

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7801386

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
VISTA OUTDOOR OPERATIONS LLC	02/10/2023
RECEIVING PARTY DATA	
Name:	FEDERAL CARTRIDGE COMPANY
Street Address:	900 EHLEN DRIVE
City:	ANOKA
State/Country:	MINNESOTA
Postal Code:	55303
PROPERTY NUMBERS Total: 104	
Property Type	Number
Patent Number:	7607393
Patent Number:	7383152
Patent Number:	8202377
Patent Number:	7765933
Patent Number:	8192568
Patent Number:	7726245
Patent Number:	7983873
Patent Number:	8206522
Patent Number:	9134164
Patent Number:	8454769
Patent Number:	8454770
Patent Number:	8470107
Patent Number:	8460486
Patent Number:	9046332
Patent Number:	9377277
Patent Number:	8881634
Patent Number:	9329003
Patent Number:	9146086
Patent Number:	9700186
Patent Number:	9157713

Property Type	Number
Patent Number:	9360284
Patent Number:	9360223
Patent Number:	9273941
Patent Number:	9329009
Patent Number:	9739582
Patent Number:	9835446
Patent Number:	9562754
Patent Number:	9651346
Patent Number:	9733052
Patent Number:	10254092
Patent Number:	9863746
Patent Number:	10041773
Patent Number:	9879957
Patent Number:	10001355
Patent Number:	10030956
Patent Number:	10222187
Patent Number:	10520288
Patent Number:	10690463
Patent Number:	10551154
Patent Number:	10422611
Patent Number:	10690464
Patent Number:	10753718
Patent Number:	10684108
Patent Number:	10605577
Patent Number:	10801820
Patent Number:	10466022
Patent Number:	10976144
Patent Number:	11268791
Patent Number:	11333472
Patent Number:	10935354
Patent Number:	11118851
Patent Number:	10928170
Patent Number:	11137229
Patent Number:	11248883
Patent Number:	11280595
Patent Number:	11162757
Patent Number:	11047660
Patent Number:	11221199

Property Type	Number
Patent Number:	11512935
Patent Number:	11378368
Patent Number:	11226182
Patent Number:	11306989
Patent Number:	11391551
Patent Number:	11378364
Patent Number:	11519703
Patent Number:	11346641
Patent Number:	11486681
Application Number:	17226931
Application Number:	17357402
Application Number:	17472896
Patent Number:	11543219
Application Number:	17490404
Application Number:	17570743
Application Number:	17577231
Application Number:	17686549
Application Number:	17699917
Application Number:	17717631
Application Number:	17745266
Application Number:	17752540
Application Number:	17855315
Application Number:	17856503
Application Number:	17867009
Application Number:	17977437
Application Number:	17994606
Application Number:	18074193
Application Number:	18083952
Patent Number:	D723653
Patent Number:	D813974
Patent Number:	D809622
Patent Number:	D810226
Patent Number:	D848569
Patent Number:	D849874
Patent Number:	D870842
Patent Number:	D847293
Patent Number:	D847294
Patent Number:	D884821

Property Type	Number
Application Number:	29638074
Patent Number:	D857523
Patent Number:	D937962
Patent Number:	D977055
Application Number:	29768547
Application Number:	29808775
Application Number:	29818013
Application Number:	63329870

CORRESPONDENCE DATA

Fax Number: (215)851-1420

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.

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Address Line 2: SUITE 3100

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103

NAME OF SUBMITTER:	JOHN M. COGILL
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SIGNATURE:	/John M. Cogill/
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DATE SIGNED:	02/16/2023
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Total Attachments: 5

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PATENT AND INVENTION ASSIGNMENT – U.S.

February 10, 2023

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, **Vista Outdoor Operations LLC** ("Assignor") hereby conveys, assigns, and transfers all of its right, title, and interest in and to the patents, patent applications, design registrations and applications identified in Schedule A attached hereto, and any related or corresponding provisional or non-provisional application claiming priority thereto or converted therefrom, including any and all provisionals, divisionals, continuing prosecution applications, continuations-in-part, reissues, reexaminations, continuations, renewals and extensions thereof and any letters patents, inventors' certificates, design registrations, industrial models, utility models and all other forms of protection that may be granted thereon ("Patent Properties") to **Federal Cartridge Company** ("Assignee"). This assignment includes Assignor's rights of priority; its rights in and to the inventions specified in the Patent Properties and improvements thereto; its rights to file patent applications on such inventions and to obtain and own patents therefor and all such patent applications and patents that have been or may be filed; the rights to all income, royalties, payments and accounts receivable now or hereafter due and or payable in connection with the Patent Properties; and its rights to sue for and collect on claims for injunctive or monetary relief by reason of past, present, or future infringement of any Patent Properties; all of the foregoing rights exercisable anywhere in the world as permitted by law. Assignor hereby authorizes the Commissioner for Patents in the United States Patent and Trademark Office to record and register this Patent and Invention Assignment, and Assignor further agrees to execute all documents that are both necessary and reasonably requested by Assignee to perfect Assignee's title in and to the Patent Properties.

[Signature page follows]

IN WITNESS WHEREOF, Assignor has caused this Patent and Invention Assignment to be duly executed effective as of date first above written.

ASSIGNOR - VISTA OUTDOOR OPERATIONS LLC

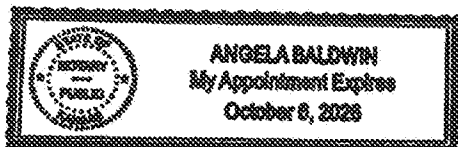
By *Daniel J. Kelly*
Daniel J. Kelly
Assistant Secretary

STATE OF Kansas
COUNTY OF JOHNSON

Subscribed and sworn to this 9th day of February 2023.

Angela Baldwin
Notary Public

The foregoing instrument was acknowledged before me this 9th day of February 2023, by Daniel Kelly
Angela Baldwin *Angela Baldwin*
Notary Public's Signature Notary Name
My Commission Exp. 10/08/2028



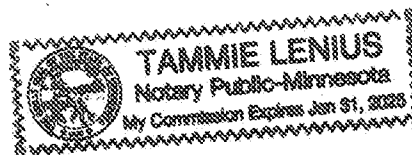
Accepted by ASSIGNEE - FEDERAL CARTRIDGE COMPANY

By *Dylan Ramsey*
Dylan Ramsey
Vice President and Secretary

Subscribed and sworn to this 10th day of February 2023. USING Communication Technology

Tammie Lenius
Notary Public

my commission expires Jan 31, 2025



STATE OF MINNESOTA
County: ANOKA

Schedule A
Patents - US

Application No.	Filing Date	Patent No.	Issue Date	Title
10/915210	10-Aug-2004	7607393	27-Oct-2009	Slug Ball Ammunition
11/329215	10-Jan-2006	7383152	03-Jun-2008	Non-Contact Deviation Measurement System
11/704530	09-Feb-2007	8202377	19-Jun-2012	Non-Toxic Percussion Primers and Methods of Preparing The Same
11/936012	06-Nov-2007	7765933	03-Aug-2010	Shotshell With Shot Pellets Having Multiple Shapes
12/029084	11-Feb-2008	8192568	05-Jun-2012	Non-Toxic Percussion Primers and Methods of Preparing The Same
12/109472	25-Apr-2008	7726245	01-Jun-2010	Muzzleloader Ammunition
12/131613	02-Jun-2008	7983873	19-Jul-2011	Non-Contact Deviation Measurement System
12/751607	31-Mar-2010	8206522	26-Jun-2012	Non-Toxic, Heavy-Metal Free Sensitized Explosive Percussion Primers and Methods of Preparing the Same
13/185395	18-Jul-2011	9134164	15-Sep-2015	Non-Contact Deviation Measurement System
13/456920	26-Apr-2012	8454769	04-Jun-2013	Non-Toxic Percussion Primers and Methods of Preparing the Same
13/473324	16-May-2012	8454770	04-Jun-2013	Non-Toxic Percussion Primers and Methods of Preparing The Same
13/477723	22-May-2012	8470107	25-Jun-2013	Non-Toxic, Heavy-Metal Free Explosive Percussion Primers and Methods of Preparing the Same
13/477750	22-May-2012	8460486	11-Jun-2013	Percussion Primer Composition and Systems Incorporating Same
13/738646	10-Jan-2013	9046332	02-Jun-2015	Projectile Assembly with Stabilization/Obturation Enhancement
13/959125	05-Aug-2013	9377277	28-Jun-2016	Advanced Muzzle Loader Ammunition
13/959138	05-Aug-2013	8881634	11-Nov-2014	Muzzle Loader Powder Increment Using Celluloid Combustible Container
14/041452	30-Sep-2013	9329003	03-May-2016	Muzzleloader Systems
14/041648	30-Sep-2013	9146086	29-Sep-2015	Muzzleloader Bullet System
14/168693	30-Jan-2014	9700186	11-Jul-2017	Portable Vacuuming Device for Collecting and Neutralizing Flammable Residue
14/213061	14-Mar-2014	9157713	13-Oct-2015	Limited Range Rifle Projectile
14/214780	15-Mar-2014	9360284	07-Jun-2016	Manufacturing Process to Produce Metalurgically Programmed Terminal Performance Projectiles
14/216130	17-Mar-2014	9360223	7-Jun-2016	High Velocity Ignition System for Ammunition
14/216386	17-Mar-2014	9273941	01-Mar-2016	Combination Gas Operated Rifle and Subsonic Cartridge
14/216421	17-Mar-2014	9329009	03-May-2016	Manufacturing Process to Produce Programmed Terminal Performance Projectiles
14/823769	11-Aug-2015	9739582	22-Aug-2017	Shotgun Shell
14/853470	14-Sep-2015	9835446	05-Dec-2017	Non-Contact Deviation Measurement System
14/869619	29-Sep-2015	9562754	07-Feb-2017	Muzzleloader Systems
15/057616	01-Mar-2016	9651346	16-May-2017	Combination Gas Operated Rifle and Subsonic Cartridge
15/175951	07-Jun-2016	9733052	15-Aug-2017	Manufacturing Process to Produce Metalurgically Programmed Terminal Performance Projectiles
15/195769	28-Jun-2016	10254092	09-Apr-2019	Advanced Muzzle Loader Ammunition
15/219012	25-Jul-2016	9863746	09-Jan-2018	Cartridge with Improved Penetration and Expansion Bullet
15/294171	14-Oct-2016	10041773	07-Aug-2018	Projectiles with Insert-Molded Polymer Tips
15/295700	17-Oct-2016	9879957	30-Jan-2018	Shotshell Having Wad with Enhanced Fin Deployment

Schedule A
Patents - US

Application No.	Filing Date	Patent No.	Issue Date	Title
15/331631	21-Oct-2016	10001355	19-Jun-2018	Reduced Drag Projectiles
15/426885	07-Feb-2017	10030956	24-Jul-2018	Muzzleloader Systems
15/646832	11-Jul-2017	10222187	05-Mar-2019	Hunting Projectile
15/866153	09-Jan-2018	10520288	31-Dec-2019	Cartridge with Improved Penetration and Expansion Bullet
15/870769	12-Jan-2018	10690463	23-Jun-2020	Extended Range Bullet
15/876186	21-Jan-2018	10551154	04-Feb-2020	Rifle Cartridge with Improved Bullet Upset and Separation
15/965426	27-Apr-2018	10422611	24-Sep-2019	Shotshell Having Wad with Enhanced Fin Deployment
15/967169	30-Apr-2018	10690464	23-Jun-2020	Cartridge with Combined Effects Projectile
15/972058	04-May-2018	10753718	25-Aug-2020	Colored Cartridge Packaging
16/012444	19-Jun-2018	10684108	16-Jun-2020	Reduced Drag Projectiles
16/044183	24-Jul-2018	10605577	31-Mar-2020	Muzzleloading Systems
16/057764	07-Aug-2018	10801820	13-Oct-2020	Projectiles with Insert-Molded Polymer Tips
16/141505	25-Sep-2018	10466022	05-Nov-2019	Reduced Energy MSR System
16/293632	05-Mar-2019	10976144	13-Apr-2021	High Pressure Rifle Cartridge with Primer
16/509394	11-Jul-2019	11268791	08-Mar-2022	Handgun Cartridge with Shear Groove Bullet
16/513377	16-Jul-2019	11333472	17-May-2022	Reduced Stiffness Barrel Fired Projectile
16/597508	09-Oct-2019	10935354	02-Mar-2021	Shotshell Having Wad with Enhanced Fin Deployment
16/674925	05-Nov-2019	11118851	14-Sep-2021	Reduced Energy MSR System
16/685413	15-Nov-2019	10928170	23-Feb-2021	Cartridge with Improved Penetration and Expansion Bullet
16/686130	16-Nov-2019	11137229	05-Oct-2021	Muzzleloader Power Cell with Primer
16/714173	13-Dec-2019	11248883	15-Feb-2022	Optimized Lever Action Firearm Cartridge Geometry
16/736309	07-Jan-2020	11280595	22-Mar-2022	Rifle Cartridge with Improved Bullet Upset and Separation
16/747099	20-Jan-2020	11162757	02-Nov-2021	Muzzleloader with Gas Powered Ejection
16/788502	12-Feb-2020	11047660	29-Jun-2021	Muzzleloader Systems
16/841261	06-Apr-2020	11221199	11-Jan-2022	High Velocity, Rimfire Cartridge
16/897833	10-Jun-2020	11512935	29-Nov-2022	Extended Range Bullet
16/899869	12-Jun-2020	11378368	05-Jul-2022	Reduced Drag Projectiles
16/904731	18-Jun-2020	11226182	18-Jan-2022	Cartridge with Combined Effects Projectile
16/995395	17-Aug-2020	11306989	19-Apr-2022	Devices and Methods for Extraction of High Pressure Cartridge Casings
17/065656	08-Oct-2020	11391551	19-Jul-2022	Improved Projectiles with Insert-Molded Polymer Tips
17/153758	20-Jan-2021	11378364	05-Jul-2022	8mm Cartridge
17/162848	29-Jan-2021	11519703	06-Dec-2022	Multi-Faceted Shot
17/173778	11-Feb-2021	11346641	31-May-2022	Cartridge with Improved Penetration and Expansion Bullet
17/188246	01-Mar-2021	11486681	01-Nov-2022	Shotshell Having Wad with Enhanced Fin Deployment
17/226931	09-Apr-2021			High Pressure Rifle Cartridge with Primer
17/357402	24-Jun-2021			Muzzleloader Systems
17/472896	13-Sep-2021			Reduced Energy MSR System
17/482348	22-Sep-2021	11543219	03-Jan-2023	Biodegradable Shotshell Components
17/490404	30-Sep-2021			Muzzleloader Power Cell with Primer
17/570743	07-Jan-2022			High Velocity Rimfire Cartridge
17/577231	17-Jan-2022			Cartridge with Combined Effects Projectile
17/686549	04-Mar-2022			Handgun Cartridge with Shear Groove Bullet

Schedule A
Patents - US

Application No.	Filing Date	Patent No.	Issue Date	Title
17/699917	21-Mar-2022			Rifle Cartridge with Improved Bullet Upset and Separation
17/717631	11-Apr-2022			Devices and Methods for Extraction of High Pressure Cartridge Casings
17/745266	16-May-2022			Reduced Stiffness Barrel Fired Projectile
17/752540	24-May-2022			Cartridge with Improved Penetration and Expansion Bullet
17/855315	30-Jun-2022			Reduced Drag Projectiles
17/856503	01-Jul-2022			8mm Cartridge
17/867009	18-Jul-2022			Improved Projectiles with Insert-Molded Polymer Tips
17/977437	31-Oct-2022			Shotshell Having Wad with Enhanced Fin Deployment
17/994606	28-Nov-2022			Extended Range Bullet
18/074193	02-Dec-2022			Multi-Faceted Shot
18/083952	19-Dec-2022			Biodegradable Shotshell Components
29/468434	30-Sep-2013	D723653	03-Mar-2015	Muzzleloader Propellant Cartridge
29/544894	06-Nov-2015	D813974	27-Mar-2018	Cartridge with an Enhanced Ball Round
29/553154	28-Jan-2016	D809622	06-Feb-2018	Shotgun Wad
29/553822	04-Feb-2016	D810226	13-Feb-2018	Shotgun Wad
29/634361	20-Jan-2018	D848569	14-May-2019	Rifle Cartridge
29/634368	21-Jan-2018	D849874	28-May-2019	Muzzleloader Propellant Cartridge
29/635655	01-Feb-2018	D870842	24-Dec-2019	Rifle Bullet
29/636143	06-Feb-2018	D847293	30-Apr-2019	Shotgun Wad
29/636973	13-Feb-2018	D847294	30-Apr-2019	Shotgun Wad
29/637432	19-Feb-2018	D884821	19-May-2020	Enhanced Ball Round
29/638074	23-Feb-2018			Shotgun Wad
29/640827	16-Mar-2018	D857523	27-Aug-2019	Cartridge Packaging
29/686654	05-Apr-2019	D937962	07-Dec-2021	Firearm Cartridge
29/713220	14-Nov-2019	D977055	31-Jan-2023	Rifle Bullet
29/768547	29-Jan-2021			Projectile
29/808775	22-Sep-2021			Formed Shotshell Wad
29/818013	06-Dec-2021			Firearm Cartridge
63/329870	11-Apr-2022			Reduced Tension Cartridge Case with Two-Stage Neck