOWE	02/03/2020
BRYAN E. PAPILLON	02/06/2020
PAVEL KRIVANEK	02/09/2020
GIMTONG TEOWEE	02/03/2020

RECEIVING PARTY DATA

Name:	AUSTIN STAR DETONATOR COMPANY
Street Address:	25800 SCIENCE PARK DRIVE
City:	CLEVELAND
State/Country:	ОНЮ
Postal Code:	44122

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16636448

CORRESPONDENCE DATA

Fax Number: (216)363-9001

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2163639000

Email: uspto@faysharpe.com

Correspondent Name: ERIC HIGHMAN

Address Line 1: 1228 EUCLID AVENUE

Address Line 2: THE HALLE BUILDING, 5TH FLR

Address Line 4: CLEVELAND, OHIO 44115

ATTORNEY DOCKET NUMBER:	ATNZ200120US01
NAME OF SUBMITTER:	ERIC HIGHMAN
SIGNATURE:	/Eric Highman/
DATE SIGNED:	02/12/2020

Total Attachments: 8

source=Assignment#page1.tif source=Assignment#page2.tif

PATENT 505913251 REEL: 051800 FRAME: 0790

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned, LARRY S. HOWE of 42 Warren Drive, Norwalk, OH 44857, UNITED STATES, BRYAN E. PAPILLON of 16 Eagle Road, Phoenixville, PA 19460, UNITED STATES, PAVEL KRIVANEK of Ahepjukova 2792/23, Ostrava 70200, CZECH REPUBLIC, UNITED STATES and GIMTONG TEOWEE of 4421 Beaconsfield Court, Westlake Village, CA 91361, UNITED STATES

who has/have created a certain invention for which a United States patent application is attached hereto, and is entitled

AUTOMATIC METHOD AND APPARATUS FOR LOGGING PREPROGRAMMED ELECTRONIC DETONATORS

do hereby sell, assign and transfer to AUSTIN STAR DETONATOR COMPANY, a corporation of the State of Ohio, having a place of business at 25800 Science Park Drive, Cleveland, Ohio 44122, (hereinafter Assignee) its successors, assigns, and legal representatives, the full and exclusive right, title, and interest in and to said invention and said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, reexaminations, extensions thereof, and all other forms of protection relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties;

Agree that said Assignee may apply for and receive Letters Patent for said invention and claim priority to the provisional application, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reexaminations, reissues, and extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature(s) on the date(s) indicated below.

Larry 1. Honce	2/3/20
LARRY S. HOWE	Date
BRYAN S. PAPILLON	Date
PAVEL KRIVANEK	Date
GIMTONG TEOWEE	 Date

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned, LARRY S. HOWE of 42 Warren Drive, Norwalk, OH 44857, UNITED STATES, BRYAN E. PAPILLON of 16 Eagle Road, Phoenixville, PA 19460, UNITED STATES, PAVEL KRIVANEK of Ahepjukova 2792/23, Ostrava 70200, CZECH REPUBLIC, UNITED STATES and GIMTONG TEOWEE of 4421 Beaconsfield Court, Westlake Village, CA 91361, UNITED STATES

who has/have created a certain invention for which a United States patent application is attached hereto, and is entitled

AUTOMATIC METHOD AND APPARATUS FOR LOGGING PREPROGRAMMED ELECTRONIC DETONATORS

do hereby sell, assign and transfer to AUSTIN STAR DETONATOR COMPANY, a corporation of the State of Ohio, having a place of business at 25800 Science Park Drive, Cleveland, Ohio 44122, (hereinafter Assignee) its successors, assigns, and legal representatives, the full and exclusive right, title, and interest in and to said invention and said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, reexaminations, extensions thereof, and all other forms of protection relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties;

Agree that said Assignee may apply for and receive Letters Patent for said invention and claim priority to the provisional application, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reexaminations, reissues, and extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature(s) on the date(s) indicated below.

LARRY S. HOWE	Data
LARRY S. HOWE	Date
Dans. Hom	02/06/2020
BRYAN PAPILLON	Date
PAVEL KRIVANEK	Date
GIMTONG TEOWEE	Date

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned, LARRY S. HOWE of 42 Warren Drive, Norwalk, OH 44857, UNITED STATES, BRYAN E. PAPILLON of 16 Eagle Road, Phoenixville, PA 19460, UNITED STATES, PAVEL KRIVANEK of Ahepjukova 2792/23, Ostrava 70200, CZECH REPUBLIC, UNITED STATES and GIMTONG TEOWEE of 4421 Beaconsfield Court, Westlake Village, CA 91361, UNITED STATES

who has/have created a certain invention for which a United States patent application is attached hereto, and is entitled

AUTOMATIC METHOD AND APPARATUS FOR LOGGING PREPROGRAMMED ELECTRONIC DETONATORS

do hereby sell, assign and transfer to AUSTIN STAR DETONATOR COMPANY, a corporation of the State of Ohio, having a place of business at 25800 Science Park Drive, Cleveland, Ohio 44122, (hereinafter Assignee) its successors, assigns, and legal representatives, the full and exclusive right, title, and interest in and to said invention and said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, reexaminations, extensions thereof, and all other forms of protection relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions agreements, acts, and treaties;

Agree that said Assignee may apply for and receive Letters Patent for said invention and claim priority to the provisional application, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reexaminations, reissues, and extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature(s) on the date(s) indicated below.

LARRY S. HOWE	Date
BRYAN S. PAPILLON	Date
Porul Miral PAVEL KRIVANEK	4 2 2020 Date
GIMTONG TEOWEE	Date

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned, LARRY S. HOWE of 42 Warren Drive, Norwalk, OH 44857, UNITED STATES, BRYAN E. PAPILLON of 16 Eagle Road, Phoenixville, PA 19460, UNITED STATES, PAVEL KRIVANEK of Ahepjukova 2792/23, Ostrava 70200, CZECH REPUBLIC, UNITED STATES and GIMTONG TEOWEE of 4421 Beaconsfield Court, Westlake Village, CA 91361, UNITED STATES

who has/have created a certain invention for which a United States patent application is attached hereto, and is entitled

AUTOMATIC METHOD AND APPARATUS FOR LOGGING PREPROGRAMMED ELECTRONIC DETONATORS

do hereby sell, assign and transfer to AUSTIN STAR DETONATOR COMPANY, a corporation of the State of Ohio, having a place of business at 25800 Science Park Drive, Cleveland, Ohio 44122, (hereinafter Assignee) its successors, assigns, and legal representatives, the full and exclusive right, title, and interest in and to said invention and said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, reexaminations, extensions thereof, and all other forms of protection relating thereto which have been or shall be filled in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties;

Agree that said Assignee may apply for and receive Letters Patent for said invention and claim priority to the provisional application, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reexaminations, reissues, and extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature(s) on the date(s) indicated below.

LARRY S. HOWE	Date
BRYAN S. PAPILLON	Date
PAVEL KRIVANEK	Date
GIMTONG TEOWEE	$\frac{2/3/2\delta}{\text{Date}}$

PATENT REEL: 051800 FRAME: 0799

RECORDED: 02/12/2020