

Plaintiff AutoStore Technology AS (“AutoStore Technology”) bring this action for patent infringement under 35 U.S.C. § 271 against defendants Ocado Group plc, Ocado Central Services Ltd., Ocado Innovation Ltd., Ocado Operating Ltd., Ocado Solutions Ltd., and Ocado Solutions USA, Inc. (collectively, “Ocado” or “Defendants”), and allege as follows:

1. This is a civil action for patent infringement under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.* to end Defendants' unauthorized and infringing importation, offer for sale, sale, distribution, and/or use of products incorporating Plaintiff AutoStore Technology's patented inventions.

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Patent No. 10,494,239 (“the ’239 patent”), titled “Automated Storage System and Robot for Transporting Storage Bins”; and U.S. Patent No. 10,696,478 (“the ’478 patent”), titled “Automated Storage System.” The ’525 patent, the ’025 patent, the ’140 patent, the ’239 patent, and the ’478 patent are referred to herein as the “Asserted Patents.”

3. Defendants import, offer for sale, sell, distribute, and/or use in the United States infringing products (“Accused Products”), and encourage others (including the Kroger Corporation) to use the Accused Products in an infringing matter. The Accused Products consist of the Ocado Smart Platform (“OSP”), Ocado’s suite of solutions for operating an online grocery business, comprising an end-to-end software-based order picking and delivery system together with a physical fulfillment asset solution.

4. Plaintiff AutoStore Technology seeks past and future damages as well as pre-judgment and post-judgment interest for Defendants’ infringement of the Asserted Patents. AutoStore Technology also seeks an injunction against further infringement of the Asserted Patents by Ocado through Ocado’s importation, offer for sale, sale, distribution, and/or use of the OSP in the United States.

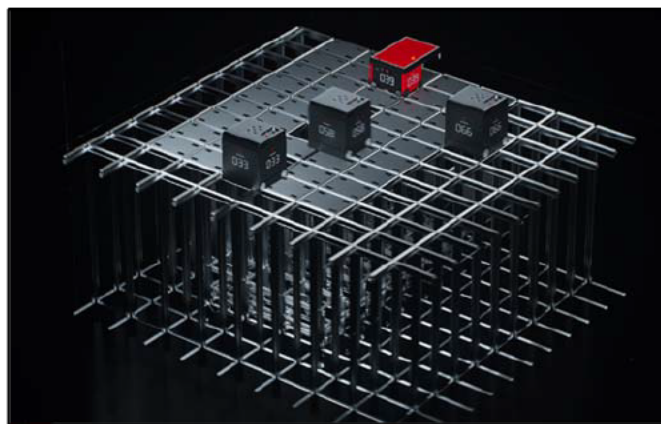
THE PLAINTIFF

5. Plaintiff AutoStore Technology is a private Norwegian corporation with its headquarters and principal place of business at Stokkastrandvegen 85, 5578 Nedre Vats, Norway.

6. AutoStore Technology is a sister company of AutoStore AS, which is also a private Norwegian corporation with its headquarters and principal place of business at Stokkastrandvegen 85, 5578 Nedre Vats, Norway. AutoStore AS conducts R&D on Automated Storage and Retrieval Systems (“AS/RS”) and markets and sells the Red Line and Black Line AS/RS solutions.

7. AutoStore System Inc. (“AutoStore USA”) is a Delaware subsidiary of AutoStore AS. Its headquarters and principal place of business are at 3 Corporate Park Drive, Unit 1, Derry, NH 03038. AutoStore USA markets AutoStore’s AS/RS systems to customers and partners in the United States; it also provides design, engineering, training, and support (including installation, testing, and repair) to customers and partners in the United States.

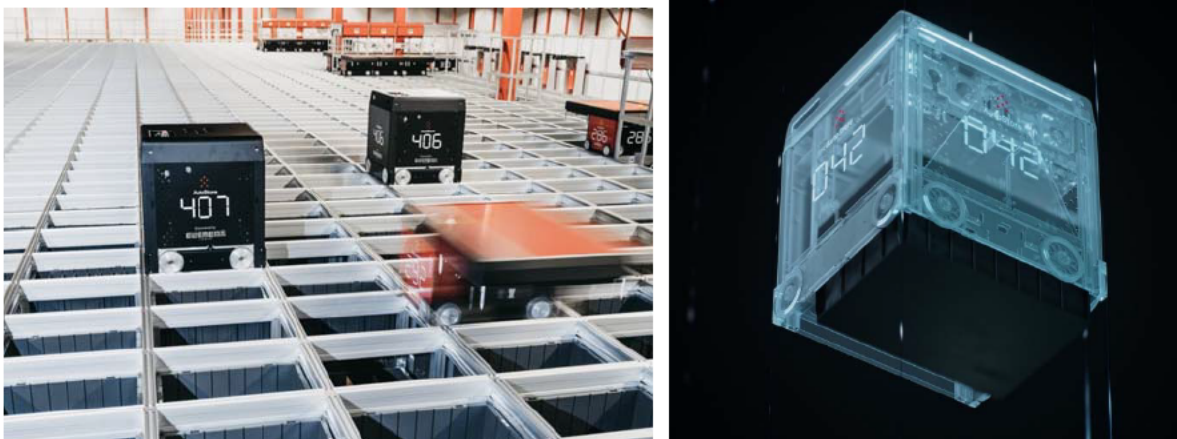
8. “AutoStore” (collectively referencing AutoStore Technology, AutoStore AS, and AutoStore USA) is a pioneer and leader in the field of Automated Storage and Retrieval Systems. Since its founding in the 1990s in Nedre Vats, Norway, AutoStore has pioneered the development of AS/RS solutions. AutoStore has developed, commercialized, and patented innovative AS/RS systems, including the Red Line and the Black Line systems (see figures below). The Red Line and the Black Line are AS/RS systems that provide unprecedented configurability and flexibility to warehouse and other facility owners and operators. Storage bins are stacked vertically in a grid and stored in a cubic structure. The bins are retrieved by robots that travel on the top of the structure. This makes it possible for the grid to be placed around columns, on mezzanines, and on multiple levels. AutoStore systems offer strategic benefits for a variety of industry segments such as e-commerce, e-grocery, omni-channel facilities, third-party logistics, and parts management.



AutoStore Black Line and Red Line robots operating on the AutoStore grid



The R5 robot used in AutoStore's Red Line system



The B1 robot used in AutoStore's Black Line system

THE DEFENDANTS

9. Upon information and belief, Ocado Group plc is a publicly traded corporation organized under the laws of the United Kingdom, with its principal place of business located at Buildings One & Two, Trident Place, Mosquito Way, Hatfield, Hertfordshire, AL10 9UL United Kingdom. On information and belief, Ocado is an online grocery retailer founded in 2000 as L.M. Solutions to sell food from the supermarket chain Waitrose. It changed its name to Ocado Limited in 2001. The company began a commercial delivery service in 2002, focusing on online grocery retail and delivery. On information and belief, Ocado did not use a cubic AS/RS system until 2012 when it purchased an AutoStore Red Line. On information and belief, Ocado Group plc owns a number of subsidiaries across the world, including the remaining Defendants.

10. On information and belief, Ocado Solutions Ltd. is a U.K. subsidiary of Ocado Group plc. On information and belief, Ocado Solutions Ltd. has responsibilities for partnering with grocery retailers to deploy the OSP for use by the grocery retailers in other countries, including the United States; on further information and belief, Ocado Solutions Ltd. has been involved in the importation, offer for sale, sale, and/or distribution in the United States of Accused Products, as well as the building and set-up of OSP's in the United States.

11. On information and belief, Ocado Solutions USA Inc. is a Delaware subsidiary of Ocado Group plc. On information and belief, Ocado Solutions USA Inc. has responsibilities for building, operating, and managing OSP's in the United States; on further information and belief, Ocado Solutions USA, Inc. has been involved in the importation, offer for sale, sale, and/or distribution in the United States of Accused Products, as well as the building and set-up of OSP's in the United States.

12. On information and belief, Ocado Innovation Ltd. is a U.K. subsidiary of Ocado Group plc. On information and belief, it provides technology and R&D services. The company states that it enables Ocado Solutions Ltd. to provide technology services to Ocado's grocery partners through the licensing of the OSP. On further information and belief, Ocado Innovation Ltd. has been involved at least in the importation of Accused Products into the United States.

13. On information and belief, Ocado Operating Ltd. is a U.K. subsidiary of Ocado Group plc. On information and belief, it provides physical online grocery fulfillment services. On further information and belief, Ocado Operating Ltd. is responsible for providing the technological aspects of online grocery fulfillment services; it sub-contracts the provision of these services to Ocado Innovation Ltd. On information and belief, Ocado Operating Ltd. has been involved at least in the importation and sale for importation of Accused Products into the United States.

14. On information and belief, Ocado Central Services Ltd. is a U.K. subsidiary of Ocado Group plc. On information and belief, it provides central and head office services to members of the Ocado Group; on further information and belief, it has been involved at least in the importation and sale for importation of Accused Products into the United States.

JURISDICTION

15. This civil action asserts claims arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.* This Court therefore has subject matter jurisdiction under 28 U.S.C. § 1331 and 1338(a).

16. This Court has personal jurisdiction over the Defendants. Personal jurisdiction exists generally and specifically over all of the Defendants because they (directly and/or through their subsidiaries, divisions, groups or distributors) have sufficient minimum contacts with the Eastern District of Virginia as a result of substantial business conducted within the Commonwealth of Virginia, including through importation of infringing products in this District, as well as the maintenance of a regular place of business within this District, as alleged further immediately below.

17. The Defendants have been involved in importation of the Accused Products into the United States through Norfolk, Virginia.

18. Moreover, on information and belief, at least Ocado Group plc, Ocado Solutions USA Inc., and Ocado Solutions Ltd. maintain a regular and established place of business within this District at: 1600 Tysons Boulevard, 4th Floor, Tysons Corner, Virginia 22102; and/or 1660 International Drive, Suite 600, McLean, Virginia 22102-4877. On information and belief, they employ individuals in this District and the Commonwealth of Virginia as part of maintaining a regular and established place of place in this District.

19. Personal jurisdiction also exists specifically over all of the Defendants because each has committed acts of infringement in this District and the Commonwealth of Virginia, including at least because each (directly and/or through their subsidiaries, divisions, groups, or distributors) advertises, markets, offers for sale, imports, distributes, and/or sells the infringing products at issue in this case in this District and the Commonwealth of Virginia. As such, the Defendants have committed tortious acts in this District and the Commonwealth of Virginia; have expressly aimed their actions at this District and the Commonwealth of Virginia with the knowledge that they would cause harm and substantial injury to AutoStore Technology in this District and the Commonwealth of Virginia; and AutoStore Technology's claims relate to the Defendants' products containing technology advertised, marketed, used, offered for sale, imported, and/or sold in this District and in Commonwealth of Virginia. Moreover, on information and belief, at least Ocado Group plc, Ocado Solutions Ltd., and Ocado Solutions USA, Inc. also maintain a regular and established place of business in this District.

VENUE

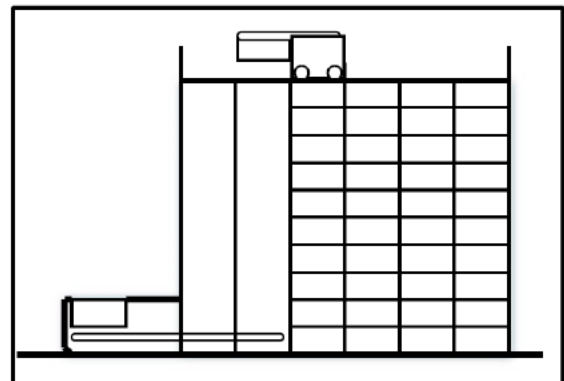
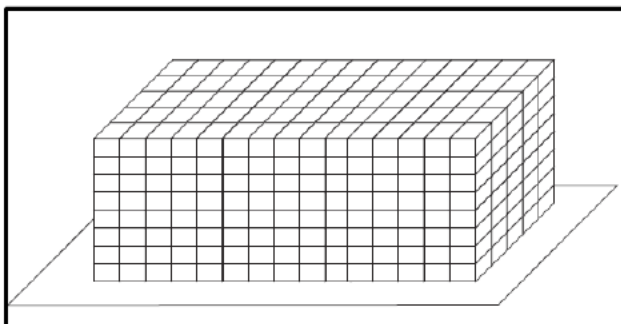
20. Venue properly lies in this District under 28 U.S.C. §§ 1391(c) and 1400(b). On information and belief, at least Ocado Group plc, Ocado Solutions Ltd., and Ocado Solutions USA Inc. maintain a regular and established place of business in this District, and each of the Defendants has committed acts of infringement in this District. Moreover, on information and belief, Ocado Group plc, Ocado Central Services Ltd., Ocado Innovation Ltd., Ocado Operating Ltd., and Ocado Solutions Ltd. are foreign corporations that do not reside in the United States.

GENERAL ALLEGATIONS

AUTOSTORE IS A PIONEER IN AUTOMATIC STORAGE AND RETRIEVAL SYSTEM SOLUTIONS

21. In the 1990's, AutoStore's parent, the Hatteland Group ("Hatteland Group"), had become the largest distributor of electronic components in Northern Europe. Despite building a new large warehouse, Hatteland Group quickly ran out of space after the warehouse was filled to capacity in its first month of operation. Instead of building another warehouse to secure business expansion, Hatteland Group's Technical Director Ingvar Hognaland had an epiphany: Why store things like dominos, when they could be stored like a Rubik's cube?

22. Mr. Hognaland realized that traditional warehouses store far more air than products in the space between each shelf. This is wasteful and expensive in utilities and manpower. Mr. Hognaland's solution was to make goods come to people, instead of people running to fetch items from shelves. In 1996, Mr. Hognaland's desire to maximize all available space in a warehouse led to the fundamental design concept of an AS/RS system called the "AutoStore Grid." In this system, bins containing stored items are stacked on top of each other in a cubic structure, and robots traveling on the top of the structure retrieve bins and bring them to the warehouse operator.



Left: Schematic of the AutoStore cubic storage structure. Right: Schematic of robot traveling on top of the cubic storage structure to retrieve bins.



Mr. Hognaland, working with direct drive motors used in AutoStore robots

23. AutoStore AS was born in 1995 as Jakob Hatteland Computer (“Hatteland Computer”), a subsidiary of the Hatteland Group. AutoStore Technology AS was born in 1996 as Jakob Hatteland Logistics AS (“Hatteland Logistics”),¹ another subsidiary of Hatteland Group. The first prototype AS/RS system by Hatteland Logistics went into operation in 2002 for Hatteland Group’s own use for warehousing electronic components.

24. After developing the first AutoStore AS/RS system for internal use, Hatteland Group soon came to realize the product’s global potential. In 2004, Hatteland Computer began to offer the first AutoStore AS/RS system (known as the “Red Line” since 2019) commercially. The

¹ The company changed its name to AutoStore Technology AS in 2017.

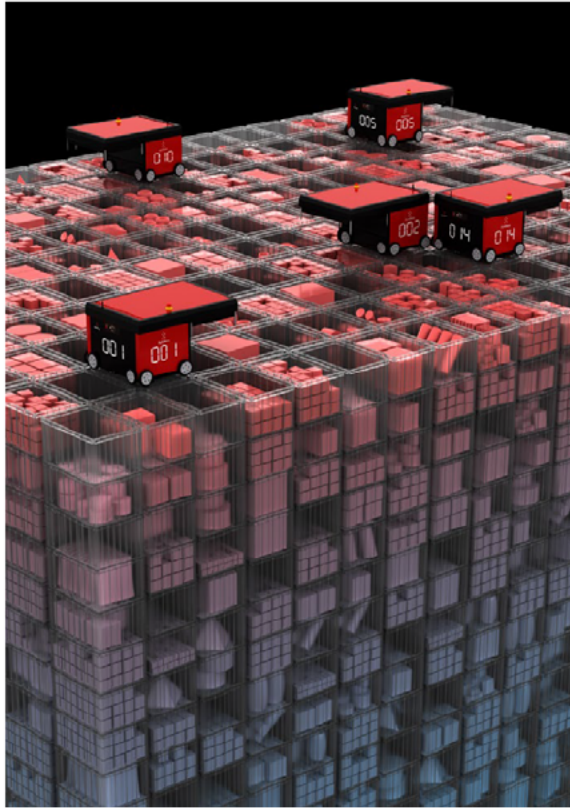
first commercial installation of the AutoStore AS/RS system occurred in 2005 in Norway. AutoStore's first international installation came in 2009.

25. In 2016, Hatteland Computer changed its name to AutoStore AS. Presently, with over 20 years of experience, AutoStore has developed global solutions that offer unmatched speed, stability, and control. The pioneering spirit is an integral part of the company's DNA as its vision is to continue to invent the future of warehousing. Its Red Line and recently released Black Line systems deliver exceptional performance across a number of critical parameters (including space utilization, throughput, capacity, flexibility/scalability, accuracy, and reliability), and provide exceptional return on invested capital for the customer.

26. AutoStore is the global leader in grid-based AS/RS solutions. It has been the fastest growing automated material handling solution in the world, with hundreds of systems sold in over 30 countries across five continents. It has won several prestigious awards and recognitions, including the "Bestes Produkt" innovation award in 2011 at LogiMat in the "procurement, transport, storage" category and the "TI supplier excellence award" in 2014.


27. AutoStore AS has established offices in six locations outside of Norway, including the United States (Derry, New Hampshire and Londonderry, New Hampshire), Poland (Koszalin, where it manufactures its robots), the United Kingdom, Germany, and Japan.

28. AutoStore currently offers two cubic AS/RS solutions. The **Red Line** is AutoStore's first cubic AS/RS system and traces its design back to the 1998 prototype developed by Mr. Hognaland and Hatteland Computer.



The AutoStore Red Line system

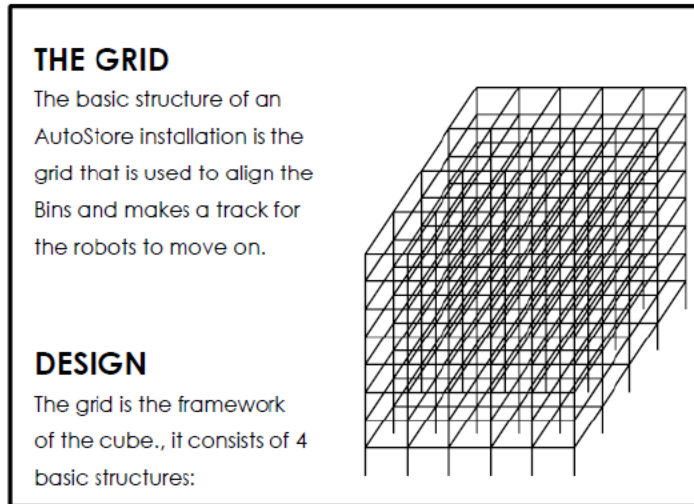
29. The figure below illustrates the progression of the shape of the AutoStore robots from the 1998 prototype to various “generations” of the robot that is currently known as the Red Line robot (termed Gen 1 - Gen 5, or R1 - R5). Currently, AutoStore’s Red Line system uses a Gen 5 (R5) robot.



PROTOTYPE	1 GEN	2 GEN	3 GEN	4 GEN	5 GEN	
	Prototype	1. Gen	2. Gen	3. Gen	4. Gen	5. Gen
Year introduced	1998	1998	2004	2005	2007	2011

30. In addition to the robot, a typical Red Line system includes the following::

- i. **Grid:** The grid is typically made from aluminum and holds the bins stacked neatly while providing tracks for the robots to drive on. The grid is modular and may be built in different shapes per the needs of the customer.



- ii. **Bins:** These are the containers that hold the stored inventory; the bins are stackable.



- iii. **Ports:** Ports are workstations where bins are presented for picking, replenishing, or other inventory actions. AutoStore offers a variety of ports to address various functions and speed needs (e.g., the CarouselPort, the ConveyorPort, and the SwingPort).

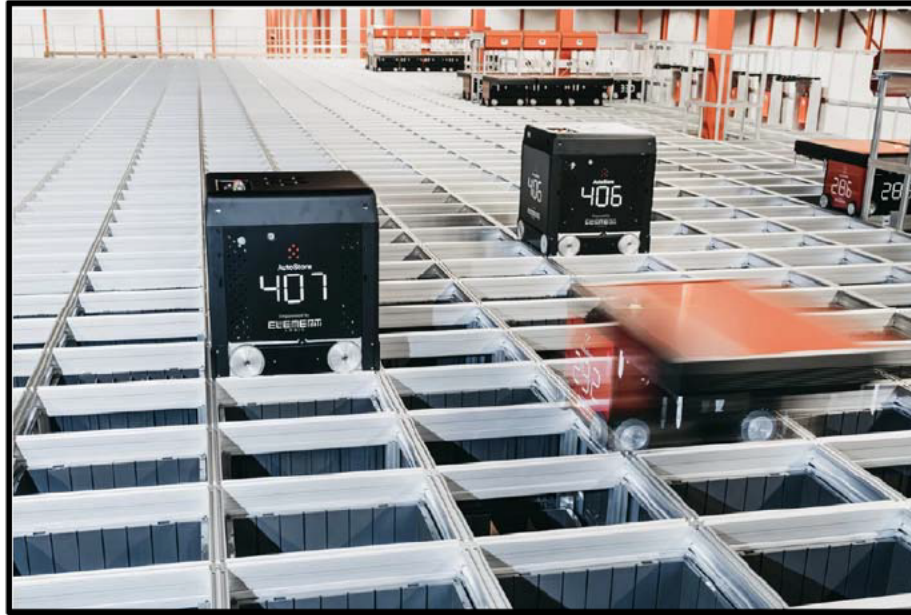


Left to right: CarouselPort, ConveyorPort, and SwingPort

- iv. **Controller:** The module serving traffic control and database functions for the AutoStore system, which communicates wirelessly with the robots.



31. The **Black Line** is a newer AS/RS cubic storage solution that AutoStore introduced to the market in January 2019 and offers several different features compared with the Red Line System.



Black Line and Red Line robots on an AutoStore grid

32. The Black Line system typically includes the following:

- i. **Robot (B1):** The Black Line B1 robot differs from the R5 robot in a number of respects, including: (i) the B1 has a “cavity” design, in which the bin is housed within a cavity in the robot; (ii) the B1 has higher stability when traveling; (iii) the B1 has faster acceleration and top speeds; (iv) the B1 has a smaller footprint; and (v) the B1 robot has brushless direct-drive motors in each wheel, whereas the R5 had one brush motor for each side of the robot.



Left: B1 robot positioned on the grid.

Right: Illustration of transparent B1 robot holding a bin in its cavity.

- ii. **Grid:** The Black Line system began to offer a “double-double” grid, which provides double tracks in both directions of movement, allowing robots to pass side-by-side in both directions. The original Red Line system came only

with a “single-double” grid allowing the robots to pass by each other in only one direction of movement. The B1 robots are backwards compatible with the “single-double” grid.



The Black Line grid showing the “double-double” tracks

- iii. **Bins:** A taller bin (425 mm / 16.7 in), which can accommodate larger products, is now available for the Black Line in addition to the existing bin sizes for the Red Line.



- iv. **Ports:** The Black Line system introduced the RelayPort, a modular workstation consisting of a picking module and multiple buffer modules. With the buffering system, the robots retrieve a bin when returning to the grid every time a bin is dropped off.



AutoStore RelayPort

- v. **Controller:** The same controller may be used for both the Red Line and the Black Line systems.

33. AutoStore provides its solutions to customers through a global network of partners. These partners find end-point customers for AutoStore systems, help define the requirements and parameters for an AS/RS system that would be deployed at the customer's site, and will make the sale to the customer. With AutoStore's assistance, these partners also design, engineer, build, and install custom AutoStore systems at the customers' sites.

34. In the United States, AutoStore USA provides support to AutoStore's U.S. partners and customers, including by: helping define customer requirements, design engineering the AS/RS system to be installed at the customer's site; providing training to the personnel of the partners and some customers regarding, *inter alia*, the design and operation of the AS/RS systems; and providing repair, testing, and replacement services for systems deployed in the field. AutoStore USA also employs sales and marketing professionals that help make sales to U.S. customers. Three active AS/RS systems installed at AutoStore USA's New Hampshire headquarters are used for robot testing and repair, training partners and customers, and warehousing of spare parts and components.

**OCADO HAS COMMERCIALIZED A TECHNOLOGY THAT IS BASED ON
AUTOSTORE'S PIONEERING SOLUTIONS AND INFRINGES AUTOSTORE'S
PATENTS**

35. In 2012, Ocado contacted Hatteland Computer to acquire the right to buy the AutoStore system directly from Hatteland Computer, and to acquire exclusive rights to distribute the AutoStore system for sales in the grocery segment. Hatteland Computer rejected this proposal both because it had a multi-distribution strategy in all markets, and in any event, Ocado did not meet Hatteland Computer's criteria (in terms of experience, service organization, customer portfolio, *etc.*) for selling the AutoStore system.

36. Ultimately, Ocado purchased an AutoStore system in 2012 for use in one of its U.K. sites, using AutoStore's distributor Swisslog to manage the project. On information and belief, the AutoStore system fulfilled a significant technological need that Ocado itself could not address. As Ocado's Director of Non-Food said of AutoStore's system at such time, "[Ocado] [was] very excited about the opportunities presented by Swisslog's AutoStore. An operation of this size presents many complex requirements. From the outset we were looking to work with a supplier that had the skills and resources to effectively design and manage the whole process to present a solution that would facilitate further expansion. Swisslog and AutoStore ticked all the boxes."

37. As part of its acquisition of an AutoStore system, Ocado received documentation and software for the AutoStore system, including software permitting simulation of robot operation (including routing) on the storage grid. AutoStore personnel also provided training to Ocado on the AutoStore system.

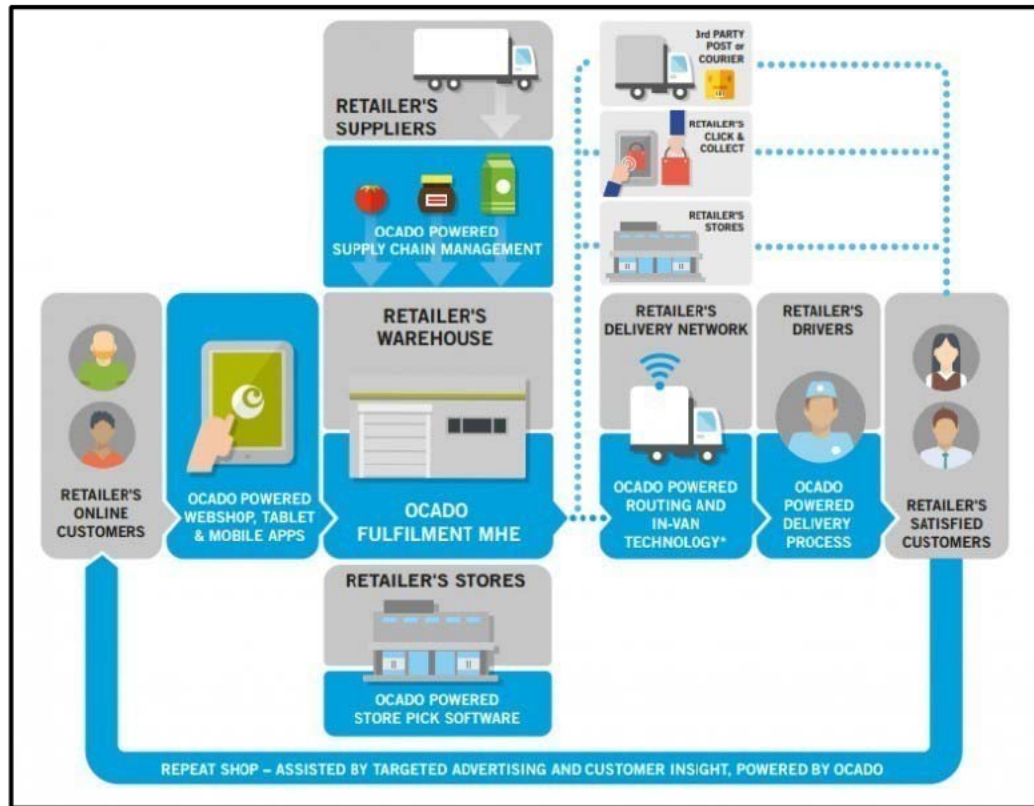
38. On information and belief, at around the same time, Ocado also began to create its own cubic AS/RS system based on the automated cubic storage technology pioneered by AutoStore. In doing so, Ocado enlisted the help of others to develop and manufacture the robotic vehicles used in its AS/RS system. Specifically, Ocado worked with Tharsus, a U.K. engineering

design and manufacturing firm, to develop and manufacture the robotic vehicles. Ocado enlisted Cambridge Consultants to design and develop the architecture for wireless communication and control of the robots on the grid. The Ocado AS/RS system appeared to have replicated, among other things, certain elements of the AutoStore system, as well as the robot and AS/RS technology covered by one or more of the Asserted Patents. Others in the industry also noticed similarities between the Ocado AS/RS system and the original AutoStore system.

39. The **Ocado Smart Platform (“OSP”)** is Ocado’s suite of solutions for operating an online grocery business, comprising an end-to-end software-based order picking and delivery system together with a physical fulfillment asset solution.

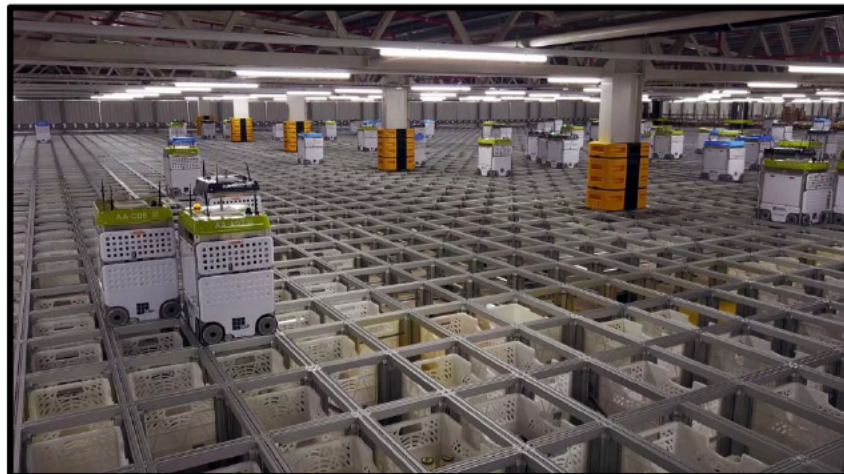
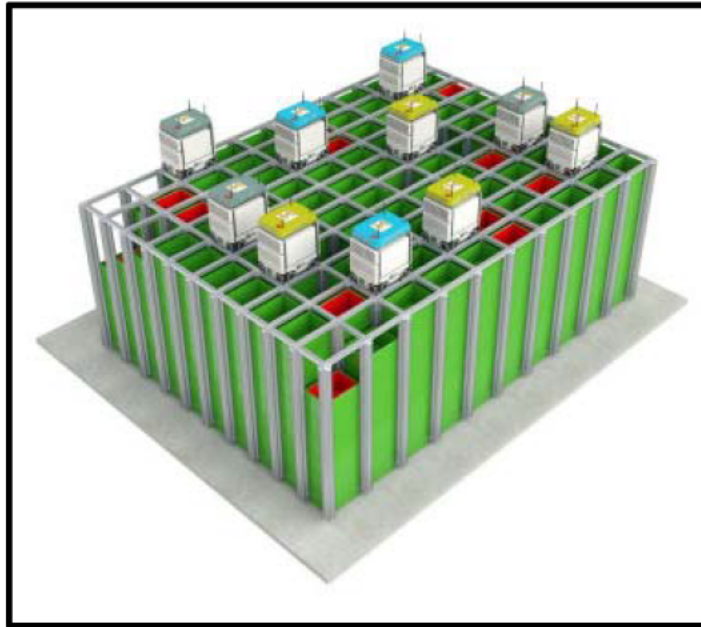
40. The figure below shows a schematic by Ocado of the OSP, including how Ocado’s AS/RS system fits within the OSP.² The Ocado AS/RS system includes a grid structure housing stored goods, automatic robotic vehicles that move on the grid structures to place and retrieve the stored goods, and associated components (including software).

² In the figure, the Ocado AS/RS system is referred to as “MHE” or Material Handling Equipment. The MHE includes a cubic grid that stores bins, as well as automated robotic vehicles that move on top of the grid to place bins into and retrieve bins from the storage columns.



Schematic of various components of Ocado's OSP

41. The Ocado AS/RS system in the OSP is based on the technology that was pioneered, patented, developed, and commercialized by AutoStore. An Ocado AS/RS system includes a cubic storage grid housing goods kept in bins, as well as wirelessly controlled robots used to place and retrieve the stored bins.



*Top: Schematic of Ocado's AS/RS System.
Bottom: Robots in Ocado's AS/RS System in Andover, U.K.*

42. Tharsus is a U.K. engineering design and manufacturing firm that developed and manufactures the robots for Ocado's cubic AS/RS solution. According to Tharsus, it shared its "extensive technological expertise with [Ocado's] technical team" and gave Ocado "clarity on the robotic needs of their project." Following development of a prototype, Tharsus used its supply chain and manufacturing teams, and "the first [Ocado] robots went into manufacture in 2015." Tharsus expects to scale up its manufacturing of Ocado robots to "thousands of units per year."

On information and belief, Tharsus sells Ocado robots, through Ocado, for importation to the United States.

43. Printed Motor Works Ltd. is a U.K. manufacturer and designer of compact electric motors and motor gearboxes, providing solutions for motion control applications. The company focuses on four strategic areas: brushless pancake motors; brushed pancake motors; in-wheel motors; and customer motor design. On information and belief, Ocado's robots use Printed Motor Works Ltd.' XR15 in-wheel motors as the motor that drives the Ocado robots' wheels. On information and belief, Printed Motor Works Ltd. sells those motors, either directly (as components) or indirectly (to be incorporated in Ocado's robots), through Ocado, for importation to the United States.

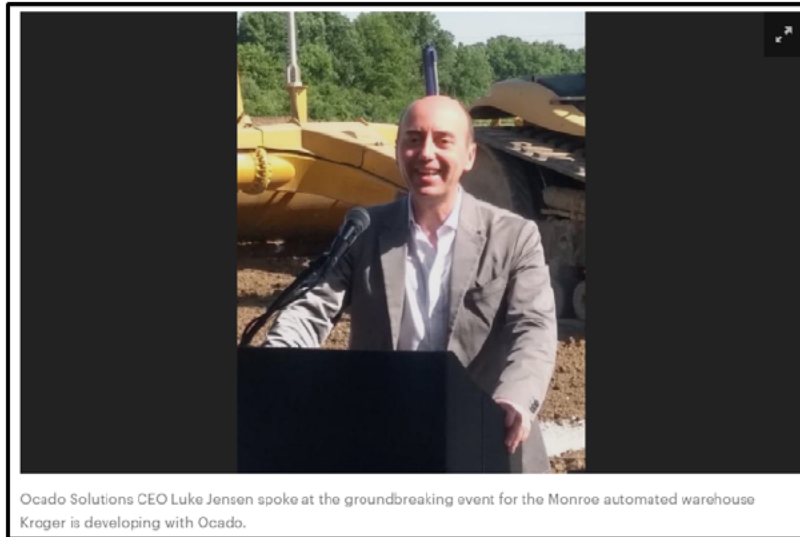
44. On information and belief, Ocado uses the OSP in connection with its own online grocery business, as well as in its partnerships with other grocers (*see infra*). In 2014, Ocado announced that it would offer the OSP to other grocery retailers. Ocado advertises that it "offer[s] OSP as a managed service to leading grocery retailers around the world," and that "[b]y partnering with Ocado Solutions, retailers combine their own scale, skills and unique attributes with [Ocado Solutions's] world-class solutions and expertise in grocery ecommerce." Under this managed service model, Ocado sells the OSP as a fully integrated service. In return for a fee structure based on, for example, committed capacity, Ocado provides its grocery partners with the benefits from physical assets sufficient to fulfill a targeted level of sales, together with the software systems required to launch and operate their entire online business. Ocado also provides initial and ongoing support and services in connection with the OSPs sold to its grocery partners. For example, Ocado advertises that "Ocado Solutions engineers install the requisite Material Handling Equipment (MHE), store pick module, and software platform, also providing training and comprehensive

familiarisation programmes for partners' management teams and operators to ensure they are well equipped to successfully run their operations.” Ocado provides the OSP to grocery retailers via its Ocado Solutions, Ltd. subsidiary.

45. Ocado has entered into partnerships with a number of grocers to provide them with the OSP to manage their automated storage facilities and supporting head office software to provide an online grocery business. Ocado has announced partnerships to deploy OSP sites in various countries, including Australia (with Coles), France (with Groupe Casino), Canada (with Sobeys), Japan (with Aeon), the United Kingdom (via Ocado Retail Limited, a joint venture with Marks & Spencer), and the United States (with Kroger Co.). Ocado OSPs in France and Canada are already in operation.

46. In the United States, Ocado entered into a partnership with Kroger Co. (“Kroger”) in 2018 to deploy OSPs at up to 20 sites (also referred to as “Customer Fulfillment Centers” or “CFCs”), at approximately \$55 million each. On the Ocado side, based on information and belief, the Kroger partnership is being managed, *inter alia*, by Ocado Solutions, Ltd. and Ocado Solutions USA Inc. Ocado has agreed to install and maintain the OSP equipment (including the storage grid and the robotic vehicles) at the CFCs sufficient to provide a certain level of processing.

47. The first announced Ocado-Kroger CFC broke ground in Monroe, Ohio in June 2018. The facility will be approximately 335,000 square feet in size. Construction of the facility is in progress, and on information and belief, it is expected to open in early 2021. The figure below on the right shows an Ocado robot at the groundbreaking event for the Monroe, OH CFC.



48. To date, Ocado and Kroger have announced the locations of eight additional CFCs that are in the process of being built or expected to be built in the United States: Pleasant Prairie, WI; Groveland, FL; Forest Park, GA; Dallas, TX; Frederick, MD; Romulus, MI; a location in the Pacific Northwest region; and a location in the West region.

THE ASSERTED PATENTS

49. Five examples of AutoStore's patented technologies that are included in AutoStore's products are described below (collectively, Asserted Patents or "the Patents-in-Suit"). *See* Exhibits 1–5. These patented technologies represent important developments and innovations in the robotic vehicles used in AS/RS systems and are critically important to AutoStore's customers and clients, and the success of AutoStore's leading products. AutoStore relies on the use and deployment of these proprietary technologies to compete in the marketplace.

U.S. Patent No. 10,093,525

50. U.S. Patent No. 10,093,525 ("the '525 patent"), titled "Robot for Transporting Storage Bins," issued on October 9, 2018 to Ingvar Hognaland. A true and correct copy of the '525 patent is attached as Exhibit 1.

51. AutoStore Technology AS owns by assignment the full right, title, and interest in the '525. The named inventor assigned to Jakob Hatteland Logistics AS (currently known as AutoStore Technology)³ U.S. Patent App. No. 14/650,757 (“the '757 Application”) and, *inter alia*, all patents issuing from continuations of the '757 Application (including the '525 patent). *See* assignment recorded at United States Patent and Trademark Office (“USPTO”) Reel/Frame No. 035827/020.

52. The '525 patent is valid and enforceable.

U.S. Patent No. 10,294,025

53. U.S. Patent No. 10,294,025 (“the '025 patent”), titled “Robot for Transporting Storage Bins,” issued on May 21, 2019 to inventors Ingvar Hognaland, Ivar Fjeldheim, Trond Austrheim, and Børge Bekken. A true and correct copy of the '025 patent is attached as Exhibit 2.

54. AutoStore Technology AS owns by assignment the full right, title, and interest in the '025 by way of an assignment (recorded at USPTO Reel/Frame No. 040641/0827) from the named inventors to Jakob Hatteland Logistics AS.

55. The '025 patent is valid and enforceable.

U.S. Patent No. 10,474,140

56. U.S. Patent No. 10,474,140 (“the '140 patent”), titled “Robot for Transporting Storage Bins” issued on November 12, 2019 to Ingvar Hognaland as the sole inventor. A true and correct copy of the '140 patent is attached as Exhibit 3.

57. AutoStore Technology AS owns by assignment the full right, title, and interest in the '140 patent by way of an assignment from the named inventor to Jakob Hatteland Logistics

³ As stated above, the company changed its name from Jakob Hatteland Logistics AS to AutoStore Technology AS (*see* assignment recorded at USPTO Reel/Frame No. 042612/0706).

AS (the former name of AutoStore Technology AS) (recorded at USPTO Reel/Frame No. 043906/0649).

58. The '140 patent is valid and enforceable.

U.S. Patent No. 10,494,239

59. U.S. Patent No. 10,494,239 (“the '239 patent”), titled “Automated Storage System and Robot for Transporting Storage Bins,” issued on December 3, 2019 to inventor Ingvar Hognaland. A true and correct copy of the '239 patent is attached as Exhibit 4.

60. AutoStore Technology AS owns by assignment the full right, title, and interest in the '239 patent. The named inventor assigned to Jakob Hatteland Logistics AS (the former name of AutoStore Technology AS) the '757 Application and, *inter alia*, all patents issuing from continuations of the '757 Application (including the '239 patent). *See* assignment recorded at USPTO Reel/Frame No. 035827/020.

61. The '239 patent is valid and enforceable

U.S. Patent No. 10,696,478

62. U.S. Patent No. 10,696,478, titled “Automated Storage System,” issued on June 30, 2020 to inventor Ingvar Hognaland. A true and correct copy of the '478 patent is attached as Exhibit 5.

63. AutoStore Technology AS owns by assignment the full right, title, and interest in the '478 patent. The named inventor assigned to Jakob Hatteland Logistics AS the '757 Application and, *inter alia*, all patents issuing from continuations of the '757 Application (including the '478 patent). *See* assignment recorded at USPTO Reel/Frame No. 035827/020.

64. The '478 patent is valid and enforceable.

THE DEFENDANTS ARE WILLFULLY INFRINGING AUTOSTORE'S PATENTS

65. The Defendants have had actual knowledge of the Asserted Patents at least as the result of the filing of this Complaint and exhibits thereto. Nonetheless, they have continued to willfully and deliberately infringe the Asserted Patents by, *inter alia*, importing, offering for sale, selling, distributing, and/or using the OSP in the United States despite the knowledge that they infringe the Asserted Patents as for example set forth in Exhibits 6–10 to this Complaint.

66. The infringement by Ocado Group plc of at least the '525, '239, and '478 patents is further egregious at least because Ocado Innovation Ltd., a wholly owned subsidiary of Ocado Group plc, sued AutoStore in 2017 in Norway to dispute the inventorship of that patent family ("the Cavity Robot Family"). The trial court in Norway found, and the appellate court subsequently affirmed, among other things that AutoStore was the true inventor of the Cavity Robot Family.

COUNT 1: PATENT INFRINGEMENT
(Infringement of the '525 patent)

67. AutoStore Technology incorporates and re-alleges Paragraphs 1 through 66 of this Complaint as if fully set forth herein.

68. The USPTO duly and legally issued the '525 patent on October 9, 2018.

69. The Defendants have infringed, and continue to infringe, one or more claims of the '525 patent, including at least claim 1, either literally or under the doctrine of equivalents, by importing into the United States, and offering for sale in the United States, selling in the United States, and/or using in the United States, products that are covered by one or more claims of the '525 patent. These products include the automatic robot vehicles ("bots") used in the Ocado Smart Platform ("OSP bots"). Exhibit 6 contains a chart detailing how an Ocado bot meets all limitations of claim 1 of the '525 patent.

70. The Defendants have had knowledge of the '525 patent at least as the result of the filing and service of the Complaint in this action. Moreover, Defendants have been at least willfully blind to the '525 patent at least as of the date Ocado sued AutoStore in Norway regarding inventorship of the Cavity Robot Family (which includes the '525 patent)

71. In addition to directly infringing the '525 patent, the Defendants have indirectly infringed and continue to indirectly infringe one or more claims of the '525 patent, including at least claim 1, by actively inducing others to directly infringe the '525 patent in violation of 35 U.S.C. § 271(b). Specifically, and in light of their knowledge of the '525 patent or at least their willful blindness thereof, the Defendants have induced infringement of the '525 patent with specific intent to do so, by their activities relating to the importation of OSP (including OSP bots) into the United States as well as their provision of instructions and guidance on the use of OSP and OSP bots. On information and belief, the Ocado bots are being used (including by testing) in the United States by at least Ocado Solutions USA Inc. and Kroger.

72. Additionally, Defendants have contributed to the infringement of the '525 patent by importing into the United States products, including the OSP bots, that constitute a material part of the '525 patent claimed inventions, that are especially made and/or adapted for infringing the '525 patent and are not staple articles of commerce suitable for substantial non-infringing use, and that have been provided to entities who infringe the '525 patent. Specifically, Defendants had knowledge that their products, including the OSP bots, were specifically made and/or adapted for infringement of the '525 patent and are not staple articles of commerce suitable for substantial non-infringing use.

COUNT 2: PATENT INFRINGEMENT
(Infringement of the '025 patent)

73. AutoStore Technology incorporates and re-alleges Paragraphs 1 through 66 of this Complaint as if fully set forth herein.

74. The USPTO duly and legally issued the '025 patent on May 21, 2019.

75. The Defendants have infringed, and continue to infringe, one or more claims of the '025 patent, including at least claims 1 and 18, either literally or under the doctrine of equivalents, by importing into the United States, and offering for sale in the United States, selling in the United States, and/or using in the United States, products that are covered by one or more claims of the '025 patent. These products include components of the OSP, including the Ocado bot. Exhibit 7 contains charts detailing how an Ocado bot meets all limitations of at least claim 1 of the '025 patent, and how the OSP meets all limitations of at least claim 18 of the '025 patent.

76. The Defendants have had knowledge of the '025 patent at least as the result of the filing and service of the Complaint in this action.

77. In addition to directly infringing the '025 patent, the Defendants have indirectly infringed and continue to indirectly infringe one or more claims of the '025 patent, including at least claims 1 and 18, by actively inducing others to directly infringe the '025 patent in violation of 35 U.S.C. § 271(b). Specifically, and in light of their knowledge of the '025 patent, the Defendants have induced infringement of the '025 patent with specific intent to do so, by their activities relating to the importation of OSP (including the OSP bots) into the United States as well as their provision of instructions and guidance on the use of the OSP and OSP robots. On information and belief, the OSP, including the OSP bots, are being used (including by testing) in the United States by at least Ocado Solutions USA Inc. and Kroger.

78. Additionally, Defendants have contributed to the infringement of the '025 patent by importing into the United States products, including the OSP, that constitute a material part of the '025 patent claimed inventions, that are especially made and/or adapted for infringing the '025 patent and are not staple articles of commerce suitable for substantial non-infringing use, and that have been provided to entities who infringe the '025 patent. Specifically, Defendants had knowledge that their products, including the OSP, were specifically made and/or adapted for infringement of the '025 patent and are not staple articles of commerce suitable for substantial non-infringing use.

COUNT 3: PATENT INFRINGEMENT
(Infringement of the '140 patent)

79. AutoStore Technology incorporates and re-alleges Paragraphs 1 through 66 of this Complaint as if fully set forth herein.

80. The USPTO duly and legally issued the '140 patent on November 12, 2019.

81. The Defendants have infringed, and continue to infringe, one or more claims of the '140 patent, including at least claims 1 and 15, either literally or under the doctrine of equivalents, by importing into the United States, and offering for sale in the United States, selling in the United States, and/or using in the United States, products that are covered by one or more claims of the '140 patent. These products include components of the OSP, including the Ocado bot. Exhibit 8 contains charts detailing how an Ocado bot meets all limitations of at least claim 1 of the '140 patent, and how the OSP meets all limitations of at least claim 15 of the '140 patent.

82. The Defendants have had knowledge of the '140 patent at least as the result of the filing and service of the Complaint in this action.

83. In addition to directly infringing the '140 patent, the Defendants have indirectly infringed and continue to indirectly infringe one or more claims of the '140 patent, including at

least claims 1 and 15, by actively inducing others to directly infringe the '140 patent in violation of 35 U.S.C. § 271(b). Specifically, and in light of their knowledge of the '140 patent, the Defendants have induced infringement of the '140 patent with specific intent to do so, by their activities relating to the importation of OSP (including the OSP bots) into the United States as well as their provision of instructions and guidance on the use of the OSP and OSP robots. On information and belief, the OSP, including the OSP bots, are being used (including by testing) in the United States by at least Ocado Solutions USA Inc. and Kroger.

84. Additionally, Defendants have contributed to the infringement of the '140 patent by importing into the United States products, including the OSP, that constitute a material part of the '140 patent claimed inventions, that are especially made and/or adapted for infringing the '140 patent and are not staple articles of commerce suitable for substantial non-infringing use, and that have been provided to entities who infringe the '140 patent. Specifically, Defendants had knowledge that their products, including the OSP, were specifically made and/or adapted for infringement of the '140 patent and are not staple articles of commerce suitable for substantial non-infringing use.

COUNT 4: PATENT INFRINGEMENT
(Infringement of the '239 patent)

85. AutoStore Technology incorporates and re-alleges Paragraphs 1 through 66 of this Complaint as if fully set forth herein.

86. The USPTO duly and legally issued the '239 patent on December 3, 2019.

87. The Defendants have infringed, and continue to infringe, one or more claims of the '239 patent, including at least claims 1 and 10, either literally or under the doctrine of equivalents, by importing into the United States, and offering for sale in the United States, selling in the United States, and/or using in the United States, products that are covered by one or more claims of the

'239 patent. These products include components of the OSP, including the Ocado bot. Exhibit 9 contains charts detailing how the OSP meets all limitations of at least claim 1 of the '239 patent, and how the OSP bot meets all limitations of at least claim 10 of the '239 patent.

88. The Defendants have had knowledge of the '239 patent at least as the result of the filing and service of the Complaint in this action. Moreover, Defendants have been at least willfully blind to the '239 patent at least as of the date Ocado sued AutoStore in Norway regarding inventorship of the Cavity Robot Family (which includes the '239 patent)

89. In addition to directly infringing the '239 patent, the Defendants have indirectly infringed and continue to indirectly infringe one or more claims of the '239 patent, including at least claims 1 and 10, by actively inducing others to directly infringe the '239 patent in violation of 35 U.S.C. § 271(b). Specifically, and in light of their knowledge of the '239 patent or at least their willful blindness thereof, the Defendants have induced infringement of the '239 patent with specific intent to do so, by their activities relating to the importation of OSP (including the OSP bots) into the United States as well as their provision of instructions and guidance on the use of the OSP and OSP robots. On information and belief, the OSP, including the OSP bots, are being used (including by testing) in the United States by at least Ocado Solutions USA Inc. and Kroger.

90. Additionally, Defendants have contributed to the infringement of the '239 patent by importing into the United States products, including the OSP, that constitute a material part of the '239 patent claimed inventions, that are especially made and/or adapted for infringing the '239 patent and are not staple articles of commerce suitable for substantial non-infringing use, and that have been provided to entities who infringe the '239 patent. Specifically, Defendants had knowledge that their products, including the OSP, were specifically made and/or adapted for

infringement of the '239 patent and are not staple articles of commerce suitable for substantial non-infringing use.

COUNT 5: PATENT INFRINGEMENT
(Infringement of the '478 patent)

91. AutoStore Technology incorporates and re-alleges Paragraphs 1 through 66 of this Complaint as if fully set forth herein.

92. The USPTO duly and legally issued the '478 patent on June 30, 2020.

93. The Defendants have infringed, and continue to infringe, one or more claims of the '478 patent, including at least claim 19, either literally or under the doctrine of equivalents, by importing into the United States, and offering for sale in the United States, selling in the United States, and/or using in the United States, products that are covered by one or more claims of the '478 patent. These products include the Ocado bot. Exhibit 10 contains a chart detailing how the OSP bot meets all limitations of at least claim 19 of the '478 patent.

94. The Defendants have had knowledge of the '478 patent at least as the result of the filing and service of the Complaint in this action. Moreover, Defendants have been at least willfully blind to the '478 patent at least as of the date Ocado sued AutoStore in Norway regarding inventorship of the Cavity Robot Family (which includes the '478 patent).

95. In addition to directly infringing the '478 patent, the Defendants have indirectly infringed and continue to indirectly infringe one or more claims of the '478 patent, including at least claim 19, by actively inducing others to directly infringe the '478 patent in violation of 35 U.S.C. § 271(b). Specifically, and in light of their knowledge of the '478 patent or at least their willful blindness thereof, the Defendants have induced infringement of the '478 patent with specific intent to do so, by their activities relating to the importation of OSP (including the OSP bots) into the United States as well as their provision of instructions and guidance on the use of

the OSP and OSP robots. On information and belief, the OSP, including the OSP bots, are being used (including by testing) in the United States by at least Ocado Solutions USA Inc. and Kroger.

96. Additionally, Defendants have contributed to the infringement of the 478 patent by importing into the United States products, including the OSP, that constitute a material part of the '478 patent claimed inventions, that are especially made and/or adapted for infringing the '478 patent and are not staple articles of commerce suitable for substantial non-infringing use, and that have been provided to entities who infringe the '478 patent. Specifically, Defendants had knowledge that their products, including the OSP bots, were specifically made and/or adapted for infringement of the '478 patent and are not staple articles of commerce suitable for substantial non-infringing use.

PRAYER FOR RELIEF

97. Wherefore, AutoStore requests entry of judgment in its favor and against Defendants as follows:

(A) Entry of judgment that the Defendants have directly infringed one or more claims of each of the Asserted Patents;

(B) Finding that Defendants have willfully infringed and are willfully infringing one or more claims of each of the Asserted Patents;

(C) Entry of a permanent injunction restraining and enjoining Defendants, and their respective officers, agents, servants, employees, attorneys, and those persons in active concert or participation with them who receive actual notice of the order by personal service or otherwise, from any further importation, offer for sale, sale, and/or use of their infringing products and/or services and any other infringement of the Asserted Patents, whether direct or indirect;

(D) An award of damages to compensate AutoStore for Defendants' infringement, including damages pursuant to 35 U.S.C. § 284, as well as prejudgment and post-judgment interest;

(E) An award of costs and expenses in this action, including an award of AutoStore's reasonable attorneys' fees pursuant to 35 U.S.C. § 285;

(F) A finding that this is an exceptional case, award treble damages due to Defendants' deliberate and willful conduct, and order Defendants to pay AutoStore's costs of suit and attorneys' fees; and

(G) For such other and further relief as the Court may deem just, proper, and equitable under the circumstances.

DEMAND FOR JURY TRIAL

98. AutoStore respectfully demands a trial by jury on all claims and issues so triable.

Dated: October 1, 2020

Respectfully submitted,

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