

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

Assignment ID: PAT1785505

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	NOTICE OF GRANT OF SECURITY INTEREST IN PATENTS (FIRST LIEN)

**CONVEYING PARTY DATA**

Name	Execution Date
Synventive Molding Solutions, Inc.	01/27/2025

**RECEIVING PARTY DATA**

<b>Company Name:</b>	WILMINGTON TRUST, NATIONAL ASSOCIATION
<b>Street Address:</b>	50 South Sixth Street, Suite 1290
<b>City:</b>	Minneapolis
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55402

**PROPERTY NUMBERS Total: 106**

Property Type	Number
Patent Number:	9222362
Patent Number:	9188184
Patent Number:	8292274
Patent Number:	7350628
Patent Number:	7677539
Patent Number:	9032587
Patent Number:	9447836
Patent Number:	10935096
Patent Number:	9822838
Patent Number:	10441983
Patent Number:	11110506
Patent Number:	12066073
Patent Number:	11499599
Patent Number:	11592499
Patent Number:	11701700
Patent Number:	11899081
Patent Number:	12129965
Patent Number:	10215251
Patent Number:	9744576
Application Number:	17113234

PATENT

<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	18229307
<b>Application Number:</b>	18283893
<b>Application Number:</b>	18369888
<b>Patent Number:</b>	8349244
<b>Patent Number:</b>	8562336
<b>Patent Number:</b>	9011736
<b>Patent Number:</b>	9005509
<b>Patent Number:</b>	9144929
<b>Patent Number:</b>	9205587
<b>Patent Number:</b>	9937648
<b>Patent Number:</b>	9878477
<b>Patent Number:</b>	11007695
<b>Patent Number:</b>	10857714
<b>Patent Number:</b>	11148333
<b>Patent Number:</b>	8091202
<b>Patent Number:</b>	8328549
<b>Patent Number:</b>	8282388
<b>Patent Number:</b>	9498909
<b>Patent Number:</b>	9492960
<b>Patent Number:</b>	9682504
<b>Patent Number:</b>	9623598
<b>Patent Number:</b>	9636858
<b>Patent Number:</b>	9682507
<b>Patent Number:</b>	9662820
<b>Patent Number:</b>	9604399
<b>Patent Number:</b>	9724861
<b>Patent Number:</b>	9427905
<b>Patent Number:</b>	10493674
<b>Patent Number:</b>	9908273
<b>Patent Number:</b>	10052801
<b>Patent Number:</b>	9944006
<b>Patent Number:</b>	9873216
<b>Patent Number:</b>	9827701
<b>Patent Number:</b>	9738024
<b>Patent Number:</b>	10384385
<b>Patent Number:</b>	10899055
<b>Patent Number:</b>	10005215
<b>Patent Number:</b>	10245772

Property Type	Number
Patent Number:	9873219
Patent Number:	10046496
Patent Number:	10046497
Patent Number:	10414079
Patent Number:	10307951
Patent Number:	10160150
Patent Number:	10173356
Patent Number:	11402982
Patent Number:	10166710
Patent Number:	10875221
Patent Number:	11491693
Patent Number:	10792849
Patent Number:	10899056
Patent Number:	10940622
Patent Number:	10569458
Patent Number:	10953581
Patent Number:	10625456
Patent Number:	11186021
Patent Number:	11148335
Patent Number:	10500775
Patent Number:	11759988
Patent Number:	11052590
Patent Number:	11186022
Patent Number:	11065793
Patent Number:	11065794
Patent Number:	11084196
Patent Number:	10982786
Patent Number:	10926445
Patent Number:	11186020
Patent Number:	10889037
Patent Number:	11872736
Patent Number:	11752673
Patent Number:	11389999
Patent Number:	11007692
Patent Number:	11524435
Patent Number:	11738490
Patent Number:	11618196
Patent Number:	11628608

Property Type	Number
Patent Number:	11897174
Patent Number:	11673305
Patent Number:	12134219
Patent Number:	11865755
Patent Number:	10875226
Application Number:	18207340
Application Number:	17690040
Application Number:	17725888
Application Number:	18034994
Application Number:	18090779

**CORRESPONDENCE DATA**

**Fax Number:**

*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:** 2025218721

**Email:** ipteam@coagencyglboal.com

**Correspondent Name:** Troy Jones

**Address Line 1:** 1025 Connecticut Ave NW, Suite 712

**Address Line 4:** Washington, DISTRICT OF COLUMBIA 20036

**ATTORNEY DOCKET NUMBER:** 2633209 TJ

**NAME OF SUBMITTER:** Troy Jones

**SIGNATURE:** /Troy Jones/

**DATE SIGNED:** 01/28/2025

**Total Attachments: 11**

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**Notice of Grant of Security Interest in Intellectual Property (First Lien)**

NOTICE OF GRANT OF SECURITY INTEREST IN PATENTS (FIRST LIEN), dated as of January 27, 2025 (this “Notice”), made by made by Synventive Molding Solutions, Inc., a Delaware corporation (“Synventive Pledgor”) and BARNES GROUP INC., a Delaware corporation (“Barnes Pledgor,” together with Synventive Pledgor, the “Pledgors” and each, a “Pledgor”), in favor of WILMINGTON TRUST, NATIONAL ASSOCIATION, as Collateral Agent (as defined below).

Reference is made to the Collateral Agreement (First Lien), dated as of January 27, 2025 (as amended, restated, supplemented or otherwise modified from time to time, the “Collateral Agreement”), among Goat Holdco, LLC, a Delaware limited liability company (the “Borrower”), each Subsidiary of the Borrower identified therein, Wilmington Trust, National Association, as collateral agent (together with its successors and assigns in such capacity, the “Collateral Agent”) for the Secured Parties (as defined therein), and Royal Bank of Canada, as Applicable Authorized Representative (as defined therein). The parties hereto agree as follows:

SECTION 1. *Terms.* Capitalized terms used in this Notice and not otherwise defined herein have the meanings specified in the Collateral Agreement. The rules of construction specified in Section 1.01(b) of the Collateral Agreement also apply to this Notice.

SECTION 2. *Grant of Security Interest.* As security for the payment and performance, as the case may be, in full of the Secured Obligations, each Pledgor pursuant to the Collateral Agreement did, and hereby does, pledge and grant to the Collateral Agent, its successors and permitted assigns, for the benefit of the Secured Parties, a continuing security interest in all of such Pledgor’s right, title and interest in, to and under any and all of the following assets now owned or at any time hereafter acquired by such Pledgor or in which such Pledgor now has or at any time in the future may acquire any right, title or interest (collectively, but excluding any Excluded Property, the “Patent Collateral”):

all Patents of the United States of America, including those listed on Schedule I and Schedule II;

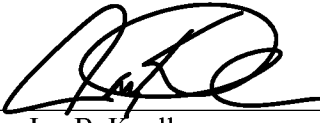
SECTION 3. *Collateral Agreement.* The security interests granted to the Collateral Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Collateral Agent pursuant to the Collateral Agreement. Each Pledgor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Patent Collateral are more fully set forth in the Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Notice and the Collateral Agreement, the terms of the Collateral Agreement shall govern.

SECTION 4. *Counterparts*. This Notice may be executed in two or more counterparts, each of which shall constitute an original but all of which when taken together shall constitute but one contract. Delivery of an executed counterpart to this Notice by facsimile or other electronic transmission shall be as effective as delivery of a manually signed original. The words “execution,” “execute,” “signed,” “signature,” “delivery,” and words of like import in or related to any document to be signed in connection with this Notice and the transactions contemplated hereby shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Collateral Agent, or the delivery or keeping of records in any electronic form (including deliveries by telecopy, emailed pdf. or any other electronic means that reproduces an image of an actual executed signature page), each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act; provided that notwithstanding anything contained herein to the contrary the Collateral Agent is under no obligation to accept electronic signatures in any form or in any format unless expressly agreed to by the Collateral Agent pursuant to procedures approved by it.

SECTION 5. *Governing Law*. THIS NOTICE AND ANY CLAIMS, CONTROVERSY, DISPUTE OR CAUSES OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS NOTICE AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES UNDER THIS NOTICE SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO ANY PRINCIPLE OF CONFLICTS OF LAW THAT COULD REQUIRE THE APPLICATION OF ANY OTHER LAW.

[Signature Pages Follow]

**BARNES GROUP INC.**


By:  \_\_\_\_\_  
Name: Jay B. Knoll  
Title: Senior Vice President, General Counsel and  
Secretary

**SYNVENTIVE MOLDING SOLUTIONS, INC.**

By: Julie S. Wade  
Name: Julie S. Wade  
Title: Secretary



**WILMINGTON TRUST, NATIONAL  
ASSOCIATION,**  
as Collateral Agent

By:   
Name: Jane Schweiger  
Title: Vice President

Schedule I  
to Notice of Grant of Security Interest (First Lien) in Patents

Patents Owned by BARNES GROUP INC.

*U.S. Patent Registrations*

<u>Title</u>	<u>Patent No.</u>	<u>Issue Date</u>
HYBRID METAL LEADING EDGE PART AND METHOD FOR MAKING THE SAME	9222362	December 29, 2015
TELESCOPING STRUT	9188184	November 17, 2015
DAMPENED COMPRESSION SPRING ROD	8292274	October 23, 2012
HIGH FORCE LOCKING SPRING	7350628	April 1, 2008
FORCE CONTROL STRUT	7677539	March 16, 2010
UNIVERSAL STOP TUBE	9032587	May 19, 2015
FRICITION DAMPENED MECHANICAL STRUT	9447836	September 20, 2016
ELECTROMECHANICAL SPRING SYSTEM	10935096	March 2, 2021
INTERFERENCE ARRANGEMENT FOR SPRING	9822838	November 21, 2017
LOCK RING	10441983	October 15, 2019
VARIABLE PULSATING, GAP CONTROL, AUTO-LEARNING PRESS CUSHION DEVICE	11110506	September 7, 2021
ELECTROMECHANICAL SPRING SYSTEM	12066073	August 20, 2024
ELECTROMECHANICAL SPRING SYSTEM	11499599	November 15, 2022
WIRELESS SENSOR WITH BEACON TECHNOLOGY	11592499	February 28, 2023
VARIABLE PULSATING, GAP CONTROL, AUTO-LEARNING PRESS CUSHION DEVICE	11701700	July 18, 2023
WIRELESS SENSOR WITH BEACON TECHNOLOGY	11899081	February 13, 2024
LUBRICATION ATOMIZATION FOR A GAS CYLINDER ARRANGEMENT	12129965	October 29, 2024
INTERFERENCE ARRANGEMENT FOR SPRING	10215251	February 26, 2019
LOCK RING	9744576	August 29, 2017

*U.S. Patent Applications*

<u>Title</u>	<u>Application No.</u>	<u>Filing Date</u>
WIRELESS SENSOR	17113234	June 10, 2021
ELECTRO FLUID DRIVEN ACTUATOR AND METHOD	18229307	November 23, 2023
TUBE IN TUBE LUBRICATION FOR A GAS CYLINDER	18283893	May 30, 2024
INJECTION MOLDING SYSTEM AND METHOD WITH TASK BASED USER INTERFACE	18369888	January 25, 2024

Schedule II  
to Notice of Grant of Security Interest (First Lien) in Patents

Patents Owned by Synventive Molding Solutions, Inc.

*U.S. Patent Registrations*

<u>Title</u>	<u>Patent No.</u>	<u>Issue Date</u>
ACTUATOR MOUNT SYSTEM AND METHOD OF MOUNTING AN ACTUATOR	8349244	September 3, 2013
ACTUATOR MOUNT SYSTEM	8562336	October 22, 2013
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9011736	April 21, 2015
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9005509	April 14, 2015
APPARATUS AND METHOD FOR DETECTING A POSITION OF AN ACTUATOR PISTON	9144929	September 29, 2015
FLOW CONTROL APPARATUS AND METHOD	9205587	December 8, 2015
NON-COAXIALLY MOUNTED ELECTRIC ACTUATOR AND TRANSMISSION	9937648	April 10, 2018
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9878477	January 30, 2018
ACTUATOR COOLING APPARATUS AND METHOD	11007695	May 18, 2021
ACTUATOR APPARATUS AND METHOD ENABLING MULTIPLE PISTON VELOCITIES	10857714	December 8, 2020
LINEAR TO LINEAR VALVE PIN DRIVE DURING INJECTION CYCLE	11148333	October 19, 2021
METHOD AND APPARATUS FOR COUPLING AND UNCOUPLING AN INJECTION VALVE PIN	8091202	January 10, 2012
HEATING APPARATUS FOR FLUID FLOW CHANNEL	8328549	December 11, 2012
APPARATUS FOR COUPLING AND UNCOUPLING AN INJECTION VALVE PIN	8282388	October 9, 2012
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9498909	November 22, 2016
NON-COAXIALLY MOUNTED ELECTRIC ACTUATOR AND TRANSMISSION	9492960	November 15, 2016
ACTUATOR COOLING APPARATUS AND METHOD	9682504 6/20/2017	June 20, 2017
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9623598 4/18/2017	April 18, 2017

INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9636858	May 2, 2017
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9682507	June 20, 2017
PNEUMATICALLY DRIVEN, PIN VELOCITY CONTROLLED INJECTION MOLDING APPARATUS AND METHOD	9662820	May 30, 2017
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	9604399	March 28, 2017
FAST ACTING REDUCED VELOCITY PIN CONTROL APPARATUS AND METHOD FOR DETECTING A POSITION OF AN ACTUATOR PISTON	9427905	August 30, 2016
FLUID CHANNEL FLOW DISRUPTION	10493674	December 3, 2019
FLOW CONTROL APPARATUS AND METHOD	9908273	March 6, 2018
END OF STROKE ACTUATOR BLEED	10052801	August 21, 2018
VALVE PIN POSITION ADJUSTER	9944006	April 17, 2018
ACTUATOR SYSTEM FOR ROTATING VALVE PIN	9873216	January 23, 2018
VALVE SYSTEM IN AN INJECTION MOLDING SYSTEM	9827701	November 28, 2017
DOWNSTREAM PIN VELOCITY CONTROLLED INJECTION MOLDING APPARATUS AND METHOD. <sup>1</sup>	9738024	August 22, 2017
REDUCED VELOCITY CONTROL BASED ON SENSED SYSTEM CONDITION	10384385	August 20, 2019
VALVE PIN AND NOZZLE CONFIGURATION AND METHOD OF CONTROL	10899055	January 26, 2021
ACTUATOR COOLING APPARATUS AND METHOD	10005215	June 26, 2018
APPARATUS AND METHOD FOR DETECTING A POSITION OF AN ACTUATOR PISTON	10245772	April 2, 2019
CONTROLLED VALVE PIN MOVEMENT BASED ON CAVITY SENSOR FEEDBACK	9873219	January 23, 2018
ACTUATOR COOLING APPARATUS AND METHOD	10046496	August 14, 2018
ACTUATOR COOLING APPARATUS AND METHOD	10046497	August 14, 2018
ACTUATOR APPARATUS AND METHOD ENABLING MULTIPLE PISTON VELOCITIES	10414079	September 17, 2019
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	10307951	June 4, 2019

<sup>1</sup> To be abandoned shortly after Closing.

INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	10160150	December 25, 2018
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	10173356	January 8, 2019
GRAPHICAL INTERFACE FOR INJECTION MOLDING SYSTEMS	11402982	August 2, 2022
APPARATUS AND METHOD FOR DETECTING A POSITION OF AN ACTUATOR PISTON	10166710	January 1, 2019
INJECTION MOLDING APPARATUS AND METHOD FOR AUTOMATIC CYCLE TO CYCLE CAVITY INJECTION	10875221	December 29, 2020
LARGE PART INJECTION MOLD APPARATUS AND PROCESS	11491693	November 8, 2022
REMOTELY MOUNTED ELECTRIC MOTOR DRIVING A VALVE PIN IN AN INJECTION MOLDING APPARATUS	10792849	October 6, 2020
NON-COAXIALLY MOUNTED ELECTRIC ACTUATOR AND TRANSMISSION	10899056	January 26, 2021
VALVE PIN POSITION AND VELOCITY CONTROL METHOD AND APPARATUS	10940622	March 9, 2021
CONTROLLER ARRANGEMENT FOR INJECTION MOLDING SYSTEM	10569458	February 25, 2020
ACTUATOR COOLING APPARATUS AND METHOD	10953581	March 23, 2021
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	10625456	April 21, 2020
ADJUSTED CAVITY INJECTION FLUID PRESSURES IN INJECTION MOLDING SYSTEM	11186021	November 30, 2021
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	11148335	October 19, 2021
APPARATUS AND METHOD FOR DETECTING A POSITION OF AN ACTUATOR PISTON	10500775	December 10, 2019
APPARATUS AND METHOD FOR CONTROLLING INJECTION MOLDING	11759988	September 19, 2023
ACTUATOR COOLING APPARATUS AND METHOD	11052590	July 6, 2021
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	11186022	November 30, 2021
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	11065793	July 20, 2021
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	11065794	July 20, 2021
INJECTION MOLDING FLOW CONTROL APPARATUS AND METHOD	11084196	August 10, 2021

VALVE SYSTEM IN AN INJECTION MOLDING SYSTEM	10982786	April 20, 2021
CONTROLLER ARRANGEMENT FOR INJECTION MOLDING SYSTEM	10926445	February 23, 2021
ACTUATOR WITH ECCENTRIC PIN DRIVE	11186020	November 30, 2021
ACTUATOR COOLING APPARATUS AND METHOD	10889037	January 12, 2021
INJECTION MOLDING APPARATUS AND METHOD FOR AUTOMATIC CYCLE TO CYCLE CAVITY INJECTION	11872736	January 16, 2024
INJECTION MOLDING APPARATUS AND METHOD FOR AUTOMATIC CYCLE TO CYCLE CAVITY INJECTION	11752673	September 12, 2023
ELECTRIC ACTUATOR DRIVE FOR INJECTION MOLDING FLOW CONTROL	11389999	July 19, 2022
NON-COAXIALLY MOUNTED ELECTRIC ACTUATOR AND TRANSMISSION	11007692	May 18, 2021
INJECTION MOLDING APPARATUS WITH INTEGRATED ACTUATOR ELECTRONIC DRIVE	11524435	December 13, 2022
VALVE PIN POSITION AND VELOCITY CONTROL METHOD AND APPARATUS	11738490	August 29, 2023
SEQUENTIAL INJECTION TO MULTIPLE MOLD CAVITIES	11618196	April 4, 2023
ACTUATOR COOLING APPARATUS AND METHOD	11628608	April 18, 2023
COOLED ELECTRIC ACTUATOR CONTROLLED INJECTION	11897174	February 13, 2024
PARTIALLY ROTATED ECCENTRIC DRIVE FOR VALVE PIN	11673305	June 13, 2023
INJECTION MOLDING APPARATUS WITH INSULATED INTEGRATED ACTUATOR ELECTRONIC DRIVE	12134219	November 5, 2024
LARGE PART INJECTION MOLD APPARATUS AND PROCESS	11865755	January 9, 2024
INJECTION MOLDING APPARATUS AND METHOD FOR AUTOMATIC CYCLE TO CYCLE CAVITY INJECTION	10875226	December 29, 2020

*U.S. Patent Applications*

<u>Title</u>	<u>Application No.</u>	<u>Filing Date</u>
INJECTION MOLDING APPARATUS WITH COOLED INTEGRATED ACTUATOR ELECTRONIC DRIVE	18207340	October 5, 2023
INJECTION MOLDING APPARATUS WITH INSULATED INTEGRATED ACTUATOR ELECTRONIC DRIVE	17690040	July 7, 2022

ELECTRIC ACTUATOR DRIVE FOR INJECTION MOLDING FLOW CONTROL	17725888	August 18, 2022
SPRING CUSHIONED VALVE PIN	18034994	March 28, 2024
METHOD AND APPARATUS FOR CONTROLLED INJECTION FLUID FLOW	18090779	June 4, 2023