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John T. Frey
CLERK, CIRCUIT COURT
FAIRFAX, VA

VIRGINIA:

IN THE CIRCUIT COURT FOR FAIRFAX COUNTY

F2E HOLDINGS LLC
4094 Majestic Lane, # 355
Fairfax, Virginia 22033

ex rel.

MISSION INTEGRATED TECHNOLOGIES, LLC,
1934 Old Gallows Road, Suite 402
Vienna, Virginia 22182

Plaintiff,

v.

TIMOTHY G. CLEMENTE,
498 Fleshman Creek Road
Livingston, Montana 59047

and

JOSHUA R. CLEMENTE,
1129 Denfield Street, Unit B
Austin, Texas 78721

Defendants.

Case No.:

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COMPLAINT

Plaintiff, Mission Integrated Technologies, LLC ("MIT"), by and through F2E Holdings, LLC ("F2E"), files this derivative action seeking monetary damages and injunctive relief for the various wrongful acts committed by one of MIT's officers and members, Defendant Timothy G. Clemente ("Tim"), and his son, Defendant Joshua R. Clemente ("Josh") (collectively, "Defendants"). In support of this Complaint, MIT alleges as follows:

NATURE OF THE ACTION

1. MIT seeks monetary and injunctive relief from Tim and Josh for the following causes of action: breach of fiduciary duties (Count I – against Tim); misappropriation of trade secrets (Count II – against Tim and Josh); business conspiracy (Count III – against Tim and Josh); unjust enrichment (Count IV – against Josh); common-law fraud (Count V – against Tim); and breach of contract (Count VI – against Josh; Count VII – against Tim).

2. This is a derivative action under DEL. CODE ANN. §§ 18-1001, *et seq.*, brought on behalf of MIT by one of its two members, F2E. Efforts to cause MIT to bring this action directly would be futile because this action alleges liability and seeks monetary and injunctive relief against MIT's President and only other member, Tim Clemente, and Tim's son, Josh Clemente.

PARTIES

3. MIT is a Delaware limited liability company with its principal place of business in Vienna, Virginia. MIT's business is the design, manufacture, marketing, and distribution of a variety of state-of-the-art tactical and rescue products for law-enforcement, fire-rescue, and military customers around the world. MIT's primary product is the Articulating Rapid Entry System ("ARES"), a vehicle-mounted articulating stairway capable of delivering response forces quickly and precisely during crisis scenarios.

4. F2E is a Delaware limited liability company with its principal place of business in Fairfax, Virginia. F2E is a private investment company with business interests in a variety of industries. F2E has been a member of MIT since its founding in 2013. F2E owned approximately 75% of MIT's membership units at its founding. F2E currently owns approximately 81% of MIT's membership units.

5. Tim is a resident and citizen of Montana. Tim is and has been a member of MIT since its founding in 2013. Tim owned approximately 25% of MIT's membership units at its founding. He currently owns approximately 13% of MIT's membership units.

6. Josh is a resident and citizen of Texas. Josh assisted Tim on the ARES design for the benefit of MIT. Josh is Tim's son.

JURISDICTION AND VENUE

7. This Court has personal jurisdiction over Tim pursuant to VA. CODE ANN. § 8.01-328.1 because he conducted and continues to conduct business in Virginia on behalf of MIT. In addition, MIT's operating agreement provides that its members "agree to submit to the jurisdiction of the [Commonwealth] of Virginia."

8. This Court has personal jurisdiction over Josh pursuant to VA. CODE ANN. § 8.01-328.1 because he assisted Tim in performing work for the benefit of MIT in Virginia; he delivered work product to MIT in Virginia; he sent at least one invoice to MIT in Virginia; he regularly directed communications to MIT in Virginia; he signed at least one contract on behalf of MIT that call for disputes to be resolved in Virginia; and he entered into at least one contract with MIT that calls for disputes to be resolved in Fairfax, Virginia.

9. This Court has subject-matter jurisdiction over this lawsuit pursuant to VA. CODE Ann. § 17.1-513.

10. Venue is proper pursuant to VA. CODE Ann. §§ 8.01-261 and/or 8.01-262 because MIT's operating agreement provides that "any legal action or proceeding shall be brought in the courts of the State of Virginia, in Fairfax County." In addition, each of the parties to this lawsuit regularly transacted business in Fairfax County at times relevant to this lawsuit.

FACTUAL BACKGROUND

The Formation of MIT

11. On or about October 7, 2013, F2E and Tim entered into the Operating Agreement of Mission Integrated Technologies, LLC (the "MIT Operating Agreement"). A true and accurate copy of the MIT Operating Agreement is attached as **Exhibit A**. Before that date, the company operated under the name Assault Rescue Elevated System, LLC.

12. MIT's stated business purpose under the MIT Operating Agreement is to design, manufacture, market, and distribute a variety of state-of-the-art tactical and rescue products to law-enforcement, fire-rescue, and military customers around the world, with its "premier products" being "articulating vehicle-based assault and rescue systems, such as the ARES."

13. A true and accurate photograph of the current ARES model is below:



14. At MIT's inception, F2E owned approximately 75% and Tim owned approximately 25% of MIT.

15. F2E and Tim initially agreed that F2E would own 80% and Tim would own 20% of MIT. At Tim's request, F2E agreed to increase Tim's share by 5% with the understanding that individuals who would be assisting Tim in the development of the ARES system on behalf of

MIT would be compensated with ownership in MIT that was to be taken from Tim's additional 5% share.

16. MIT is a member-managed LLC. MIT's members designated Tim to serve as the company's President with authority "only as Approved by the Members."

Relevant MIT Operating Agreement Provisions

17. Section 15(J) of the MIT Operating Agreement provides that it "shall be governed by, and interpreted in accordance with, the laws of the State of Delaware."

18. The MIT Operating Agreement describes the powers of MIT's members. Section 3(D) provides that "[n]o Member or Financial Interest Holder has the authority or power to act for or on behalf of, to bind, or to incur any liability on behalf of the LLC except as specifically provided in this [Operating] Agreement." Section 7(A) provides that "[a]ll decisions taken by the Members unless otherwise specifically stated herein shall require an affirmative vote or written consent of the Members." Section 7(A) further provides that "[n]o person may act unilaterally on behalf of the LLC absent the approval of a majority of the Members."

19. Section 14(A) of the MIT Operating Agreement provides that "as long as any Member remains a nominal or beneficial interest holder in the LLC, and for a period of two (2) years thereafter, no Member shall directly or indirectly (e.g., through an affiliate of any Member), engage in any activities within the scope of the Business of the LLC without the Approval of the Members."

20. Section 14(B) of the MIT Operating Agreement provides that "all intellectual property, including but not limited to names, trade names, internet domains, inventions, designs, drawings, formulae, recipes, discoveries, concepts, ideas, know-how, information, developed or conceived inventions, and improvements, either patentable or not, and either contributed to the LLC by the Members or developed or improved by the LLC is owned at all times by the LLC." It further provides

that "all domain names, trade names, data and software associated with the Mission Integrated Technologies or Assault Rescue Elevated System concepts . . . belong exclusively to, and to the extent required, are assigned to, the LLC." It further provides that "[a]ll past and future inventions and contributions made by the Members related to the Mission Integrated Technologies and Assault Rescue Elevated Systems projects shall be deemed work for hire and shall belong exclusively to the LLC, unless otherwise waived by Approval of the Members."

21. Section 7(B) of the MIT Operating Agreement provides that MIT's members may designate "a Manager, President, Vice President, Secretary, and/or Treasurer" who "shall have the general powers and duties of management typically vested in the office of president, vice-president, secretary or treasurer of a limited liability company, as applicable, and such other powers and duties as may be prescribed by the Members."

22. The MIT Operating Agreement defines the fiduciary duties of loyalty and care applicable to MIT's officers. Section 7(D) provides that each of MIT's officers "shall exercise all powers and duties entrusted to him, her, or it, in the matters such person, individually or on behalf of an entity, believes in good faith to be in the best interest of the LLC, using a standard of care as a person in a like position would use under similar circumstances, including reasonable inquiry and ordinary prudence."

Circumstances Leading to Josh's Work on ARES

23. Tim advocated for Josh to assist him on the ARES design, since Tim is not an engineer and Josh has a background in mechanical engineering. Although F2E preferred to engage a professional engineering firm, Tim prevailed upon F2E that MIT would have greater control over the design and development of ARES by having his son assist him instead of a professional engineering firm.

24. Following Tim's recommendation, F2E agreed to allow Tim to use Josh and another individual, Kenneth Fournier ("Fournier"), to perform engineering design services for MIT under Tim's supervision. F2E and Tim agreed that Josh and Fournier would be compensated for assisting Tim with a 5% ownership interest in MIT to be taken from Tim's 25% share of the company (thereby reducing Tim's ownership to 20% and maintaining F2E's ownership at 75%).

False Representations Regarding Non-Disclosure & Non-Circumvention Agreement

25. F2E agreed to allow Josh and Fournier to assist Tim on the ARES design in reliance on representations by Tim that each of them would, and in fact did, sign MIT's standard non-disclosure and non-circumvention agreement, which protected MIT's rights and interests in confidential information provided to or developed by Josh and Fournier in the course of their work. F2E's agreement to allow Josh and Fournier to assist Tim in performing work for MIT on ARES was contingent on Josh and Fournier each signing such a non-disclosure and non-circumvention agreement.

26. Tim knew that F2E's agreement to allow Josh and Fournier to assist him in performing work for MIT on ARES was contingent on MIT obtaining the aforementioned non-disclosure and non-circumvention agreements. In numerous conversations both before and after MIT's formation, F2E's owner, Fahmi Alubbad ("Alubbad"), routinely emphasized to Tim the importance of protecting the company's intellectual property, including trade secrets and other confidential business information. Tim also was aware of Alubbad's strict practice of requiring business associates to sign non-disclosure and non-circumvention agreements before giving them access to trade secrets and other confidential business information. To wit, Alubbad, through another company he owned (Atlantis Consultants Limited Corporation ("Atlantis")), required Tim to sign a non-disclosure and non-circumvention agreement before sharing information with Tim during the business discussions

leading to the formation of MIT and its predecessor company. A true and accurate copy of the non-disclosure and non-circumvention agreement between Atlantis and Tim is attached as **Exhibit B**.

27. Tim knew that if Alubbad were aware that an individual or entity had access to MIT's trade secrets and other confidential business information without being subject to a non-disclosure and non-circumvention agreement, F2E would insist that MIT immediately terminate that person's access and remove them from the ARES project.

28. On or about August 7, 2013, Tim reported to Alubbad that Josh was "filling out the [non-disclosure and non-circumvention agreement] and will email the signed cop[y] back to you."

29. Contrary to Tim's representation, Josh did not email a signed copy of the non-disclosure and non-circumvention agreement to F2E.

30. Tim nevertheless represented to F2E on multiple occasions that he had obtained a signed non-disclosure and non-circumvention agreement from Josh.

31. Tim further represented to F2E that the agreement Josh purportedly signed included non-disclosure obligations, duties to maintain the confidentiality of trade secrets and other confidential business information for the benefit of MIT, and duties to provide and/or return such information to MIT upon request.

32. Tim has never provided a copy of Josh's signed non-disclosure and non-circumvention agreement to F2E, despite multiple requests from F2E that he do so. Tim has represented to F2E that he lost the signed non-disclosure and non-circumvention agreement at some point when his computer was damaged.

33. Upon information and belief, Tim never obtained a signed non-disclosure and non-circumvention agreement from Josh, contrary to his representations to F2E.

34. In or about April 2022, the members of MIT approved replacement non-disclosure and non-circumvention agreements to be given to both Josh and Fournier. Each replacement agreement contained a mutual acknowledgement that the parties had previously executed a non-disclosure and non-circumvention agreement dated June 6, 2013, and that the June 2013 non-disclosure and non-circumvention agreement subsequently was lost. Each replacement agreement also included a certification that Josh and Fournier had returned all of MIT's proprietary information, including trade secrets and other confidential business information, and had not shared such information with any unauthorized third parties. True and accurate copies of the replacement non-disclosure and non-circumvention agreements approved by the members of MIT are attached as **Exhibits C & D**.

35. F2E and Tim agreed that Tim was to present the replacement non-disclosure and non-circumvention agreements to both Josh and Fournier on behalf of MIT.

36. Tim presented Fournier with the replacement non-disclosure and non-circumvention agreement that had been approved by the members of MIT. Tim obtained Fournier's signature on the agreement in July 2022.

37. Tim represented to F2E that Josh also had signed the replacement non-disclosure and non-circumvention agreement that had been approved by the members of MIT.

38. Tim's representation that Josh had signed the replacement non-disclosure and non-circumvention agreement that had been approved by the members of MIT was false. When F2E reviewed the agreement Josh had signed, F2E discovered that it differed materially from the agreement that had been approved by F2E and Tim.

39. Unbeknownst to, and without the approval of, F2E, Tim had substantially and materially altered the replacement agreement Josh signed so that it only provided MIT with prospective confidentiality protections beginning in June 2022. Unbeknownst to, and without the approval of,

F2E, Tim removed any provision that applied to Josh's conduct between June 6, 2013—the purported date of the original non-disclosure and non-circumvention agreement—and the date of the replacement agreement. A true and accurate copy of the purported replacement non-disclosure and non-circumvention agreement signed by Josh is attached as **Exhibit E**.

40. Tim never required Josh to sign the replacement non-disclosure and non-circumvention agreement approved by the members of MIT.

July 2022 Agreement Transferring MIT Membership Units to Fournier

41. On or about April 18, 2017, in exchange for additional financial contributions by F2E to MIT, Tim transferred six of his membership units in MIT to F2E. After the transfer, F2E owned approximately 81% and Tim owned approximately 19% of MIT.

42. On or about July 27, 2022, MIT, F2E, Tim, and Fournier executed an agreement under which Tim transferred six of his remaining membership units to Fournier (the "July 2022 Agreement"). A true and accurate copy of the July 2022 Agreement is attached as **Exhibit F**. As a result of the July 2022 Agreement, the current ownership structure of MIT is as follows: F2E owns approximately 81%; Tim owns approximately 13%; and Fournier owns approximately 6%.

43. Under § 6(ii) of the July 2022 Agreement, Tim and Fournier represented and warranted that they had turned over to MIT all confidential business information of MIT, including but not limited to all information relating to the design and manufacture of the ARES system.

44. Under § 6(iii) of the July 2022 Agreement, Tim and Fournier represented and warranted that they would destroy or erase all remaining electronic copies of MIT's confidential business information in their possession.

45. Under § 6(v) of the July 2022 Agreement, Tim and Fournier represented and warranted that there were no facts in their knowledge, or that reasonable should be in their knowledge, that would render any of their representations and warranties in the July 2022 Agreement misleading.

46. Tim's representations in §§ 6(ii) and 6(iii) of the July 2022 Agreement were false. At the time Tim signed the July 2022 Agreement, Tim had neither turned over any confidential business information to MIT nor destroyed all remaining copies of MIT's confidential business information in his possession.

Josh's Work on ARES and False Statements About His Relationship with MIT

47. Beginning in 2013, Josh worked under Tim's supervision to assist him on the design, development, and production of the initial ARES model. Josh performed mechanical engineering and design work on ARES, including the design of foundational mechanisms, kinetic math calculations, structural hand calculations, stress analyses, and finite element analyses.

48. In connection with Josh's work on ARES, Tim provided Josh with access to MIT's trade secrets and other confidential business information relating to ARES, including but not limited to the product concept, functional capabilities, conceptual designs, and potential customers identified by F2E.

49. F2E allowed Tim to provide Josh with access to MIT's trade secrets and other confidential business information in reliance on Tim's representations to F2E that Josh had signed a non-disclosure and non-circumvention agreement that protected MIT's rights and interests in such information.

50. Among the types of confidential business information provided to Josh by Tim were ARES concepts and capabilities first developed for F2E, including a wireless touchscreen controller.

51. Josh was never an officer or member of MIT. Unbeknownst to F2E, however, Josh held himself out to third parties and entered into at least one contract on behalf of MIT purportedly as MIT's Vice President of Engineering. Josh did so without any written employment or engagement agreement with MIT and without the knowledge or approval of F2E, MIT's majority member.

52. Upon information and belief, Tim knew that Josh was holding himself out to third parties and entered into at least one contract on behalf of MIT as a purported officer of MIT without the knowledge and approval of F2E, MIT's majority member. Tim took no action to prevent Josh from doing so.

53. On the contrary, Tim repeated and promoted Josh's misrepresentations about his relationship with MIT and made similar misrepresentations about Tim's own relationship with MIT.

54. In or about 2017, Tim registered a website for MIT in his own name. Tim maintained exclusive access and control over MIT's website until at least September 2022, despite repeated requests from F2E that Tim provide F2E with access to and control over the website.

55. From 2017 until at least September 2022, Tim identified himself on MIT's website as MIT's CEO and Josh as MIT's Vice-President of Engineering, even though Tim was not MIT's CEO and Josh was never an officer or member in MIT.

56. From 2017 until at least September 2022, Tim also represented to the public on MIT's website that Tim and Josh were the sole designers and inventors of ARES, even though other individuals and entities also were materially involved with the design. Tim also made other false statements about ARES and MIT on MIT's website.

57. As of the date of this Complaint, Tim continues to represent to the public on his personal website that he is the inventor and manufacturer of ARES.

Tim and Josh's Scheme to Misappropriate
MIT's Confidential Information and Intellectual Property Rights

58. Upon information and belief, in or about 2015, Tim and Josh formed a common scheme to wrongfully establish control over MIT's confidential business information and intellectual property rights.

59. On or about January 28, 2015, Tim filed a provisional patent application in which Tim and Josh claimed to be the sole inventors of the initial version of ARES. No further action was taken on the provisional patent application filed by Tim in January 2015.

60. On November 20, 2018, however, Josh filed another provisional patent application in which he claimed to be the sole inventor of the initial version of ARES. Josh did so with the knowledge and approval of Tim, but without the knowledge or approval of F2E.

61. On November 19, 2019, Josh filed a patent application for the ARES system in which he named himself as sole inventor. A true and accurate copy of the official record of the November 19, 2019, patent application is attached as **Exhibit G**. Josh did so with the knowledge and approval of Tim but without the knowledge or approval of F2E. Josh also did so without assigning ownership of the patent to MIT.

62. The U.S. Patent and Trademark Office published Josh's patent application on its website on May 21, 2020, and awarded the ARES patent (U.S. Patent No. 11,174,677 B2) to Josh on November 16, 2021 with Josh—not MIT—as the owner. A true and accurate copy of the ARES patent is attached as **Exhibit H**. Neither Tim nor Josh made F2E aware of either of those events. F2E learned of the ARES patent for the first time in or about March 2022 while reviewing an MIT investor presentation prepared by Tim that mentioned the patent.

63. F2E never authorized the filing of any patent application for ARES.

64. The unauthorized patent applications filed by Josh contained confidential information about ARES that MIT did not want or expect to be disclosed to the public.

65. Moreover, Josh's patent application contained numerous deficiencies that are likely to invalidate the ARES patent.

66. Around the same time Josh was acting to obtain a patent for ARES in his own name in furtherance of his and Tim's common scheme to misappropriate MIT's intellectual property rights, Tim and Josh also took measures to seize control of MIT's confidential business information.

67. In or about 2016, F2E determined that the original ARES concept was not headed in the right direction and needed to be modified. F2E requested that MIT retain a professional engineering firm to help work on a new version of ARES, which F2E envisioned being mounted on an armored vehicle.

68. F2E identified Lenco Armored Vehicles, Inc. ("Lenco"), a major armored vehicle manufacturer, to provide the armored vehicle on which the redesigned ARES would be mounted. MIT and Lenco entered into an agreement under which Lenco provided the armored vehicle free of charge to assist MIT with marketing the redesigned ARES.

69. F2E also found two companies to assist MIT with mechanical and computer engineering tasks on the redesigned ARES: Cardinal Scientific, Inc. ("Cardinal"), and 21st Century Software Group, Inc. ("21st Century").

70. In or about April 2017, MIT entered into a contract with Cardinal. Pursuant to the contract, Cardinal was given confidential information about ARES by MIT and generated confidential work product on behalf of MIT. Cardinal was paid for its work by MIT.

71. Upon the completion of its work, however, Cardinal returned MIT's confidential materials and work product—including 3-D models, shop drawings, photographs, and videos of the ARES system components—to Josh and Tim.

72. In or about July 2017, Josh signed a contract purportedly on behalf of MIT with 21st Century under which 21st Century was tasked with working on the wireless controller and tablet design for the ARES system. Josh signed the contract in his purported capacity as MIT's Vice President of Engineering, even though Josh was not an officer or member of MIT and had no authority to bind MIT. An initial, unexecuted version of MIT's contract with 21st Century provided for Tim to sign on behalf of MIT. Tim modified the contract without F2E's knowledge or approval, however, to instead provide for Josh to sign on behalf of MIT.

73. Pursuant to the contract, 21st Century was given confidential information about ARES by MIT and generated confidential work product on behalf of MIT. Upon completion of its work, however, the 21st Century contract that Tim had modified without F2E's knowledge or approval required 21st Century to return its work product and MIT's confidential materials—including the source code for the ARES control system—only to Josh and not to MIT.

74. From 2017 until at least September 2022, Tim maintained exclusive access and control over MIT's website—which contained numerous false and misleading statements—despite F2E's repeated demands that Tim provide F2E with access to and control over the website. Tim also set up an unauthorized MIT email account and unauthorized MIT social media accounts, over which Tim maintained exclusive access and control. Until at least September 2022, Tim refused to provide F2E with access to those accounts despite repeated demands that he do so.

75. In or about August 2019, one of MIT's production contractors, IBIS TEK, LLC ("IBIS"), required certain design, development, and manufacturing information concerning ARES to perform

its work for MIT. IBIS had been subject to a non-disclosure and non-circumvention agreement with MIT since 2015 that protected confidential materials provided to IBIS by MIT, but not materials IBIS received from third parties.

76. F2E directed both Tim and Josh to provide the requested materials to F2E so they could be delivered to IBIS on behalf of MIT. Both Tim and Josh ignored F2E's request.

77. F2E then engaged an attorney on behalf of MIT to write letters to Tim and Josh demanding that they supply F2E with the information requested by IBIS. Both Tim and Josh also ignored those demands.

78. Instead, without F2E's knowledge or approval, Josh sent MIT's confidential business information concerning ARES directly to IBIS, even though Josh was not a member or officer of MIT and was not authorized to act on behalf of MIT.

79. Both Josh and Tim have refused to disclose to F2E what specific confidential business information Josh sent to IBIS.

80. Tim and Josh have attempted to use their wrongful control over MIT's confidential business information and intellectual property rights to extract additional ownership shares in MIT and other concessions from F2E.

81. In or about 2015, Tim advised F2E that he wanted to transfer 4% of his membership units in MIT to Josh and 2% to Fournier. F2E agreed with Tim's proposal.

82. Despite F2E's agreement, however, Tim never transferred any of his membership units in MIT to Josh or otherwise compensated Josh for Josh's work assisting Tim on behalf of MIT.

83. In or about November 2017, MIT demonstrated the redesigned ARES model at the Milipol Paris defense-industry trade show. The redesigned ARES model received favorable interest from several international customers.

84. Shortly after seeing the market's favorable reception to the redesigned ARES model, Josh demanded a 10% ownership interest in MIT. F2E rejected Josh's demand and advised Josh that any units of ownership in MIT would need to come exclusively from Tim's units in the company, in accordance with F2E's agreement with Tim at the company's founding.

85. Even though F2E would not agree to Josh's demand for a 10% ownership interest in MIT, F2E offered Josh full-time employment with MIT. Josh rejected F2E's offer of full-time employment.

86. Tim never transferred any portion of his ownership interests in MIT to Josh.

87. Instead, in March 2022, immediately after Alubbad discovered that a patent had been issued to Josh on ARES, Tim proposed an agreement to F2E under which Josh would assign the ARES patent to MIT in exchange for 5% of the membership units in MIT, without specifying that the membership units to be given to Josh would be taken from Tim's (and not F2E's) membership units.

88. Upon information and belief, Tim and Josh had wrongfully amassed control over MIT's confidential business information and intellectual property rights for the specific purpose of extracting that and other concessions from F2E.

89. F2E did not agree to the agreement proposed by Tim in March 2022.

90. In or about April 2022, after F2E rejected the agreement proposed by Tim in March 2022, Tim requested that MIT's attorney prepare a set of agreements regarding several matters at issue among MIT, F2E, Tim, Josh, and Fournier. That set of agreements included the July 2022 Agreement.

91. In connection with the drafting of those new agreements, Tim informed F2E for the first time that Josh had personally made a payment of $30,000 to 21st Century with Tim's knowledge and

approval but without F2E's knowledge or approval. Neither Tim nor Josh had informed F2E about that payment, nor have they ever provided MIT with an invoice or any other support for the payment.

92. F2E contributed funds to MIT for the specific purpose of paying MIT's contractors, including 21st Century. Tim was responsible for paying MIT's contractors, including 21st Century, with the funds contributed to MIT by F2E.

93. Around the same time Tim informed F2E that he had allowed Josh to pay 21st Century with Josh's own funds, F2E discovered that Tim had used the funds F2E had earmarked for 21st Century for purported business expenses. Tim has not provided MIT with any documentation to substantiate those purported business expenses.

94. Tim's diversion of the funds F2E had earmarked for 21st Century was done without F2E's knowledge or approval.

95. MIT has undertaken extensive efforts, both directly and through legal counsel, to recover MIT's trade secrets and other confidential business information from Tim and Josh. Among the information MIT has sought to recover are electronic files containing 3D models of ARES; shop drawings, photographs, and videos of ARES components; source files for the wireless controller developed for MIT by 21st Century; and other intellectual property.

96. It was not until December 2022 that Tim agreed to return to MIT, and did in fact return to MIT, at least some of MIT's intellectual property, including trade secrets and other confidential business information. MIT has been unable to confirm whether Tim has returned all such materials in his possession, custody, or control.

97. As of the filing of this Complaint, Josh continues to refuse MIT's demands to (a) disclose the whereabouts of all of MIT's intellectual property, including trade secrets and other confidential business information; (b) return all of MIT's intellectual property, including trade secrets and other

confidential business information, in his possession, custody, or control; and (c) identify any unauthorized third parties to whom any of MIT's intellectual property, including trade secrets and other confidential business information, has been disclosed.

False Representations Regarding Patent Assignment Agreement

98. The set of agreements MIT's attorney prepared in April 2022 included an agreement regarding the assignment of the ARES patent by Josh to MIT.

99. The members of MIT approved a patent assignment agreement to be given to Josh under which Josh would assign the ARES patent to MIT for a nominal payment (the "Patent Assignment Agreement"). A true and accurate copy of the Patent Assignment Agreement approved by the members of MIT is attached as **Exhibit I**.

100. The members of MIT agreed that Tim was to present the Patent Assignment Agreement to Josh on behalf of MIT.

101. Tim represented to F2E that Josh had signed the Patent Assignment Agreement as approved by the members of MIT.

102. Tim's representation that Josh had signed the Patent Assignment Agreement as approved by the members of MIT was false. When F2E reviewed the patent assignment agreement Josh had signed, F2E discovered that it differed materially from the Patent Assignment Agreement that was approved by F2E and Tim.

103. Unbeknownst to, and without the approval of, F2E, Tim had substantially and materially altered the patent assignment agreement that Josh ultimately signed. Unbeknownst to, and without the approval of, F2E, Tim had inserted a provision under which MIT would pay Josh $30,000 as reimbursement for the funds Josh purportedly had personally paid to 21st Century, as well as up to $10,000 for patent expenses incurred by Josh, among other unauthorized changes. A true and

accurate copy of the unauthorized patent assignment agreement signed by Josh is attached as **Exhibit J**.

COUNT I
Breach of Fiduciary Duties
(Against Tim)

104. Paragraphs 1 through 103 above are incorporated herein by reference.

105. The MIT Operating Agreement is a binding and enforceable contract.

106. F2E has fully performed its obligations under the MIT Operating Agreement.

107. Section 7(D) of the MIT Operating Agreement specifies the fiduciary duties applicable to MIT's officers under Delaware law. It provides that each of MIT's members and officers "shall exercise all powers and duties entrusted to him, her, or it, in the matters such person, individually or on behalf of an entity, believes in good faith to be in the best interest of the LLC, using a standard of care as a person in a like position would use under similar circumstances, including reasonable inquiry and ordinary prudence."

108. Tim breached his duty of loyalty to MIT by failing to perform his duties as President of MIT in a manner he believed in good faith to be in the best interest of MIT, as alleged herein.

109. Tim breached his duty of care to MIT by failing to perform his duties as President of MIT using the standard of care a person in a like position would use under similar circumstances, including reasonable inquiry and ordinary prudence, as alleged herein.

110. Tim breached his fiduciary duties to MIT by, among other wrongful conduct, (a) willfully disregarding his duty to protect MIT's intellectual property, including its trade secrets and other confidential business information; (b) allowing his son, Josh, to improperly possess MIT's intellectual property, including its trade secrets and other confidential business information; (c) empowering his son, Josh, to assert ownership of MIT's intellectual property, including its trade

secrets and other confidential business information, including by obtaining a patent for ARES in his own name and without assignment to MIT; (d) refusing to identify or confirm the whereabouts of MIT's intellectual property, including its trade secrets and other confidential business information; (e) willfully registering a website for MIT in his own name rather than in MIT's name and refusing to assign his rights to the website to MIT; (f) incurring unauthorized liabilities on behalf of MIT; (g) engaging in unauthorized activities within the scope of MIT's business; and (h) otherwise acting to the detriment of MIT to try to gain financial advantage for himself and his son, Josh.

111. MIT has suffered and continues to suffer damages as a result of Tim's breach of his fiduciary duties, as alleged herein.

COUNT II
Misappropriation of Trade Secrets
(Against Tim and Josh)

112. Paragraphs 1 through 111 above are incorporated herein by reference.

113. As a member and officer of MIT, Tim was given access to and use of MIT's trade secrets, as that term is defined under the Virginia Uniform Trade Secrets Act ("VTUSA"), VA. CODE ANN. §§ 59.1-336, *et seq.*

114. The trade secrets to which Tim had access to and use of included but were not limited to concepts, uses, designs, adaptations, costs, and sales information for the ARES system, none of which are generally known to the public.

115. At all relevant times, MIT undertook reasonable efforts to maintain the confidentiality of such information. MIT's efforts included but were not limited to confidentiality obligations in the MIT Operating Agreement and strict requirements that employees and independent

contractors sign non-disclosure and non-circumvention agreements before accessing or using such information.

116. Both Tim and Josh knew of MIT's efforts to maintain the confidentiality of its trade secrets and other confidential business information.

117. Upon information and belief, Tim did not require his son, Josh, to sign a non-disclosure and non-circumvention agreement before accessing and using MIT's trade secrets and other confidential business information.

118. In the alternative, Tim knowingly and willfully refused to require Josh to sign a replacement non-disclosure and non-circumvention agreement after Tim became aware that MIT no longer possessed Josh's initial non-disclosure and non-circumvention agreement with MIT.

119. Even though Josh was not subject to any non-disclosure and non-circumvention agreement with MIT, or, in the alternative, was not subject to any non-disclosure and non-circumvention agreement in MIT's possession, Tim knowingly and intentionally provided Josh with access to and the use of MIT's trade secrets and other confidential business information, as alleged herein.

120. Josh intentionally has maintained access to and control over MIT's trade secrets and other confidential business information with knowledge that he is not authorized to do so, as alleged herein.

121. Josh knowingly and intentionally disclosed MIT's trade secrets and other confidential business information to a least one third party with knowledge that he was not authorized to do so.

122. Tim and Josh knowingly and intentionally have exploited their possession and control over MIT's trade secrets and other confidential business information to try to extract financial and other concessions from MIT, as alleged herein.

123. Tim's and Josh's conduct has been willful and malicious, as alleged herein.

124. MIT has suffered and continues to suffer damages as a result of Tim's and Josh's misappropriation.

COUNT III
Business Conspiracy
(Against Tim and Josh)

125. Paragraphs 1 through 124 above are incorporated herein by reference.

126. Tim and Josh combined, associated, agreed, mutually undertook, and/or concerted together to injure MIT's reputation, trade, business, or profession by misappropriating MIT's intellectual property, trade secrets, and other confidential business information, as alleged herein.

127. Tim's and Josh's conduct was and continues to be willful and malicious, as alleged herein.

128. MIT has suffered and continues to suffer damages as a result of Tim's and Josh's conduct, as alleged herein.

129. Tim and Josh are liable to MIT under Virginia's business conspiracy statute, VA. CODE ANN. §§ 18.2-499, *et seq.*, as alleged herein.

COUNT IV
Unjust Enrichment
(Against Josh)

130. Paragraphs 1 through 129 above are incorporated herein by reference.

131. Josh has no legal right to possess, use, or retain MIT's intellectual property, including its trade secrets and other confidential business information, as alleged herein.

132. Despite having no legal right to possess, use, or retain MIT's intellectual property, Josh filed a patent application in which he falsely represented that he was the sole inventor of the ARES design, as alleged herein.

133. Despite Josh having no legal right to possess, use, or retain MIT's intellectual property, the U.S. Patent and Trademark Office awarded Josh a patent on the ARES system. Josh continues to assert sole ownership of that patent.

134. Josh continues to possess and use MIT's intellectual property, including its trade secrets and other confidential business information, despite having no legal right to do so, as alleged herein.

135. Josh has been unjustly enriched by the value and use of MIT's intellectual property, including its trade secrets and other confidential business information, as alleged herein.

136. It would be inequitable for Josh to retain the benefits derived from his possession and use of MIT's intellectual property, including its trade secrets and other confidential business information, without compensating MIT, as alleged herein.

COUNT V
Common-Law Fraud
(Against Tim)

137. Paragraphs 1 through 136 above are incorporated herein by reference.

138. Tim represented to F2E on numerous occasions that Josh had executed a non-disclosure and non-circumvention agreement that protected MIT's intellectual property, including its trade secrets and other confidential business information, as alleged herein.

139. Upon information and belief, Tim's representations that Josh had executed a non-disclosure and non-circumvention agreement that protected MIT's intellectual property, including its trade secrets and other confidential business information, were false.

140. Upon information and belief, Tim made the aforementioned representations with actual knowledge of their falsity or with reckless indifference to their truth, as alleged herein.

141. Tim made the aforementioned representations to induce MIT to authorize Tim to engage Josh to assist him in performing work on the ARES system, as alleged herein.

142. Tim made the aforementioned representations to induce MIT to allow Josh to access and use MIT's intellectual property, including its trade secrets and other confidential business information relating to ARES, as alleged herein.

143. MIT specifically relied on Tim's false representations in authorizing Tim to have Josh assist him in performing work on the ARES system, as alleged herein.

144. MIT specifically relied on Tim's false representations in allowing Josh to access and use MIT's intellectual property, including its trade secrets and other confidential business information relating to ARES, as alleged herein.

145. MIT has suffered and continues to suffer damages as a direct and proximate result of Tim's false representations, as alleged herein.

COUNT VI
Breach of Contract
(Alleged in the Alternative Against Josh)

146. Paragraphs 1 through 145 above are incorporated herein by reference.

147. Josh entered into a non-disclosure and non-circumvention agreement with MIT in 2013 that protected MIT's intellectual property, including its trade secrets and other confidential business information (the "2013 NDA"), as alleged herein.

148. The 2013 NDA is a binding and enforceable contract.

149. MIT has fully performed its obligations under the 2013 NDA.

150. Under 2013 NDA, Josh agreed that all information provided by or developed for MIT, including information about the ARES system, was the exclusive property of MIT. Josh further agreed to assign to MIT any rights he otherwise could claim in such information.

151. The 2013 NDA obligated Josh to maintain the confidentiality of trade secrets and other confidential business information provided by or developed for MIT and to provide and/or return such information to MIT upon request.

152. Josh breached the 2013 NDA by, among other wrongful conduct, (a) asserting a personal interest in MIT's intellectual property; (b) publishing aspects of the ARES design without authorization; (c) otherwise disclosing MIT's intellectual property, including its trade secrets and other confidential business information, to at least one third party; and (d) refusing to return and/or destroy MIT's intellectual property, including its trade secrets and other confidential business information.

153. MIT has suffered and continues to suffer damages as a result of Josh's breaches, as alleged herein.

COUNT VII
Breach of Contract
(Against Tim)

154. Paragraphs 1 through 153 above are incorporated herein by reference.

155. The July 2022 Agreement is a binding and enforceable contract, as alleged herein.

156. MIT has fully performed its obligations under the July 2022 Agreement, as alleged herein.

157. Tim represented and warranted in § 6(ii) of the July 2022 Agreement that he had returned to MIT all confidential business information of MIT, including but not limited to all information regarding the design and manufacture of the ARES system.

158. Tim represented and warranted under § 6(iii) of the July 2022 Agreement that he would destroy or erase all remaining copies of MIT's confidential business information in his possession.

159. Tim represented and warranted in § 6(v) of the July 2022 Agreement that there were no facts in his knowledge, or that reasonably should be in his knowledge, that would render misleading any of his other representations in the July 2022 Agreement.

160. Tim's representations in the July 2022 Agreement were false. At the time Tim executed the July 2022 Agreement, he had not returned MIT's confidential business information and destroyed and/or deleted any remaining copies in his possession, as alleged herein.

161. MIT suffered damages as a result of Tim's breaches, as alleged herein.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Mission Integrated Technologies, LLC, by and through F2E Holdings, LLC, respectfully requests that this Court enter judgment in its favor and award the following relief:

A. Three times its actual damages, in an amount to be proven at trial, for which Tim and Josh shall be jointly and severally liable;

B. Incidental and consequential damages, in an amount to be proven at trial, for which Tim and Josh shall be jointly and severally liable;

C. Punitive damages in an amount not to exceed twice any award made at trial under VA. CODE ANN. § 59.1-338(A), for which Tim and Josh shall be jointly and severally liable;

D. Additional punitive damages against Tim in an amount to be determined at trial;

E. An injunction against Tim (a) prohibiting Tim from any future access to or use of, directly or indirectly, MIT's intellectual property, trade secrets and other confidential business information; and (b) prohibiting Tim from engaging in any other conduct that violates his contractual and fiduciary duties to MIT;

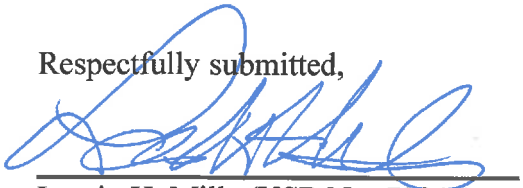
F. An injunction against Josh (a) requiring Josh to transfer to MIT all rights to, ownership in, and access to all of MIT's intellectual property, trade secrets, and other confidential business information, including but not limited to the ARES patent; (b) requiring Josh to return to MIT all of MIT's intellectual property, trade secrets, and other confidential business information in his possession, custody, or control; (c) requiring Josh to destroy and/or delete any remaining copies of MIT's intellectual property, trade secrets, and other confidential business information in his possession, custody, or control; (d) requiring Josh to disclose to MIT the whereabouts of any other MIT intellectual property, trade secrets, and other confidential business information; (e) requiring Josh to disclose to MIT any instances in which MIT's intellectual property, trade secrets, and other confidential business information were disclosed to any third party without authorization; and (f) prohibiting Josh from any future access to or use of, directly or indirectly, of MIT's intellectual property, trade secrets, and other confidential business information;

G. Reasonable costs and attorneys' fees, for which Tim and Josh shall be jointly and severally liable; and

H. Such other relief the Court deems just and proper.

Dated: October 16, 2023

Respectfully submitted,



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Counsel For Mission Integrated Technologies, LLC

EXHIBIT A

OPERATING AGREEMENT
MISSION INTEGRATED TECHNOLOGIES, LLC

THIS OPERATING AGREEMENT (the "Agreement") of Mission Integrated Technologies, LLC[1] (the "LLC"), a Delaware limited liability company, is hereby approved by and between all Members, executed this 7th day of October, 2013 and made effective as of the 5th day of August, 2013 (the "Effective Date") by and through the undersigned.

RECITALS

The Members desire to create a comprehensive document reflecting their intentions regarding the operation of the LLC, concerning the participation of current and future Members and Financial Interest Holders in the LLC, as well as all other matters relating to the LLC, through this Agreement.

The Members hereby agree and set forth, subject to the conditions created in the Certificate of Formation, the following terms of this Agreement:

1. DEFINITIONS

A. **Generally**. Pursuant to Regulation § 301.7701-3, the LLC shall be treated as a partnership for federal income tax purposes, and the tax treatment of the LLC shall be governed by subchapter K of the Code. Certain definitions contained in this Agreement refer to sections of the Code or Regulations involving partnerships. However, the intention is to utilize the concepts and requirements of the Code and Regulations involving partnerships, and the definitions contained herein should be read consistently with each provision of the Code and Regulations.

B. **Certain Definitions**. As used in this Agreement, the following terms shall have the meanings specified as follows:

(1) "Act" means the Delaware Limited Liability Company Act, as amended.

(2) "Adjusted Capital Account Deficit" shall mean, with respect to any Member or Financial Interest Holder, the deficit balance, if any, of such Member's or Financial Interest Holder's Capital Account as of the end of the relevant fiscal Year, after giving effect to the following adjustments:

a. Credit to such Capital Account of any amounts which such Member or Financial Interest Holder is obligated to restore pursuant to this Agreement

[1] The LLC has changed its name from "Assault Rescue Elevated System, LLC" to "Mission Integrated Technologies, LLC." For avoidance of doubt, the Department of State "file number" assigned to the LLC is 5378070.

or is deemed to be obligated to restore to the LLC pursuant to the penultimate sentences of Regulations §§ 1.704-2(g)(1) and 1.704-2(i)(5), and

b. Debit to such Capital Account of the items described in Regulations §§ 1.704-1(b)(2)(ii)(d)(4), (5) and (6).

c. Except as otherwise provided herein, the foregoing definition of Adjusted Capital Account Deficit is intended to comply with the provisions of Regulations § 1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

(3) "Agreement" means the Operating Agreement of the LLC, and includes any amendments thereto.

(4) "Approval of the Members," "Approved by the Members" or "Consent of the Members" (whether capitalized or lower case) shall have the meaning provided for in Section 6.J. below.

(5) "Business" shall have the meaning provided for in Section 2.E. below.

(6) "Capital Account" means the total amount of a Member's or Financial Interest Holder's Capital Contribution, as adjusted by additional contributions, allocations and distributions, etc.

(7) "Capital Call" means that the LLC has required the Members to make additional Capital Contributions.

(8) "Capital Contribution" means any contribution of value, including but not limited to, cash, property, or assets, by a Member or Financial Interest Holder to the capital of the LLC.

(9) "Certificate of Formation" means the written instrument under that name which was filed on the 5th day of August, 2013 with the Secretary of State of Delaware for the purpose of forming Mission Integrated Technologies, LLC as a limited liability company, and includes any amendments thereto.

(10) "Code" means the Internal Revenue Code of 1986, as amended.

(11) "Financial Interest" means a Financial Interest Holder's *pro rata* share of ownership of the LLC Profits, Losses, allocations and distributions of the LLC Assets pursuant to this Agreement and the Act, but shall not include any right to participate in the management or affairs of the LLC, such as the right to vote on, consent to, or otherwise participate in any decision of the Members.

(12) "Financial Interest Holder" means the owner of a Financial Interest of the LLC.

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(13) "LLC Assets" shall mean the cash, property, and other assets, whether tangible or intangible and whether real, personal, or mixed, at any time owned by or held, directly or indirectly, for the benefit of the LLC, and all right, title and interest, if any, at any time owned by or held, directly or indirectly, by the LLC in other persons or entities.

(14) "LLC Minimum Gain" shall have the meaning set forth in Regulations § 1.704-2(d), adjusted appropriately to be used in computing the liabilities of each subsidiary, if any, and the relevant assets of each subsidiary.

(15) "LLC" means Mission Integrated Technologies, LLC.

(16) "Manager" or "Managers" means the person(s) elected, appointed, or otherwise designated in accordance with this Agreement to manage and operate the LLC.

(17) "Member" or "Members" means any person(s) who or entity(ies) that owns a Membership Interest in this LLC, is qualified and approved as a Member of the LLC, and who agrees to be bound by this Agreement and all existing amendments hereto.

(18) "Membership Interest" means a Member's *pro rata* ownership share of the LLC's Profits, Losses, allocations and distributions of the LLC Assets pursuant to this Agreement and the Act, and shall include the right to participate in the management or affairs of the LLC, a right to vote on and give consent to any decision of the Members, the right to obtain information concerning the LLC, and any other rights granted to a Member under the Act, the Certificate of Formation, and this Agreement.

(19) "Minimum Gain" shall mean the amount, with respect to each Member's or Financial Interest Holder's Nonrecourse Debt, equal to the LLC Minimum Gain that would result if the Nonrecourse Debt were treated as a Nonrecourse Liability, determined in accordance with Regulations § 1.704-2(i)(3).

(20) "Nonrecourse Debt" shall mean a liability as defined in Regulations § 1.704-2(b)(4), adjusted appropriately to be used in computing the liabilities of each subsidiary.

(21) "Nonrecourse Deductions" shall mean the nonrecourse deductions as defined in Regulations § 1.704-2(b)(1), with respect to the LLC and each subsidiary. The amount of Nonrecourse Deductions for a fiscal Year equals the net increase, if any, in the amount of LLC Minimum Gain during such fiscal Year, reduced by any distributions of the proceeds of a Nonrecourse Liability during such fiscal Year that are allocable to an increase in LLC Minimum Gain, determined according to the provisions of Regulations §§ 1.704-2(c) and 1.704-2(h).

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(22) "Nonrecourse Liability" shall mean a liability defined in Regulations § 1.704-2(b)(3), used in computing the liabilities of the LLC and each subsidiary.

(23) "Percentage Interest" shall mean, with respect to each Member or Financial Interest Holder, the percentage set forth next to each Member's or Financial Interest Holder's name in Schedule 3(A), which is attached hereto, incorporated herein, and represents the Member's or Financial Interest Holder's interest in the LLC, as adjusted from time-to-time through dilution, allocation of the Unallocated Reserve, reorganization, or in any other manner in accordance with the terms of this Agreement.

(24) "Profits" and "Losses" shall mean, respectively, an amount equal to the LLC's taxable profit and loss for each fiscal Year or period, determined in accordance with Code § 703(a) (and for this purpose, all items of profit, including but not limited to income, and loss, including but not limited to expenditures, are required to be stated separately pursuant to Code § 703(a)(1) and shall be included as taxable income or loss) with the following adjustments:

a. Any income of the LLC that is exempt from federal income tax or excluded from federal gross income and not otherwise used in computing Profits or Losses pursuant to this Section 1.B.(23), shall be added to such taxable profit or loss;

b. Any expenditures of the LLC described in Code § 705(a)(2)(B) or treated as Code § 705(a)(2)(B) expenditures pursuant to Regulations § 1.704-1(b)(2)(iv)(i), and not otherwise used in computing Profits or Losses pursuant to this Section 1.B.(23), shall be subtracted from such taxable profit or loss;

c. In the event the gross asset value of any LLC Asset is adjusted pursuant to any provision of this Agreement, the amount of such adjustment shall be taken into account as profit or loss from the disposition of such LLC Asset for purposes of computing Profits or Losses;

d. Profit or loss resulting from any disposition of any LLC Asset with respect to which profit or loss is recognized for federal income tax purposes shall be computed by reference to the gross asset value of the property disposed of, notwithstanding that the adjusted tax basis of such LLC Asset differs from its gross asset value;

e. In lieu of the depreciation, amortization and other cost recovery deductions used in computing such taxable income or loss, there shall be taken into account Depreciation for such fiscal Year or other period, computed in accordance with the definition of Depreciation; and

f. Notwithstanding any other provision of this Section 1.B.(23), any items which are allocated pursuant to Section 5.B. shall not be used in computing Profits or Losses.

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(25) "Regulations" shall mean the temporary and permanent Treasury Regulations promulgated under the Code as such Regulations may be amended from time to time (including corresponding provisions of succeeding Regulations).

(26) "Transfer" shall mean any sale, exchange, assignment, alienation, disposition, gift, pledge, hypothecation, encumbrance, or grant of security interest in the Percentage Interest.

(27) "Unallocated Reserve" shall mean the authorized Membership Units or Financial Interest Units that are not allocated or issued to specific persons or entities.

(28) "Units" means the numerical equivalent of Percentage Interest as reflected in absolute numerical value, designated as either voting "Membership Units" (owned by a Member) or non-voting "Financial Interest Units" (owned by a Financial Interest Holder).

2. FORMATION

A. **Formation of the LLC**. This LLC was formed pursuant to the laws of the State of Delaware by filing the Certificate of Formation with the Secretary of State.

B. **Name**. The name of the LLC is Mission Integrated Technologies, LLC. The Members shall operate the Business of the LLC under such name or use such other names as the Members deem necessary provided that the names do not violate the Act.

C. **Principal Office**. The LLC's principal place of business will be located at 150 Rustic Ridge Road, Fredericksburg, Virginia 22405, or any other location approved by the Members. If the principal office is located outside the state of organization, and the LLC has one or more business offices in the state of organization, the Members shall fix and designate a principal business office in the state of organization. Branch or subordinate offices may be established at any time and at any place as the Members may determine.

D. **Term**. The LLC will continue to exist until terminated or dissolved in accordance with its Certificate of Formation or this Agreement.

E. **Business Purpose**. The LLC is organized by the Members for the purposes of designing, manufacturing, marketing, and distributing a variety of state-of-the-art tactical and rescue products to law enforcement, fire-rescue, and military customers around the world (the "Business"). The LLC's premiere products will be articulating vehicle based assault and rescue systems, such as the ARES. The LLC shall engage in such other lawful business activities as are reasonably useful or necessary to the furtherance of the foregoing purposes. The LLC shall have the

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authority to do all things necessary or convenient to accomplish its purpose and operate its Business as described in this Agreement.

F. **Registered Agent**. The LLC's registered agent will be InCorp Services, Inc., or any other person or entity with an office in the state of organization as Approved by the Members.

G. **Registered Office**. The LLC's registered office will be the office of the registered agent located at 1201 Orange Street, Suite 600, Wilmington, Delaware 19899, or any other location within the state of organization as Approved by the Members.

H. **Membership Units and Financial Interest Units**. The LLC authorizes a total of one hundred (100) units, which may be issued to any approved person or entity under the terms of this Agreement. All Membership Units have voting rights, and all Financial Interest Units are non-voting. Each Membership Unit shall have one vote, but each Member votes all of his, her or its Membership Units as a whole. In other words, no Member may split or reserve a portion of his, her, or its vote. Financial Interest Units, once created, may not be used to vote except on such matters as may be required by the Act, and if so voted, shall be voted by the Financial Interest Holder owning said Units at a ratio of one vote per Unit. All said Units must be voted in the same way, so that no Financial Interest Holder splits or reserves a portion of his, her, or its vote.

3. OWNERSHIP OF MEMBERSHIP INTEREST AND FINANCIAL INTEREST

A. **Initial Members**. The initial Members of the LLC are those persons set forth in Schedule 3(A) of this Agreement.

B. **Additional Members**. Except as otherwise specifically stated in this Agreement, additional persons may be admitted to the LLC as Members, and Membership Units may be issued to those additional Members, upon the Approval of the Members. The number of Units issued and the price per Unit, if any, shall be determined by Approval of the Members. All new Members must sign a Joinder to this Agreement, agreeing to be bound by the terms of this Agreement and as may be amended in the future as a condition precedent to becoming a Member.

C. **Liability to Third Parties**. No Member or Financial Interest Holder shall be liable for the debts, obligations or liabilities of the LLC to a third party unless the Member or Financial Interest Holder consents in writing to be liable.

D. **Authority**. No Member or Financial Interest Holder has the authority or power to act for or on behalf of, to bind, or to incur any liability on behalf of the LLC except as specifically provided in this Agreement.

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E. **Withdrawal**. No Member or Financial Interest Holder has the right to withdraw from the LLC as a Member or Financial Interest Holder except as provided in this Agreement. However, a Member or Financial Interest Holder has the power to withdraw but such withdrawal shall be deemed a breach of this Agreement. If a Member or Financial Interest Holder does exercise such power of withdrawal in breach of this Agreement, the Member or Financial Interest Holder shall be liable to the LLC and the other Members or Financial Interest Holders for all monetary damages as a result of the breach, including but not limited to direct, indirect, incidental and consequential damages. The LLC and the other Members and Financial Interest Holders shall not have the right to prevent the withdrawing Member or Financial Interest Holder from withdrawing through the use of an injunction or otherwise.

4. CAPITAL ACCOUNTS

A. **Initial Contributions**. The initial contributions of the Members and Financial Interest Holders are acknowledged as received.

B. **Additional Contributions**. The Members shall make additional Capital Contributions as the Members may authorize through a Capital Call Approved by the Members. If additional Capital Contributions are approved as specified in the previous sentence, then the Members may issue Units to the contributing Member(s) in *pro rata* proportion to their respective contributions. The number of Units issued and the price per Unit, if any, shall be determined by Approval of the Members. No Units may be issued to any person who was not previously a Member until said person has executed a Joinder as required in Section 3(B) above.

C. **Capital Accounts**. A Capital Account shall be established and maintained for each Member and Financial Interest Holder. Each Capital Account will be accounted for separately and will be maintained in accordance with generally accepted accounting principles. If a Member or Financial Interest Holder validly transfers his, her, or its Percentage Interest, the Capital Account of the transferring Member or Financial Interest Holder shall carry over to the transferee Member or Financial Interest Holder in accordance with the Code.

D. **Advances**. Members and Financial Interest Holders may, at any time, advance any amount of money to the LLC. An advance is a loan from the Member or Financial Interest Holder to the LLC and shall bear interest at the prevailing interest rate. An advance is not a Capital Contribution.

E. **Return of Capital**. No Member or Financial Interest Holder shall have the right to withdraw or obtain a return of his, her, or its Capital Contribution except as provided in this Agreement. The return of a Capital Contribution may not be withdrawn in the form of property other than cash except as provided in this Agreement.

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5. ALLOCATION OF PROFITS AND LOSSES AND DISTRIBUTIONS

A. **Allocation of Profits and Losses**.

(1) After giving effect to the mandatory allocations set forth in Section 5.B., Profits and Losses for any fiscal Year, subject to Sections 5.A.(2)-(3) below, shall be allocated among the Members or Financial Interest Holders in proportion to their respective Percentage Interests.

(2) All Losses that would otherwise be allocated to any Member or Financial Interest Holder pursuant to Section 5.A.(1) which exceed his, her, or its respective Capital Account balance shall be allocated to the other Members or Financial Interest Holders in proportion to their respective Percentage Interest.

(3) If Losses have been allocated under this Section 5.A., then Profits shall be thereafter allocated in the following priority:

a. First, to the Members and Financial Interest Holders until the aggregate allocation of Profits to each Member or Financial Interest Holder pursuant to this Section 5.A.(3) for all fiscal Years or portions thereof are equal to the aggregate allocations of Losses to each Member pursuant to Section 5.A.(1) for all fiscal Years or portions thereof, in reverse order, and, in proportion to the prior allocations of Losses to the Members and Financial Interest Holders pursuant to Section 5.A.(2).

b. Second, to all Members and Financial Interest Holders, in proportion to their respective Percentage Interests, the remainder of such Profits.

B. **Mandatory Allocations**. The following special allocations shall be made in the following order:

(1) **Net Decrease**. Notwithstanding any other provision of this Section 5, if there is a net decrease in LLC Minimum Gain during any fiscal Year or other applicable period, then, subject to the exceptions set forth in Regulations §§ 1.704-2(f)(2)-(5), each Member and Financial Interest Holder shall be specially allocated items of LLC Profits for such fiscal Year (and, if necessary, subsequent fiscal Years) in an amount equal to such Member's or Financial Interest Holder's share of the net decrease in LLC Minimum Gain, as determined in accordance with Regulation §1.704-2(g). Allocations pursuant to the previous sentence shall be determined in accordance with Regulation §1.704-2(f). This Section 5.B.(1) is intended to comply with the minimum gain chargeback requirement in such section of the Regulations and shall be interpreted consistently therewith.

(2) **Minimum Gain Chargeback**. Notwithstanding any other provision of this Section 5 except Section 5.C., if there is a net decrease in LLC Minimum Gain attributable to a Nonrecourse Debt during any fiscal Year or other applicable period, then, subject to the exceptions set forth in Regulation §704-2(i)(4), each Member and

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Financial Interest Holder who has a share of the LLC Minimum Gain attributable to such Nonrecourse Debt, determined in accordance with Regulation §1.704-2(i)(5) shall be specially allocated items of LLC income and gain for such fiscal Year (and, if necessary, subsequent fiscal Years) in an amount equal to such Member's or Financial Interest Holder's share of the net decrease in LLC Minimum Gain attributable to such Nonrecourse Debt, determined in accordance with Regulation §1.704-2(i)(4). Allocations pursuant to the previous sentence shall be made in proportion to the respective amounts required to be allocated to each Member or Financial Interest Holder pursuant thereto. The items to be so allocated shall be determined in accordance with Regulation §1.704-2(i)(4). This Section 5.B.(2) is intended to comply with the minimum gain chargeback requirement in such section of the Regulations and shall be interpreted consistently therewith.

C. **Qualified Income Offset**. Notwithstanding any provision of this Section 5, except Section 5.B.(1), in the event any Member or Financial Interest Holder receives any adjustments, allocations or distributions described in Regulations §§1.704-1(b)(2)(ii)(d)(4), (5) or (6), that cause or increase an Adjusted Capital Account deficit of such Member or Financial Interest Holder, items of LLC income and gain shall be specially allocated to such Member or Financial Interest Holder in an amount and manner sufficient to eliminate, to the extent required by the Regulations, the Adjusted Capital Account deficit of such Member or Financial Interest Holder as quickly as possible. This section is intended to comply with the qualified income offset provision of Regulation §1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

D. **No Excess Deficit**. To the extent that any Member or Financial Interest Holder has or would have, as a result of an allocation of Loss (or item thereof), an Adjusted Capital Account Deficit, such amount of Loss (or item thereof) shall be allocated to the Members and Financial Interest Holders in accordance with their relative Percentage Interests to the extent that such allocations do not produce an Adjusted Capital Account Deficit as to such Members and Financial Interest Holders.

E. **Nonrecourse Deductions Pro Rata Allocation**. Nonrecourse Deductions for any fiscal Year or other applicable period shall be allocated to the Members and Financial Interest Holders *pro rata* in accordance with their Percentage Interests as of the end of such fiscal Year or other applicable period.

F. **Nonrecourse Deductions Special Allocation**. Any Nonrecourse Deductions for any fiscal Year or other applicable period shall be specially allocated to the Member or Financial Interest Holder who bears the economic risk of loss with respect to the Nonrecourse Debt to which such Nonrecourse Deductions are attributable in accordance with Regulations § 1.704-2(i)(1).

G. **Code § 754 Adjustments**. To the extent an adjustment to the adjusted tax basis of any LLC Asset pursuant to Code § 734(b) or Code § 743(b) is required, pursuant to Regulations §§ 1.704-1(b)(2)(iv)(m), to be taken into account in determining Capital Accounts, the amount of such adjustment to the Capital Accounts shall be

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treated as an item of gain (if the adjustment increases the basis of the asset) or loss (if the adjustment decreases such basis) and such gain or loss shall be specially allocated to the Members in a manner consistent with the manner in which their Capital Accounts are required to be adjusted pursuant to such section of the Regulations.

H. **Curative Allocations**. Any mandatory allocations of items pursuant to Sections 5.B.(1) and (2) shall be taken into account for the purpose of equitably adjusting subsequent allocations of income, gain, loss or deduction so that the net allocations, in the aggregate, allocated to each Member and Financial Interest Holder pursuant to this Section 5, and the Capital Accounts of each, shall as quickly as possible and to the extent possible, be the same as if no mandatory allocations had been made.

I. **Other Allocation Rules**.

(1) For purposes of determining the Profits, Losses, or any other items allocable to any period, such Profits, Losses, and other items shall be determined on a daily, monthly or other basis, as Approved by the Members using any permissible method under Code § 706 and the Regulations thereunder.

(2) The Members and Financial Interest Holders are aware of the income tax consequences of the allocations made by this Section 5 and hereby agree to be bound by the provisions thereof in reporting their shares of LLC income and loss for income tax purposes.

J. **Tax Allocations**.

(1) Except as otherwise provided for in this Section 5.J., for federal income tax purposes, each item of Profit or Loss shall be allocated among the Members and Financial Interest Holders in the same manner as its correlative item of "book" Profit or Loss is allocated pursuant to Sections 5.A. – 5.I. above.

(2) In accordance with Code § 704(c) and the Regulations thereunder, Profits and Losses, with respect to any Capital Contribution, shall, solely for federal income tax purposes, be allocated among the Members and Financial Interest Holders so as to take account of any variation between the adjusted basis of such property to the LLC for federal income tax purposes and its initial gross asset value.

(3) In the event the gross asset value of any LLC Asset is adjusted as described in subparagraph (2) of the definition of gross asset value, subsequent allocations of income, gain, loss and deduction with respect to such Company Asset shall take into account any variation between the adjusted basis of such Company Asset for Federal income tax purposes and its gross asset value in the same manner as under Code § 704(c) and the Regulations thereunder.

TMC Initials Initials

(4) Any elections or other decisions relating to such allocations shall be made by the Tax Matters Member in a manner that reasonably reflects the purpose and intention of this Agreement. Allocations pursuant to this Section 5.J. are solely for purposes of federal, state and local taxes and shall not affect, or in any way be taken into account in computing, any Member's or Financial Interest Holder's Capital Account or share of Profits, Losses, other items or distributions pursuant to any provision of this Agreement.

K. **Determination of Available Net Cash Flow for Distribution**.

(1) In reasonably determining the amount of net cash flow to distribute, the Members may consider such factors as the need to allocate funds to any reserves for LLC contingencies, the desirability of prepaying the debt borrowed under any financing agreement entered into by the LLC or any other LLC purposes that the Members reasonably deem appropriate or necessary.

(2) For purposes of this Section 5.M.(2), net cash flow shall be deemed to include applicable tax credits or tax deducted or withheld to the extent that, in the reasonable opinion of the Members, such credits or deduction or withholding would give rise to a credit to a Member or Financial Interest Holder if such Member or Financial Interest Holder were an individual U.S. resident or citizen. To the extent that the amount of any tax credits or tax deducted or withheld depends on the identity, composition or characteristics of a Member or Financial Interest Holder, the relevant amount of such tax shall be allocated to such Member or Financial Interest Holder and shall be treated as a distribution of net cash flow to such Member or Financial Interest Holder.

L. **Distributions of Net Cash Flow**. The Members shall, to the extent available, distribute Net Cash Flow to the Members and Financial Interest Holders, in such amounts as may be Approved by the Members. Distributions shall be made among the Members and Financial Interest Holders in proportion to their respective Percentage Interests.

6. RIGHTS AND DUTIES OF MEMBERS

A. **Place of Meeting**. The Members' meetings shall be held at any place designated by the Members and such place shall be stated in the notice of the meeting; however, if no such place is specified, the meeting shall be held at the LLC's principal office.

B. **Annual Meeting**. An annual meeting of the Members shall be held on the 1st day of January of each year at the LLC's principal office; however, if such day falls on a legal holiday or a weekend, then the annual meeting shall be held at the same time and place on the next full business day. At the annual meeting, any proper business may be transacted.

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C. **Special Meetings**. A special meeting of the Members may be called at any time by any Member holding Percentage Interests. A Member's request for a special meeting shall be in writing, specifying the time and place of the meeting and the general nature of the business proposed to be transacted. The notice shall be delivered in accordance with Sections 6.D. – E. below.

D. **Notice of Members' Meetings**. Notice of Members' meetings shall be given not less than ten (10) or more than sixty (60) days before the date of the meeting, not counting the date of the meeting. Notice shall specify the meeting date, time, place, and (1) for a special meeting, the general nature of the business to be transacted, or (2) for an annual meeting, the proposals to be presented for action. If a proposal contains (1) a contract or transaction in which a Member has a direct or indirect financial interest, (2) an amendment of the Certificate of Formation, (3) a reorganization of the LLC, or (4) a voluntary dissolution of the LLC, the notice shall state the general nature of such proposal.

E. **Manner of Giving Notice**. Notice of Members' meetings shall be written and personally delivered to the Member(s) or sent by the United States Postal Service (the "USPS"), professional courier service, facsimile, electronic mail, or such other means. If costs of sending are incurred, notice shall be given with charges prepaid. Notice shall be sent to each Member at the most current address appearing on the books and records of the LLC, unless the Member has made a written request to the other Member(s) that the person(s) directed to give notice should send the notice to such Member(s) at a different address and/or via facsimile or electronic mail. Notice shall be deemed "given" and "delivered" on the day that the person giving notice has personally delivered such notice to the Member or delivered custody of the notice to the USPS or other professional courier service, or has completed the act of sending by facsimile or electronic mail.

If notice is sent to a Member at the address appearing on the books and records of the LLC, and such notice is returned to the LLC and marked by the USPS or professional courier service to indicate that the USPS or professional courier service is unable to deliver the notice to the Member at such address, then any future notice shall be deemed "given" or "delivered" without sending notice to such address, but only if notice shall be available to the Member upon written demand of such Member at the principal office of the LLC for a period of one (1) year from the date of such notice being given.

F. **Affidavits of Notice**. An affidavit of the person(s) giving notice of a meeting shall be filed and maintained in the books and records of the LLC identifying such notice, the day such notice was given, and the manner in which such notice was given to each Member. The person(s) giving notice of a meeting shall attest to the information contained in the affidavit by signing it.

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G. **Waiver of Notice**. The Members' meetings and the transactions thereof shall nonetheless be valid if regular call and notice are not observed, but only if a quorum of Members is present in person or by proxy, and if each Member who is not present in person or by proxy signs a waiver of notice, a consent to the holding of the meeting, or an approval of the meeting's minutes, either before or after the meeting. All such waivers, consents, or approvals shall identify either the business transacted or (i) for a special meeting, the general nature of the business to be transacted, or (ii) for an annual meeting, the proposals to be presented for action. All such waivers, consents, and approvals shall be filed in the books and records of the LLC. Attendance of a Member at a meeting shall constitute a waiver of notice of such meeting, unless such person objects at the beginning of the meeting.

H. **Conduct of Meetings**. All Members' meetings shall be presided over by the President of the LLC. The President of the LLC shall determine the order of business and the procedures to be followed at the meeting.

I. **Quorum**. The presence, in person or by proxy, of the holder(s) of an aggregate of fifty-one (51) percent or more of the Membership Interests shall constitute a quorum at all meetings of the Members for the transaction of business.

J. **Voting**. Each Member shall have a number of votes equal to the Membership Interest held by such Member. However, if a Member is not entitled to vote on a specific matter, then such Member's number of votes and Membership Interest shall not be considered for purposes of determining whether a quorum is present, or whether approval by vote of the Members has been obtained, with respect to such specific matter. An aggregate of at least fifty-one (51) percent of Membership Units shall be required to approve any action, unless a greater or lesser vote is specifically and unambiguously required pursuant to this Agreement or the Act. For avoidance of doubt notwithstanding anything to the contrary in this Agreement, any reference in this Agreement to a required "vote of the Members", "approval of the Members", "determination by the Members", "consent of the Members" or similar words relating to decisions to be made by the Members shall mean "Approval of the Members."

K. **Adjourned Meeting and Notice Thereof**. Any Members' meeting may be adjourned by an affirmative vote of fifty-one (51) percent of the Membership Units represented at such meeting, either in person or by proxy. Once a meeting has been adjourned, no other business may be transacted at such meeting. If any meeting is adjourned to another time and place, and the time and place of the adjourned meeting is announced at the original meeting, then no new notice must be given to the Members unless the adjournment is for more than seven (7) days from the date of the original meeting. Notice of any such adjourned meeting, if required, shall be given to each Member entitled to vote at the adjourned meeting in accordance with Sections 7.E. – G. At the adjourned meeting, the LLC may transact any business that was to be transacted at the original meeting.

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L. **Member Action by Written Consent**. Any action that may be taken at a Members' meeting may also be taken without a meeting and without notice, if consent in writing, setting forth the action to be taken, is signed by the Member(s) holding Membership Units representing the aggregate number of votes equal to or greater than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all Membership Interests entitled to vote thereon were present and voted. All such consents shall be filed in the books and records of the LLC.

M. **Proxies**. Every Member entitled to vote shall have the right to do so either in person or by one or more agents authorized by a written proxy signed by the Member and filed with the LLC. A proxy shall be revocable unless the proxy specifically states that it is irrevocable.

N. **Voting Trusts**. If any Member files a voting trust agreement with the LLC, the LLC shall take notice of its terms and trustee limitations.

7. MANAGEMENT OF THE LLC

A. **Management by the Members**. The LLC shall be managed by its Members, who shall be responsible for the day-to-day operation of the LLC. All decisions taken by the Members, unless otherwise specifically stated herein shall require an affirmative vote or written consent of the Members. No person may act unilaterally on behalf of the LLC absent the approval of a majority of the Members.

B. **The Members may designate a Manager, President, Vice President, Secretary, and/or Treasurer of the LLC**. Such officers shall have the general powers and duties of management typically vested in the office of president, vice-president, secretary or treasurer of a limited liability company, as applicable, and such other powers and duties as may be prescribed by the Members. The Manager shall have authority to operate the Company on a day-to-day basis in the ordinary course of business and, otherwise, to take such actions as may be Approved by the Members.

C. **Liability to Third Parties**. No Member, Financial Interest Holder, or officer shall be liable for the debts, obligations, or liabilities of the LLC to a third party unless he, she, or it agrees in writing to be liable.

D. **Standard of Care; Liability**. Each Member, Manager, or officer shall exercise all powers and duties entrusted to him, her, or it, in the matters such person, individually or on behalf of an entity, believes in good faith to be in the best interests of the LLC, using a standard of care as a person in a like position would use under similar circumstances, including reasonable inquiry and ordinary prudence. Said Member, Manager, or officer shall be entitled to rely on information, opinions, reports, or statements, including financial statements and other financial data, in which case prepared or presented by:

(1) One or more officers, employees, or agents of the LLC whom the recipient believes to be reliable and competent in the matters presented;

(2) Counsel, independent accountants, or other persons as to matters which the recipient believes to be within such person's professional or expert competence; or

(3) A committee upon which the Member, Manager, or officer does not serve, which committee such person, individually or on behalf of an entity, believes in good faith to merit confidence involving matters within its designated authority so long as the Member, Manager, or officer, after reasonable inquiry, believes the need to be indicated by the circumstances.

8. TRANSFER AND ASSIGNMENT OF MEMBERSHIP INTERESTS

A. **Transfers**. Except as otherwise provided in this Agreement, no Member may directly or indirectly transfer, in whole or in part, his, her, or its Membership Interest ("Transfer") without the Approval of the Member(s). As such, the Member(s) agree that they will not take or permit any action that results in a merger, consolidation, liquidation, reorganization or any other transaction that individually or together with other transactions has the effect of circumventing the restrictions upon Transfers. Any Transfers made in violation of this Section 8 are void at inception.

B. **Drag Along Rights**. Notwithstanding anything to the contrary in this Agreement, if Member(s) holding at least a majority of the allocated Membership Units desire to sell or otherwise Transfer all or substantially all of their Membership Units ("Selling Majority Member(s)") to a *bona fide* third party having no direct or indirect relationship with any of Member voting in favor ("Third Party Purchaser"), then, upon the written Approval of the Member(s), the Selling Majority Member(s) may, after providing Notice to all Members, of their intentions to sell ("Drag Along Notice"), and after not less than thirty (30) days of said Drag Along Notice, elect to sell all of their Membership Interests to the Third Party Purchaser and require all other Members to sell all of their respective Units (including all voting rights, if any) to the Third Party Purchaser, such that all of the Units of the LLC shall be transferred to the Third Party Purchaser ("Drag Along Rights"). Any such sale or other Transfer of the other Members' respective Units must be made on the same terms and conditions, upon which the Selling Majority Member(s) are to Transfer their Membership Interests to the Third Party Purchaser and with no control share or interest preferences. Without limiting the generality of the foregoing, in connection with any sale under this subsection, each of the Members shall agree to make with respect to itself only and not jointly with any other party, substantially the same representations, warranties, covenants and indemnities and other similar agreements as the Selling Majority Member(s) agree to make in connection with the proposed sale.

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C. **Tag Along Rights**. Notwithstanding anything to the contrary in this Agreement provided that if Member(s) holding at least a majority of the allocated Membership Units desire to sell or otherwise transfer all or substantially all of their Membership Units ("Selling Member(s)"), then the other Member(s) may elect to participate in the contemplated sale to the Third Party Purchaser by the Selling Member(s) by delivering written notice to the Selling Majority Member(s) within ten (10) days after receipt of Notice of the contemplated transaction ("Tag Along Rights"). If the other Member(s) elect, individually or in the aggregate, to participate in the sale, the Selling Member(s) and the electing other Member(s) shall be entitled to sell in the contemplated sale, at the same price and on the same terms, their *pro rata* portion of the total Percentage Interest to be sold in the contemplated sale. In connection with any sale under this Section, each electing other Member shall agree to make with respect to itself only, and not jointly with any other party, substantially the same representations, warranties, covenants and indemnities and other similar agreements as the Selling Member(s) agree to make in connection with the proposed sale, with no preference for controlling Units. The net purchase price attributable to such sale shall be allocated amongst all of the Members *pro rata* in accordance with their respective Percentage Interests and without any adjustments for controlling interests or otherwise.

9. BOOKS AND RECORDS

A. **Maintenance of Books and Records**. The LLC shall establish and maintain appropriate books and records of the LLC in accordance with generally accepted accounting principles. There shall be maintained at the principal office of the LLC, the following documents:

(1) A current list of the name, business or residence address, Capital Contribution and Percentage Interest of each Member and Financial Interest Holder, if any;

(2) A current list of the name, business or residence address, and title of each Manager or officer, if any;

(3) The Certificate of Formation and any amendments thereto;

(4) This Agreement and any amendments thereto;

(5) Federal, state, and local income tax returns of the LLC, if any, for the past six (6) fiscal years;

(6) Financial statements of the LLC, if any, for the past six (6) fiscal years;

(7) All minutes and any written consent to action taken at meetings, all actions taken by written consent in lieu of meetings, any waivers of notice, and all Member votes; and

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(8) Any other information required to be maintained by the LLC pursuant to the Act.

B. **Inspection and Audit Rights**. Each Member and Financial Interest Holder has the right, upon reasonable request, for purposes reasonably related to the interest of that Member or Financial Interest Holder, to inspect and copy during normal business hours any of the books and records of the LLC. Such right may be exercised by the Member or Financial Interest Holder, or their respective agents or attorneys. Any Member or Financial Interest Holder may require a review and/or audit of the books and records of the LLC.

C. **Bank Accounts**. All funds of the LLC shall be deposited in the LLC's name in such banks as Approved by the Members. All checks, drafts, or other orders for payment of money, notes or other evidences of indebtedness, issued in the name of or payable to the LLC, shall be signed or endorsed by such person or persons and in such manner as, from time-to-time, shall be determined by Approval of the Members.

D. **Fiscal Year**. The LLC's fiscal year shall end on December 31.

E. **Accounting Method**. For financial reporting purposes, the books and records of the LLC shall be kept on the cash (method of accounting applied in a consistent manner and shall reflect all transactions of the LLC and be appropriate and adequate for the purposes of the LLC unless otherwise Approved by the Members.

10. TAXATION

A. **Tax Year**. The LLC's taxable year shall end on December 31.

B. **Tax Matters Partner**. A majority of Membership Interests at a meeting of the Members shall appoint a Tax Matters Partner pursuant to Code § 6231 to represent the LLC. The Tax Matters Partner, on behalf of the LLC, shall oversee the LLC tax affairs in the overall best interests of the LLC and make all elections for federal income tax purposes. The Tax Matters Partner shall have all necessary federal and state income and information tax returns prepared and filed on behalf of the LLC. The determination of the Tax Matters Partner as to adjustments to the financial reports, returns, books and records of the LLC, in the absence of fraud or gross negligence, shall be final and binding upon the LLC and all Members.

11. INDEMNIFICATION

A. **Definitions: Agents, Proceedings, and Expenses**. For the purposes of this Agreement, "Agent" means any person who is or was a Member, Manager, officer, employee, or other agent of this LLC; "Proceeding" means any threatened, pending or completed action or proceeding, whether civil, criminal, administrative, or investigative;

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and "Expenses" means any and all costs, fees, and expenses including but not limited to court costs and attorneys' fees.

B. **Actions other than by the LLC**. The LLC shall indemnify and hold harmless any person who was or is a party, or is threatened to be made a party, to any Proceeding by a party other than the LLC, by reason of the fact that such person is or was an Agent of this LLC, against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with such Proceeding, if that person acted in good faith and in a manner that person reasonably believed to be in the best interests of this LLC, and, in the case of a criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in the best interests of this LLC or that the person had reasonable cause to believe that his or her conduct was unlawful.

C. **Other Contractual Rights**. Nothing contained in this Section 11.C. shall affect any right to indemnification to which Agents of this LLC or any subsidiary may be entitled by contract, by Approval of the Members, as a matter of law or equity, or otherwise.

D. **Amendments to the Act**. In the event that the Act or other applicable law in effect at the time of adoption of this Agreement, in regards to the indemnification of Members, Managers, directors, officers, employees, and agents of a LLC, as in effect at the time of adoption of this Agreement, is subsequently amended in any way that increases the scope of permissible indemnification beyond that set forth herein, the indemnification authorized by this Section shall be deemed to be coextensive to the maximum extent afforded by the applicable law so amended.

E. **Insurance**. The LLC may, upon Approval by the Members, purchase and maintain insurance on behalf of any Agents of the LLC against any liability which might be asserted against or incurred by the Agents in such capacity, or which might arise out of the Agents' status as such, whether or not the LLC would have the power to indemnify such Agents against that liability.

F. **Consent of the Members**. The grant of indemnity in this Section may be removed upon the Approval of the Members.

12. LLC CERTIFICATES

A. **Issuance of LLC Certificates**. The Percentage Interest of each Member and Financial Interest Holder shall be represented by an LLC Certificate. Upon execution of this Agreement and payment of Capital Contributions, each Member and Financial Interest Holder shall be issued at least one (1) LLC Certificate to certify that he, she, or it is the record holder of the Membership or Financial Interest.

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B. **Transfer of LLC Certificates**. Any Membership Interest or Financial Interest which is transferred in accordance with the terms of this Agreement shall be transferable on the books and records of the LLC. However, the Transfer shall not be entered until the previously issued LLC Certificate representing such an Interest is surrendered to the LLC, canceled, and a replacement LLC Certificate is issued to the assignee.

C. **Lost, Stolen or Destroyed Certificates**. The LLC shall issue a new LLC Certificate in place of any LLC Certificate previously issued if the record holder of the LLC Certificate satisfactorily proves that a previously issued LLC Certificate was lost, stolen, or destroyed. If the record holder fails to notify the LLC of the loss, theft or destruction within a reasonable time after the record holder discovered the loss, theft, or destruction, and a transfer of the Membership or Financial Interest represented by the LLC Certificate is registered before receiving such notification, the LLC shall have no liability with respect to any claim against the LLC for such transfer or for a new LLC Certificate.

13. TERMINATION AND DISSOLUTION

A. The LLC shall be dissolved and its business wound up upon the occurrence of either of the following events:

(1) The written consent of all Members to dissolve the LLC; or

(2) The reduction to cash of all or substantially all of the LLC Assets.

B. In the event of the dissolution of the LLC, there shall be an orderly liquidation of the LLC Assets, unless the Members determine that an immediate sale of all or part of the LLC Assets would cause undue loss to the Members and Financial Interest Holders, in which event (1) the liquidation may be deferred for a reasonable time except as to those assets necessary to satisfy the LLC debts and the Members shall be deemed to have elected to reconstitute the LLC for such period, or (2) all or part of the LLC Assets may be distributed in kind, subject to the provisions of and in the same manner as cash under the applicable provisions of this Section 13.B. and provided that such distribution is made on the same proportionate basis as all cash distributions would have been made to all of the Members of all of the LLC Assets.

C. Upon any dissolution of the LLC, the Members shall prepare a statement setting forth the assets and liabilities of the LLC as of the date of dissolution, and such statement shall be furnished to all Members. No dissolution of the LLC shall release or relieve the Members of their obligations under this Agreement.

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D. In the event of liquidation of the LLC Assets, the LLC Assets shall be liquidated as promptly as possible, and the Members shall supervise such liquidation, which shall be conducted in an orderly and business-like manner so as not to involve undue sacrifice, as the Members shall determine in their reasonable discretion.

E. The proceeds thereof shall be applied and distributed in the following order of priority:

(1) To the payment of the debts and liabilities of the LLC (including any debts and liabilities owed to the Members) and the expenses of liquidation;

(2) To the setting up of any reserves which the Members reasonably may deem necessary for any contingent or unforeseen liabilities or obligations of the LLC arising out of or in connection with the LLC. Said reserves may be paid over by the Members to an unaffiliated third-party attorney-at-law, as escrowee, to be held by such attorney for the purpose of disbursing such reserves in payment of any of the aforementioned contingencies and, at the expiration of such period as the Members shall deem advisable, to distribute the balance of such reserves in accordance with Section 13.E.(3);

(3) To the Members and Financial Interest Holders to the extent of the positive balances (or if less than the aggregate amount of such balances, in proportion to such balances) of their respective Capital Accounts (after giving effect to all contributions and allocations under Section 5 as the result of the liquidation of the LLC Assets); and

(4) Any remaining amounts shall be distributed to all Members and Financial Interest Holders pursuant to Section 5.L.

F. **Provisions Cumulative**. All provisions of this Agreement relating to the dissolution, liquidation and termination of the LLC shall be cumulative to the extent not inconsistent with other provisions herein; that is, the exercise or use of one of the provisions hereof shall not preclude the exercise or use of any other provision of this Agreement to the extent not inconsistent therewith.

14. SPECIAL PROVISIONS

A. **Covenant-not-to Compete**. For as long as any Member remains a nominal or beneficial interest holder in the LLC, and for a period of two (2) years thereafter, no Member shall directly or indirectly (e.g., through an affiliate of any Member), engage in any activities within the scope of the Business of the LLC without the Approval of the Members.

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B. **Ownership of Intellectual Property by the LLC; Work for Hire**. The Parties agree that all intellectual property, including but not limited to names, trade names, internet domains, inventions, designs, drawings, formulae, recipes, discoveries, concepts, ideas, know-how, information, developed or conceived inventions, and improvements, either patentable or not, and either contributed to the LLC by the Members or developed or improved by the LLC is owned at all times by the LLC. The Members specifically acknowledge that all domain names, trade names, data and software associated with the Mission Integrated Technologies or Assault Rescue Elevated System concepts they are developing belong exclusively to, and to the extent required, are assigned to, the LLC. All past and future inventions and contributions made by the Members related to the Mission Integrated Technologies and Assault Rescue Elevated Systems projects shall be deemed work for hire and shall belong exclusively to the LLC, unless otherwise waived by Approval of the Members.

C. **Priority of Repayment of Loans and/or Additional Capital Contributions by Members.** All loans and/or additional Capital Contributions made by the Members or their affiliates to the LLC shall be paid back prior to payment of any distributions of any Profits or Net Cash Flow to the Members unless otherwise agreed in writing by Approval of the Members. Any payments made in violation of this section shall be void, the LLC shall hold constructive trust over all said funds, and the LLC shall have the right to force the return of said funds in its name as the beneficial owner of said improperly distributed funds.

15. GENERAL PROVISIONS

A. **Entire Agreement/Modification**. This Agreement (and its exhibits and schedules) contains the entire understanding of the parties with respect to the subject matter of the agreement, and it supersedes all prior understandings and agreements, whether written or oral, and all prior dealings of the parties with respect to the subject matter hereof. This Agreement, in whole or in part, cannot be changed, modified, extended, or discharged orally and no waiver of compliance with any provision or condition hereof and no consent provided for herein shall be effective unless evidenced by an instrument in writing duly executed. No consent or waiver, express or implied, to or of any breach or default shall constitute a consent or waiver to or of any other breach.

B. **Amendments by Members**. This Agreement may only be amended, altered, or repealed by the affirmative vote or written consent of all Members, representing one hundred (100) percent of the Membership Units in favor of such decision.

C. **Partition**. Each Member and Financial Interest Holder agrees that he, she, or it has no right to have the LLC Assets partitioned, and irrevocably waives any and all such rights to do so, or to file a complaint, or otherwise institute and maintain any proceeding at law or equity to have the LLC Assets partitioned.

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D. **Further Actions**. Each Member and Financial interest Holder agrees to acknowledge, sign, and deliver additional documents, and further act as may reasonably be required from time to time to carry out each of the provisions and the intent of this Agreement, and every agreement or document relating hereto, or entered into in connection herewith.

E. **Severability**. If any provision of this Agreement or the application thereof to any person or circumstance shall be invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

F. **Successor and Assigns**. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors, legal representatives, and assigns. No Member or Financial Interest Holder, without the express written consent of all Members not unreasonably withheld, may assign this Agreement.

G. **Attorneys' Fees**. In the event of any litigation, arbitration or other dispute arising as a result of or by reason of this Agreement, the prevailing party in any such litigation, arbitration or other dispute shall be entitled to, in addition to any other damages assessed, its reasonable attorneys' fees, and all other costs and reasonable expenses incurred in connection with settling or resolving such dispute.

H. **Construction**. Throughout this Agreement, the masculine, feminine, or neuter genders shall be deemed to include the masculine, feminine, and neuter and the singular, the plural, and vice versa. The section headings of this Agreement are for convenience of reference only and do not form a part hereof and do not in any way modify, interpret, or construe the intentions of the parties.

I. **Execution and Counterparts**. This Agreement may be executed in several counterparts each of which shall be deemed to be an original, and all such counterparts when taken together shall constitute one and the same instrument.

J. **Governing Law.** This Agreement shall be governed by, and interpreted in accordance with, the laws of the State of Delaware. The Members and Financial Interest Holders hereby agree that any legal action or proceeding shall be brought in the courts of the State of Virginia, in Fairfax County. The Members and Financial Interest Holders further agree to submit to the jurisdiction of the State of Virginia and consent to the service of process in accordance with applicable procedures and rules of said jurisdiction.

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K. **Opportunity to Review with Counsel**. Each Member has had an opportunity to review this Agreement with their respective advisors, accountants, and attorneys prior to execution of same. Marko & Magolnick, P.A. ("Corporate Counsel") was retained by the LLC to prepare this Agreement, and did not represent the interests of any of the Members or provide any advice to any Members in connection herewith. Corporate Counsel provided no tax or financial advice to the LLC and any such provisions in this Agreement have been approved by independent tax advisors or independently determined to be appropriate by the signatories hereto.

[REMAINDER OF PAGE LEFT BLANK – SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF, the parties hereto have caused this Operating Agreement to be duly executed as of the Effective Date.

MEMBER:

F2E HOLDINGS, LLC

By: _____
Fahmi Alubbad
Authorized Representative

MEMBER:

_____
Timothy Guy Clemente

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SCHEDULE 3(A)

Member Name & Address	Membership Units
F2E Holdings, LLC Attn: Fahmi Alubbad 4094 Majestic Lane Suite 355 Fairfax, Virginia 22033	75 Membership Units Representing a 75 Percent Membership Interest
Timothy Guy Clemente 150 Rustic Ridge Road Fredericksburg, Virginia 22405	25 Membership Units Representing a 25 Percent Membership Interest

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WRITTEN STATEMENT OF ORGANIZATION
MISSION INTEGRATED TECHNOLOGIES, LLC

By and through the undersigned, F2E Holdings, LLC and Timothy Guy Clemente, hereby constitute all the Members of MISSION INTEGRATED TECHNOLOGIES, LLC[1] (the "Company"), a Delaware limited liability company. In lieu of an organizational meeting, the following Written Statement of Organization is submitted:

Certificate of Formation: A Certificate of Formation for the Company (the "Certificate") was filed with the Department of State in the State of Delaware on August 5, 2013. In due course, a letter was received from the Department of State evidencing the filing thereof and receipt of filing fees and taxes. The Certificate and the corresponding letter shall be kept in the Company Records Book along with this Written Statement.

Operating Agreement: A proposed agreement of the Members, prepared and submitted by counsel for the Company and dated even with this Written Statement has been reviewed in its entirety and is hereby adopted as the "Operating Agreement" of the Company.

Management: The Company shall be managed by the Members.

Officers: Timothy Guy Clemente is hereby elected as the President of the LLC to serve until his resignation or removal. The President shall have authority to act only as Approved by the Members.

Membership Certificates: The membership certificates of the Company will be in the form attached hereto.

Bank Account: The President is hereby authorized and directed to open an account(s) with such bank(s) as Approved by the Members of the Company. All checks, drafts, and notes of the Company shall be made in the name of the Company, by those persons designated as having the authority to do so by Approval of the Members.

Capitalized Terms: All capitalized terms not specifically defined herein shall have the meaning ascribed to them in the Operating Agreement of the Company.

Execution and Counterparts: This Written Statement may be executed in several counterparts each of which shall be deemed to be an original, and all such counterparts when taken together shall constitute one and the same instrument.

---

[1] The Company has changed its name from "Assault Rescue Elevated System, LLC" to "Mission Integrated Technologies, LLC." For avoidance of doubt, the Department of State "file number" assigned to the Company is 5378070.

IN WITNESS WHEREOF, the undersigned Members execute this document this 7th day of October, 2013.

MEMBER:

F2E HOLDINGS, LLC
75 Membership Units

By: _____
Fahmi Alubbad
Its Managing Member

MEMBER:

_____
Timothy Guy Clemente
25 Membership Units

State of Delaware
Secretary of State
Division of Corporations
Delivered 02:00 PM 10/02/2013
FILED 02:00 PM 10/02/2013
SRV 131155191 - 5378070 FILE

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT

1. Name of Limited Liability Company: Assault Rescue Elevated System, LLC

2. The Certificate of Formation of the limited liability company is hereby amended as follows:

The name of Assault Rescue Elevated System, LLC has been changed to Mission Integrated Technologies, LLC.

IN WITNESS WHEREOF, the undersigned have executed this Certificate on the 2nd day of October, A.D. 2013.

By: _____
Authorized Person(s)

Name: David E. Marko, Esq.
Print or Type

EXHIBIT B

MUTUAL NON-DISCLOSURE & NON-CIRCUMVENTION AGREEMENT

BY AND BETWEEN

ATLANTIS CONSULTANTS LIMITED CORP.

AND

TIMOTHY CLEMENTE

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CLAUSE

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THIS NON-DISCLOSURE AGREEMENT (this "Agreement") is made the 5th day of June, 2013 (the "**Effective Date**"), by and between Atlantis Consultants Limited Corporation ("**ATLANTIS**") with its primary offices located at 4094 Majestic Lane, Suite 355, Fairfax, VA 22033, and Timothy Clemente (the "**Clemente**") with his primary location at _____. ATLANTIS and Clemente are referred to herein individually as a "**Party**" and collectively as the "**Parties**".

BETWEEN:

(1) **ATLANTIS** and

(2) **Timothy Clemente** (the "**Clemente**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain Proprietary Information, including technical data, potential business opportunities and contacts or sources; and b) for the Parties to evaluate, pursue and capture business opportunities in the Territory (such purpose, the **"Stated Purpose"**);

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality thereof, the Parties have entered into this Agreement.

NOW IT IS HEREBY AGREED AS FOLLOWS

1 CERTAIN DEFINED TERMS

1.1 "**Affiliate**" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2 "**Clients**" means customers or potential customers, sources, vendors suppliers or other contacts introduced by ATLANTIS in the Territory.

THIS NON-DISCLOSURE AGREEMENT (this "Agreement") is made the 5th day of June, 2013 (the "**Effective Date**"), by and between Atlantis Consultants Limited Corporation ("**ATLANTIS**") with its primary offices located at 4094 Majestic Lane, Suite 355, Fairfax, VA 22033, and Timothy Clemente (the "**Clemente**") with his primary location at 150 RUSTIC RIDGE RD FREDERICKSBURG, VA 22405 ATLANTIS and Clemente are referred to herein individually as a "**Party**" and collectively as the "**Parties**".

BETWEEN:

(1) **ATLANTIS** and

(2) **Timothy Clemente** (the "**Clemente**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain Proprietary Information, including technical data, potential business opportunities and contacts or sources; and b) for the Parties to evaluate, pursue and capture business opportunities in the Territory (such purpose, the **"Stated Purpose"**);

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality thereof, the Parties have entered into this Agreement.

NOW IT IS HEREBY AGREED AS FOLLOWS

1 CERTAIN DEFINED TERMS

1.1 "**Affiliate**" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2 "**Clients**" means customers or potential customers, sources, vendors suppliers or other contacts introduced by ATLANTIS in the Territory.

1.3 "**Confidential Information**" means information whether conveyed in written, graphic, oral or physical form, including, but not limited to: Clients contact names; addresses; business plans; operations or systems development plans; financial projections; financial resources; marketing strategies, sales contracts; research and development; manufacturers; markets; third party agreements; strategic resources; proposed trade secrets; product ideas; designs; configurations; processes; software; improvements; data; plans and strategies; sales and financial reports or forecasts; scientific knowledge; know-how; processes; compilations; data bases; prototypes; collaborations; inventions; techniques; business strategies; notes; analyses; studies; formulae; models; concepts; design concepts; products; business operations; customer and supplier lists; business relationships; specifications; drawings; working drawings; means of implementation and manufacture; cost and pricing data; bills; ideas; software materials (including object code, source code and documentation in the form of software notes); methods of encoding; preprocessing and all other proprietary information; patent, trademark and copyright applications; patentable or unpatentable and/or copyrightable descriptions of mathematics and/or any other written material referring to the same; and any document, diagram, drawing, computer program, or other communication that is (A) marked "confidential" or "proprietary," (B) known or reasonably known by the Parties to be confidential, or (C) learned or disclosed in the course of discussions, studies or other work undertaken between the Parties. Notwithstanding the above, the following information shall always be treated as "Confidential Information": any proposed fees or commission to be charged or paid from one Party to the other; the existence and terms of this Agreement or any other agreement between the parties; the identities of Clients or contact names; and information regarding any proposals to Clients.

1.4 "**Disclosing Party**" means the Party disclosing its Confidential Information to the Receiving Party or any of such other Party's Affiliates.

1.5 "**Receiving Party**" means the Party receiving Confidential Information of the Disclosing Party.

1.6 "**Territory"** means worldwide.

2 CONFIDENTIAL INFORMATION.

2.1 **Confidentiality Obligations:** Neither Party may disclose or use the Confidential Information of the other Party unless specifically authorized by the terms of this Agreement. The Parties agree that any business opportunity disclosed to a Receiving Party shall be considered "Confidential Information" hereunder, and it is explicitly agreed to that the Receiving Party is barred and foreclosed from pursuing such business opportunity under the terms of this Agreement if such pursuit is not in joint conjunction with the Disclosing Party. A Receiving Party may disclose or use Confidential Information of the Disclosing Party only under the following conditions:

2.2.1 Except as otherwise expressly permitted to be disclosed or used pursuant to this Section 2, such Receiving Party agrees to hold in strict confidence and not directly or indirectly use or disclose to any other person or entity any Confidential Information of the Disclosing Party without the prior written permission of the Disclosing Party. Such Receiving Party understands that disclosure of such Confidential Information would destroy the value of such Confidential Information and cause irreparable harm to the Disclosing Party. Such Receiving Party shall use, and shall cause its Affiliates to use, at least the same level of care and protection of Confidential Information of the Disclosing Party as such Receiving Party uses to prevent unauthorized use and unauthorized disclosure its own Confidential Information, but in any case using no less than a reasonable standard of care.

2.2.2 Such Receiving Party will use Confidential Information of the Disclosing Party only for the Stated Purpose. For the avoidance of doubt, such Receiving Party, except as otherwise permitted by this Agreement or any other written agreement between the Parties, shall not use or otherwise utilize for its own business or benefit, or any third party's benefit, any Confidential Information of the Disclosing Party except for the Stated Purpose.

2.2.3 Such Receiving Party will use Confidential Information of the Disclosing Party in marketing and sales materials, only if such materials are to be delivered to a third party for the Stated Purpose, and only as is expressly agreed upon by both Parties.

2.2.4 Such Receiving Party will not modify the Confidential Information in any way without the prior written consent of the Disclosing Party.

2.2.5 **Certain Exceptions to Confidentiality Obligations:** The restrictions regarding the confidentiality of the Confidential Information of a Disclosing Party shall not apply to information that:

- is disclosed by Receiving Party in accordance with a judicial or other governmental order provided that the Receiving Party, subject to what is permitted under the applicable law, gives the Disclosing Party reasonable notice prior to such disclosure and restricts disclosure of the Confidential Information to the extent mandatory under the order.

2.2.6 **Return of Confidential Information**: Upon the earlier of

(a) completion of the Stated Purpose;

(b) the request of the Disclosing Party; and

(c) the expiration or termination of this Agreement, the Receiving Party shall, and shall cause its Affiliates to discontinue use of and promptly return (or, if the Confidential Information is of such a nature that it cannot be returned, delete or destroy) all Confidential Information of the Disclosing Party, and copies thereof and all Physical Property with which it was furnished.

2.2.7 **Ownership of Confidential Information**: All Confidential Information disclosed to the Receiving Party by the Disclosing Party under this Agreement

shall be and remain the property of the Disclosing Party. No licenses or rights under any registered or unregistered patent, copyright, trademark or trade secret, or application therefore, are granted to or are to be implied by this Agreement.

2.2.8 **No Representations or Warranties**: Each Party hereby acknowledges that neither the other Party nor any of its Affiliates makes any representation or warranty as to the accuracy or completeness of the Confidential Information disclosed by it. Neither the Disclosing Party nor any of its Affiliates shall be liable to the Receiving Party or any of its Affiliates in relation to or as a result of the Receiving Party's use of the Disclosing Party's Confidential Information.

3 NON-CIRCUMVENTION.

Neither Clemente nor any of its Affiliates shall contact or attempt to contact, directly or indirectly, the Clients or other entities which are part of the ATLANTIS Confidential Information on matters relating to the subject hereof or otherwise make any use of the Confidential Information, except with the express written consent of ATLANTIS. Clemente shall not disclose any information discussed by the Parties with Clients, or directly deal with any Clients introduced to Clemente by ATLANTIS without the express written consent of ATLANTIS.

4 TERM TERMINATION

This Agreement shall be effective as of the date both Parties have signed the Agreement ("**Effective Date**"). Either Party may terminate the Agreement with respect to further disclosures upon thirty (30) days' prior written notice. However, the terms and conditions of this Agreement shall survive for a period of five (5) years following any expiration or termination of this Agreement.

5 ASSIGNMENT, NO THIRD-PARTY BENEFICIARIES

This Agreement is not assignable by either Party, whether by operation of law or otherwise, without the express prior written consent of the other Party, which consent shall not be unreasonably denied, delayed or conditioned, and any attempt to assign the rights or obligations under this Agreement to the contrary shall be void *ab initio*. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties and their respective successors, legal representatives and permitted assigns, any rights or remedies under or by reason of this Agreement.

6 REMEDIES

All remedies provided for in this Agreement shall be cumulative and in addition to, and not in lieu of, any other remedies available to either Party at law, in equity or otherwise. The Parties agree that monetary damages caused by breaches hereunder would be difficult to measure or inadequate and, accordingly, if a Party breaches, or proposes to breach, any portion of this Agreement, the other Party shall be entitled, in addition to all other remedies that it may have, to expedited relief, including a temporary restraining order or a permanent injunction, or other appropriate equitable relief (without the posting of any bond or other security) to restrain any such breach without showing or proving any actual damage to the other Party.

7 SURVIVAL

Subject to Section 4 hereof, upon the expiration of the Term or termination of this Agreement in accordance with the terms and conditions hereof, all provisions of this Agreement shall survive five (5) years following the termination or expiration of this Agreement.

8 ENTIRE AGREEMENT

This Agreement constitutes the complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings between the Parties, whether written or oral.

9 AMENDMENT WAIVER

This Agreement may not be amended or in any manner modified except by a written instrument signed by an authorized representative on behalf of each Party.

10 GOVERNING LAW

This Agreement shall be governed by, interpreted under and construed in accordance with the internal substantive laws of the Commonwealth of Virginia applicable to contracts executed and to be performed wholly within that state without giving effect to the choice or conflict of laws principles or provision thereof that would provide for the application of the laws of any other jurisdiction.

11 JURISDICTION AND VENUE

Each of the Parties expressly waives its, his or her right to a jury trial with respect to any suit, litigation or other judicial proceeding regarding this agreement or any dispute hereunder or relating hereto. Each of the Parties agrees that any dispute under or with respect to this Agreement shall be determined before the state or federal courts situated in Alexandria, Virginia, which courts shall have exclusive jurisdiction over and with respect to any such dispute, and each of the Parties hereby irrevocably submits to the jurisdiction of such courts. Each Party hereby agrees not to raise any defense or objection, under the theory of forum *non conveniens* or otherwise, with respect to the jurisdiction of any such court. Should suit be brought to enforce or interpret any part of this Agreement, the prevailing party shall be awarded its reasonable attorneys' fees and costs, including expert witness fees and fees in prosecuting and/or defending the action and on any appeal thereof

12 COUNTERPARTS

This Agreement may be executed in one or more counterparts (including facsimile), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

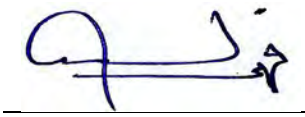
13 SEVERABILITY

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14 SUCCESSORS

This Agreement will be binding upon and inure to the benefit of Parties and their respective successors and/or permitted assigns.

IN WITNESS WHEREOF this Agreement has been executed by a duly authorized representative on behalf of each Party as of the Effective Date.

ATLANTIS CONSULTANTS LIMITED CORP		**TIMOTHY CLEMENTE**	
By		By	
Name	Fahmi Alubbad	Name	Timothy Clemente
Title	President	Title	Signed Individually
Date	6 June 2013	Date	

13 SEVERABILITY

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

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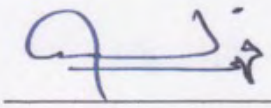
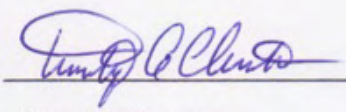
ATLANTIS CONSULTANTS LIMITED CORP		**TIMOTHY CLEMENTE**	
By		By	
Name	Fahmi Alubbad	Name	Timothy Clemente
Title	President	Title	Signed Individually
Date	6 June 2013	Date	6 JUNE 2013

EXHIBIT C

NON-DISCLOSURE AGREEMENT

BY AND BETWEEN

MISSION INTEGRATED TECHNOLOGIES, LLC

AND

KENNETH FOURNIER

THIS NON-DISCLOSURE AGREEMENT ("**Agreement**") is being executed on the date last signed below but shall be effective retroactively to the date of execution of the Mutual Non- Disclosure & Non-Circumvention Agreement dated June 6, 2013 ("**Effective Date**") because the original that was executed in 2013 cannot be located, by and between Mission Integrated Technologies, LLC ("**MIT**") with its primary offices located at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182, and Kenneth Fournier ("**Kenneth**") with offices located at 13701 Riverside Drive, Suite 500, Sherman Oaks, CA 91423. MIT and Kenneth are referred to herein individually as a "**Party**" and collectively as the "**Parties.**"

BETWEEN:

(1) **Mission Integrated Technologies, LLC** ("**MIT**") and

(2) **Kenneth Fournier** ("**Kenneth**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain proprietary information, including technical data, design information and project details related to MIT products, including without limitation the Articulating Rapid Entry System (ARES); b) for the Parties to evaluate and pursue projects related to the provision of build, integration, hardware and software necessary to operate the ARES where it is envisioned that Cardinal Scientific, Ibistek, Retiina, or others, will provide contract manufacturing and integration services of MIT products (the "**Stated Purpose**");

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality and proprietary nature thereof, the Parties have entered into this Agreement.

WHEREAS, Pursuant to Section 3 of the Agreement dated _____ day of July, 2022 by and between Kenneth, Joshua Clemente, Timothy Clemente, F2E Holdings LLC, and MIT, this Agreement is being executed by MIT and Kenneth.

NOW IT IS HEREBY AGREED AS FOLLOWS

1. CERTAIN DEFINED TERMS.

1.1. "Affiliate" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants, or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2. "Clients" means the buyers or prospective buyers of the MIT goods and/or services; other potential partner companies; suppliers, vendors, sources, contacts or other persons or entities introduced by one Party to the other.

1.3. "Confidential Information" means information whether conveyed in written, graphic, oral or physical form, including, but not limited to: Client information, contact names and

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addresses; business plans; operations or system development plans; financial projections; financial resources; marketing strategies, sales contracts; research and development; manufacturers; markets; third party agreements; strategic resources; proposed trade secrets; product ideas; product advancements or improvements along with any information related thereto, designs; configurations; processes; software; improvements to existing designs or software; data; plans and strategies; sales and financial reports or forecasts; scientific knowledge; know-how; processes; compilations; data bases; prototypes; collaborations; inventions; techniques; business strategies; notes; analyses; studies; formulae; models; concepts; design concepts; products; business operations; customer and supplier lists; business relationships; specifications; drawings; working drawings; means of implementation and manufacture; cost and pricing data; bills; ideas; software materials (including object code, source code and documentation in the form of software notes); methods of encoding; preprocessing and all other proprietary information; patent, trademark and copyright applications; patentable or unpatentable and/or copyrightable descriptions of mathematics, designs, design concepts, software and/or any other written material or verbal descriptions referring to the same; and any document, diagram, drawing, computer program, or other communication that is (A) marked "confidential" or "proprietary," (B) known or reasonably known by the Parties to be "confidential" or "proprietary", or (C) learned or disclosed in the course of discussions, studies or other work undertaken between the Parties. Notwithstanding the above, the following information shall always be treated as "Confidential Information": any compensation, expenses, reimbursements or engineering or hardware costs to be charged or paid by either Party; the existence and terms of this Agreement or any other agreement(s) between the parties; the identities of Clients or contact names; and information regarding any proposals to Clients.

1.4. "Disclosing Party" means the Party disclosing its Confidential Information to the Receiving Party or any of such other Party's Affiliates.

1.5. "Receiving Party" means the Party receiving Confidential Information of the Disclosing Party.

2. CONFIDENTIAL INFORMATION.

2.1. Confidentiality Obligations: Neither Party may disclose or use the Confidential Information of the other Party unless specifically authorized by the terms of this Agreement. A Receiving Party may disclose or use Confidential Information of the Disclosing Party only under the following conditions:

2.1.1. Except as otherwise expressly permitted to be disclosed or used pursuant to this Section 2, such Receiving Party agrees to hold in strict confidence and not directly or indirectly use or disclose to any other person or entity any Confidential Information of the Disclosing Party without the prior written permission of the Disclosing Party. Such Receiving Party understands that disclosure or use of such Confidential Information would destroy the value of such Confidential Information and cause irreparable harm to the Disclosing Party. Such Receiving Party shall use, and shall cause its Affiliates to use, at least the same level of care and protection of Confidential

Information of the Disclosing Party as such Receiving Party uses to prevent unauthorized use and unauthorized disclosure of its own Confidential Information, but in any case using no less than a reasonable standard of care.

2.1.2. Such Receiving Party will use Confidential Information of the Disclosing Party only for the Stated Purpose. For the avoidance of doubt, such Receiving Party, except as otherwise permitted by this Agreement or any other written agreement between the Parties, shall not use or otherwise utilize for its own business or benefit, or any third party's benefit, any Confidential Information of the Disclosing Party except for the Stated Purpose.

2.1.3. Such Receiving Party will use Confidential Information of the Disclosing Party in marketing and sales materials, only if such materials are to be delivered to a third party for the Stated Purpose, and only as is expressly agreed upon by the Disclosing Party.

2.1.4. Such Receiving Party will not modify the Confidential Information in any way without the prior written consent of the Disclosing Party.

2.1.5. It is specifically acknowledged that neither Kenneth nor any of his Affiliates may use the Confidential Information of MIT, including without limitation technical details, design concepts, designs resulting from exchanges of information pursuant to this Agreement or otherwise, product improvements or advances resulting from the exchange of Confidential Information or pricing information to prepare and/or submit any proposal, bid, quotation or other similar offer to any Client or potential Client that would be considered competitive with or an alternative to a product or proposal submitted to a Client for the sale of MIT products and services, whether or not such proposal is submitted by Kenneth, any of his Affiliates, any third party, or directly by MIT.

2.2. Certain Exceptions to Confidentiality Obligations: The restrictions regarding the confidentiality of the Confidential Information of a Disclosing Party shall not apply to information that is disclosed by Receiving Party in accordance with a judicial or other governmental order provided that the Receiving Party, subject to what is permitted under the applicable law, gives the Disclosing Party reasonable notice prior to such disclosure and restricts disclosure of the Confidential Information to the extent mandatory under the order.

2.3. Return of Confidential Information: Upon the earlier of

2.3.1. completion of the Stated Purpose;

2.3.2. the request of the Disclosing Party; or

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2.3.3. the expiration or termination of this Agreement, the Receiving Party shall, and shall cause its Affiliates to discontinue use of and promptly return (or, if the Confidential Information is of such a nature that it cannot be returned, delete or destroy) all Confidential Information of the Disclosing Party, and copies thereof and all Physical Property with which it was furnished.

2.4. Ownership of Confidential Information: All Confidential Information disclosed to the Receiving Party by the Disclosing Party under this Agreement shall be and remain the property of the Disclosing Party. No licenses or rights under any registered or unregistered patent, copyright, trademark or trade secret, or application therefore, are granted to or are to be implied by this Agreement. It is specifically acknowledged without limiting any of the foregoing that any and all Confidential Information related to MIT product and services, including design, design plans, MIT product improvements, advancements, enhancements or derivatives, whether or not originating with MIT or Kenneth during exchanges under this Agreement, or otherwise, shall remain at all times the sole property of MIT. At no time, shall Kenneth be entitled to any rights in the Confidential Information related to MIT products or improvement, enhancements or derivatives thereof, and all concepts and designs, whether or not derived, created and implemented prior to, during or after the performance of this Agreement by either party shall be the exclusive property of MIT. Any future products or derivative technologies created based on the exchanges of Confidential Information hereunder shall at all times remain the property of MIT.

2.5. No Representations or Warranties: Each Party hereby acknowledges that neither the other Party nor any of its Affiliates makes any representation or warranty as to the accuracy or completeness of the Confidential Information disclosed by it. Neither the Disclosing Party nor any of its Affiliates shall be liable to the Receiving Party or any of its Affiliates in relation to or as a result of the Receiving Party's use of the Disclosing Party's Confidential Information, including without limitation any investment made in non-recurring engineering expenses, product research & development or other associated costs undertaken as a result of the exchange of Confidential Information pursuant to this Agreement.

3. NON-CIRCUMVENTION.

Neither Kenneth nor any of his Affiliates shall contact or attempt to contact, directly or indirectly, the Clients or other entities who are part of MIT's Confidential Information on matters relating to the subject hereof or otherwise make any use of the Confidential Information, except with the express written consent of MIT. The Parties shall not disclose price, costs or other financial information to Clients, or directly deal with any Clients introduced by MIT without the express written consent of MIT, or as required by law.

4. TERM TERMINATION.

This Agreement shall be effective as of the date both Parties have signed the Agreement ("**Effective Date**"). Either Party may terminate the Agreement with respect to further disclosures upon thirty (30) days' prior written notice. However, the terms and

conditions of this Agreement shall survive for a period of five (5) years following any expiration or termination of this Agreement; provided, however, that the MIT intellectual property rights to its products and services and all other Confidential Information shall survive in perpetuity.

5. ASSIGNMENT, NO THIRD-PARTY BENEFICIARIES.

This Agreement is not assignable by either Party, whether by operation of law or otherwise, without the express prior written consent of the other Party, which consent shall not be unreasonably denied, delayed, or conditioned. Any attempt to assign the rights or obligations under this Agreement to the contrary shall be void *ab initio*. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties and their respective successors, legal representatives and permitted assigns, any rights or remedies under or by reason of this Agreement.

6. REMEDIES.

All remedies provided for in this Agreement shall be cumulative and in addition to, and not in lieu of, any other remedies available to either Party at law, in equity or otherwise. The Parties agree that monetary damages caused by breaches hereunder would be difficult to measure or inadequate and, accordingly, if a Party breaches, or proposes to breach, any portion of this Agreement, the other Party shall be entitled, in addition to all other remedies that it may have, to seek expedited relief, including a temporary restraining order or a permanent injunction, or other appropriate equitable relief to restrain any such breach.

7. SURVIVAL.

Subject to Section 4 hereof, upon the expiration of the Term or termination of this Agreement in accordance with the terms and conditions hereof, all provisions of this Agreement shall survive five (5) years following the termination or expiration of this Agreement.

8. ENTIRE AGREEMENT.

This Agreement constitutes the complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings between the Parties, whether written or oral.

9. AMENDMENT WAIVER.

This Agreement may not be amended or in any manner modified except by a written instrument signed by an authorized representative on behalf of each Party.

10. GOVERNING LAW.

TOC/MCF

This Agreement shall be governed by, interpreted under and construed in accordance with the internal substantive laws of the Commonwealth of Virginia, applicable to contracts executed and to be performed wholly within that jurisdiction without giving effect to the choice or conflict of laws principles or provision thereof that would provide for the application of the laws of any other jurisdiction.

11. ARBITRATION AND VENUE.

11.1. Arbitration. EACH OF THE PARTIES EXPRESSLY WAIVES ITS, HIS OR HER RIGHT TO A JURY TRIAL WITH RESPECT TO ANY SUIT, LITIGATION OR OTHER JUDICIAL PROCEEDING REGARDING THIS AGREEMENT OR ANY DISPUTE HEREUNDER OR RELATING HERETO.

11.2. Venue. The parties shall make a good faith effort to settle any dispute or claim arising under this Agreement. If the Parties are unable to resolve such dispute, the Parties agree that such controversy or dispute will be settled by final and binding arbitration in accordance with the Rules of Arbitration under the American Arbitration Association ("**AAA**"), as amended and in effect at the time that such demand for arbitration is filed. Any dispute in which the amount in controversy is less than Two Million United States Dollars (USD $2,000,000) shall be submitted to a single arbitrator for resolution who will be selected in accordance with the AAA Rules of Arbitration. Any dispute in which the amount in controversy is Two Million United States Dollars (USD $2,000,000) or greater shall be submitted to a three-arbitrator panel for resolution. In such case, each party shall select an arbitrator and then the two party- appointed arbitrators shall choose one additional arbitrator who shall act as the chairman. The Award of the Arbitral Tribunal shall be binding upon the parties and conclusive to the fullest extent permitted by law. The place of any arbitration shall be in Fairfax County, Virginia. In any arbitration brought under this Agreement, the Arbitration Tribunal shall award the prevailing party its reasonable attorneys' fees and costs, including the arbitrator costs, AAA administrative fees, expert witness fees and any other fees (collectively "**Arbitration Costs**") in prosecuting or defending the action and on any appeal thereof.

12. COUNTERPARTS.

This Agreement may be executed in one or more counterparts (including facsimile), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

13. SEVERABILITY.

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and

provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14. SUCCESSORS.

This Agreement will be binding upon and inure to the benefit of Parties and their respective successors and/or permitted assigns.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed by a duly authorized representative on behalf of each Party as of the Effective Date.

MISSION INTEGRATED TECHNOLOGIES, LLC	KENNETH FOURNIER
By: _____ Timothy Clemente Manager/President	_____ Kenneth Fournier

EXHIBIT D

NON-DISCLOSURE AGREEMENT

BY AND BETWEEN

MISSION INTEGRATED TECHNOLOGIES, LLC

AND

JOSHUA CLEMENTE

THIS NON-DISCLOSURE AGREEMENT ("**Agreement**") is being executed on the date last signed below but shall be effective retroactively to the date of execution of the Mutual Non- Disclosure & Non-Circumvention Agreement dated June 6, 2013 ("**Effective Date**") because the original that was executed in 2013 cannot be located, by and between Mission Integrated Technologies, LLC ("**MIT**") with its primary offices located at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182, and Joshua Clemente ("**Joshua**") with offices located at 1129 Denfield St., Unit B, Austin, TX 78721. MIT and Joshua Clemente are referred to herein individually as a "**Party**" and collectively as the "**Parties**".

BETWEEN:

(1) **Mission Integrated Technologies, LLC** ("**MIT**") and

(2) **Joshua Clemente** ("**Joshua**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain proprietary information, including technical data, design information and project details related to MIT products, including without limitation the Articulating Rapid Entry System (ARES); b) for the Parties to evaluate and pursue projects related to the provision of build, integration, hardware and software necessary to operate the ARES where it is envisioned that Cardinal Scientific, Ibistek, Retiina, or others, will provide contract manufacturing and integration services of MIT products (the "**Stated Purpose**");

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality and proprietary nature thereof, the Parties have entered into this Agreement.

WHEREAS, Pursuant to Section 3 of the Agreement dated _____day of June, 2022 by and between Joshua, Kenneth Fournier, Timothy Clemente, F2E Holdings LLC, and MIT, this Agreement is being executed by MIT and Joshua.

NOW IT IS HEREBY AGREED AS FOLLOWS

1. CERTAIN DEFINED TERMS.

1.1. "Affiliate" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants, or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2. "Clients" means the buyers or prospective buyers of the MIT goods and/or services; other potential partner companies; suppliers, vendors, sources, contacts or other persons or entities introduced by one Party to the other.

1.3. "Confidential Information" means information whether conveyed in written, graphic, oral or physical form, including, but not limited to: Client information, contact names and

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addresses; business plans; operations or system development plans; financial projections; financial resources; marketing strategies, sales contracts; research and development; manufacturers; markets; third party agreements; strategic resources; proposed trade secrets; product ideas; product advancements or improvements along with any information related thereto, designs; configurations; processes; software; improvements to existing designs or software; data; plans and strategies; sales and financial reports or forecasts; scientific knowledge; know-how; processes; compilations; data bases; prototypes; collaborations; inventions; techniques; business strategies; notes; analyses; studies; formulae; models; concepts; design concepts; products; business operations; customer and supplier lists; business relationships; specifications; drawings; working drawings; means of implementation and manufacture; cost and pricing data; bills; ideas; software materials (including object code, source code and documentation in the form of software notes); methods of encoding; preprocessing and all other proprietary information; patent, trademark and copyright applications; patentable or unpatentable and/or copyrightable descriptions of mathematics, designs, design concepts, software and/or any other written material or verbal descriptions referring to the same; and any document, diagram, drawing, computer program, or other communication that is (A) marked "confidential" or "proprietary," (B) known or reasonably known by the Parties to be "confidential" or "proprietary", or (C) learned or disclosed in the course of discussions, studies or other work undertaken between the Parties. Notwithstanding the above, the following information shall always be treated as "Confidential Information": any compensation, expenses, reimbursements or engineering or hardware costs to be charged or paid by either Party; the existence and terms of this Agreement or any other agreement(s) between the parties; the identities of Clients or contact names; and information regarding any proposals to Clients.

1.4. "Disclosing Party" means the Party disclosing its Confidential Information to the Receiving Party or any of such other Party's Affiliates.

1.5. "Receiving Party" means the Party receiving Confidential Information of the Disclosing Party.

2. CONFIDENTIAL INFORMATION.

2.1. Confidentiality Obligations: Neither Party may disclose or use the Confidential Information of the other Party unless specifically authorized by the terms of this Agreement. A Receiving Party may disclose or use Confidential Information of the Disclosing Party only under the following conditions:

2.1.1. Except as otherwise expressly permitted to be disclosed or used pursuant to this Section 2, such Receiving Party agrees to hold in strict confidence and not directly or indirectly use or disclose to any other person or entity any Confidential Information of the Disclosing Party without the prior written permission of the Disclosing Party. Such Receiving Party understands that disclosure or use of such Confidential Information would destroy the value of such Confidential Information and cause irreparable harm to the Disclosing Party. Such Receiving Party shall use, and shall cause its Affiliates to use, at least the same level of care and protection of Confidential

Information of the Disclosing Party as such Receiving Party uses to prevent unauthorized use and unauthorized disclosure of its own Confidential Information, but in any case using no less than a reasonable standard of care.

2.1.2. Such Receiving Party will use Confidential Information of the Disclosing Party only for the Stated Purpose. For the avoidance of doubt, such Receiving Party, except as otherwise permitted by this Agreement or any other written agreement between the Parties, shall not use or otherwise utilize for its own business or benefit, or any third party's benefit, any Confidential Information of the Disclosing Party except for the Stated Purpose.

2.1.3. Such Receiving Party will use Confidential Information of the Disclosing Party in marketing and sales materials, only if such materials are to be delivered to a third party for the Stated Purpose, and only as is expressly agreed upon by the Disclosing Party.

2.1.4. Such Receiving Party will not modify the Confidential Information in any way without the prior written consent of the Disclosing Party.

2.1.5. It is specifically acknowledged that neither Joshua nor any of its Affiliates may use the Confidential Information of MIT, including without limitation technical details, design concepts, designs resulting from exchanges of information pursuant to this Agreement or otherwise, product improvements or advances resulting from the exchange of Confidential Information or pricing information to prepare and/or submit any proposal, bid, quotation or other similar offer to any Client or potential Client that would be considered competitive with or an alternative to a product or proposal submitted to a Client for the sale of MIT products and services, whether or not such proposal is submitted by Joshua, any of his Affiliates, any third party or directly by MIT.

2.2. Certain Exceptions to Confidentiality Obligations: The restrictions regarding the confidentiality of the Confidential Information of a Disclosing Party shall not apply to information that is disclosed by Receiving Party in accordance with a judicial or other governmental order provided that the Receiving Party, subject to what is permitted under the applicable law, gives the Disclosing Party reasonable notice prior to such disclosure and restricts disclosure of the Confidential Information to the extent mandatory under the order.

2.3. Return of Confidential Information: Upon the earlier of

2.3.1. completion of the Stated Purpose;

2.3.2. the request of the Disclosing Party; or

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2.3.3. the expiration or termination of this Agreement, the Receiving Party shall, and shall cause its Affiliates to discontinue use of and promptly return (or, if the Confidential Information is of such a nature that it cannot be returned, delete or destroy) all Confidential Information of the Disclosing Party, and copies thereof and all Physical Property with which it was furnished.

2.4. Ownership of Confidential Information: All Confidential Information disclosed to the Receiving Party by the Disclosing Party under this Agreement shall be and remain the property of the Disclosing Party. No licenses or rights under any registered or unregistered patent, copyright, trademark or trade secret, or application therefore, are granted to or are to be implied by this Agreement. It is specifically acknowledged without limiting any of the foregoing that any and all Confidential Information related to MIT product and services, including design, design plans, MIT product improvements, advancements, enhancements or derivatives, whether or not originating with MIT or Joshua during exchanges under this Agreement, or otherwise, shall remain at all times the sole property of MIT. At no time, shall Joshua be entitled to any rights in the Confidential Information related to MIT products or improvement, enhancements or derivatives thereof, and all concepts and designs, whether or not derived, created and implemented prior to, during or after the performance of this Agreement by either party shall be the exclusive property of MIT. Any future products or derivative technologies created based on the exchanges of Confidential Information hereunder shall at all times remain the property of MIT.

2.5. No Representations or Warranties: Each Party hereby acknowledges that neither the other Party nor any of its Affiliates makes any representation or warranty as to the accuracy or completeness of the Confidential Information disclosed by it. Neither the Disclosing Party nor any of its Affiliates shall be liable to the Receiving Party or any of its Affiliates in relation to or as a result of the Receiving Party's use of the Disclosing Party's Confidential Information, including without limitation any investment made in non-recurring engineering expenses, product research & development or other associated costs undertaken as a result of the exchange of Confidential Information pursuant to this Agreement.

3. NON-CIRCUMVENTION.

Neither Joshua nor any of his Affiliates shall contact or attempt to contact, directly or indirectly, the Clients or other entities who are part of MIT's Confidential Information on matters relating to the subject hereof or otherwise make any use of the Confidential Information, except with the express written consent of MIT. The Parties shall not disclose price, costs or other financial information to Clients, or directly deal with any Clients introduced by MIT without the express written consent of MIT, or as required by law.

4. TERM TERMINATION.

This Agreement shall be effective as of the date both Parties have signed the Agreement ("**Effective Date**"). Either Party may terminate the Agreement with respect to further disclosures upon thirty (30) days' prior written notice. However, the terms and

conditions of this Agreement shall survive for a period of five (5) years following any expiration or termination of this Agreement; provided, however, that the MIT intellectual property rights to its products and services and all other Confidential Information shall survive in perpetuity.

5. ASSIGNMENT, NO THIRD-PARTY BENEFICIARIES.

This Agreement is not assignable by either Party, whether by operation of law or otherwise, without the express prior written consent of the other Party, which consent shall not be unreasonably denied, delayed, or conditioned. Any attempt to assign the rights or obligations under this Agreement to the contrary shall be void *ab initio*. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties and their respective successors, legal representatives and permitted assigns, any rights or remedies under or by reason of this Agreement.

6. REMEDIES.

All remedies provided for in this Agreement shall be cumulative and in addition to, and not in lieu of, any other remedies available to either Party at law, in equity or otherwise. The Parties agree that monetary damages caused by breaches hereunder would be difficult to measure or inadequate and, accordingly, if a Party breaches, or proposes to breach, any portion of this Agreement, the other Party shall be entitled, in addition to all other remedies that it may have, to seek expedited relief, including a temporary restraining order or a permanent injunction, or other appropriate equitable relief to restrain any such breach.

7. SURVIVAL.

Subject to Section 4 hereof, upon the expiration of the Term or termination of this Agreement in accordance with the terms and conditions hereof, all provisions of this Agreement shall survive five (5) years following the termination or expiration of this Agreement.

8. ENTIRE AGREEMENT.

This Agreement constitutes the complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings between the Parties, whether written or oral.

9. AMENDMENT WAIVER.

This Agreement may not be amended or in any manner modified except by a written instrument signed by an authorized representative on behalf of each Party.

10. GOVERNING LAW.

This Agreement shall be governed by, interpreted under and construed in accordance with the internal substantive laws of the Commonwealth of Virginia, applicable to contracts executed and to be performed wholly within that jurisdiction without giving effect to the choice or conflict of laws principles or provision thereof that would provide for the application of the laws of any other jurisdiction.

11. ARBITRATION AND VENUE.

11.1. Arbitration. EACH OF THE PARTIES EXPRESSLY WAIVES ITS, HIS OR HER RIGHT TO A JURY TRIAL WITH RESPECT TO ANY SUIT, LITIGATION OR OTHER JUDICIAL PROCEEDING REGARDING THIS AGREEMENT OR ANY DISPUTE HEREUNDER OR RELATING HERETO.

11.2. Venue. The parties shall make a good faith effort to settle any dispute or claim arising under this Agreement. If the Parties are unable to resolve such dispute, the Parties agree that such controversy or dispute will be settled by final and binding arbitration in accordance with the Rules of Arbitration under the American Arbitration Association ("**AAA**"), as amended and in effect at the time that such demand for arbitration is filed. Any dispute in which the amount in controversy is less than Two Million United States Dollars (USD $2,000,000) shall be submitted to a single arbitrator for resolution who will be selected in accordance with the AAA Rules of Arbitration. Any dispute in which the amount in controversy is Two Million United States Dollars (USD $2,000,000) or greater shall be submitted to a three-arbitrator panel for resolution. In such case, each party shall select an arbitrator and then the two party- appointed arbitrators shall choose one additional arbitrator who shall act as the chairman. The Award of the Arbitral Tribunal shall be binding upon the parties and conclusive to the fullest extent permitted by law. The place of any arbitration shall be in Fairfax County, Virginia. In any arbitration brought under this Agreement, the Arbitration Tribunal shall award the prevailing party its reasonable attorneys' fees and costs, including the arbitrator costs, AAA administrative fees, expert witness fees and any other fees (collectively "**Arbitration Costs**") in prosecuting or defending the action and on any appeal thereof.

12. COUNTERPARTS.

This Agreement may be executed in one or more counterparts (including facsimile), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

13. SEVERABILITY.

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and

provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14. SUCCESSORS.

This Agreement will be binding upon and inure to the benefit of Parties and their respective successors and/or permitted assigns.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed by a duly authorized representative on behalf of each Party as of the Effective Date.

MISSION INTEGRATED TECHNOLOGIES, LLC By: _____ Timothy Clemente Manager/President	JOSHUA CLEMENTE _____ Joshua Clemente

EXHIBIT E

Exhibit 2

NON-DISCLOSURE AGREEMENT

BY AND BETWEEN

MISSION INTEGRATED TECHNOLOGIES, LLC AND JOSHUA CLEMENTE

THIS NON-DISCLOSURE AGREEMENT ("**Agreement**") is being executed on the date last signed below and shall be effective immediately at the date of execution ("**Effective Date**") by and between Mission Integrated Technologies, LLC ("**MIT**") with its primary offices located at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182, and Joshua Clemente ("**Joshua**") having an address located at 1129 Denfield St., Unit B, Austin, TX 78721. MIT and Joshua Clemente are referred to herein individually as a "**Party**" and collectively as the "**Parties**".

BETWEEN:

(1) Mission Integrated Technologies, LLC ("**MIT**") and

(2) Joshua Clemente ("**Joshua**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain proprietary information, including technical data, design information and project details related to MIT products, including without limitation the Articulating Rapid Entry System (ARES); b) for the Parties to evaluate and pursue projects related to the provision of build, integration, hardware and software necessary to operate the ARES where it is envisioned that Cardinal Scientific, Ibistek, Retiina, or others, will provide contract manufacturing and integration services of MIT products (the "**Stated Purpose**");

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality and proprietary nature thereof, the Parties have entered into this Agreement.

WHEREAS, Pursuant to Section 3 of the Agreement dated 21st day of June, 2022 by and between Joshua Clemente, Timothy Clemente, F2E Holdings LLC, and MIT, this Agreement is being executed by MIT and Joshua.

NOW IT IS HEREBY AGREED AS FOLLOWS

1. CERTAIN DEFINED TERMS.

1.1. "Affiliate" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants, or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2. "Clients" means the buyers or prospective buyers of the MIT goods and/or services; other potential partner companies; suppliers, vendors, sources, contacts or other persons or entities introduced by one Party to the other.

1.3. "Confidential Information" means information whether conveyed in written, graphic, oral or physical form, including, but not limited to: Client information, contact names and addresses; business plans; operations or system development plans; financial projections; financial resources; marketing strategies, sales contracts; research and development; manufacturers; markets; third party agreements; strategic resources; proposed trade secrets; product ideas; product advancements or improvements along with any information related thereto, designs; configurations; processes; software; improvements to existing designs or software; data; plans and strategies; sales and financial reports or forecasts; scientific knowledge; know-how; processes; compilations; data bases; prototypes; collaborations; inventions; techniques; business strategies; notes; analyses; studies; formulae; models; concepts; design concepts; products; business operations; customer and supplier lists; business relationships; specifications; drawings; working drawings; means of implementation and manufacture; cost and pricing data; bills; ideas; software materials (including object code, source code and documentation in the form of software notes); methods of encoding; preprocessing and all other proprietary information; patent, trademark and copyright applications; patentable or unpatentable and/or copyrightable descriptions of mathematics, designs, design concepts, software and/or any other written material or verbal descriptions referring to the same; and any document, diagram, drawing, computer program, or other communication that is (A) marked "confidential" or "proprietary," (B) known or reasonably known by the Parties to be "confidential" or "proprietary", or (C) learned or disclosed in the course of discussions, studies or other work undertaken between the Parties. Notwithstanding the above, the following information shall always be treated as "Confidential Information": any compensation, expenses, reimbursements or engineering or hardware costs to be charged or paid by either Party; the existence and terms of this Agreement or any other agreement(s) between the parties; the identities of Clients or contact names; and information regarding any proposals to Clients.

1.4. "Disclosing Party" means the Party disclosing its Confidential Information to the Receiving Party or any of such other Party's Affiliates.

1.5. "Receiving Party" means the Party receiving Confidential Information of the Disclosing Party.

2. CONFIDENTIAL INFORMATION.

2.1. Confidentiality Obligations: Neither Party may disclose or use the Confidential Information of the other Party unless specifically authorized by the terms of this Agreement. A Receiving Party may disclose or use Confidential Information of the Disclosing Party only under the following conditions:

2.1.1. Except as otherwise expressly permitted to be disclosed or used pursuant to this Section 2, such Receiving Party agrees to hold in strict confidence and not directly or indirectly use or disclose to any other person or entity any Confidential Information of the Disclosing Party without the prior written permission of the Disclosing Party. Such Receiving Party understands that disclosure or use of such Confidential Information would destroy the value of such Confidential Information and cause irreparable harm to the Disclosing Party. Such Receiving Party shall use, and shall cause its Affiliates to use, at least the same level of care and protection of Confidential Information of the Disclosing Party as such Receiving Party uses to prevent unauthorized use and unauthorized disclosure of its own Confidential Information, but in any case, using no less than a reasonable standard of care.

2.1.2. Such Receiving Party will use Confidential Information of the Disclosing Party only for the Stated Purpose. For the avoidance of doubt, such Receiving Party, except as otherwise permitted by this Agreement or any other written agreement between the Parties, shall not use or otherwise utilize for its own business or benefit, or any third party's benefit, any Confidential Information of the Disclosing Party except for the Stated Purpose.

2.1.3. Such Receiving Party will use Confidential Information of the Disclosing Party in marketing and sales materials, only if such materials are to be delivered to a third party for the Stated Purpose, and only as is expressly agreed upon by the Disclosing Party.

2.1.4. Such Receiving Party will not modify the Confidential Information in any way without the prior written consent of the Disclosing Party.

2.1.5. It is specifically acknowledged that neither the Company nor any of its Affiliates may use the Confidential Information of MIT, including without limitation technical details, design concepts, designs resulting from exchanges of information pursuant to this Agreement or otherwise, product improvements or advances resulting from the exchange of Confidential Information or pricing information to prepare and/or submit any proposal, bid, quotation or other similar offer to any Client or potential Client that would be considered competitive with or an alternative to a product or proposal submitted to a Client for the sale of MIT products and services, whether or not

such proposal is submitted by the Company, any of its Affiliates, any third party or directly by MIT.

2.2. Certain Exceptions to Confidentiality Obligations: The restrictions regarding the confidentiality of the Confidential Information of a Disclosing Party shall not apply to information that is disclosed by Receiving Party in accordance with a judicial or other governmental order provided that the Receiving Party, subject to what is permitted under the applicable law, gives the Disclosing Party reasonable notice prior to such disclosure and restricts disclosure of the Confidential Information to the extent mandatory under the order.

2.3. Return of Confidential Information: Upon the earlier of

2.3.1. completion of the Stated Purpose;

2.3.2. the request of the Disclosing Party; or

2.3.3. the expiration or termination of this Agreement, the Receiving Party shall, and shall cause its Affiliates to discontinue use of and promptly return (or, if the Confidential Information is of such a nature that it cannot be returned, delete or destroy) all Confidential Information of the Disclosing Party, and copies thereof and all Physical Property with which it was furnished.

2.4. Ownership of Confidential Information: All Confidential Information disclosed to the Receiving Party by the Disclosing Party under this Agreement shall be and remain the property of the Disclosing Party. No licenses or rights under any registered or unregistered patent, copyright, trademark or trade secret, or application, therefore, are granted to or are to be implied by this Agreement. It is specifically acknowledged without limiting any of the foregoing that any and all Confidential Information related to MIT product and services, including design, design plans, MIT product improvements, advancements, enhancements or derivatives, whether or not originating with MIT or the Company during exchanges under this Agreement, or otherwise, as shall remain at all times the sole property of MIT. At no time, shall the Company be entitled to any rights in the Confidential Information related to MIT products or improvement, enhancements or derivatives thereof, and all concepts and designs, whether or not derived, created and implemented prior to, during or after the performance of this Agreement by either party shall be the exclusive property of MIT. Any future products or derivative technologies created based on the exchanges of Confidential Information hereunder shall at all times remain the property of MIT.

2.5. No Representations or Warranties: Each Party hereby acknowledges that neither the other Party nor any of its Affiliates makes any representation or warranty as to the accuracy or completeness of the Confidential Information disclosed by it. Neither the Disclosing Party nor any of its Affiliates shall be liable to the Receiving Party or any of its Affiliates in relation to or as a result of the Receiving Party's use of the Disclosing Party's Confidential Information, including without limitation any investment made in non-recurring engineering expenses, product research & development or other associated costs undertaken as a result of the exchange of Confidential Information pursuant to this Agreement.

3. NON-CIRCUMVENTION.

Neither the Company nor any of its Affiliates shall contact or attempt to contact, directly or indirectly, the Clients or other entities who are part of MIT's Confidential Information on matters relating to the subject hereof or otherwise make any use of the Confidential Information, except with the express written consent of MIT. The Parties shall not disclose price, costs or other financial information to Clients, or directly deal with any Clients introduced by MIT without the express written consent of MIT, or as required by law.

4. TERM TERMINATION.

This Agreement shall be effective as of the date both Parties have signed the Agreement ("**Effective Date**"). Either Party may terminate the Agreement with respect to further disclosures upon thirty (30) days' prior written notice. However, the terms and conditions of this Agreement shall survive for a period of five (5) years following any expiration or termination of this Agreement; provided, however, that the MIT intellectual property rights to its products and services and all other Confidential Information shall survive in perpetuity.

5. ASSIGNMENT, NO THIRD-PARTY BENEFICIARIES.

This Agreement is not assignable by either Party, whether by operation of law or otherwise, without the express prior written consent of the other Party, which consent shall not be unreasonably denied, delayed, or conditioned. Any attempt to assign the rights or obligations under this Agreement to the contrary shall be void *ab initio*. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties and their respective successors, legal representatives and permitted assigns, any rights or remedies under or by reason of this Agreement.

6. REMEDIES.

All remedies provided for in this Agreement shall be cumulative and in addition to, and not in lieu of, any other remedies available to either Party at law, in equity or otherwise. The Parties agree that monetary damages caused by breaches hereunder would be difficult to measure or inadequate and, accordingly, if a Party breaches, or proposes to breach, any portion of this Agreement, the other Party shall be entitled, in addition to all other remedies that it may have, to seek expedited relief, including a temporary restraining order or a permanent injunction, or other appropriate equitable relief to restrain any such breach.

7. SURVIVAL.

Subject to Section 4 hereof, upon the expiration of the Term or termination of this Agreement in accordance with the terms and conditions hereof, all provisions of this Agreement shall survive five (5) years following the termination or expiration of this Agreement.

8. ENTIRE AGREEMENT.

This Agreement constitutes the complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings between the Parties, whether written or oral.

9. AMENDMENT WAIVER.

This Agreement may not be amended or in any manner modified except by a written instrument signed by an authorized representative on behalf of each Party.

10. GOVERNING LAW.

This Agreement shall be governed by, interpreted under and construed in accordance with the internal substantive laws of the Commonwealth of Virginia, applicable to contracts executed and to be performed wholly within that jurisdiction without giving effect to the choice or conflict of laws principles or provision thereof that would provide for the application of the laws of any other jurisdiction.

11. ARBITRATION AND VENUE.

11.1. Arbitration. EACH OF THE PARTIES EXPRESSLY WAIVES ITS, HIS OR HER RIGHT TO A JURY TRIAL WITH RESPECT TO ANY SUIT, LITIGATION OR OTHER JUDICIAL PROCEEDING REGARDING THIS AGREEMENT OR ANY DISPUTE HEREUNDER OR RELATING HERETO.

11.2. Venue. The parties shall make a good faith effort to settle any dispute or claim arising under this Agreement. If the Parties are unable to resolve such dispute, the Parties agree that such controversy or dispute will be settled by final and binding arbitration in accordance with the Rules of Arbitration under the American Arbitration Association ("**AAA**"), as amended and in effect at the time that such demand for arbitration is filed. Any dispute in which the amount in controversy is less than Two Million United States Dollars (USD $2,000,000) shall be submitted to a single arbitrator for resolution who will be selected in accordance with the AAA Rules of Arbitration. Any dispute in which the amount in controversy is Two Million United States Dollars (USD $2,000,000) or greater shall be submitted to a three-arbitrator panel for resolution. In such case, each party shall select an arbitrator and then the two party- appointed arbitrators shall choose one additional arbitrator who shall act as the chairman. The Award of the Arbitral Tribunal shall be binding upon the parties and conclusive to the fullest extent permitted by law. The place of any arbitration shall be in Fairfax County, Virginia. In any arbitration brought under this Agreement, the Arbitration Tribunal shall award the prevailing party its reasonable attorneys' fees and costs, including the arbitrator costs, AAA administrative fees, expert witness fees and any other fees (collectively "**Arbitration Costs**") in prosecuting or defending the action and on any appeal thereof.

12. COUNTERPARTS.

This Agreement may be executed in one or more counterparts (including facsimile), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

13. SEVERABILITY.

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14. SUCCESSORS.

This Agreement will be binding upon and inure to the benefit of Parties and their respective successors and/or permitted assigns.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed by a duly authorized representative on behalf of each Party as of the Effective Date.

MISSION INTEGRATED TECHNOLOGIES, LLC By: _____ Timothy Clemente Manager/President	JOSHUA CLEMENTE DocuSigned by: Josh Clemente 1CE3B6C21835544C Joshua Clemente

EXHIBIT F

AGREEMENT

This Agreement ("**Agreement**") is entered into as of the 27 day of July, 2022 ("**Effective Date**"), by and between Joshua Clemente, ("**Joshua**"), having an address at 1129 Denfield St., Unit B, Austin, TX 78721, Timothy Clemente, ("**Timothy**"), having an address at 150 Rustic Road, Fredericksburg, Virginia 22405, F2E Holdings LLC, ("**F2E**"), having an address at 4094 Majestic Lane, Suite 355, Fairfax, VA 22033, Kenneth Fournier, ("**Kenneth**"), having an address at 13701 Riverside Drive, Suite 500, Sherman Oaks, CA 91423, and Mission Integrated Technologies, LLC, ("**Company**"), having an address at 1934 Old Gallows Rd., Suite 402, Vienna, VA 22182 (each a "**Party**" and, collectively, "**Parties**").

RECITALS

A. The Company engages in the business of designing, manufacturing, marketing, and distributing vehicle-mounted elevated access systems. The vehicle-mounted elevated access system patent issued by, and registered with, the United States Patent and Trademark Office ("**USPTO**"), on November 16, 2021, with Patent Number 11,174,677 B2 (the "**Patent**"), listed Joshua as the sole applicant and owner of the Patent. Joshua has agreed to assign all of his rights in or to the Patent to the Company.

B. To preserve the confidentiality of the Company's intellectual property and information, Joshua and Kenneth have each executed with the Company a Non-Disclosure Agreement dated June 6, 2013. Because the signed original Non-Disclosure Agreements cannot be located, Joshua, Kenneth, and the Company have agreed to re-execute a Non-Disclosure Agreement having substantially the same terms, with a retroactive effective date of June 6, 2013.

C. Joshua is erroneously identified as Vice President of Engineering on the Company's website even though he does not hold any offices with the Company. In order to correct this mistake, the Company will update its website and Joshua has agreed to execute an acknowledgment and disclaimer of any authority on behalf of the Company.

D. Kenneth is erroneously identified as Director of Operations on the Company's website even though he does not hold any offices with the Company. In order to correct this mistake, the Company will update its website and Kenneth has agreed to execute an acknowledgment and disclaimer of any authority on behalf of the Company.

D. Timothy is one of the members of the Company. Timothy agreed, pursuant to that Unanimous Written Consent of the Members of the Company dated April 20, 2017, that, as a result of the advancement of certain capital contributions by F2E for the benefit of Timothy, the resulting membership structure of the Company is as follows: Timothy owning nineteen (19) units, representing a 19% membership interest in the Company, and F2E owning 81 units, representing an 81% membership interest in the Company.

E. Timothy will transfer six (6) of his units, representing a 6% membership interest in the Company, to Kenneth. Upon completion of this transfer, the membership structure of the Company will be as follows: Timothy owning thirteen (13) units, representing a 13% membership

interest in the Company, Kenneth owning six (6) units, representing a 6% membership interest in the Company, and F2E owning 81 units, representing an 81% membership interest in the Company; provided, however, the membership interest of Kenneth shall be solely an economic interest in the Company wherein he shall have, to the maximum extent permitted by law, no rights to vote on any matter whatsoever, no right to access any of the books and records of the Company, no rights to receive any information otherwise available to members of an LLC (other than a K-1), and only such information as the Company shall deem appropriate in the Company's absolute discretion.

NOW, THEREFORE, for $10.00 and other good and valuable consideration, in consideration of the mutual covenants, terms, and conditions set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of all of which is fully and hereby acknowledged:

1. Incorporation of Recitals. The foregoing recitals are true and correct and are incorporated herein by this reference as if stated at length.

2. Assignment of Patent and other Intellectual Property Rights.

(a) *Assignment.* Joshua and Kenneth transfer, at their cost, to the Company, all rights, title, and interest Joshua and/or Kenneth may have or claim, in and to, any and all intellectual property relating, directly or indirectly, to vehicle-mounted elevated access systems or the business of the Company including, without limitation, patents, trademarks, copyrights, trade secrets, writings, technology, inventions, discoveries, designs, processes, techniques, methods, ideas, concepts, research, proposals, materials, customers and vendors lists, business ideas, and all other creations of the human mind and work product of any nature whatsoever, regardless of registration or registrability, that is or was created, prepared, produced, authored, edited, amended, conceived, or reduced to practice by Joshua and/or Kenneth, solely or jointly with others, directly or indirectly, regardless of when or where the work product was prepared, or whose equipment or other resources were used in preparing the same, all rights and claims related to the foregoing, and all printed, physical, and electronic copies, and other tangible embodiments thereof, relating to vehicle mounted elevated access systems, whether hydraulic, electric, fixed, removable, or any other type of system related thereto, including, without limitation, the ARES system, the system identified in the Patent, and any predecessors, successors, or modifications thereto (collectively, "**Assigned Intellectual Property**"). In addition, the Company may add or change the inventor information as it deems appropriate based upon inventor(s) substantial contribution to claims within the Patent.

(b) *Representations and Warranties of Joshua.* Joshua represents and warrants that: (i) he is the record owner of the Assigned Intellectual property, and all registrations issued in connection therewith are valid, subsisting, and in full force and effect; (ii) he has not granted and will not grant any licenses, liens, security interests, or other encumbrances in, to, or under, the Assigned Intellectual Property; (iii) the use of the Assigned Intellectual Property and the exercise by Company of the rights granted under this Agreement will not infringe or otherwise conflict with the rights of any other person or entity; (iv) there is no settled, pending, or, to Joshua's knowledge formed after diligent inquiry, threatened, litigation, opposition, or other claim or proceeding

challenging the validity, enforceability, ownership, registration, or use of any Assigned Intellectual Property; (v) he has not brought or threatened any claim against any third party alleging infringement of any Assigned Intellectual Property, nor, to his knowledge formed after diligent inquiry, is there any third party infringing or threatening to infringe any Assigned Intellectual Property; and (vi) he has not filed any applications for registration of any Assigned Intellectual Property with the USPTO or with any corresponding office in any jurisdiction in the world other than the Patent.

(c) *Representations and Warranties of Kenneth*. Kenneth represents and warrants that: (i) he has not granted and will not grant any licenses, liens, security interests, or other encumbrances in, to, or under, the Assigned Intellectual Property; (ii) the use of the Assigned Intellectual Property and the exercise by Company of the rights granted under this Agreement will not infringe or otherwise conflict with the rights of any other person or entity; (iii) there is no settled, pending, or, to Kenneth's knowledge formed after diligent inquiry, threatened, litigation, opposition, or other claim or proceeding challenging the validity, enforceability, ownership, registration, or use of any Assigned Intellectual Property; (v) he has not brought or threatened any claim against any third party alleging infringement of any Assigned Intellectual Property, nor, to his knowledge formed after diligent inquiry, is there any third party infringing or threatening to infringe any Assigned Intellectual Property; and (vi) he has not filed any applications for registration of any Assigned Intellectual Property with the USPTO or with any corresponding office in any jurisdiction in the world.

(d) *Absolute Conveyance*. The conveyance of Joshua's and Kenneth's right, title, and interest referenced in this Section 2 is an absolute transfer to the Company, free and clear of all liens and restrictions, and it is effective immediately upon execution of this Agreement.

(e) *Execution of Documents*. In furtherance of their obligations set forth in this Section 2, Joshua and Kenneth agree to execute such documents as deemed reasonably necessary by the Company including, without limitation, Joshua's execution of the Recordation Form Cover Sheet attached hereto as Exhibit 1, and the Assignment Agreement in the form attached hereto as Exhibit 2.

3. Non-Disclosure Agreement.

(a) *Representations and Warranties*. Joshua and Kenneth represent and warrant that: (i) the Non-Disclosure Agreement dated June 6, 2013, was fully executed by them and the Company; and (ii) the executed version of the Non-Disclosure Agreement was subsequently lost.

(b) *Waiver*. Joshua and Kenneth hereby expressly, knowingly, and irrevocably waive any right, claim, counterclaim, defense, or allegation, based, in whole or in part on the principle that: (i) the loss of the original Non-Disclosure Agreement voided the provisions thereof or otherwise released them from their confidentiality obligations; (ii) at any time since June 6, 2013, they have not been bound by the provisions of the Non-Disclosure Agreement; (iii) the Non-Disclosure Agreement attached hereto as Exhibit 3 is unenforceable by virtue of its retroactive effective date, the lack of adequate or "fresh" consideration, or otherwise.

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(c) *Execution of Documents*. In furtherance of their obligations set forth in this Section 3, Joshua and Kenneth agree that they will execute the Non-Disclosure Agreement with a retroactive effective date to replace the lost original as set forth in Exhibit 3.

4. Incorrect Officer Status.

(a) *Disclaimer of all Authority*. Joshua and Kenneth acknowledge and agree that they do not hold, and have never held, any office or authority to act by, in the name, or on behalf of, the Company, in any capacity. To the extent that either of them is deemed to have any implied authority, Joshua and Kenneth disclaim it.

(b) *Representations and Warranties*. Joshua and Kenneth represent and warrant that: (i) they are not, and have never been, officers, directors, representatives, or agents of the Company; and (ii) they have never undertaken any action, or incurred any obligation, on behalf of, or purportedly on behalf of, the Company, except only for the fact that Joshua was authorized by Timothy to sign a contract with 21 Century on behalf of the Company.

(c) *Execution of Documents*. In furtherance of their obligations set forth in this Section 4, Joshua and Kenneth agree that they will execute the Affidavit of Non-Authority attached hereto as Exhibit 4.

5. Transfer of Membership Interest from Timothy to Kenneth.

(a) *Assignment*. Timothy agrees to transfer, at his cost, six (6) units, representing a 6% membership interest in the Company, to Kenneth (the "Assigned Units"). Upon completion of these transfers, the membership structure of the Company will be as follows: Timothy owning thirteen (13) units, representing a 13% membership interest in the Company; Kenneth owning six (6) units, representing a 6% membership interest in the Company; and F2E owning 81 units, representing a 81% membership interest in the Company; provided, however, the membership interest of Kenneth shall be solely an economic interest in the Company wherein he shall have, to the maximum extent permitted by law, no rights to vote on any matter whatsoever, no right to access any of the books and records of the Company, no rights to receive any information otherwise available to members of an LLC (other than a K-1), and only such information as the Company shall deem appropriate in the Company's absolute discretion, and that this limitation shall be deemed incorporated into, and part of, the Operating Agreement of the Company, which may be amended in the future to explicitly incorporate this limitation.

(b) *Representations and Warranties of Timothy*. Timothy represents and warrants that: (i) he is the record owner of the Assigned Units; (ii) he has not granted and will not grant any licenses, liens, security interests, or other encumbrances in, to, or under, the Assigned Units; (iii) the transfer of the Assigned Units will not infringe or otherwise conflict with the rights of any other person or entity; (iv) there is no settled, pending, or, to Timothy's knowledge formed after diligent inquiry, threatened, litigation, opposition, or other claim or proceeding challenging the validity, enforceability, ownership, or rights in, the Assigned Units; and (v) he has not brought or threatened any claim against any third party alleging any claim in connection with the Assigned

Units, nor, to his knowledge formed after diligent inquiry, is there any third party against whom any such claim may be asserted.

(c) *Absolute Conveyance.* The conveyance of Timothy's right, title, and interest referenced in this Section 5 is an absolute transfer to Kenneth, free and clear of all liens and restrictions, provided, however, that no rights to access the books and records or other information, or voting rights, shall be conveyed to the transferee and all such untransferred rights associated with the Assigned Units are terminated.

(d) *Execution of Documents*. In furtherance of his obligations set forth in this Section 5, Timothy agrees to execute the Assignment of Membership Interest attached hereto as Exhibit 5.

(e) *Reliance by the Company*. The Company shall be entitled to (i) rely conclusively and without investigation upon the truth of the foregoing representations; and (ii) to record in its books and records the transfer of the Assigned Units as described in this Section 5 without any liability for any inaccuracies or errors resulting therefrom.

6. Additional Representations and warranties by Joshua, Timothy and Kenneth. Joshua, Timothy and Kenneth, jointly and severally, represent and warrant that: (i) none of them has ever promised to any third-party any equity or other interest in the Company or incurred any liability on behalf of the Company; (ii) prior to the execution of this Agreement, they have turned over all copies of Confidential Information of the Company, including all information relating to the Assigned Intellectual Property (including any information about the ARES system and including specifically, but not limited to, all design development and manufacturing information in any form from 21 Century, Cardinal Scientific, IBES TEK, and Exper and Wulco, Inc.) to the Company; (iii), after such information has been turned over, they have destroyed or erased any electronic copies in their possession in any format whatsoever; (iv) they have not shared any Assigned Intellectual Property not in the public domain with any third party; and (v) all representations contained herein are true, complete, and correct, and there are no facts or circumstances known, or which reasonably should be known, to Joshua, Timothy or Kenneth, which would need to be disclosed to render any of the foregoing representations and warranties not misleading.

7. Indemnification.

(a) *Joshua, Kenneth, and Timothy Indemnification*. Joshua, Kenneth, and Timothy, jointly and severally ("**Indemnitors**"), shall indemnify, defend, and hold harmless the Company, and each of their respective officers, directors, employees, agents, affiliates, successors, and permitted assigns (collectively, "**Indemnified Parties**"), from and against any and all losses, damages, liabilities deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs, or expenses of whatever kind, including attorneys' fees and court costs at all court levels, (collectively, "**Losses**"), arising out of or related to any claim arising in whole or in part in connection with:

(i) The inaccuracy, incompleteness, breach, or non-fulfillment of each Indemnitor's respective representations, warranties, or covenants, of this Agreement, or the failure to fully and timely perform hereunder;

(ii) Any negligent or more culpable act or omission of an Indemnitor (including any reckless or willful misconduct) in connection with the performance of its obligations under this Agreement; or

(iii) Any failure by an Indemnitor to comply with any applicable federal, state, or local, laws, regulations, or codes, in the performance of their obligations under this Agreement.

(b) *Indemnified Parties' Control of Defense and Advancement.* Notwithstanding anything to the contrary in this Section 7, each Indemnified Party may select its own legal counsel to represent its interests, and Indemnitors shall reimburse the Indemnified Party for its Losses immediately upon request by the Indemnified Party.

(c) *No Settlement of Indemnified Claims by Indemnitors.* Indemnitors may not, without the Indemnified Parties' prior written consent, settle or compromise any claim or consent to the entry of any judgment regarding which indemnification is being sought hereunder.

(d) *Security.* As security for the full and timely performance of all of their obligations hereunder, as well as in connection with the indemnification of any Losses, Timothy and Kenneth hereby grant to the Company a first priority security interest in and to their Units in the Company ("**Collateral**"). The Company may, at its option, elect to satisfy any indemnity obligation hereunder by executing on the Collateral, including by automatically redeeming the Collateral. Any such redemption shall be self-executing and, to the maximum extent permitted by law, shall not require a judicial determination, auction sale, or foreclosure.

8. Further Assurances. At any time after the Effective Date, Joshua, Kenneth, and Timothy shall, within ten (10) days of request by the Company or F2E, execute and deliver such further documents and agreements and take such further actions as the Company reasonably deems necessary or appropriate to permit each transaction contemplated in this Agreement and its Exhibits to be consummated in accordance with the provisions hereof and thereof, and to perfect, preserve, protect, and continue all liens, security interests, and rights of the Company under this Agreement and the Exhibits, as well as any other documents executed, delivered, and/or filed in connection herewith, and/or agreements supplementing, extending or otherwise modifying the foregoing. As security for the performance of each Party's respective obligations hereunder, each Joshua, Kenneth, Timothy, and the Company, herein irrevocably with full power of substitution, constitutes and appoints F2E as attorney-in-fact, such appointment being coupled with an interest, with the right to enforce F2E's and the Company's rights with respect to the above further assurances. In addition, Timothy shall immediately provide to F2E, in a manner requested by F2E, all usernames, passwords, and any necessary access credentials, for all domains, email accounts, social media accounts, domain registration accounts, and any other password protected accounts related to the Company, including, without limitation, for "mit.technology".

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9. Confidentiality.

(a) *Definitions*. "**Confidential Business Information**" is all information, whether compiled and/or stored by electronic, mechanical, or manual means, that relates to the business of the Company or any of its partners, affiliates, parents or subsidiaries, managers, directors, employees or agents, as individuals or entities (collectively, "**Related Persons**"). Confidential Business Information includes, but is not limited to: copyrights, patents (including the Patent), any accessories to the ARES system, trademarks, trade secrets, business interests, strategies, designs, formulas, recipes, customers, suppliers, or products, or any item, document, or communication labelled as "confidential" similarly designated or directly related to the design, development and manufacturing of the ARES system from any of the Company's contractors whether marked "confidential" or not, or regarding or including any of the foregoing; all of which is acquired, created, licensed or otherwise used by, or on behalf of, the Company or its Related Persons, and that may be found in forms including, but not limited to files, correspondence, ledgers, photographs, videos, sound recordings, statistics, and analyses. For the avoidance of doubt, this Agreement shall constitute Confidential Business Information.

(b) *Ownership of Confidential Business Information*. Joshua, Kenneth, and Timothy agree that all Confidential Business Information is and shall remain, at all times, the sole property of the Company, regardless of Joshua's, Kenneth's, or Timothy's past use of said Confidential Business Information, and regardless of Joshua's, Kenneth's, or Timothy's involvement, if any, in the creation or acquiring of the Confidential Business Information.

(c) *No Unauthorized Disclosure or Reproduction*. Joshua, Kenneth, and Timothy shall not retain copy, duplicate, use, disclose, make available to any individual or entity, or remove from the Company's premises, any Confidential Business Information, in whole or in part, directly or indirectly, for any purpose, except with the express authorization of a majority of the membership interests in the Company in writing. Should Confidential Business Information come into the possession of Joshua, Kenneth, and / or Timothy through no fault of their own, each of them shall protect and safeguard the confidentiality of the Confidential Business Information with at least the same degree of care as Joshua, Kenneth, or Timothy would use to protect their own Confidential Business Information, but in no event with less than a commercially reasonable degree of care. Further, Joshua, Kenneth, and Timothy shall not use Confidential Business Information, or permit it to be accessed or used, for any purpose other than to exercise their rights or perform their obligations under this Agreement.

(d) *Continuing Obligation*. Joshua, Kenneth, and Timothy understand and agree that their obligations under this section of the Agreement would continue indefinitely for the maximum amount of time permitted under applicable law, and in any event for no less than three (3) years from the receipt in their possession or under their control of any Confidential Business Information, whichever is longer. Upon termination of the confidentiality provisions of this Agreement, all Confidential Business Information shall remain the sole property of the Company and shall remain in, or, if not already in the sole possession, custody, and control of the Company, be returned to, the undisputed possession, custody, and control of the Company.

10. Remedies.

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(a) *Injunctive Relief.* Joshua, Kenneth, and Timothy acknowledge that the Restrictive Covenants set forth in this Agreement are of a special, unique, and extraordinary character; they are reasonable; they are not contrary to the public policy, health, safety, or welfare; and the failure to enforce such covenants will result in irreparable injury to the Company. The Parties agree and consent that if any of Joshua, Kenneth, or Timothy violates, breaches, or attempts to violate or breach the provisions of this Agreement, the Company will not have an adequate remedy at law and the Company, in addition to any other rights and remedies available under this Agreement or otherwise, shall be entitled to such equitable and injunctive relief as may be available to restrain Joshua, Kenneth, or Timothy from the violation or continued violation of this Agreement, without the need to post a bond or other security. Said equitable or injunctive relief can be sought in any court having equitable jurisdiction over Joshua, Kenneth, or Timothy without prejudice to other methods of dispute resolution as may be agreed upon by the Parties. Joshua, Kenneth and Timothy further expressly and irrevocably waive any objection or defense based on the Company's failure to post a bond or security, the availability of an adequate remedy at law, or the absence of irreparable harm. If a bond is nonetheless required by a court or other tribunal of competent jurisdiction, the Parties acknowledge and agree that a bond in the amount of five thousand dollars ($5,000) is fair and sufficient. In addition to equitable relief, the Company shall have the right to attorneys' fees, and court costs at both trial and all appellate levels. The Company shall also have the right to recover any profits obtained by Joshua, Kenneth, or Timothy in violation of this Agreement as well as to seek specific performance of this Agreement.

(b) *Cumulative Remedies.* All rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either Party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, in equity, by statute, in any other agreement between the Parties, or otherwise.

11. Miscellaneous.

(a) *Governing Law; Venue; Jurisdiction.* This Agreement shall be governed and enforced in accordance with Delaware law, regardless of any conflict of law rules. Exclusive venue and jurisdiction for any dispute relating to this Agreement, the transactions contemplated hereby, and the relationship of the Parties hereto, shall be in the state and federal courts located in, or for, Fairfax County, Virginia, and each Party submits to the jurisdiction of said courts, consents to the laying of venue therein, and waives any objection or contest thereto.

(b) *Interpretation.* In this Agreement, each gender and number shall include all genders and numbers, as the context requires. Headings are for convenience only and do not affect interpretation. This Agreement shall be deemed to have been jointly drafted, and ambiguities in this Agreement shall not be resolved against the Party primarily responsible for its drafting.

(c) *Entire Agreement; Amendment; Waivers.* This Agreement, together with any exhibits and attachments hereto, constitutes the entire agreement of the Parties regarding the subject matter hereof, is fully integrated, and supersedes all prior and contemporaneous understandings, written or oral, regarding said subject matter. The terms of this Agreement may not be amended, and the rights and obligations of the Parties hereunder may not be waived, except

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in writing signed by both Parties. Any such written waiver shall be valid only for the specific right and in the specific circumstances set forth in writing in the waiver.

(d) *Third-Parties*. This Agreement is intended to benefit only the Parties hereto, and each of their respective successors and permitted assigns.

(e) *WAIVER OF JURY TRIAL*. EACH PARTY IRREVOCABLY AND KNOWINGLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY PROCEEDINGS ARISING OUT OF, OR IN CONNECTION WITH, THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER, OR THE RELATIONSHIP OF THE PARTIES HERETO.

(f) *Counterparts*. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed one and the same agreement. A signed copy of this Agreement delivered by electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

(g) *Reimbursement of Out-of-Pocket Expenses for Legal Fees and Software Development Cost*. Joshua represents that he has incurred up to $40,000 in costs on behalf of the Company, comprising of up to $30,000 paid for software development to "21st Century" in connection with ARES system, as well as an additional up to $10,000 for legal fees in connection with the Patent. In connection with the legal fees, Joshua shall provide billing records for any work done in connection with the Patent. The billing records, engagement letters, and any other relevant documentation will be subject to a review to F2E's satisfaction before any costs are reimbursed. Upon providing receipts to the Company and such other documentation/evidence as is required by F2E and the Company for said expenses, the Company shall proportionally reimburse Joshua for said expenses at the time of LLC distributions, subject to any limitations in, and in accordance with, the Operating Agreement of the Company.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have caused this Agreement to become effective on the date first written above.

JOSHUA CLEMENTE _____ Joshua Clemente TIMOTHY CLEMENTE _____ Timothy Clemente KENNETH FOURNIER _____ Kenneth Fournier	MISSION INTEGRATED TECHNOLOGIES, LLC By: _____ Timothy Clemente, Manager/President F2E HOLDINGS, LLC By: _____ Fahmi Alubbad, Manager

Exhibit 1

(Patent Recordation Form)

Exhibit 2

(Joshua IP Assignment)

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This Intellectual Property Assignment Agreement ("**IP Assignment**") is made pursuant and entered into as of the date of the last signature set forth below, between Joshua Clemente, an individual having an address at 1129 Denfield St., Unit B, Austin, TX 78721 ("**Assignor**") and Mission Integrated Technologies, LLC, a Delaware limited liability company having its principal place of business at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182 ("**Assignee**") (each a "**Party**" and collectively, the "**Parties**").

RECITALS

WHEREAS, Assignor states, represents, and warrants that he is the sole and exclusive title owner of all rights, title, and interest in and to the intellectual property set forth in Exhibit A hereto (collectively, the "**IP**");

NOW, THEREFORE, for $10.00 and other good and valuable consideration, in consideration of the mutual covenants, terms, and conditions set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of all of which is fully and hereby acknowledged:

1. Assignment. Assignor irrevocably conveys, transfers, and assigns to Assignee, and Assignee accepts, all of Assignor's rights, title, and interest in and to the following:

(a) The IP set forth in Exhibit A hereto, including pending applications and all issuances, extensions, and renewals thereof, together with the goodwill of the business connected with the use thereof, and symbolized thereby;

(b) All rights of any kind whatsoever of Assignor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world;

(c) Any and all royalties, fees, income, payments, and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and

(d) Any and all claims and causes of actions with respect to any of the foregoing, whether accruing before, on, or after the date hereof, including all rights and claims for damages, restitution, and injunctive and other legal and equitable relief for past, present, and future infringement, dilution, misappropriation, violation, misuse, breach, or default with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

JBC

(e) All patents, rights to inventions, copyright and related rights, trademarks, business names and domain names, rights in get-up, goodwill, and the right to sue for passing off, rights in designs, database rights, rights to use, and protect the confidentiality of, confidential information (including know-how) and all other intellectual property rights, including moral rights, if any, in each case whether registered or unregistered and including all applications and rights to apply for and be granted, renewals or extensions of, and rights to claim priority from, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world.

2. Recordation and Further Actions. Assignor hereby authorizes the United States Patent and Trademark Office and the officials of corresponding entities or agencies in any applicable jurisdiction to record and register this IP Assignment upon request by Assignee. Following the date hereof upon Assignee's reasonable request and at Assignee's sole cost and expense, Assignor shall take such steps and actions, and provide such cooperation and assistance to Assignee and its successors, assigns, and legal representatives, including the execution and delivery of any affidavits, declarations, oaths, exhibits, assignments, powers of attorney, or other documents, as may be reasonably necessary to effect, evidence, or perfect Assignee's rights to the IP as provided hereunder.

3. Representation and Warranties.

(a) Mutual. Each Party represents and warrants to the other that: (i) if an entity, it is duly organized, validly existing, and in good standing under the laws of its jurisdiction of incorporation or organization; and if a natural person, he/she is over the age of eighteen or is otherwise *sui juris*, and he/she is competent to enter into and be bound by this IP Assignment; (ii) it has the full right, power, and authority to enter into this IP Assignment and to perform its obligations hereunder; (iii) if an entity, the execution of this IP Assignment by its representative whose signature is set forth at the end hereof has been duly authorized by all necessary actions; and (iv) when executed and delivered by the other Party, this IP Assignment shall constitute the legal, valid, and binding obligation of the first Party, enforceable against such Party in accordance with its terms.

(b) *By Assignor*. The Assignor represents and warrants to Assignee that: (i) he is the record owner of the IP set forth in Exhibit A, and all registrations issued in connection therewith are valid, subsisting, and in full force and effect; (ii) he has not granted and will not grant any licenses, liens, security interests, or other encumbrances in, to, or under, the IP; (iii) the use of the IP and the exercise by Assignee of the rights granted under this IP Assignment will not infringe or otherwise conflict with the rights of any other Person; (iv) there is no settled, pending, or, to its knowledge, threatened litigation, opposition, or other claim or proceeding challenging the validity, enforceability, ownership, registration, or use of any IP; (v) he has not brought or threatened any claim against any third party alleging infringement of any IP, nor, to its knowledge, there is no third party infringing or threatening to infringe any IP; and (vi) the Assignor warrants and represents that he has not filed any other patent applications related to this patent with the USPTO, and to the extent that he has, he grants a power of attorney to Assignee or any of its officers or designees to convey and transfer any other applications and/or registrations.

4. Miscellaneous

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(a) Governing Law; Venue; Jurisdiction. This IP Assignment shall be governed and enforced in accordance with Delaware law, regardless of any conflict of law rules. Exclusive venue and jurisdiction for any dispute relating to this IP Assignment, the transactions contemplated hereby, and the relationship of the Parties hereto, shall be in the state and federal courts located in, or for, Fairfax County, Virginia, and each Party submits to the jurisdiction of said courts, consents to the laying of venue therein, and waives any objection or contest thereto.

(b) Interpretation. In this IP Assignment, each gender and number shall include all genders and numbers, as the context requires. Headings are for convenience only and do not affect interpretation. This IP Assignment shall be deemed to have been jointly drafted, and ambiguities in this IP Assignment shall not be resolved against the Party primarily responsible for its drafting.

(c) Entire Agreement; Amendment; Waivers. This IP Assignment, together with any exhibits and attachments hereto, constitutes the entire agreement of the Parties regarding the subject matter hereof, is fully integrated, and supersedes all prior and contemporaneous understandings, written or oral, regarding said subject matter. The terms of this IP Assignment may not be amended, and the rights and obligations of the Parties hereunder may not be waived, except in writing signed by both Parties. Any such written waiver shall be valid only for the specific right and in the specific circumstances set forth in writing in the waiver.

(d) Third-Parties. This IP Assignment is intended to benefit only the Parties hereto, and each of their respective successors and permitted assigns.

(e) WAIVER OF JURY TRIAL. EACH PARTY IRREVOCABLY AND KNOWINGLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY PROCEEDINGS ARISING OUT OF, OR IN CONNECTION WITH, THIS IP ASSIGNMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER, OR THE RELATIONSHIP OF THE PARTIES HERETO.

(f) Counterparts. This IP Assignment may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed one and the same agreement. A signed copy of this IP Assignment delivered by electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this IP Assignment.

[SIGNATURE PAGE FOLLOWS]

JAC / KCS

IN WITNESS WHEREOF, the Parties have caused this IP Assignment to become effective as of the date of the last signature set forth below.

ASSIGNOR:

JOSHUA CLEMENTE

Joshua Clemente

ASSIGNEE:

MISSION INTEGRATED TECHNOLOGIES, LLC

By: _____
Timothy Clemente
Manager/President

EXHIBIT A

IP Type	IP Specimen or Description	USPTO Serial/Reg. Number	Application Filing Date	Registration Date
Patent	ARES Patent	Patent No. 11,174,677 B2	11-19-2019	11-16-2021

Exhibit 3

(NDA's)

NON-DISCLOSURE AGREEMENT

BY AND BETWEEN

MISSION INTEGRATED TECHNOLOGIES, LLC

AND

KENNETH FOURNIER

THIS NON-DISCLOSURE AGREEMENT ("**Agreement**") is being executed on the date last signed below but shall be effective retroactively to the date of execution of the Mutual Non- Disclosure & Non-Circumvention Agreement dated June 6, 2013 ("**Effective Date**") because the original that was executed in 2013 cannot be located, by and between Mission Integrated Technologies, LLC ("**MIT**") with its primary offices located at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182, and Kenneth Fournier ("**Kenneth**") with offices located at 13701 Riverside Drive, Suite 500, Sherman Oaks, CA 91423. MIT and Kenneth are referred to herein individually as a "**Party**" and collectively as the "**Parties.**"

BETWEEN:

(1) **Mission Integrated Technologies, LLC** ("**MIT**") and

(2) **Kenneth Fournier** ("**Kenneth**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain proprietary information, including technical data, design information and project details related to MIT products, including without limitation the Articulating Rapid Entry System (ARES); b) for the Parties to evaluate and pursue projects related to the provision of build, integration, hardware and software necessary to operate the ARES where it is envisioned that Cardinal Scientific, Ibistek, Retiina, or others, will provide contract manufacturing and integration services of MIT products (the "**Stated Purpose**");

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality and proprietary nature thereof, the Parties have entered into this Agreement.

WHEREAS, Pursuant to Section 3 of the Agreement dated _____ day of July, 2022 by and between Kenneth, Joshua Clemente, Timothy Clemente, F2E Holdings LLC, and MIT, this Agreement is being executed by MIT and Kenneth.

NOW IT IS HEREBY AGREED AS FOLLOWS

1. CERTAIN DEFINED TERMS.

1.1. "Affiliate" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants, or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2. "Clients" means the buyers or prospective buyers of the MIT goods and/or services; other potential partner companies; suppliers, vendors, sources, contacts or other persons or entities introduced by one Party to the other.

1.3. "Confidential Information" means information whether conveyed in written, graphic, oral or physical form, including, but not limited to: Client information, contact names and

TCC / KCF

addresses; business plans; operations or system development plans; financial projections; financial resources; marketing strategies, sales contracts; research and development; manufacturers; markets; third party agreements; strategic resources; proposed trade secrets; product ideas; product advancements or improvements along with any information related thereto, designs; configurations; processes; software; improvements to existing designs or software; data; plans and strategies; sales and financial reports or forecasts; scientific knowledge; know-how; processes; compilations; data bases; prototypes; collaborations; inventions; techniques; business strategies; notes; analyses; studies; formulae; models; concepts; design concepts; products; business operations; customer and supplier lists; business relationships; specifications; drawings; working drawings; means of implementation and manufacture; cost and pricing data; bills; ideas; software materials (including object code, source code and documentation in the form of software notes); methods of encoding; preprocessing and all other proprietary information; patent, trademark and copyright applications; patentable or unpatentable and/or copyrightable descriptions of mathematics, designs, design concepts, software and/or any other written material or verbal descriptions referring to the same; and any document, diagram, drawing, computer program, or other communication that is (A) marked "confidential" or "proprietary," (B) known or reasonably known by the Parties to be "confidential" or "proprietary", or (C) learned or disclosed in the course of discussions, studies or other work undertaken between the Parties. Notwithstanding the above, the following information shall always be treated as "Confidential Information": any compensation, expenses, reimbursements or engineering or hardware costs to be charged or paid by either Party; the existence and terms of this Agreement or any other agreement(s) between the parties; the identities of Clients or contact names; and information regarding any proposals to Clients.

1.4. "Disclosing Party" means the Party disclosing its Confidential Information to the Receiving Party or any of such other Party's Affiliates.

1.5. "Receiving Party" means the Party receiving Confidential Information of the Disclosing Party.

2. CONFIDENTIAL INFORMATION.

2.1. Confidentiality Obligations: Neither Party may disclose or use the Confidential Information of the other Party unless specifically authorized by the terms of this Agreement. A Receiving Party may disclose or use Confidential Information of the Disclosing Party only under the following conditions:

2.1.1. Except as otherwise expressly permitted to be disclosed or used pursuant to this Section 2, such Receiving Party agrees to hold in strict confidence and not directly or indirectly use or disclose to any other person or entity any Confidential Information of the Disclosing Party without the prior written permission of the Disclosing Party. Such Receiving Party understands that disclosure or use of such Confidential Information would destroy the value of such Confidential Information and cause irreparable harm to the Disclosing Party. Such Receiving Party shall use, and shall cause its Affiliates to use, at least the same level of care and protection of Confidential

Information of the Disclosing Party as such Receiving Party uses to prevent unauthorized use and unauthorized disclosure of its own Confidential Information, but in any case using no less than a reasonable standard of care.

2.1.2. Such Receiving Party will use Confidential Information of the Disclosing Party only for the Stated Purpose. For the avoidance of doubt, such Receiving Party, except as otherwise permitted by this Agreement or any other written agreement between the Parties, shall not use or otherwise utilize for its own business or benefit, or any third party's benefit, any Confidential Information of the Disclosing Party except for the Stated Purpose.

2.1.3. Such Receiving Party will use Confidential Information of the Disclosing Party in marketing and sales materials, only if such materials are to be delivered to a third party for the Stated Purpose, and only as is expressly agreed upon by the Disclosing Party.

2.1.4. Such Receiving Party will not modify the Confidential Information in any way without the prior written consent of the Disclosing Party.

2.1.5. It is specifically acknowledged that neither Kenneth nor any of his Affiliates may use the Confidential Information of MIT, including without limitation technical details, design concepts, designs resulting from exchanges of information pursuant to this Agreement or otherwise, product improvements or advances resulting from the exchange of Confidential Information or pricing information to prepare and/or submit any proposal, bid, quotation or other similar offer to any Client or potential Client that would be considered competitive with or an alternative to a product or proposal submitted to a Client for the sale of MIT products and services, whether or not such proposal is submitted by Kenneth, any of his Affiliates, any third party, or directly by MIT.

2.2. Certain Exceptions to Confidentiality Obligations: The restrictions regarding the confidentiality of the Confidential Information of a Disclosing Party shall not apply to information that is disclosed by Receiving Party in accordance with a judicial or other governmental order provided that the Receiving Party, subject to what is permitted under the applicable law, gives the Disclosing Party reasonable notice prior to such disclosure and restricts disclosure of the Confidential Information to the extent mandatory under the order.

2.3. Return of Confidential Information: Upon the earlier of

2.3.1. completion of the Stated Purpose;

2.3.2. the request of the Disclosing Party; or

JJK / KCF

2.3.3. the expiration or termination of this Agreement, the Receiving Party shall, and shall cause its Affiliates to discontinue use of and promptly return (or, if the Confidential Information is of such a nature that it cannot be returned, delete or destroy) all Confidential Information of the Disclosing Party, and copies thereof and all Physical Property with which it was furnished.

2.4. Ownership of Confidential Information: All Confidential Information disclosed to the Receiving Party by the Disclosing Party under this Agreement shall be and remain the property of the Disclosing Party. No licenses or rights under any registered or unregistered patent, copyright, trademark or trade secret, or application therefore, are granted to or are to be implied by this Agreement. It is specifically acknowledged without limiting any of the foregoing that any and all Confidential Information related to MIT product and services, including design, design plans, MIT product improvements, advancements, enhancements or derivatives, whether or not originating with MIT or Kenneth during exchanges under this Agreement, or otherwise, shall remain at all times the sole property of MIT. At no time, shall Kenneth be entitled to any rights in the Confidential Information related to MIT products or improvement, enhancements or derivatives thereof, and all concepts and designs, whether or not derived, created and implemented prior to, during or after the performance of this Agreement by either party shall be the exclusive property of MIT. Any future products or derivative technologies created based on the exchanges of Confidential Information hereunder shall at all times remain the property of MIT.

2.5. No Representations or Warranties: Each Party hereby acknowledges that neither the other Party nor any of its Affiliates makes any representation or warranty as to the accuracy or completeness of the Confidential Information disclosed by it. Neither the Disclosing Party nor any of its Affiliates shall be liable to the Receiving Party or any of its Affiliates in relation to or as a result of the Receiving Party's use of the Disclosing Party's Confidential Information, including without limitation any investment made in non-recurring engineering expenses, product research & development or other associated costs undertaken as a result of the exchange of Confidential Information pursuant to this Agreement.

3. NON-CIRCUMVENTION.

Neither Kenneth nor any of his Affiliates shall contact or attempt to contact, directly or indirectly, the Clients or other entities who are part of MIT's Confidential Information on matters relating to the subject hereof or otherwise make any use of the Confidential Information, except with the express written consent of MIT. The Parties shall not disclose price, costs or other financial information to Clients, or directly deal with any Clients introduced by MIT without the express written consent of MIT, or as required by law.

4. TERM TERMINATION.

This Agreement shall be effective as of the date both Parties have signed the Agreement ("**Effective Date**"). Either Party may terminate the Agreement with respect to further disclosures upon thirty (30) days' prior written notice. However, the terms and

conditions of this Agreement shall survive for a period of five (5) years following any expiration or termination of this Agreement; provided, however, that the MIT intellectual property rights to its products and services and all other Confidential Information shall survive in perpetuity.

5. ASSIGNMENT, NO THIRD-PARTY BENEFICIARIES.

This Agreement is not assignable by either Party, whether by operation of law or otherwise, without the express prior written consent of the other Party, which consent shall not be unreasonably denied, delayed, or conditioned. Any attempt to assign the rights or obligations under this Agreement to the contrary shall be void *ab initio*. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties and their respective successors, legal representatives and permitted assigns, any rights or remedies under or by reason of this Agreement.

6. REMEDIES.

All remedies provided for in this Agreement shall be cumulative and in addition to, and not in lieu of, any other remedies available to either Party at law, in equity or otherwise. The Parties agree that monetary damages caused by breaches hereunder would be difficult to measure or inadequate and, accordingly, if a Party breaches, or proposes to breach, any portion of this Agreement, the other Party shall be entitled, in addition to all other remedies that it may have, to seek expedited relief, including a temporary restraining order or a permanent injunction, or other appropriate equitable relief to restrain any such breach.

7. SURVIVAL.

Subject to Section 4 hereof, upon the expiration of the Term or termination of this Agreement in accordance with the terms and conditions hereof, all provisions of this Agreement shall survive five (5) years following the termination or expiration of this Agreement.

8. ENTIRE AGREEMENT.

This Agreement constitutes the complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings between the Parties, whether written or oral.

9. AMENDMENT WAIVER.

This Agreement may not be amended or in any manner modified except by a written instrument signed by an authorized representative on behalf of each Party.

10. GOVERNING LAW.

TOK / MCF

This Agreement shall be governed by, interpreted under and construed in accordance with the internal substantive laws of the Commonwealth of Virginia, applicable to contracts executed and to be performed wholly within that jurisdiction without giving effect to the choice or conflict of laws principles or provision thereof that would provide for the application of the laws of any other jurisdiction.

11. ARBITRATION AND VENUE.

11.1. Arbitration. EACH OF THE PARTIES EXPRESSLY WAIVES ITS, HIS OR HER RIGHT TO A JURY TRIAL WITH RESPECT TO ANY SUIT, LITIGATION OR OTHER JUDICIAL PROCEEDING REGARDING THIS AGREEMENT OR ANY DISPUTE HEREUNDER OR RELATING HERETO.

11.2. Venue. The parties shall make a good faith effort to settle any dispute or claim arising under this Agreement. If the Parties are unable to resolve such dispute, the Parties agree that such controversy or dispute will be settled by final and binding arbitration in accordance with the Rules of Arbitration under the American Arbitration Association ("**AAA**"), as amended and in effect at the time that such demand for arbitration is filed. Any dispute in which the amount in controversy is less than Two Million United States Dollars (USD $2,000,000) shall be submitted to a single arbitrator for resolution who will be selected in accordance with the AAA Rules of Arbitration. Any dispute in which the amount in controversy is Two Million United States Dollars (USD $2,000,000) or greater shall be submitted to a three-arbitrator panel for resolution. In such case, each party shall select an arbitrator and then the two party- appointed arbitrators shall choose one additional arbitrator who shall act as the chairman. The Award of the Arbitral Tribunal shall be binding upon the parties and conclusive to the fullest extent permitted by law. The place of any arbitration shall be in Fairfax County, Virginia. In any arbitration brought under this Agreement, the Arbitration Tribunal shall award the prevailing party its reasonable attorneys' fees and costs, including the arbitrator costs, AAA administrative fees, expert witness fees and any other fees (collectively "**Arbitration Costs**") in prosecuting or defending the action and on any appeal thereof.

12. COUNTERPARTS.

This Agreement may be executed in one or more counterparts (including facsimile), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

13. SEVERABILITY.

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and

provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14. SUCCESSORS.

This Agreement will be binding upon and inure to the benefit of Parties and their respective successors and/or permitted assigns.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed by a duly authorized representative on behalf of each Party as of the Effective Date.

MISSION INTEGRATED TECHNOLOGIES, LLC	KENNETH FOURNIER
By: _____ Timothy Clemente Manager/President	_____ Kenneth Fournier

NON-DISCLOSURE AGREEMENT

BY AND BETWEEN

MISSION INTEGRATED TECHNOLOGIES, LLC

AND

JOSHUA CLEMENTE

THIS NON-DISCLOSURE AGREEMENT ("**Agreement**") is being executed on the date last signed below but shall be effective retroactively to the date of execution of the Mutual Non- Disclosure & Non-Circumvention Agreement dated June 6, 2013 ("**Effective Date**") because the original that was executed in 2013 cannot be located, by and between Mission Integrated Technologies, LLC ("**MIT**") with its primary offices located at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182, and Joshua Clemente ("**Joshua**") with offices located at 1129 Denfield St., Unit B, Austin, TX 78721. MIT and Joshua Clemente are referred to herein individually as a "**Party**" and collectively as the "**Parties**".

BETWEEN:

(1) **Mission Integrated Technologies, LLC** ("**MIT**") and

(2) **Joshua Clemente** ("**Joshua**").

WHEREAS, each Party may be given access to the other Party's Confidential Information (as defined in Section 1.3 hereof) for the purposes of: a) permitting each Party to disclose certain proprietary information, including technical data, design information and project details related to MIT products, including without limitation the Articulating Rapid Entry System (ARES); b) for the Parties to evaluate and pursue projects related to the provision of build, integration, hardware and software necessary to operate the ARES where it is envisioned that Cardinal Scientific, Ibistek, Retiina, or others, will provide contract manufacturing and integration services of MIT products (the "**Stated Purpose**");

WHEREAS, in order to protect the rights of each Party to their Confidential Information and in order to protect the confidentiality and proprietary nature thereof, the Parties have entered into this Agreement.

WHEREAS, Pursuant to Section 3 of the Agreement dated _____day of June, 2022 by and between Joshua, Kenneth Fournier, Timothy Clemente, F2E Holdings LLC, and MIT, this Agreement is being executed by MIT and Joshua.

NOW IT IS HEREBY AGREED AS FOLLOWS

1. CERTAIN DEFINED TERMS.

1.1. "Affiliate" of any Party means each of the directors, officers, shareholders, managers, members, partners, employees, agents, representatives, advisors, contractors, consultants, attorneys, accountants, or affiliated organizations of such Party, including any other person that directly or indirectly controls, is controlled by or is under common control with such specified Party.

1.2. "Clients" means the buyers or prospective buyers of the MIT goods and/or services; other potential partner companies; suppliers, vendors, sources, contacts or other persons or entities introduced by one Party to the other.

1.3. "Confidential Information" means information whether conveyed in written, graphic, oral or physical form, including, but not limited to: Client information, contact names and

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addresses; business plans; operations or system development plans; financial projections; financial resources; marketing strategies, sales contracts; research and development; manufacturers; markets; third party agreements; strategic resources; proposed trade secrets; product ideas; product advancements or improvements along with any information related thereto, designs; configurations; processes; software; improvements to existing designs or software; data; plans and strategies; sales and financial reports or forecasts; scientific knowledge; know-how; processes; compilations; data bases; prototypes; collaborations; inventions; techniques; business strategies; notes; analyses; studies; formulae; models; concepts; design concepts; products; business operations; customer and supplier lists; business relationships; specifications; drawings; working drawings; means of implementation and manufacture; cost and pricing data; bills; ideas; software materials (including object code, source code and documentation in the form of software notes); methods of encoding; preprocessing and all other proprietary information; patent, trademark and copyright applications; patentable or unpatentable and/or copyrightable descriptions of mathematics, designs, design concepts, software and/or any other written material or verbal descriptions referring to the same; and any document, diagram, drawing, computer program, or other communication that is (A) marked "confidential" or "proprietary," (B) known or reasonably known by the Parties to be "confidential" or "proprietary", or (C) learned or disclosed in the course of discussions, studies or other work undertaken between the Parties. Notwithstanding the above, the following information shall always be treated as "Confidential Information": any compensation, expenses, reimbursements or engineering or hardware costs to be charged or paid by either Party; the existence and terms of this Agreement or any other agreement(s) between the parties; the identities of Clients or contact names; and information regarding any proposals to Clients.

1.4. "Disclosing Party" means the Party disclosing its Confidential Information to the Receiving Party or any of such other Party's Affiliates.

1.5. "Receiving Party" means the Party receiving Confidential Information of the Disclosing Party.

2. CONFIDENTIAL INFORMATION.

2.1. Confidentiality Obligations: Neither Party may disclose or use the Confidential Information of the other Party unless specifically authorized by the terms of this Agreement. A Receiving Party may disclose or use Confidential Information of the Disclosing Party only under the following conditions:

2.1.1. Except as otherwise expressly permitted to be disclosed or used pursuant to this Section 2, such Receiving Party agrees to hold in strict confidence and not directly or indirectly use or disclose to any other person or entity any Confidential Information of the Disclosing Party without the prior written permission of the Disclosing Party. Such Receiving Party understands that disclosure or use of such Confidential Information would destroy the value of such Confidential Information and cause irreparable harm to the Disclosing Party. Such Receiving Party shall use, and shall cause its Affiliates to use, at least the same level of care and protection of Confidential

Information of the Disclosing Party as such Receiving Party uses to prevent unauthorized use and unauthorized disclosure of its own Confidential Information, but in any case using no less than a reasonable standard of care.

2.1.2. Such Receiving Party will use Confidential Information of the Disclosing Party only for the Stated Purpose. For the avoidance of doubt, such Receiving Party, except as otherwise permitted by this Agreement or any other written agreement between the Parties, shall not use or otherwise utilize for its own business or benefit, or any third party's benefit, any Confidential Information of the Disclosing Party except for the Stated Purpose.

2.1.3. Such Receiving Party will use Confidential Information of the Disclosing Party in marketing and sales materials, only if such materials are to be delivered to a third party for the Stated Purpose, and only as is expressly agreed upon by the Disclosing Party.

2.1.4. Such Receiving Party will not modify the Confidential Information in any way without the prior written consent of the Disclosing Party.

2.1.5. It is specifically acknowledged that neither Joshua nor any of its Affiliates may use the Confidential Information of MIT, including without limitation technical details, design concepts, designs resulting from exchanges of information pursuant to this Agreement or otherwise, product improvements or advances resulting from the exchange of Confidential Information or pricing information to prepare and/or submit any proposal, bid, quotation or other similar offer to any Client or potential Client that would be considered competitive with or an alternative to a product or proposal submitted to a Client for the sale of MIT products and services, whether or not such proposal is submitted by Joshua, any of his Affiliates, any third party or directly by MIT.

2.2. Certain Exceptions to Confidentiality Obligations: The restrictions regarding the confidentiality of the Confidential Information of a Disclosing Party shall not apply to information that is disclosed by Receiving Party in accordance with a judicial or other governmental order provided that the Receiving Party, subject to what is permitted under the applicable law, gives the Disclosing Party reasonable notice prior to such disclosure and restricts disclosure of the Confidential Information to the extent mandatory under the order.

2.3. Return of Confidential Information: Upon the earlier of

2.3.1. completion of the Stated Purpose;

2.3.2. the request of the Disclosing Party; or

2.3.3. the expiration or termination of this Agreement, the Receiving Party shall, and shall cause its Affiliates to discontinue use of and promptly return (or, if the Confidential Information is of such a nature that it cannot be returned, delete or destroy) all Confidential Information of the Disclosing Party, and copies thereof and all Physical Property with which it was furnished.

2.4. Ownership of Confidential Information: All Confidential Information disclosed to the Receiving Party by the Disclosing Party under this Agreement shall be and remain the property of the Disclosing Party. No licenses or rights under any registered or unregistered patent, copyright, trademark or trade secret, or application therefore, are granted to or are to be implied by this Agreement. It is specifically acknowledged without limiting any of the foregoing that any and all Confidential Information related to MIT product and services, including design, design plans, MIT product improvements, advancements, enhancements or derivatives, whether or not originating with MIT or Joshua during exchanges under this Agreement, or otherwise, shall remain at all times the sole property of MIT. At no time, shall Joshua be entitled to any rights in the Confidential Information related to MIT products or improvement, enhancements or derivatives thereof, and all concepts and designs, whether or not derived, created and implemented prior to, during or after the performance of this Agreement by either party shall be the exclusive property of MIT. Any future products or derivative technologies created based on the exchanges of Confidential Information hereunder shall at all times remain the property of MIT.

2.5. No Representations or Warranties: Each Party hereby acknowledges that neither the other Party nor any of its Affiliates makes any representation or warranty as to the accuracy or completeness of the Confidential Information disclosed by it. Neither the Disclosing Party nor any of its Affiliates shall be liable to the Receiving Party or any of its Affiliates in relation to or as a result of the Receiving Party's use of the Disclosing Party's Confidential Information, including without limitation any investment made in non-recurring engineering expenses, product research & development or other associated costs undertaken as a result of the exchange of Confidential Information pursuant to this Agreement.

3. NON-CIRCUMVENTION.

Neither Joshua nor any of his Affiliates shall contact or attempt to contact, directly or indirectly, the Clients or other entities who are part of MIT's Confidential Information on matters relating to the subject hereof or otherwise make any use of the Confidential Information, except with the express written consent of MIT. The Parties shall not disclose price, costs or other financial information to Clients, or directly deal with any Clients introduced by MIT without the express written consent of MIT, or as required by law.

4. TERM TERMINATION.

This Agreement shall be effective as of the date both Parties have signed the Agreement ("**Effective Date**"). Either Party may terminate the Agreement with respect to further disclosures upon thirty (30) days' prior written notice. However, the terms and

conditions of this Agreement shall survive for a period of five (5) years following any expiration or termination of this Agreement; provided, however, that the MIT intellectual property rights to its products and services and all other Confidential Information shall survive in perpetuity.

5. ASSIGNMENT, NO THIRD-PARTY BENEFICIARIES.

This Agreement is not assignable by either Party, whether by operation of law or otherwise, without the express prior written consent of the other Party, which consent shall not be unreasonably denied, delayed, or conditioned. Any attempt to assign the rights or obligations under this Agreement to the contrary shall be void *ab initio*. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties and their respective successors, legal representatives and permitted assigns, any rights or remedies under or by reason of this Agreement.

6. REMEDIES.

All remedies provided for in this Agreement shall be cumulative and in addition to, and not in lieu of, any other remedies available to either Party at law, in equity or otherwise. The Parties agree that monetary damages caused by breaches hereunder would be difficult to measure or inadequate and, accordingly, if a Party breaches, or proposes to breach, any portion of this Agreement, the other Party shall be entitled, in addition to all other remedies that it may have, to seek expedited relief, including a temporary restraining order or a permanent injunction, or other appropriate equitable relief to restrain any such breach.

7. SURVIVAL.

Subject to Section 4 hereof, upon the expiration of the Term or termination of this Agreement in accordance with the terms and conditions hereof, all provisions of this Agreement shall survive five (5) years following the termination or expiration of this Agreement.

8. ENTIRE AGREEMENT.

This Agreement constitutes the complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings between the Parties, whether written or oral.

9. AMENDMENT WAIVER.

This Agreement may not be amended or in any manner modified except by a written instrument signed by an authorized representative on behalf of each Party.

10. GOVERNING LAW.

This Agreement shall be governed by, interpreted under and construed in accordance with the internal substantive laws of the Commonwealth of Virginia, applicable to contracts executed and to be performed wholly within that jurisdiction without giving effect to the choice or conflict of laws principles or provision thereof that would provide for the application of the laws of any other jurisdiction.

11. ARBITRATION AND VENUE.

11.1. **Arbitration**. EACH OF THE PARTIES EXPRESSLY WAIVES ITS, HIS OR HER RIGHT TO A JURY TRIAL WITH RESPECT TO ANY SUIT, LITIGATION OR OTHER JUDICIAL PROCEEDING REGARDING THIS AGREEMENT OR ANY DISPUTE HEREUNDER OR RELATING HERETO.

11.2. **Venue**. The parties shall make a good faith effort to settle any dispute or claim arising under this Agreement. If the Parties are unable to resolve such dispute, the Parties agree that such controversy or dispute will be settled by final and binding arbitration in accordance with the Rules of Arbitration under the American Arbitration Association ("**AAA**"), as amended and in effect at the time that such demand for arbitration is filed. Any dispute in which the amount in controversy is less than Two Million United States Dollars (USD $2,000,000) shall be submitted to a single arbitrator for resolution who will be selected in accordance with the AAA Rules of Arbitration. Any dispute in which the amount in controversy is Two Million United States Dollars (USD $2,000,000) or greater shall be submitted to a three-arbitrator panel for resolution. In such case, each party shall select an arbitrator and then the two party- appointed arbitrators shall choose one additional arbitrator who shall act as the chairman. The Award of the Arbitral Tribunal shall be binding upon the parties and conclusive to the fullest extent permitted by law. The place of any arbitration shall be in Fairfax County, Virginia. In any arbitration brought under this Agreement, the Arbitration Tribunal shall award the prevailing party its reasonable attorneys' fees and costs, including the arbitrator costs, AAA administrative fees, expert witness fees and any other fees (collectively "**Arbitration Costs**") in prosecuting or defending the action and on any appeal thereof.

12. COUNTERPARTS.

This Agreement may be executed in one or more counterparts (including facsimile), each of which shall be deemed an original but all of which together will constitute one and the same instrument.

13. SEVERABILITY.

If any portion or provision of this Agreement is to any extent declared unenforceable by a court of competent jurisdiction, then the Parties agree that the court shall reform the provision to the minimum extent necessary to make it enforceable and each portion and

provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

14. SUCCESSORS.

This Agreement will be binding upon and inure to the benefit of Parties and their respective successors and/or permitted assigns.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed by a duly authorized representative on behalf of each Party as of the Effective Date.

MISSION INTEGRATED TECHNOLOGIES, LLC By: _____ Timothy Clemente Manager/President	JOSHUA CLEMENTE _____ Joshua Clemente

Exhibit 4

(Affidavits)

AFFIDAVIT OF NON-AUTHORITY

STATE OF _____)
)
COUNTY OF _____)

Before me, the undersigned JOSHUA CLEMENTE ("**Affiant**"), personally appeared and after being duly sworn, deposes and says under oath the following:

1. Pursuant to Section 4 of the Agreement dated ____day of July, 2022, ("**Agreement**") by and between Affiant, Timothy Clemente, F2E Holdings LLC, and Mission Integrated Technologies, LLC (the "**Company**") this Affidavit is being executed by the Affiant.
2. Affiant is over the age of 18 or otherwise *sui juris*.
3. Affiant is competent to testify and has knowledge of the facts stated herein.
4. Affiant is not a director, officer, representative, or agent of the Company, a Delaware limited liability company doing business in the State of Virginia.
5. Affiant has not bound, incurred expenses, or obligated the Company to any third parties, except as specifically set forth in the Agreement.
6. Affiant has personal knowledge of and is competent to testify to the matters sworn to in this affidavit.
7. Affiant gives this affidavit with full knowledge of applicable law regarding sworn affidavits and the penalties and liabilities imposed for providing false statements or misrepresentations in an affidavit.

Date: _____ day of July, 2022

_____

Joshua Clemente

Sworn to and subscribed before me by means of □ physical presence or □ online notarization this _____ Day of July, 2022 by Joshua Clemente, who is an individual. He produced _____ as identification.

_____

(Notary Signature)

Name:

Notary Public, State of _____

My commission expires:

[NOTARY SEAL]

AFFIDAVIT OF NON-AUTHORITY

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES)

Before me, the undersigned Kenneth Fournier ("**Affiant**"), personally appeared and after being duly sworn, deposes and says under oath the following:

1. Pursuant to Section 4 of the Agreement dated ____day of July, 2022 by and between Affiant, Timothy Clemente, F2E Holdings LLC, and Mission Integrated Technologies, LLC (the "**Company**") this Affidavit is being executed by the Affiant.
2. Affiant is over the age of 18 or otherwise *sui juris*.
3. Affiant is competent to testify and has knowledge of the facts stated herein.
4. Affiant is not a director, officer, representative, or agent of the Company, a Delaware limited liability company doing business in the State of Virginia.
5. Affiant has not bound, incurred expenses, or obligated the Company to any third parties as a result of his misrepresentation of his position at the Company.
6. Affiant has personal knowledge of and is competent to testify to the matters sworn to in this affidavit.
7. Affiant gives this affidavit with full knowledge of applicable Virginia law regarding sworn affidavits and the penalties and liabilities imposed for providing false statements or misrepresentations in an affidavit.

Date: 17 day of July, 2022

Kenneth Fournier

Sworn to and subscribed before me by means of □ physical presence or □ online notarization this _____ Day of July, 2022 by Kenneth Fournier, who is an individual. He produced _____as identification.

_____

(Notary Signature)

Name:

Notary Public, State of California

My commission expires:

[NOTARY SEAL]

SEE ATTACHED CALIFORNIA NOTARIAL CERTIFICATE

CALIFORNIA JURAT WITH AFFIANT STATEMENT **GOVERNMENT CODE § 8202**

☐ See Attached Document (Notary to cross out lines 1–6 below)
☐ See Statement Below (Lines 1–6 to be completed only by document signer[s], *not* Notary)

Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Los Angeles

Subscribed and sworn to (or affirmed) before me on this 17th day of July, 20 22,
Date *Month* *Year*
by
(1) Kenneth Fournier
(and (2) ----------),
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

MICHAEL DAVID KOHN
COMM. #2380160
Notary Public - California
Los Angeles County
My Comm. Expires Oct. 26, 2025

Signature _____
Signature of Notary Public

Place Notary Seal Above

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Exhibit 5

(Assignment and Assumption)

ASSIGNMENT AND ASSUMPTION OF MEMBERSHIP INTERESTS

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT ("**Agreement**") is entered into as of the 27 day of July, 2022, by and between Timothy Clemente, an individual, having an address at 150 Rustic Road, Fredericksburg, Virginia 22405 ("**Assignor**"), and Kenneth Fournier, an individual, having an address at 13701 Riverside Drive, Suite 500, Sherman Oaks, CA 91423 ("**Assignee**").

WHEREAS, Assignor is the owner of a Nineteen percent (19%)[1] membership interest in MISSION INTEGRATED TECHNOLOGIES, LLC, a Delaware limited liability company ("**Company**") pursuant to that certain Limited Liability Company Operating Agreement of the Company, dated October 7, 2013 (the "**Operating Agreement**"), a true, complete, and correct copy of which is attached hereto as Exhibit A; and

WHEREAS, Assignor desires to assign, transfer, and sell to Assignee a six percent (6%) membership interest in the Company ("**Assigned Interest**").

WHEREAS, Pursuant to Section 5 of the Agreement dated _ day of July, 2022 by and between Assignee, Assignor, F2E Holdings LLC, and the Company, this Agreement is being executed by Assignor and Assignee and agreed to and accepted by the Company.

NOW, THEREFORE, for $10.00 and other good and valuable consideration, in consideration of the mutual covenants, terms, and conditions set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of all of which is fully and hereby acknowledged:

1. Assignment. Assignor hereby assigns and transfers to Assignee all of the Assignor's right, title, and interest in and to the Assigned Interest, provided, however, that no rights to access the books and records or other information, or voting rights, shall be conveyed to Assignee and all such untransferred rights associated with the Assigned Units are terminated.

2. Representations and Warranties of Assignor. The Assignor represents and warrants that: (a) Assignor is the true and lawful owner of the Assigned Interest and has good title to the same; (b) the Assignor has made no prior assignment or sale of the Assigned Interest and that no other person or entity has any right, title, or interest therein; (c) the execution and delivery hereof by the Assignor and the assignment of all its right, title, and interest in and to the Assigned Interest does not contravene any agreement to which the Assignor is a party or by which it or its property, or the Company's property, is bound; (d) no liens, encumbrances, charges, or security interests of any kind exist on the date hereof against the Assigned Interest; and (e) Assignor hereby warrants and defends title to the Assigned Interest to Assignee against the claims and demands of all persons.

3. Representations and Warranties of Assignee. Assignee has been advised that the Assigned

[1] Pursuant to that Unanimous Written Consent dated April 20, 2017, Timothy's membership interest in the Company was reduced until the conditions in that same resolution for the return of the 6% membership interest are satisfied as set forth in that same resolution.

TC / KCF

Interest is not registered under the Securities Act of 1933 and represents, warrants, and agrees that: (a) Assignee is acquiring the securities represented by the Assigned Interest for its own account, solely for investment purposes, and not with a view to resale of said securities; (b) Assignee has such knowledge and experience in business and financial matters which enables it to be capable of evaluating the risks and merits of this investment; (c) Assignee is able to bear the economic risks of this investment; and (d) Assignee has been provided with access to all information which it deems material to formulating an investment decision and that such information has been sufficient to make an informed decision.

4. Approval. Assignor and Assignee acknowledge that this assignment of Assignor's Assigned Interest is contemplated by Section 8 of the Operating Agreement and has been approved by the other Members of the Company, such that no further action will be required to effect this assignment after its execution by Assignor and Assignee, though Assignor will deliver a copy of this Agreement to the Company to keep with its copy of the Operating Agreement.

5. Acceptance by Assignee. Assignee: (a) accepts the assignment of all of Assignor's right, title, and interest in and to the Assigned Interest; and (b) agrees to be bound by all of the terms, covenants, and conditions of this Agreement and of the Operating Agreement. Assignee hereby indemnifies and holds Assignor, and its manager, directors, employees, members, and agents harmless against any and all losses, costs, and expenses (including reasonable attorneys' fees) arising out of any obligations of Assignee relating to the Assigned Interest which occur on or after, or arise from events occurring on or after, the date hereof.

6. Absolute Conveyance. The conveyance of the Assigned Interest hereunder is an absolute transfer to Assignee, free and clear of all liens and restrictions.

7. Further Assurances. Assignor shall promptly execute and deliver to Assignee any additional instrument or other document which Assignee reasonably requests to evidence or better effect the assignment contained herein.

8. Heirs, Successors, and Assigns. This Agreement shall bind and inure to the benefit of the parties hereto and their respective successors and assigns.

9. Governing Law. This Agreement and all other instruments referred to herein shall be governed by, and shall be construed according to, the laws of the State of Delaware, without regard to conflict of law rules.

10. Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original for all purposes, and all such counterparts shall together constitute but one and the same instrument. A signed copy of this Agreement delivered by either facsimile or email shall be deemed to have the same legal effect as delivery of an original signed copy of this Assignment, provided such original signed copy is delivered within five (5) days thereafter. Notwithstanding the foregoing, each party hereto shall deliver original counterpart signatures to the other parties on or before the date hereof.

11. Amendments and Modifications. This Agreement may not be modified or amended in any manner other than by a written agreement signed by the party to be charged.

MCF

12. Defined Terms. Capitalized terms used herein, but not otherwise defined shall have the meanings ascribed to such terms in the Operating Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date set forth above.

ASSIGNOR:

TIMOTHY CLEMENTE

Timothy Clemente

ASSIGNEE:

KENNETH FOURNIER

Kenneth Fournier

AGREED TO AND ACCEPTED:

COMPANY:

MISSION INTEGRATED TECHNOLOGIES, LLC, a Delaware limited liability company

By:
Name: Timothy Clemente
Title: Manager/President

EXHIBIT A

Operating Agreement

EXHIBIT G

180720

A VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION

[0001] The present application claims priority to and the benefit of U.S. Provisional Patent Application No. 62/770,022, filed on November 20, 2018, the content of which is incorporated herein by reference in its entirety.

BACKGROUND

1. Field

[0002] Aspects and features of embodiments of the present invention relate to a vehicle-mounted elevated access system.

2. Description of Related Art

[0003] In the course of, for example, tactical (police, SWAT, or military), firefighting, and rescue operations, groups of people may need to rapidly enter and/or exit elevated points of interest, including buildings, structures, environmental features, or mobile targets (e.g., commercial aircraft parked on tarmac). To easily and quickly reach these elevated points of interest, external structures, such as external staircases, may be used. Further, in some instances, it may be desired that a continuous route of access and/or egress between the ground and the elevated point of interest be maintained such that rapid movements of personnel between elevations may be achieved at any time throughout the operation.

[0004] Conventional elevated access systems exist which may be mounted or dismounted from various suitable vehicles in order that the vehicle may be used in a variety of functions (e.g., so that the vehicle's utility is not limited). When mounted to a suitable vehicle, such systems generally include a base structure connected to the vehicle at a plurality of points and an access structure including a ramp or stairway,

which can be inclined with respect to the base structure, providing personnel access between ground level and points some height above the ground.

[0005] However, these conventional elevated access systems suffer drawbacks including:

- a reduction in horizontal overhang of the access structure;
- substantial cantilevered sections of the access structure that are subject to increased bending forces and deflections (e.g., movement under load) as compared to non-cantilevered structures; and
- inherent instability and failure modes such as buckling.

[0006] The above information disclosed in this Background section is only for enhancement of understanding of the background, and therefore, it may contain information that does not constitute prior art.

SUMMARY

[0007] Embodiments of the present invention provide an elevated access system including:

- a movable hinge between an access structure and a base structure, which improves horizontal reach;
- self-deploying and self-stowing handrails/guardrails along the access structure and end platform;
- a self-deploying and self-stowing end platform; and
- access structure actuation components that are substantially loaded in tension and that are attached further along the access structure, thereby reducing cantilevered lengths of the access structure.

[0008] Aspects of embodiments of the present disclosure are directed toward a vehicle-mounted elevated access system.

[0009] According to some example embodiments of the present disclosure, a vehicle-mounted access system including: a fixed base structure including a plurality of track channels; a plurality of movable hinge carriages respectively on and configured to move along the plurality of track channels; an inclinable access structure having a proximal end and a distal end, the proximal end of the inclinable access structure being pivotably connected to the plurality of movable hinge carriages; a lifting mast having a proximal end and a distal end, the distal end of the lifting mast being connected to the distal end of the inclinable access structure by forward tension elements and being connected to the fixed base structure by rear tension elements, the proximal end of the lifting mast being pivotably connected to the fixed base structure; and an actuator connected between the movable hinge carriages and the fixed base structure, the actuator being configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

[0010] According to some example embodiments, the vehicle-mounted access system further includes an inclinable access handrail positioned along to and pivotably attached to the inclinable access structure.

[0011] According to some example embodiments, the inclinable access handrail is configured to extend into a deployed position by a plurality of linkages.

[0012] According to some example embodiments, the vehicle-mounted access system further including a multi-position end breaching platform that is pivotably connected to the distal end of the inclinable access structure.

[0013] According to some example embodiments, the vehicle-mounted access, further including a platform handrail positioned along and pivotably attached to the multi-position end breaching platform.

[0014] According to some example embodiments, the platform handrail is configured to extend into a deployed position by an action of a multilink kinematic mechanism.

[0015] According to some example embodiments, the vehicle-mounted access system further including a plurality of secondary actuators connected between the distal end of the inclinable access structure and the multi-position end breaching platform.

[0016] According to some example embodiments, the secondary actuators are configured to extend to pivot the multi-position end breaching platform relative to the inclined access structure and to transition a surface of the multi-position end breaching platform into a series of stairs.

[0017] According to some example embodiments, the inclinable access structure further includes a ramp.

[0018] According to some example embodiments, the inclinable access structure further includes a plurality of stairs.

[0019] According to some example embodiments, the plurality of stairs are configured to remain passively parallel to the ground.

[0020] According to some example embodiment, the vehicle-mounted access system further including a controller configured to control movement of the actuator.

[0021] According to some example embodiments, the controller is operated by a touchscreen user interface including: a manual mode; a preset mode; a video streaming mode; and an aircraft mode.

[0022] According to some example embodiments, the preset mode is configured to allow a selection of pre-programmed heights of the distal end of the inclinable access structure.

[0023] According to some example embodiments, in the aircraft mode, the touchscreen user interface displays an aircraft, wherein, in the aircraft mode, the controller is configured to allow for a selection of a pre-programmed height of the distal end of the inclinable access structure by selecting a window on the displayed aircraft.

[0024] According to some example embodiments, the actuator is configured to pull the movable hinge carriages toward the actuator to raise the distal end of the inclinable access structure.

[0025] According to some example embodiments, a method for deploying the vehicle-mounted access system by using a touchscreen user interface, the method including: displaying, by the touchscreen user interface, an image of an aircraft; transmitting, by the touchscreen user interface, a preprogrammed height selected by a user by selecting a window on the image of the aircraft to a controller of the vehicle-mounted access system; and raising, by the controller, a distal end of an inclinable access structure connected to the vehicle-mounted access system to the preprogrammed height.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] FIG. 1 is a perspective view of a vehicle-mounted elevated access system according to an embodiment of the present invention;

[0027] FIG. 2 shows an enlarged portion A of FIG. 1;

[0028] FIG. 3 is a perspective view of an end platform shown in FIG. 1 in a deployed configuration;

[0029] FIGS. 4-8 show steps of deploying the vehicle-mounted elevated access system from a stowed configuration according to an embodiment of the present invention;

[0030] FIG. 9 shows a graphical user interface (GUI) for controlling the vehicle-mounted elevated access system in a manual mode according to an embodiment of the present invention; and

[0031] FIG. 10 shows the GUI shown in FIG. 9 in an aircraft mode according to an embodiment of the present invention.

DETAILED DESCRIPTION

[0032] The exemplary embodiments of the present invention disclosed herein are directed to a vehicle-mounted platform including one or more inclinable access structures connected to a base structure at movable hinge points, which allows the entire access structure to advance toward an above-ground target prior to and/or during elevation/inclination. In some embodiments, the actuation devices, structures, and mechanisms of the access structure are substantially loaded in tension, and the handrails/guardrails and end platform(s) may be deployed automatically and without manual effort.

[0033] Referring to FIGS. 1-3, a vehicle-mounted elevated access system 100 according to an embodiment of the present invention includes an inclinable access structure 110 connected to (e.g., positioned upon) a fixed base structure (e.g., a fixed base) 105. In some embodiments, a plurality of inclinable access structures 110 may be included in the vehicle-mounted elevated access system 100. In such embodiments, the inclinable access structures 110 may be arranged adjacent to each other or in front/behind each other. The fixed base structure 105 may be mounted to a suitable host vehicle 101 so the vehicle-mounted elevated access system 100 is mobile. In such an embodiment, the fixed base structure 105 has a front end 203 that is positioned near the front of the host vehicle 101 and a rear end 204 opposite to the front end 203 and positioned near the rear of the host vehicle 101.

[0034] The inclinable access structure 110 has a proximal end 201 that is partially connected (e.g., movably and/or pivotably connected to, not rigidly connected) to the fixed base structure 105 and a distal end 202 opposite to the proximal end 201. In a deployed configuration, the distal end 202 is positioned further away from the fixed base structure 105 than is the proximal end 201.

[0035] In various embodiments, the inclinable access structure 110 may include one or more ramps and/or one or more stairways. In the illustrated embodiment, the inclinable access structure 110 includes a stairway including a plurality of steps 113. The steps 113 may be configured to remain passively parallel to the ground (e.g., may remain parallel to the ground due to gravity) during all angles of operation of the inclinable access structure 110 (e.g., during inclination and declination of the inclinable access structure 110).

[0036] Hereinafter, the lifting mechanism for the inclinable access structure 110 will be described in more detail. A plurality of lifting masts 120 (e.g., one lifting mast 120 on each side of the inclinable access structure 110, or one lifting mast 120 on each side of each of the inclinable access structures 110) are pivotably connected to the fixed base structure 105 at a proximal end of the lifting masts 120. A distal end of each of the lifting masts 120 is connected to (e.g., pivotably connected to) forward tension element(s) 111 and rear tension element(s) 112. The forward tension elements 111 are respectively connected to (e.g., extend between) the distal end of the lifting masts 120 and the distal end 202 of the inclinable access structure 110, and the rear tension elements 112 are respectively connected to (e.g., extend between) the distal end of the lifting masts 120 and the fixed base structure 105.

[0037] The forward and rear tension elements 111/112 may be rods, or plates, such as metal or composite rods or plates, or they may be cables or ropes, such as metal cable or synthetic fiber rope or cable. In other embodiments, the forward and rear

tension elements 111/112 may be cables or ropes, such as metal cables or synthetic fiber ropes or cables. In some embodiments, the forward tension elements 111 may each be a single, continuous element between the lifting mast 120 and the distal end 202 of the inclinable access structure 110, and the rear tension elements 112 may each include a plurality of elements pivotably connected to each other. Referring to, for example, FIG. 4, by adding a pivotable joint (e.g., a pivotable connection) in the rear tension element 112, the rear tension element 112 may be more compactly folded in a retracted/declined position.

[0038] In addition, the fixed base structure 105 includes a plurality of track channels 107 (e.g., one track channel 107 on each side of the inclinable access structure 110). The track channels 107 are oriented from the front end 203 to the rear end 204 of the fixed base structure 105 (e.g., an axis of each of the track channel 107 extends in a direction from the front end 203 toward the rear end 204 of the fixed base structure 105).

[0039] One or more movable hinge points (e.g., moveable hinge carriages) 108 may be arranged on each track channel 107. The movable hinge points 108 may include a plurality of bearings (e.g., wheels or sliding/bearing surfaces and plates) such that they may move longitudinally along the respective track channel 107.

[0040] The inclinable access structure 110 may be pivotably attached to the movable hinge points 108, which are arranged on the track channels 107. For example, a proximal end 201 of the inclinable access structure 110 may be connected to one movable hinge point 108.

[0041] Actuators 140 may be connected between the movable hinge points 108 and the front end 203 of the fixed base structure 105. In various embodiments, the actuators 140 may be hydraulic cylinders (e.g., double-acting hydraulic cylinders), and in such an embodiment, the barrel is connected to the front end 203 of the fixed base structure 105

and the piston rod is connected to the movable hinge points 108, but the present invention is not limited thereto. In other embodiments, the actuators 140 may be screw-type actuators, such as ACME or ball screw actuators, or a belt drive, rack and pinion, gear and track, or a set of winches, but the present invention is not limited thereto. The actuators 140 may be configured to translate (e.g., move or pull) the movable hinge points 108 along the track channels 107 toward the front end 203 of the fixed base structure 105, thereby moving the proximal end 201 of the inclinable access structure 110. As the proximal end 201 of the inclinable access structure 110 moves toward the front end 203 of the fixed base structure 105, the distal end 202 of the inclinable access structure 110 is elevated (e.g., pivoted upwardly) about the lifting masts 120 due to the fixed lengths of the front and rear tension elements 111/112. For example, because the front and rear tension elements 111/112 do not extend (e.g., stretch), as the proximal end 201 of the inclinable access structure 110 moves forward due to the movement of the movable hinge points 108, the distal end 202 of the inclinable access structure 110 is pulled upwardly (e.g., is inclined) due to the restrictive force applied by the front and rear tension elements 111/112. Put another way, because the length of the front and rear tension elements 111/112 cannot extend beyond a maximum length, as the proximal end 201 of the inclinable access structure 110 moves toward the front end 203 of the fixed base structure 105, the distal end 202 of the inclinable access structure 110 moves upwardly (e.g., inclines). Reversing the actuators 140 translates (e.g., moves or pushes) the movable hinge points 108 rearward (e.g., toward a rear of the vehicle 101), thereby declining the inclinable access structure 110 and stowing the inclinable access structure 110.

[0042] In some embodiments, the fixed base structure 105 includes a deck section 106 that is positioned near the rear end 204 thereof and at (or adjacent to) the proximal end 201 of the inclinable access structure 110. The deck section 106 may have a

substantially flat surface parallel to and facing away from the ground (e.g., facing upward). The surface of the deck section 106 is suitable for standing and walking, and may have a similar surface structure as that of the inclinable access structure 110 or may have a different surface structure than that of the inclinable access structure 110. For example, because the deck section 106 does not incline (e.g., remains flat), the deck section 106 may have a continuous, flat surface, optionally with ribs or grooves formed therein for additional traction, as opposed to stairs as in the inclinable access structure 110.

[0043] In addition, the elevated access system 100 includes a multi-position end breaching platform 125. The multi-position end breaching platform 125 may be pivotably connected to the distal end 202 of the inclinable access structure 110. The multi-position end breaching platform 125 has a surface 126 that, in a deployed configuration, faces away from and is parallel to the ground (e.g., is substantially flat). In the retracted position, the multi-position end breaching platform 125 lies on the inclinable access structure 110 to provide compact overall dimensions. The surface 126 is suitable for standing and walking and may have a similar surface structure as that of the inclinable access structure 110 or a different surface structure as that of the inclinable access structure 110. For example, when the inclinable access structure 110 is stairs, the surface 126 may also be stairs. But in another embodiment, when the inclinable access structure 110 is stairs, the surface 126 may be a flat (with or without ribs or grooves for traction) surface. Further, the deck section 106, the inclinable access structure 110, and the multi-position end breaching platform 125 provide a substantially continuous path (e.g., movement path) for one or more people and/or machines (e.g., drones, robots, etc.) to access an elevated location by walking or running from the deck section 106, up the inclinable access structure 110, onto the multi-position end breaching platform 125, and then into the elevated position. In various embodiments, the multi-position end

breaching platform 125 may be configured to remain passively parallel to the ground during operation of the vehicle-mounted elevated access system 100. For example, the surface 126 may remain parallel to the ground regardless of the inclination angle of the inclinable access structure 110 to which it is connected.

[0044] The multi-position end breaching platform 125 may also be controlled to be inclined at an angle corresponding to the inclination angle of the inclinable access structure 110 to allow access to even higher points of interest. For example, in some embodiments, the multi-position end breaching platform 125 may be configured to be raised by actuators (e.g., secondary actuators) 301. In some embodiments, the actuators 301 may be electric actuators, but the present invention is not limited thereto. The actuators 301 are connected between the distal end 202 of the inclinable access structure 110 and the multi-position end breaching platform 125 (e.g., a proximal end of the multi-position end breaching platform 125 adjacent to the distal end 202 of the inclinable access structure 110). The actuators 301 can push the multi-position end breaching platform 125 upwardly to match (or substantially match) the angle of the inclinable access structure 110.

[0045] The elevated access system 100 may include handrails 130 mounted to the inclinable access structure 110 and handrails 131 mounted to the multi-position end breaching platform 125. The handrails 130 may be positioned along and pivotably mounted to the inclinable access structure 110, and the handrails 131 may be positioned along and pivotably mounted to the multi-position end breaching platform 125. In some embodiments, handrails 130 and handrails 131 may be configured to operate independently from each other. The handrails 130/131 may operate by gravity. For example, as the inclinable access structure 110 is deployed, the handrails 130/131 may fall backwards, thereby extending the handrails 130/131. In some embodiments, the handrails 130/131 may be pivotably mounted to the inclinable access structure 110

and the multi-position end breaching platform 125, respectively, and may have stops such that, when the pivot to the extended position is due to gravity, the stop pivoting at a desired angle due to the stops. In the illustrated embodiment, the handrails 131 and 130 may be connected to the inclinable access structure 110 via a deployment linkage 115 such that the motion of the inclinable access structure 110 passively (e.g. without additional actuation) deploys and stows the handrails 131 and 130 while rigidly maintaining their position (e.g., their stowed or deployed position).

[0046] In various embodiments, a control system (e.g., a controller) 135 may be housed in or on the vehicle and/or within the fixed base structure 105. The control system 135 is configured to control the operation of the vehicle-mounted elevated access system 100. For example, the control system 135 may control the movement of the actuators 140 and the movement of the actuators 301 to determine the configuration and overall height of the inclinable access structure 110.

[0047] A method of deploying (e.g., extending, raising, or inclining) an embodiment of the vehicle-mounted elevated access system 100 will be described in more detail hereinafter with reference to FIGS. 4-8.

[0048] Referring to FIG. 4, which shows the vehicle-mounted elevated access system 100 in the stowed (or retracted) configuration, the inclinable access structure 110 is positioned flat against the fixed base structure 105, and the multi-position end breaching platform 125 is folded against (e.g., is folded against a top surface of) the inclinable access structure 110. In this configuration, the handrails 130 and 131 are in a stowed configuration in which they are positioned flat against the fixed base structure 105, and the lifting masts 120 are in a stowed configuration in which they are pivoted downwardly near the fixed base structure 105.

[0049] Referring to FIG. 5, in the deployed flat configuration, the inclinable access structure 110 remains flat against the fixed base structure 105, but the lifting masts 120

are shifted into their deployed position due to retraction (e.g., partial retraction) of the actuators 140, which pulls the tension elements 111 forward, which cause the movable hinge points 108 to move along the track channels 107, which causes the lifting masts 120 to move into a deployed configuration (or position). Additionally, as the movable hinge points 108 translate the inclinable access structure 110 forward, the multi-position end breaching platform 125 is shifted into its flat deployed position by way of forces applied through the deployment mechanism 302, and reacted by the fixed base structure 105, and host vehicle 101. The forward tension elements 111 and the rear tension elements 112 pivot relative to the fixed base structure 105 during the movement of the actuators 140 but do not bend or fold. In various embodiments, the lifting masts 120, the handrails 131, and the multi-position end breaching platform 125 may be deployed concurrently (or substantially simultaneously).

[0050] In the deployed flat configuration, the tops of the lifting masts 120 are raised above the fixed base structure 105. The inclinable access structure 110 is connected to the lifting masts 120 by the forward tension elements 111, and the lifting masts 120 are connected to the fixed base structure 105 by way of rear tension elements 112 and the pivotable connection 104. In the deployed flat configuration, the multi-position end breaching platform 125 is oriented in a flat, deployed position in which the multi-position end breaching platform 125 is folded out so that the surface 126 thereof faces upwardly and is parallel to the inclinable access structure 110. In various embodiments, the multi-position end breaching platform 125 may be configured to remain passively parallel to the ground in the flat deployed position. In this configuration, the handrails 131 of the multi-position end breaching platform 125 may be deployed automatically (e.g., may be deployed passively, without additional actuation) via a rigid linkage 303 (e.g., may be a multilink kinematic mechanism) while the handrails 130 of the inclinable access structure 110 remain flat against the fixed base structure 105.

[0051] The elevated access system 100 shifts from the deployed flat configuration shown in FIG. 5 to the deployed low angle configuration shown in FIG. 6 by further movement of the actuators 140. In the deployed low angle configuration shown in FIG. 6, the distal end 202 of the inclinable access structure 110 is raised to a height above the fixed base structure 105. As described above, because the steps 113 of the inclinable access structure 110 are configured to remain passively parallel to the ground, they remain parallel to the ground in this configuration without external input. Similarly, the multi-position end breaching platform 125 is pivotably connected to the distal end 202 of the inclinable access structure 110 such that it remains passively parallel to the ground without external input. In various embodiments, the multi-position end breaching platform 125 may be configured to remain passively parallel to the ground during operation of the vehicle-mounted elevated access system 100. When the inclinable access structure 110 is moved to an angle above parallel, such as the low angle deployed configuration shown in FIG. 6, the handrails 130 may be extended (or deployed) via the motion of the deployment linkages 115 connected to the inclinable access structure 110 and to the proximal ends of the handrail uprights 116. Such linkages may be disconnected to allow handrails 130 to lay flat on the inclinable access structure 110 when desired. In the low angle deployed configuration, both the handrails 130 and 131 may be in the extended (or deployed) configuration (or position).

[0052] The elevated access system 100 shifts from the deployed low angle configuration shown in FIG. 6 to the deployed high angle configuration as shown in FIG. 7 by further movement of the actuators 140. Referring to FIG. 7, in the deployed high angle configuration, the distal end 202 of the inclinable access structure 110 is raised to a height greater than that reached in the deployed low angle configuration shown in FIG. 6. As in the other configurations, the steps 113 of the inclinable access structure 110 and the surface 126 of the multi-position end breaching platform 125 remain passively

parallel to the ground. The handrails 130 remain substantially parallel to the inclinable access structure 110, and the handrails 131 remain substantially parallel to the multi-position end breaching platform 125.

[0053] The elevated access system 100 shifts from the deployed high angle configuration shown in FIG. 7 to the deployed high angle configuration with the multi-position end breaching platform 125 deployed in a stairway configuration as shown in FIG. 8 by extension (e.g., further extension) of the actuators 301. Referring to FIG. 8, when the multi-position end breaching platform 125 is in the stairway configuration, the tread surface 126 of the multi-position end breaching platform 125 separates and rotates into a series of stairs which align as an extension of the inclinable access structure 110 and is not parallel to the ground as in the above-described configurations. The multi-position end breaching platform 125 is deployed into the stairway configuration by movement (e.g., extension) of the actuators 301.

[0054] Although the multi-position end breaching platform 125 is only shown as entering the stairway configuration when the inclinable access structure 110 is in its highest configuration, that is, the high angle configuration, the multi-position end breaching platform 125 may enter the stairway configuration regardless of the position (or configuration) of the inclinable access structure 110 as long as it is in at least the deployed flat configuration shown in FIG. 5 (e.g., as long as the multi-position end breaching platform 125 is folded out from the inclinable access structure 110).

[0055] Further, although the inclinable access structure 110 is shown as being deployed into certain configurations, the inclinable access structure 110 can be deployed to any height between the deployed flat configuration shown in FIG. 5 to the deployed high angle configuration shown in FIG. 8. Put another way, the inclination angle of the inclinable access structure 110 is not limited to the distinct angles shown in FIGS. 5-8 but may be raised to any desired height (e.g., to any desired angle) between

the deployed flat configuration shown in FIG. 5 and the deployed high angle configuration shown in FIG. 8. Nor are the angles of the inclinable access structure 110 and the multi-position end breaching platform 125 shown in FIG. 8 intended to be limiting of the possible range of motion of these components.

[0056] In some embodiments, a user may be able to control the inclinable access structure 110 and/or the multi-position end breaching platform 125 to reach a desired height by using a controller. For example, a user may input or select a desired height for vehicle-mounted access system 100 (e.g., the distal end of the multi-position end breaching platform 125), and the vehicle-mounted elevated access system 100 may deploy itself to the desired height. For example, the controller 135 may have a look-up table of values comparing movement of the actuators 140 to the overall height of the elevated access system 100. And, in some embodiments, the controller 135 may store heights of various entry points, etc., such as the height of a particular aircraft door above the ground. In such an embodiment, a user may select which door of an aircraft the elevated access system 100 is desired to reach, and by using the software look-up table and stored information relating to the height of the selected aircraft door, the elevated access system 100 may deploy the inclinable access structure 110 and the multi-position end breaching platform 125 to substantially the correct height to reach the selected aircraft door.

[0057] FIG. 9 illustrates a graphical user interface 900 for communicating with the controller according to an embodiment of the present invention.

[0058] Referring to FIG. 9, the graphical user interface 900 communicates with the controller on the vehicle-mounted elevated access system 100 to control the operation of the system. The graphical user interface 900 may operate on a suitable device using touchscreen input methods, such as mobile devices including mobile phones, tablets, etc. The graphical user interface 900 is compatible with multiple touch enabled

operating systems including, but not limited to: macOS, iOS, Android, Windows. The graphical user interface 900 may communicate with the controller of the vehicle-mounted elevated access system 100 via a cellular connection, a WiFi connection by using in-vehicle WiFi hotspot (e.g., a local-area WiFi network), or Bluetooth. Over the Air (OTA) updates are available for software running on device that have an internet connection. The graphical user interface 900 may incorporate programmed logic with feedback from sensors and switches to prevent mechanical interference between mechanisms, such that, for example the multi-position end breaching platform 125 does not extend unless the inclinable access structure 110 is raised to or above 1 degree). In some embodiments, the touchscreen controls are useable by operators in touch-enabled gloves.

[0059] In various embodiments, graphical user interface 900 can operate in different control modes, including, but not limited to, manual control mode, preset mode, aircraft mode, and video streaming mode. The manual control mode can be selected by pressing the MODE MANUAL button 901. When in manual control mode, individual touch sensitive actuation buttons 902, when held down, control the extension and retraction of various mechanisms and actuators. In some embodiments, the graphical user interface 900 may include an ARM button. In such an embodiment, to move the inclinable access structure 110 and/or the multi-position end breaching platform 125, the user may be to hold down the ARM button along with any actuation button 902 to execute the selected actuation command to prevent or reduce the occurrence of accidental control inputs. The manual control mode also displays a 3D responsive image 903 of the vehicle-mounted elevated access system 100 that highlights the subsystem (or component) being actuated. A stair info box 904 displays real time angle and height of the inclinable access structure 110 and the multi-position end breaching platform 125 by using on board sensors. A large ALL STOP button 905 can be pushed

to immediately cut power to all systems, which will arrest the motion of the system and maintain its position for safety.

[0060] The preset mode can be selected by pressing the MODE PRESETS button 906. When in preset mode, the graphical user interface 900 displays a scrollable list of preset system heights from 3 meters (m) to 9 m in 0.25 m increments. The preset system heights correspond to the height of the overall distal end. While holding down the ARM button (when present), a user presses and release one of the preset height buttons, at which time the graphical user interface 900 will display a "deploying to preset" message and will begin to drive system to the preset height. If at any time, the user releases the ARM button during deployment to the preset height, the control logic will automatically halt all system motion. Once the desired height has been reached, as determined by on-board sensors, the controller will automatically halt all motion and maintain the position (or configuration) of the vehicle-mounted elevated access system 100. Any configuration (e.g., height) can be stored (e.g., permanently stored) in the controller for quick recall by pressing a SAVE CONFIGURATION button. The stored configuration may then be named by a user, such as "West Wing – 2nd Store Balcony".

[0061] The video streaming mode can be selected by pressing the VIEW VIDEO STREAM button. When the VIEW VIDEO STREAM button is selected, the device wirelessly streams live high definition (HD) video from Ethernet cameras mounted to the vehicle-mounted elevated access system. During video streaming, a return arrow in corner of the screen allows user to return to the most recent control screen.

[0062] FIG. 10 illustrates another screen of the graphical user interface (UI) 900 in an aircraft mode according to an embodiment of the present invention.

[0063] When in the aircraft mode, the graphical user interface 900 displays a drop down "Aircraft Selection Menu." The "Aircraft Selection Menu" provides a user with a list of commercial aircraft to choose from, such as the Airbus A380, the Boeing 777, the

Boeing 747, etc. Upon selection of an aircraft, a side view of that aircraft (with identification label) is displayed on the screen with each fuselage door represented as an easily visible button. While holding down the ARM button (when present), a user presses and releases one of the fuselage door buttons, at which time the UI displays a "Deploying to Preset" message and begins to drive the vehicle-mounted elevated access system 100 into a configuration corresponding to the selected door preset. Fuselage door configuration settings may be pre-calibrated to aircraft manufacturer specifications. If at any time, the user releases the ARM button during deployment to preset, the control logic will automatically halt all system motion. Once a preset configuration has been reached, the corresponding fuselage door remains highlighted until a different configuration is selected. The user can select a desired height for the distal end of the inclinable access structure 110 and/or the multi-position end breaching platform 125 by selecting a window on the side view of the displayed aircraft. The height of the window corresponds to the height of the inclinable access structure 110 and/or the multi-position end breaching platform 125.

[0064] It will be understood that when an element or layer is referred to as being "on," "connected to," or "coupled to" another element or layer, it may be directly on, connected, or coupled to the other element or layer or one or more intervening elements or layers may also be present. When an element or layer is referred to as being "directly on," "directly connected to," or "directly coupled to" another element or layer, there are no intervening elements or layers present. For example, when a first element is described as being "coupled" or "connected" to a second element, the first element may be directly coupled or connected to the second element or the first element may be indirectly coupled or connected to the second element via one or more intervening elements.

[0065] The same reference numerals designate the same elements. As used herein, the term "and/or" includes any and all combinations of one or more of the associated listed items. Further, the use of "may" when describing embodiments of the present invention relates to "one or more embodiments of the present invention." Expressions, such as "at least one of," when preceding a list of elements, modify the entire list of elements and do not modify the individual elements of the list. Also, the term "exemplary" is intended to refer to an example or illustration. As used herein, the terms "use," "using," and "used" may be considered synonymous with the terms "utilize," "utilizing," and "utilized," respectively. As used herein, the terms "substantially," "about," and similar terms are used as terms of approximation and not as terms of degree, and are intended to account for the inherent variations in measured or calculated values that would be recognized by those of ordinary skill in the art.

[0066] It will be understood that, although the terms first, second, third, etc. may be used herein to describe various elements, components, regions, layers, and/or sections, these elements, components, regions, layers, and/or sections should not be limited by these terms. These terms are used to distinguish one element, component, region, layer, or section from another element, component, region, layer, or section. Thus, a first element, component, region, layer, or section discussed below could be termed a second element, component, region, layer, or section without departing from the teachings of example embodiments. In the figures, dimensions of the various elements, layers, etc. may be exaggerated for clarity of illustration.

[0067] Spatially relative terms, such as "beneath," "below," "lower," "above," "upper," and the like, may be used herein for ease of description to describe one element or feature's relationship to another element(s) or feature(s) as illustrated in the figures. It will be understood that the spatially relative terms are intended to encompass different orientations of the device in use or operation in addition to the orientation depicted in the

figures. For example, if the device in the figures is turned over, elements described as "below" or "beneath" other elements or features would then be oriented "above" or "over" the other elements or features. Thus, the term "below" may encompass both an orientation of above and below. The device may be otherwise oriented (rotated 90 degrees or at other orientations), and the spatially relative descriptors used herein should be interpreted accordingly.

[0068] The terminology used herein is for the purpose of describing particular example embodiments of the present invention and is not intended to be limiting of the described example embodiments of the present invention. As used herein, the singular forms "a" and "an" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "includes," "including," "comprises," and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

[0069] Also, any numerical range disclosed and/or recited herein is intended to include all sub-ranges of the same numerical precision subsumed within the recited range. For example, a range of "1.0 to 10.0" is intended to include all subranges between (and including) the recited minimum value of 1.0 and the recited maximum value of 10.0, that is, having a minimum value equal to or greater than 1.0 and a maximum value equal to or less than 10.0, such as, for example, 2.4 to 7.6. Any maximum numerical limitation recited herein is intended to include all lower numerical limitations subsumed therein, and any minimum numerical limitation recited in this specification is intended to include all higher numerical limitations subsumed therein. Accordingly, Applicant reserves the right to amend this specification, including the claims, to expressly recite any sub-range subsumed within the ranges expressly recited

herein. All such ranges are intended to be inherently described in this specification such that amending to expressly recite any such sub-ranges would comply with the requirements of 35 U.S.C. § 112(a) and 35 U.S.C. § 132(a).

[0070] Although example embodiments of the vehicle-mounted elevated access system have been described and illustrated herein, many modifications and variations within those embodiments will be apparent to those skilled in the art. Accordingly, it is to be understood that the vehicle-mounted elevated access system according to the present invention may be embodied in forms other than as described herein without departing from the spirit and scope of the present invention. The present invention is defined by the following claims and equivalents thereof.

WHAT IS CLAIMED IS:

1. A vehicle-mounted access system comprising:

a fixed base structure comprising a plurality of track channels;

a plurality of movable hinge carriages respectively on and configured to move along the plurality of track channels;

an inclinable access structure having a proximal end and a distal end, the proximal end of the inclinable access structure being pivotably connected to the plurality of movable hinge carriages;

a lifting mast having a proximal end and a distal end, the distal end of the lifting mast being connected to the distal end of the inclinable access structure by forward tension elements and being connected to the fixed base structure by rear tension elements, the proximal end of the lifting mast being pivotably connected to the fixed base structure; and

an actuator connected between the movable hinge carriages and the fixed base structure, the actuator being configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

2. The vehicle-mounted access system of claim 1, further comprising an inclinable access handrail positioned along to and pivotably attached to the inclinable access structure.

3. The vehicle-mounted access system of claim 2, wherein the inclinable access handrail is configured to extend into a deployed position by a plurality of linkages.

4. The vehicle-mounted access system of claim 1, further comprising a multi-position end breaching platform that is pivotably connected to the distal end of the inclinable access structure.

5. The vehicle-mounted access system of claim 4, further comprising a platform handrail positioned along and pivotably attached to the multi-position end breaching platform.

6. The vehicle-mounted access system of claim 5, wherein the platform handrail is configured to extend into a deployed position by an action of a multilink kinematic mechanism.

7. The vehicle-mounted access system of claim 4, further comprising a plurality of secondary actuators connected between the distal end of the inclinable access structure and the multi-position end breaching platform.

8. The vehicle-mounted access system of claim 7, wherein the secondary actuators are configured to extend to pivot the multi-position end breaching platform relative to the inclined access structure and to transition a surface of the multi-position end breaching platform into a series of stairs.

9. The vehicle-mounted access system of claim 1, wherein the inclinable access structure further comprises a ramp.

10. The vehicle-mounted access system of claim 1, wherein the inclinable access structure further comprises a plurality of stairs.

11. The vehicle-mounted access system of claim 10, wherein the plurality of stairs are configured to remain passively parallel to the ground.

12. The vehicle-mounted access system of claim 1, further comprising a controller configured to control movement of the actuator.

13. The vehicle-mounted access system of claim 12, wherein the controller is operated by a touchscreen user interface comprising:

a manual mode;

a preset mode;

a video streaming mode; and

an aircraft mode.

14. The vehicle-mounted access system of claim 13, wherein the preset mode is configured to allow a selection of pre-programmed heights of the distal end of the inclinable access structure.

15. The vehicle-mounted access system of claim 13, wherein, in the aircraft mode, the touchscreen user interface displays an aircraft,

wherein, in the aircraft mode, the controller is configured to allow for a selection of a pre-programmed height of the distal end of the inclinable access structure by selecting a window on the displayed aircraft.

16. The vehicle-mounted access system of claim 1, wherein the actuator is configured to pull the movable hinge carriages toward the actuator to raise the distal end of the inclinable access structure.

17. A method for deploying the vehicle-mounted access system according to claim 1 by using a touchscreen user interface, the method comprising:

displaying, by the touchscreen user interface, an image of an aircraft;

transmitting, by the touchscreen user interface, a preprogrammed height selected by a user by selecting a window on the image of the aircraft to a controller of the vehicle-mounted access system; and

raising, by the controller, a distal end of an inclinable access structure connected to the vehicle-mounted access system to the preprogrammed height.

180720

ABSTRACT

A vehicle-mounted access system includes a fixed base structure including a plurality of track channels; a plurality of movable hinge carriages configured to move along the plurality of track channels; an inclinable access structure pivotably connected to the movable hinge points and connected to lifting masts by forward tension elements, lifting masts connected to the fixed base structure by rear tension elements and pivotably connected to the fixed base structure; an actuator connected between the movable hinge carriages and the fixed base structure, the actuator configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

Attorney: Daniel Salgado
Docket No. 180720
Inventor: Joshua Clemente
Title: A Vehicle-Mounted Elevated Access System

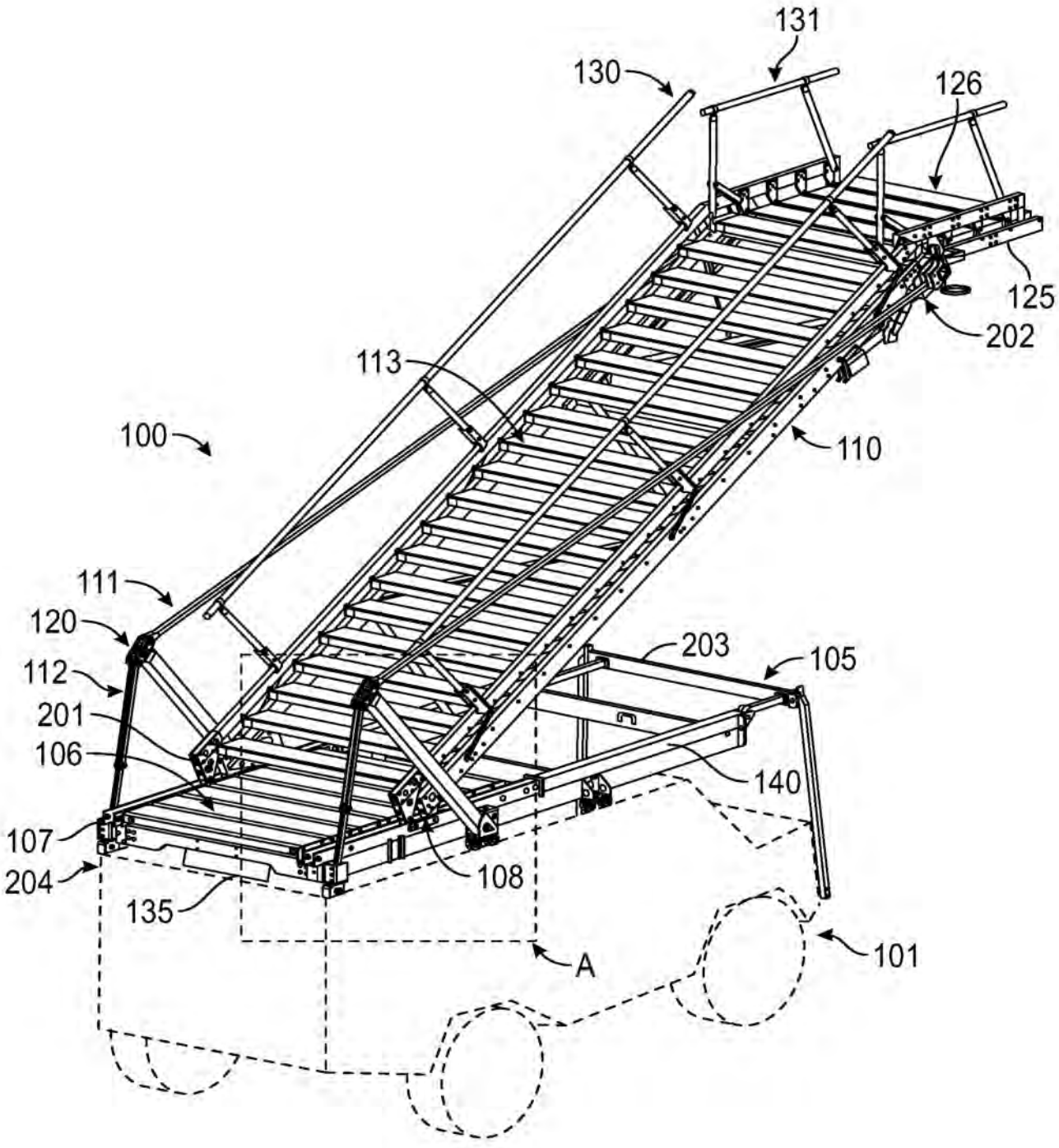


FIG. 1

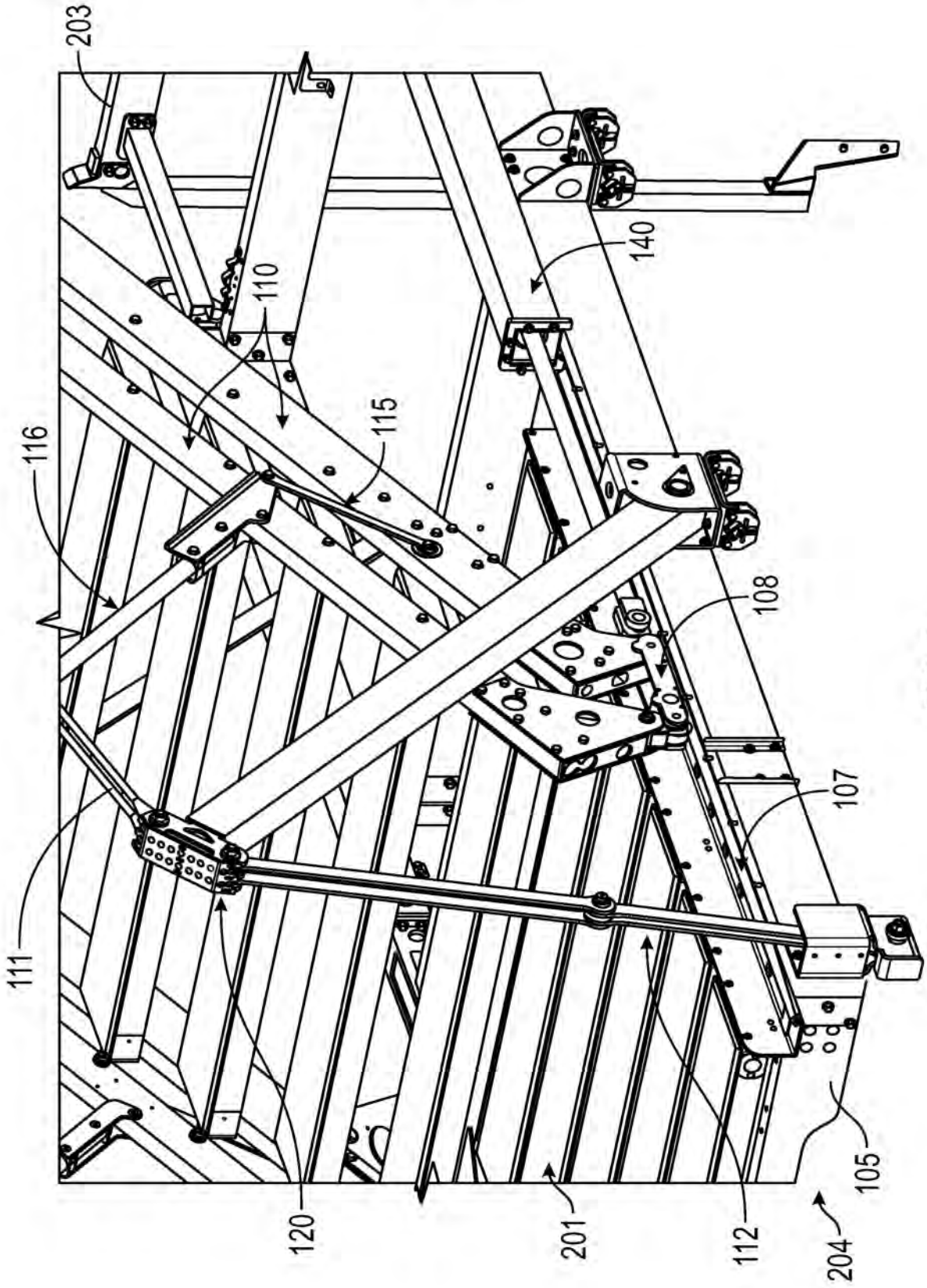


FIG. 2

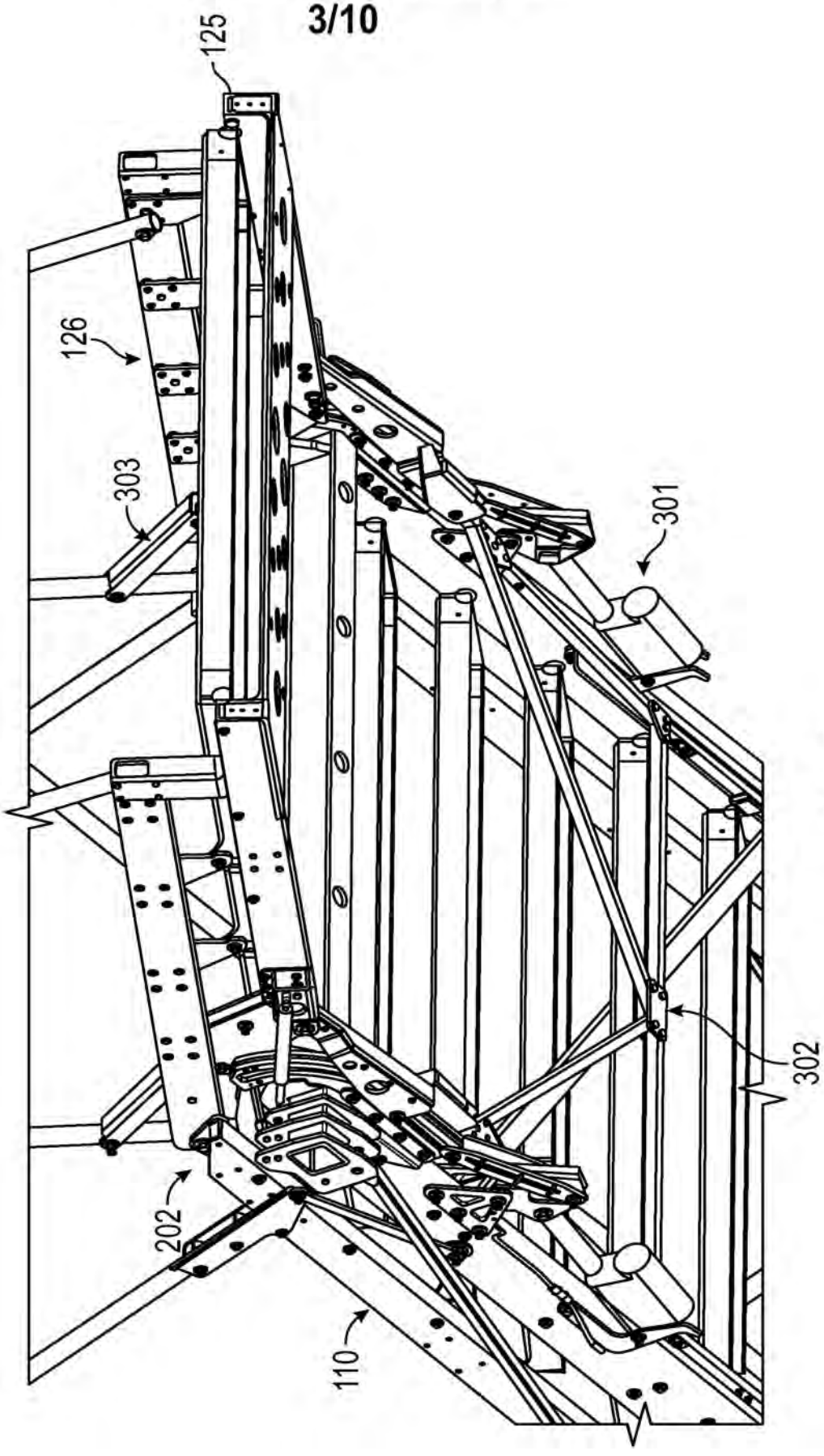


FIG. 3

Attorney: Daniel Salgado
Docket No. 180720
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Title: A Vehicle-Mounted Elevated Access System

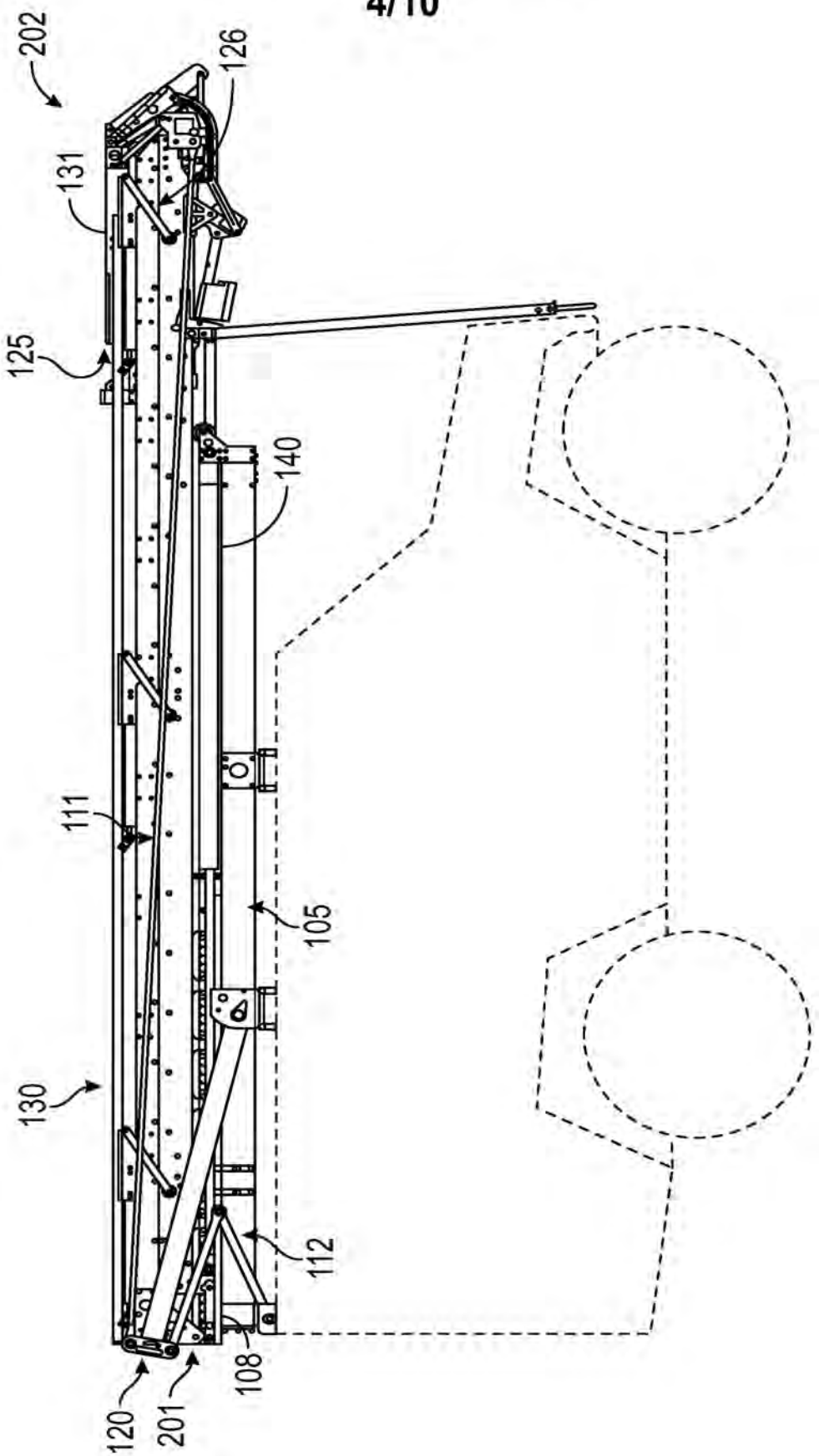


FIG. 4

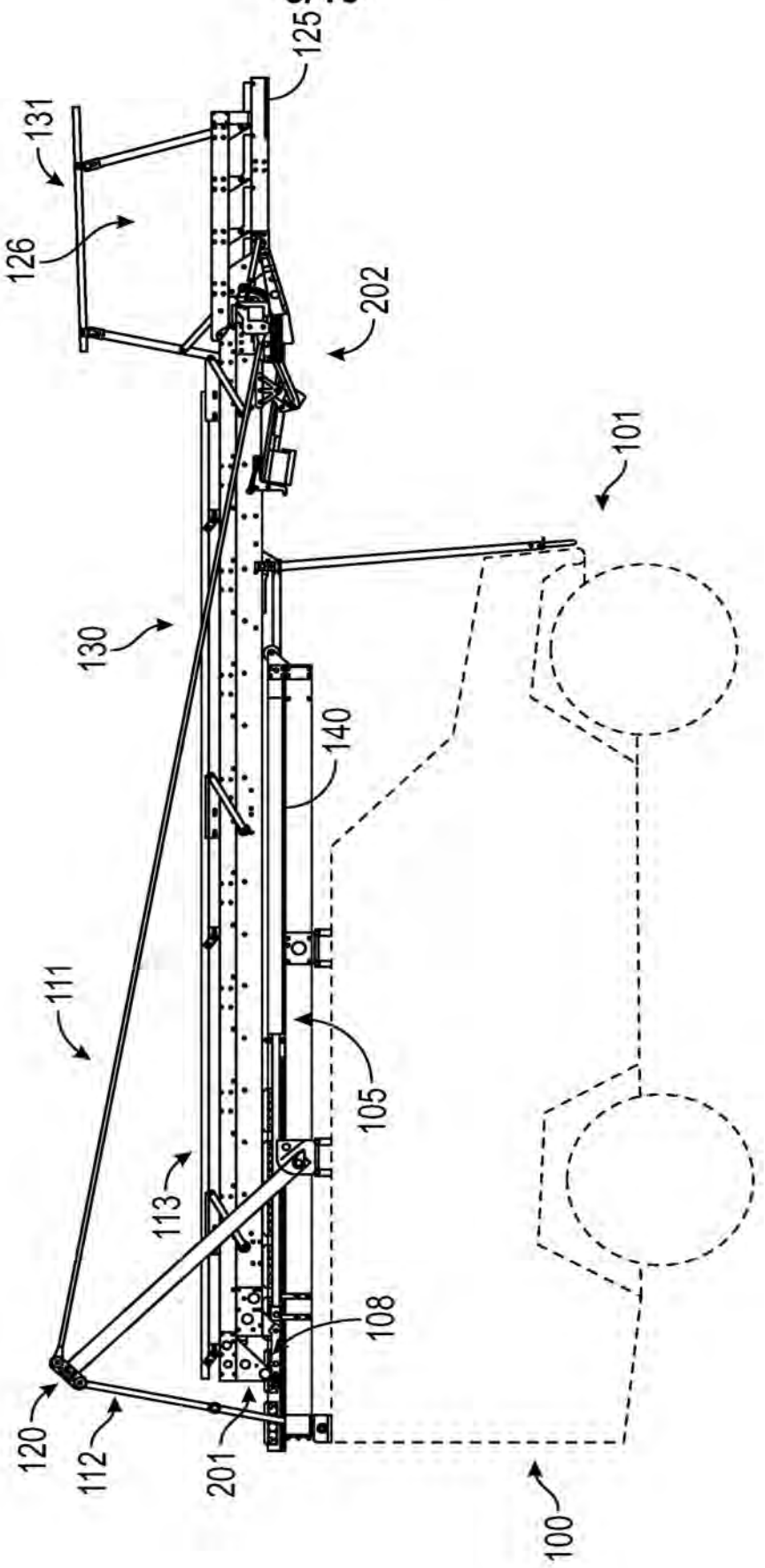


FIG. 5

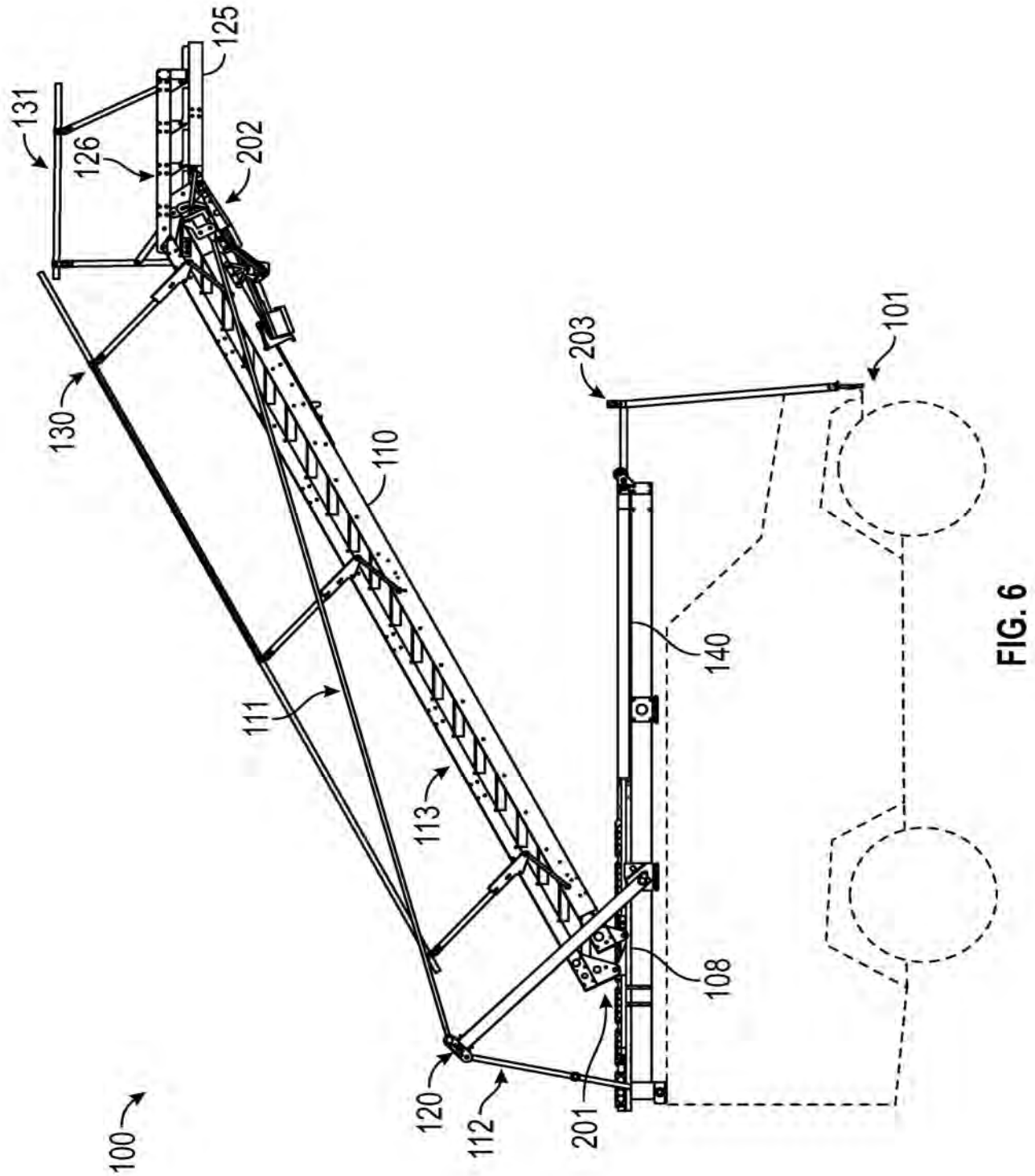


FIG. 6

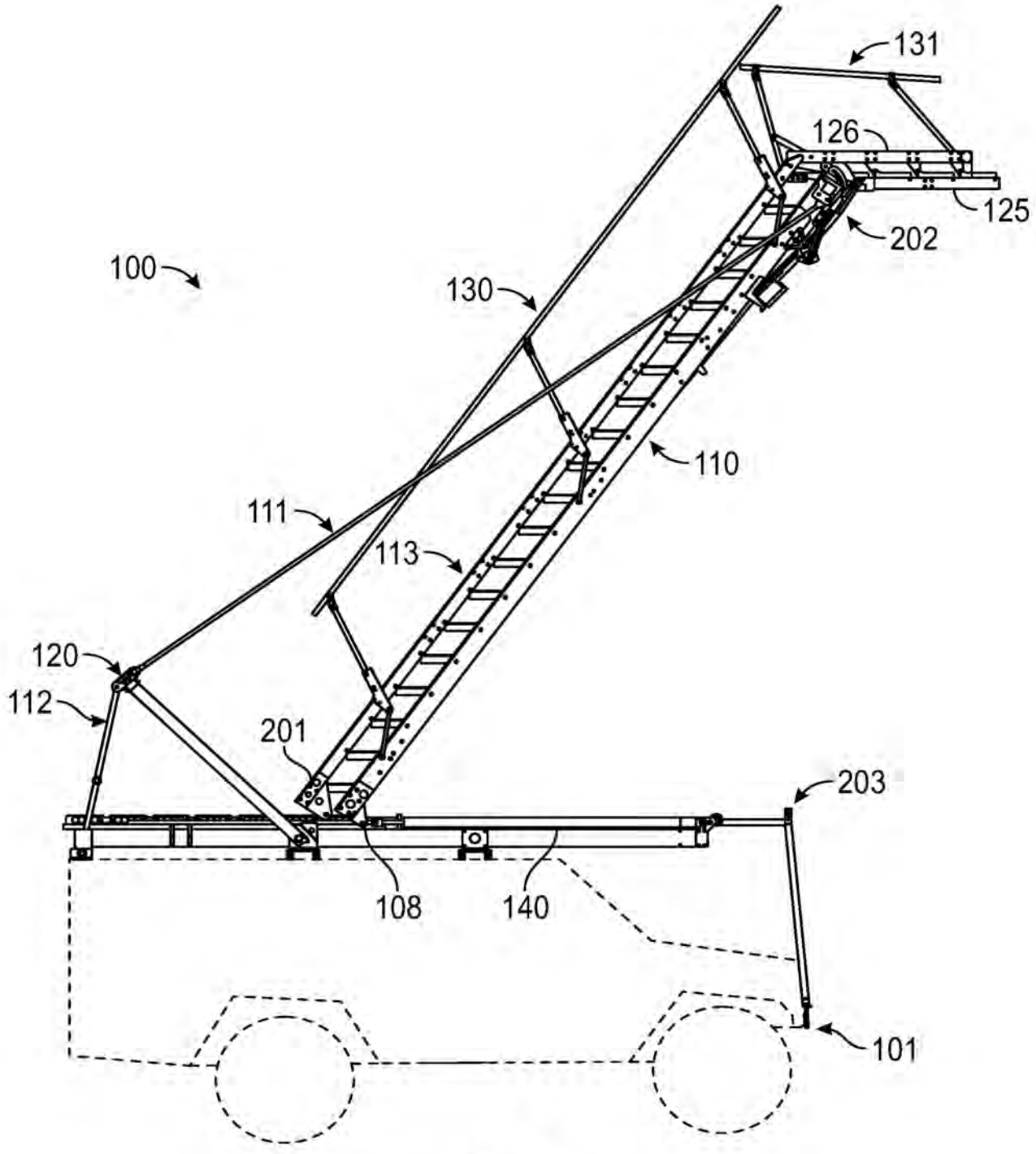


FIG. 7

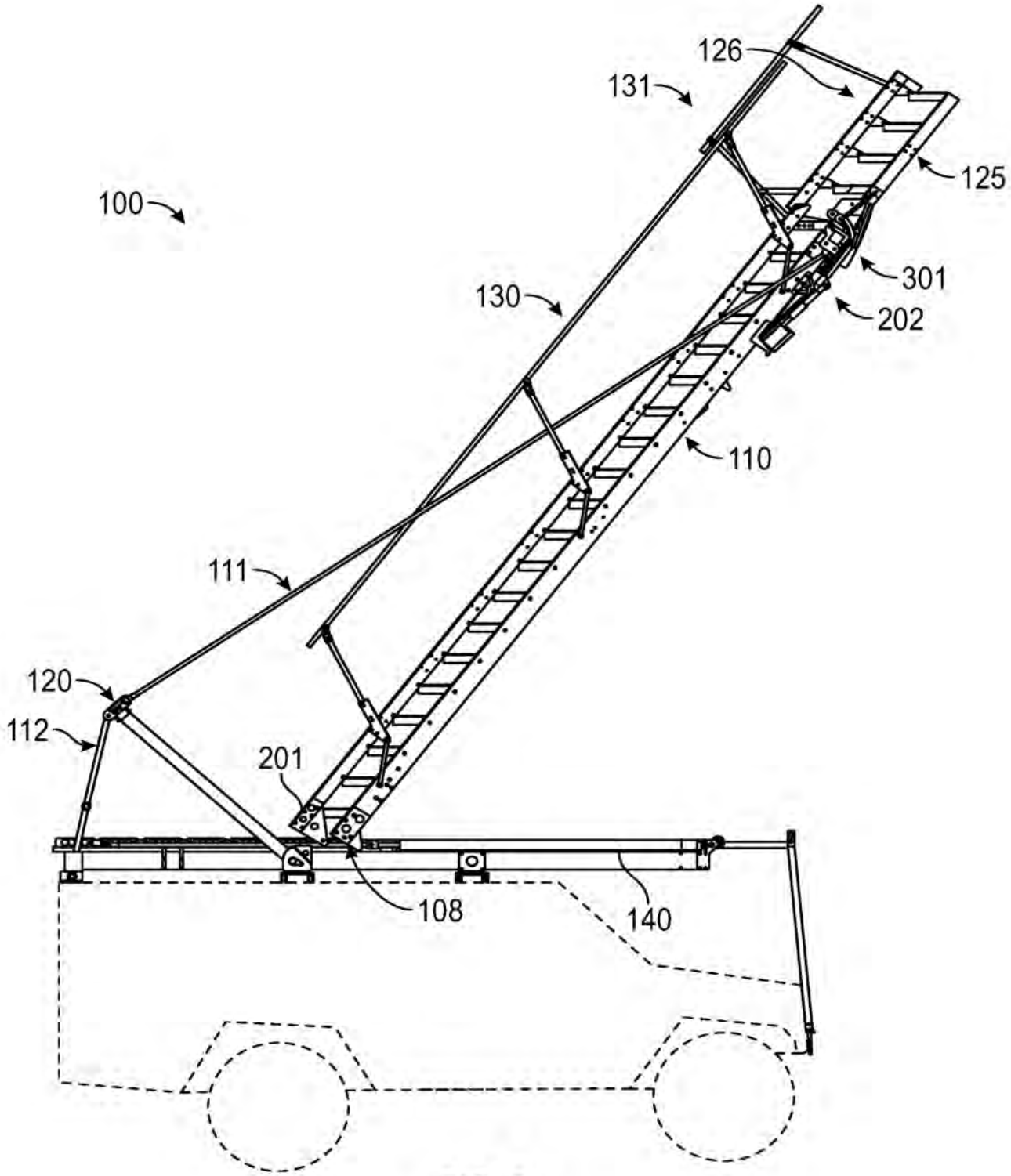


FIG. 8

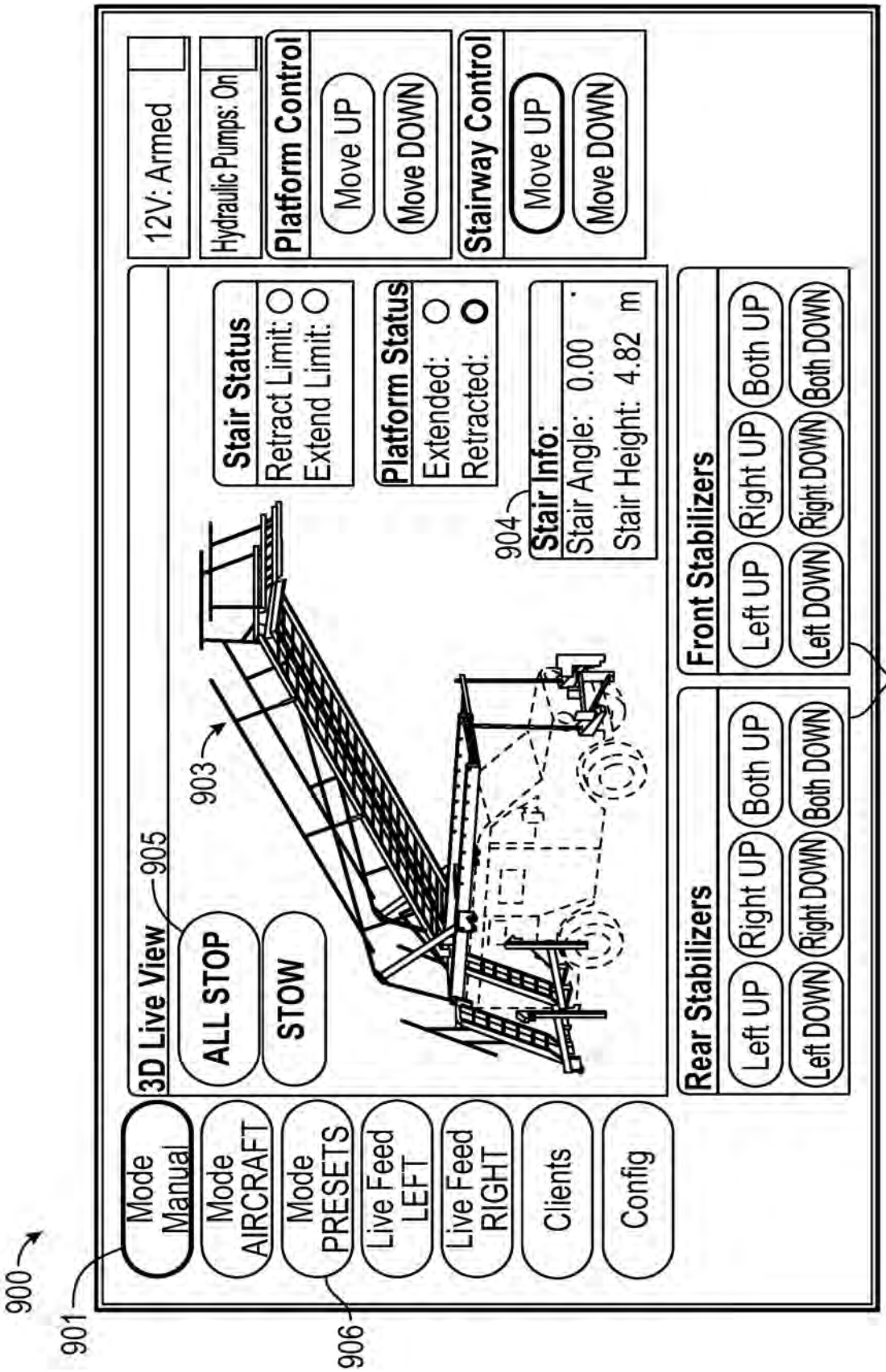

900
901
906
Mode Manual
Mode AIRCRAFT
Mode PRESETS
Live Feed LEFT
Live Feed RIGHT
Clients
Config
3D Live View
905
ALL STOP
STOW
903
Stair Status
Retract Limit: O
Extend Limit: O
Platform Status
Extended: O
Retracted: O
904
Stair Info:
Stair Angle: 0.00 °
Stair Height: 4.82 m
12V: Armed
Hydraulic Pumps: On
Platform Control
Move UP
Move DOWN
Stairway Control
Move UP
Move DOWN
Rear Stabilizers
Left UP
Right UP
Both UP
Left DOWN
Right DOWN
Both DOWN
Front Stabilizers
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Right UP
Both UP
Left DOWN
Right DOWN
Both DOWN
902

FIG. 9

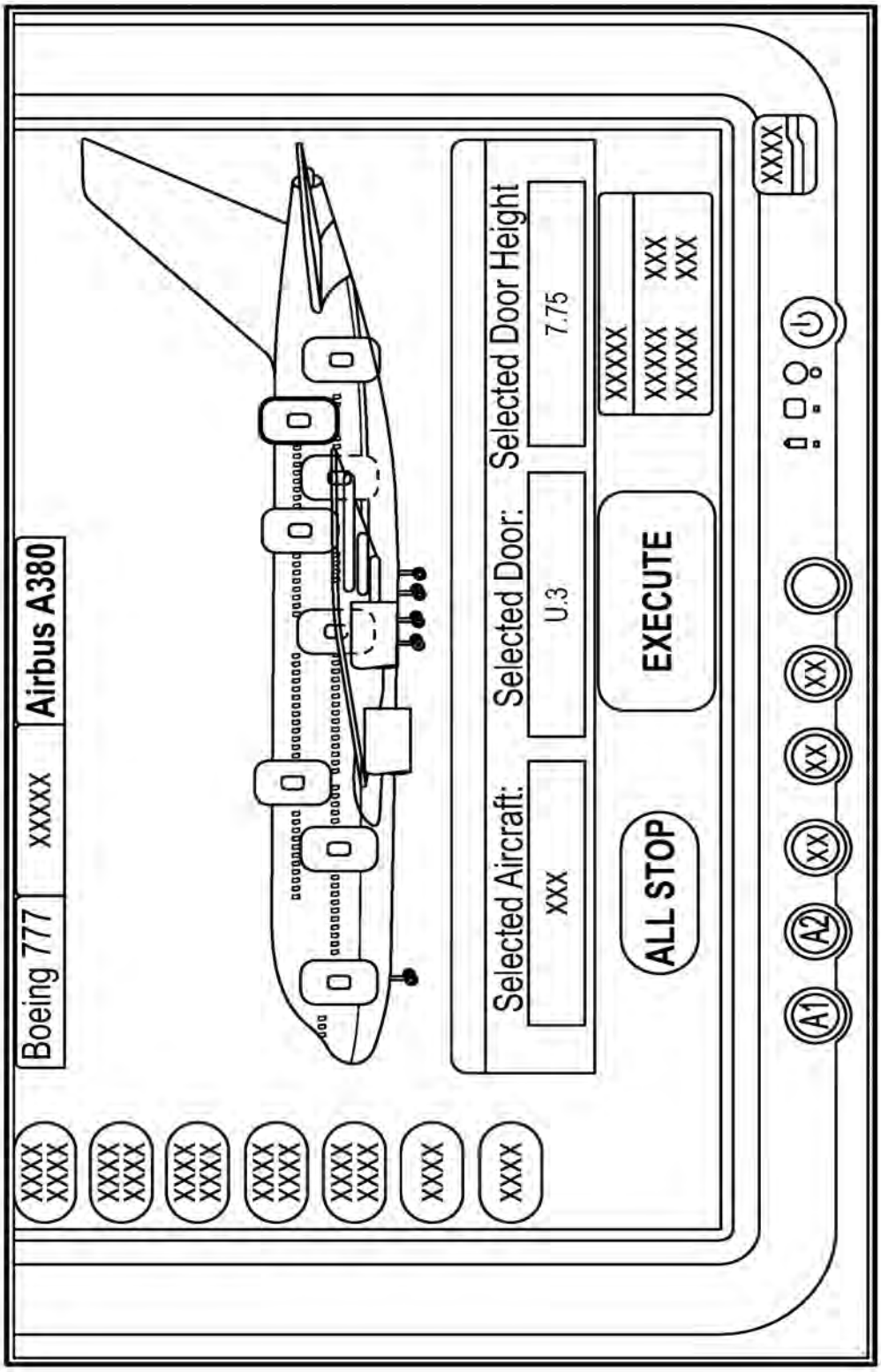

900
Boeing 777
XXXXX
Airbus A380
XXXX XXXX
XXXX XXXX
XXXX XXXX
XXXX XXXX
XXXX XXXX
XXXX
XXXX
Selected Aircraft:
XXX
Selected Door:
U.3
Selected Door Height
7.75
ALL STOP
EXECUTE
XXXXX
XXXXX XXX
XXXXX XXX
XXXX
A1
A2
XX
XX
XX

FIG. 10

AIA-SEPARATE

INVENTOR'S DECLARATION FOR PATENT APPLICATION PATENT

Title of Invention: A VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

Docket No.: 180720

As the below named inventor, I hereby declare that:

This declaration is directed to the attached application unless the following is checked:

_____ United States Application or PCT International Application Number _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

Joshua Clemente
Legal Name of Inventor

11/19/19
Date

Signature

109751925.1

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being EFS-Web transmitted to the United States Patent and Trademark Office on November 19, 2019 at or before 11:59 p.m. Pacific Time under the Rules of 37 CFR § 1.8.

/Sheila R. Harter/
Sheila R. Harter

Appl No.	: TBD	Confirmation No. TBD
Inventor	: Joshua Clemente	
Filed	: Herewith	
Title	: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM (As Amended)	
TC/A.U.	: TBD	
Examiner	: TBD	
Docket No.	: 180720	
Customer No.	: 23363	

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 29001
Glendale, CA 91209-9001
November 19, 2019

Commissioner:

Prior to examination, please amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Remarks/Arguments begin on page 3 of this paper.

Amendments to the Specification:

Please amend the title of the invention as set forth below:

[[A]] VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

REMARKS/ARGUMENTS

Prior to examination, Applicant respectfully requests entry to the amended title of the invention as set forth herein. No new matter has been introduced.

If there are any additional fees associated with the filing of this Preliminary Amendment, please charge the prescribed fee(s) to Deposit Account No. 03-1728.

Respectfully submitted,
LEWIS ROCA ROTHGERBER CHRISTIE LLP

By /Daniel Salgado/
Daniel A. Salgado
Reg. No. 76,283
626/795-9900

DAS/srh
SRH 109778654.1-*-11/19/2019 1:59 PM

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being EFS-Web transmitted to the United States Patent and Trademark Office on November 19, 2019 at or before 11:59 p.m. Eastern Standard Time under the Rules of 37 CFR § 1.10.

/Sheila R. Harter/
Sheila R. Harter

Inventor	:	Joshua Clemente
Application No.	:	To Be Determined
Filed	:	November 19, 2019
Title	:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
Grp./Div.	:	To Be Determined
Examiner	:	To Be Determined
Docket No.	:	180720

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS IN ACCORDANCE WITH 37 CFR 1.5

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 29001
Glendale, CA 91209-9001
November 19, 2019

Commissioner:

Attached herewith is a General Power of Attorney for the above-identified patent application.

Respectfully submitted,

LEWIS ROCA ROTHGERBER CHRISTIE LLP

By /Daniel Salgado/
Daniel A. Salgado
Reg. No. 76,283
626/795-9900

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SRH 109778585.1-*-11/19/2019 1:58 PM

FEE TRANSMITTAL
UTILITY PATENT APPLICATION

DATE: November 19, 2019

Docket No. : 180720 Duplicate __
Inventor(s) : Joshua Clemente
Title : VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

FEE CALCULATION

CLAIMS AS FILED						
	Number Filed	Number Extra	Large Entity Rate	Small Entity Rate	Micro Entity Rate	Fee
Total Claims	17 – 20	= 0	$100.00	$50.00	0 x $25.00	$0.00
Independent Claims	1 – 3	= 0	$460.00	$230.00	0 x $115.00	$0.00
Multiple-Dependent Claims Fee			$820.00	$410.00	$205.00	$0.00

BASIC FILING, SEARCH, AND EXAMINATION FEES				
	Large Entity Rate	Small Entity Rate	Micro Entity Rate	Fee
Basic Filing Fee	$300.00	$75.00	$75.00	$75.00
Search Fee	$660.00	$330.00	$165.00	$165.00
Examination Fee	$760.00	$380.00	$190.00	$190.00

APPLICATION SIZE FEE							
EFS Paper Size Equivalent	Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to whole number)	Large Entity Rate	Small Entity Rate	Micro Entity Rate	Fee
37 *.75	= 28 – 100	= 0/50	= 0	$400.00	$200.00	0 x $100.00	$0.00

OTHER				
	Large Entity Rate	Small Entity Rate	Micro Entity Rate	Fee
Late Submission of Oath/Declaration Fee	$160.00	$80.00	$40.00	$0.00
Non-Electronic Filing Fee	$400.00	$200.00	$200.00	$0.00
			TOTAL AMOUNT OF FEES	$430.00
List Independent Claims: 1				

METHOD OF PAYMENT

__X__ Submitted herewith is the fee of $430.00.

__X__ The Commissioner is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required during the **entire pendency** of the application to Deposit Account No. 03-1728. Please show our docket number with any charge or credit to our Deposit Account.

Respectfully submitted,

LEWIS ROCA ROTHGERBER CHRISTIE LLP

By /Daniel Salgado/
Daniel A. Salgado
Reg. No. 76,283
626/795-9900

DAS/srh

UTILITY PATENT APPLICATION TRANSMITTAL
(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.: 180720

5. _____ **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, all necessary)*
   _____ Computer Readable Copy
   _____ Paper Copy (identical to computer copy)
   _____ Statement verifying identity of above copies

6. **APPLICANT(S) STATUS UNDER 37 CFR § 1.27 or 1.29**
   _____ Applicant(s) and any others associated with it/them under § 1.27(a) are a SMALL ENTITY
   __X__ Applicant(s) and any others associated with it/them under § 1.29(a) are a MICRO ENTITY
   __X__ Certification of Micro Entity Status (Gross Income Basis)

7. **ALSO ENCLOSED ARE**
   _____ Request and Certificate under 35 U.S.C. §122(b)(2)(B)(i) **(Request for Non-Publication)**
   __X__ Preliminary Amendment
   _____ Includes "Cross-Reference to Related Applications"
   _____ A Petition for Extension of Time for the parent application and the required fee are being filed concurrently herewith.
   _____ This application is owned by _____ pursuant to an Assignment recorded at Reel _____, Frame _____
   _____ Information Disclosure Statement (IDS)
   _____ Copies of IDS Citations
   _____ Certified copy of Priority Document(s) (*paper filing only, if foreign priority is claimed)*
   _____ English Translation Document *(if applicable)*
   _____ Return Receipt Postcard (MPEP 503) (should be specifically itemized).
   __X__ Other: Micro-Entity Statement

8. **DIRECT ALL CORRESPONDENCE TO: CUSTOMER NUMBER 23363**

Respectfully submitted,

LEWIS ROCA ROTHGERBER CHRISTIE LLP

By /Daniel Salgado/
Daniel A. Salgado
Reg. No. 76,283
626/795-9900

*LEWIS ROCA ROTHGERBER CHRISTIE LLP, **P.O. BOX 29001, GLENDALE, CA 91209-9001***

UTILITY PATENT APPLICATION TRANSMITTAL
(Only for new nonprovisional applications under 37 CFR 1.53(b))

I hereby certify that this correspondence is being EFS-Web transmitted to the United States Patent and Trademark Office on November 19, 2019 at or before 11:59 p.m. Eastern Standard Time under the Rules of 37 CFR § 1.10.

/Sheila R. Harter/
Sheila R. Harter

Docket No. : 180720
Inventor(s) : Joshua Clemente
Title : VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

ADDRESS TO: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

November 19, 2019

1. __X__ **FEE TRANSMITTAL FORM**

2. **IF A CONTINUING APPLICATION**
_____ This application is a _____ of patent application No. _____.

Prior application information: Examiner _____; Group Art Unit: _____.

__X__ This application claims the benefit of Provisional Application No. 62/770,022 pursuant to 35 U.S.C. §119(e) and 37 CFR §1.78(a)(4).

3. **APPLICATION COMPRISED OF**

Specification
__27__ Specification, claims and Abstract (total pages)

Drawings
__10__ Sheets of formal drawing(s) (FIGS. 1 to 10)

Inventor's Declaration(s)
__X__ Executed Declaration (new or copy from a prior application (37 CFR 1.63(d)) (for continuation and divisional)
_____ Executed Declaration/Assignment (new or copy from a prior application (37 CFR 1.63(d)) (for continuation and divisional)

Power of Attorney by Applicant(s)
__X__ Executed (new or copy from a prior application (37 CFR 1.63(d)) (for continuation and divisional) with transmittal

Application Data Sheet
__X__ Newly executed ADS
_____ Unexecuted ADS

4. _____ **Microfiche Computer Program** *(Appendix)*

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

	Claims		23	26	
	Specification		1	22	
Warnings:					
Information:					
5	Drawings-only black and white line drawings	180720LabeledDwgSet.PDF	548924 77e2e8d3a47fd879a76f9023b6acde8063a e647b	no	10
Warnings:					
Information:					
6	Oath or Declaration filed	180720InventorDec.pdf	34342 4a39aabddbeef07ad7b8ffdf9f21733375733 9935	no	1
Warnings:					
Information:					
7	Certification of Micro Entity (Gross Income Basis)	180720MicroStatement.pdf	110487 301ce6544f87d4035ffb59df68d76c659e6d 3f4d	no	2
Warnings:					
Information:					
8	Power of Attorney	180720POA.pdf	30270 dee39baabf91aa6ad1481e37c6191ab7b9 3906	no	1
Warnings:					
Information:					
9	Application Data Sheet	180270ADS.pdf	2872765 d7f2dba6f21aeda690149da7e87d68fda704 2fe2	no	8
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
10	Fee Worksheet (SB06)	fee-info.pdf	35136 147a48f3b5fb8d3d3ac4455262165d6762 beb08	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	4285856		

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	180720UtilityTransmittal.pdf	187831 ccecdebf905884dc87a21d13994f6df4995 1e67	no	3
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	180720POATransmittal.pdf	128423 d9531f864fe9231509628420415b511ba0f761 f306	no	1
Warnings:					
Information:					
3		180720PreAmend.pdf	137672 6127eedc81fbb5bde612ddd6a7229ffb08 632d6	yes	3

Multipart Description/PDF files in .zip description

Document Description	Start	End
Applicant Arguments/Remarks Made in an Amendment	3	3
Specification	2	2
Preliminary Amendment	1	1

Warnings:					
Information:					
4		180720Specification.pdf	200006 d40179431b24b10fc37fe8dc6ec916f42229 37b13	yes	27

Multipart Description/PDF files in .zip description

Document Description	Start	End
Abstract	27	27

Electronic Acknowledgement Receipt

EFS ID:	37798922
Application Number:	16688884
International Application Number:	
Confirmation Number:	6650
Title of Invention:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
First Named Inventor/Applicant Name:	Joshua Clemente
Customer Number:	23363
Filer:	Daniel A. Salgado/Sheila Harter
Filer Authorized By:	Daniel A. Salgado
Attorney Docket Number:	180720 (306317-00001)
Receipt Date:	19-NOV-2019
Filing Date:	
Time Stamp:	18:50:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$430
RAM confirmation Number	E2019AII51000167
Deposit Account	031728
Authorized User	Sheila Harter

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

M

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	430

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
First Named Inventor/Applicant Name:	Joshua Clemente
Filer:	Daniel A. Salgado/Sheila Harter
Attorney Docket Number:	180720 (306317-00001)

Filed as Micro Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
BASIC FILING FEE-UTILITY	3011	1	75	75
UTILITY SEARCH FEE	3111	1	165	165
UTILITY EXAMINATION FEE	3311	1	190	190
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Joshua		Clemente	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Philadelphia	State/Province	PA	Country of Residence	US

Mailing Address of Inventor:

Address 1	2111 Ellsworth Street		
Address 2			
City	Philadelphia	State/Province	PA
Postal Code	19146	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	23363		
Email Address	pto@lrrc.com	Add Email	Remove Email

Application Information:

Title of the Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM		
Attorney Docket Number	180720 (306317-00001)	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	10	Suggested Figure for Publication (if any)	

PTO/AIA/14 (02-18)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	23363		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Claims benefit of provisional	62/770022	2018-11-20

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

○ Assignee ○ Legal Representative under 35 U.S.C. 117 ○ Joint Inventor

○ Person to whom the inventor is obligated to assign. ○ Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Applicant:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (02-18)
Approved for use through 01/31/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Daniel Salgado/			Date (YYYY-MM-DD)	2019-11-19
First Name	Daniel	Last Name	Salgado	Registration Number	76283

Additional Signature may be generated within this form by selecting the Add button.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	180720 (306317-00001)
	Application Number	
Title of Invention	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor	:	Joshua Clemente	Confirmation No. TBD
Application No.	:	TBD	
Filed	:	Herewith	
Title	:	A VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	
Grp./Div.	:	TBD	
Examiner	:	TBD	
Docket No.	:	180720	

POWER OF ATTORNEY

Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Commissioner:

The undersigned inventor(s) for the above-identified application hereby appoint(s) the practitioners associated with the

CUSTOMER NUMBER 23363

of the firm LEWIS ROCA ROTHGERBER CHRISTIE LLP, telephone 626/795-9900, as attorneys or agents to transact all business in the United States Patent and Trademark Office for the matter identified above, for which (I am/we are) the applicant(s) as inventor(s)

Please direct all correspondence to **CUSTOMER NUMBER 23363**. Direct all telephone calls to Daniel A. Salgado at 626/795-9900, **LEWIS ROCA ROTHGERBER CHRISTIE LLP, P.O. Box 29001, Glendale, California 91209-9001**.

Date 11/19/19 By _____
Joshua Clemente

109751913.1

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: MES.GIB
Document Description: Certification of Micro Entity Status (Gross Income Basis)

PTO/SB/15A (07-14)

CERTIFICATION OF MICRO ENTITY STATUS
(GROSS INCOME BASIS)

Application Number or Control Number (if applicable):	Patent Number (if applicable):
First Named Inventor: Joshua Clemente	Title of Invention: A VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

The applicant hereby certifies the following—

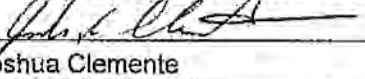
(1) **SMALL ENTITY REQUIREMENT** – The applicant qualifies as a small entity as defined in 37 CFR 1.27.

(2) **APPLICATION FILING LIMIT** – Neither the applicant nor the inventor nor a joint inventor has been named as the inventor or a joint inventor on more than four previously filed U.S. patent applications, excluding provisional applications and international applications under the Patent Cooperation Treaty (PCT) for which the basic national fee under 37 CFR 1.492(a) was not paid, and also excluding patent applications for which the applicant has assigned all ownership rights, or is obligated to assign all ownership rights, as a result of the applicant's previous employment.

(3) **GROSS INCOME LIMIT ON APPLICANTS AND INVENTORS** – Neither the applicant nor the inventor nor a joint inventor, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986 (26 U.S.C. 61(a)), exceeding the "Maximum Qualifying Gross Income" reported on the USPTO Web site at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

(4) **GROSS INCOME LIMIT ON PARTIES WITH AN "OWNERSHIP INTEREST"** – Neither the applicant nor the inventor nor a joint inventor has assigned, granted, or conveyed, nor is under an obligation by contract or law to assign, grant, or convey, a license or other ownership interest in the application concerned to an entity that, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986, exceeding the "Maximum Qualifying Gross Income" reported on the USPTO Web site at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

SIGNATURE by an authorized party set forth in 37 CFR 1.33(b)

Signature					
Name	Joshua Clemente				
Date	11/19/19	Telephone	540-429-1631	Registration No.	

☐ There is more than one inventor and I am one of the inventors who are jointly identified as the applicant. The required additional certification form(s) signed by the other joint inventor(s) are included with this form.

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/688,884**

Projected Publication Date: 05/21/2020

Non-Publication Request: No

Early Publication Request: No
** MICRO ENTITY **
Title

VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

Preliminary Class

297

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/688,884	11/19/2019	3636	430	180720 (306317-00001)	17	1

CONFIRMATION NO. 6650

23363
Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

FILING RECEIPT

OC000000113138102

Date Mailed: 12/10/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Joshua Clemente, Philadelphia, PA;

Applicant(s)

Joshua Clemente, Philadelphia, PA;

Power of Attorney: The patent practitioners associated with Customer Number 23363

Domestic Priority data as claimed by applicant

This appln claims benefit of 62/770,022 11/20/2018

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 12/05/2019

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/688,884

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	75
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	165
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	190
TOTAL CLAIMS (37 CFR 1.16(i))	17 minus 20 =	*			OR	x 25 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*				x 115 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	430

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being EFS-Web transmitted to the United States Patent and Trademark Office on May 19, 2020 at or before 11:59 p.m. Pacific Time under the Rules of 37 CFR § 1.8.

/Sheila R. Harter/
Sheila R. Harter

Inventor(s)	: Joshua Clemente	Confirmation No. 6650
Application No.	: 16/688,884	
Filed	: November 19, 2019	
Title	: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	
Grp./Div.	: 3634	
Examiner	: TBD	
Docket No.	: 180720	

INFORMATION DISCLOSURE STATEMENT
37 CFR § 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 29001
Glendale, CA 91209-9001
May 19, 2020

Commissioner:

In compliance with the duty of disclosure under 37 CFR §§ 1.56, 1.97 and 1.98, and in accordance with the provisions in the Manual of Patent Examining Procedure §§ 609 and 707.05(b), enclosed is an information disclosure statement listing the references that are known to applicant. A copy of the foreign reference is enclosed. This filing is timely because it is made during one of the periods described in 37 CFR § 1.97(b).

It is respectfully requested that the listed references be considered in the examination of this application and identified on the list of references cited on the patent issuing for this application. Applicant also requests that an initialed copy of the information disclosure statement be entered in the application file and returned to applicant with the next communication from the Office in accordance with MPEP § 609.

Application No.: 16/688,884

The Commissioner is hereby authorized to charge any fees which may be required by this paper to Deposit Account No. 03-1728. Please show our docket number with any Deposit Account transaction.

Respectfully submitted,
LEWIS ROCA ROTHGERBER CHRISTIE LLP

By */Kyle W. Kellar/*
Kyle W. Kellar
Reg. No. 71,165
626/795-9900

KWK/srh
Enclosures: IDS/Foreign Ref

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	180720SB08.pdf	95737 59d0eec8ee6608dfd695c49ce9b3d786554688db	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	WO2001097919.pdf	4911152 1f4b0fa0ee2734753f383c9d9a1010c82483a0b6	no	36
Warnings:					
Information:					
		Total Files Size (in bytes):	5130984		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	39486067
Application Number:	16688884
International Application Number:	
Confirmation Number:	6650
Title of Invention:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
First Named Inventor/Applicant Name:	Joshua Clemente
Customer Number:	23363
Filer:	Kyle W. Kellar/Sheila Harter
Filer Authorized By:	Kyle W. Kellar
Attorney Docket Number:	180720 (306317-00001)
Receipt Date:	19-MAY-2020
Filing Date:	19-NOV-2019
Time Stamp:	18:47:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	180720IDSTransmittal.pdf	124095 ee621e1825977dfd8cf2ed3fcnc29c5760f79caa	no	2

Warnings:

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US 00/22113

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 9416065 U	01-02-1996	NONE	
US 3850283 A	26-11-1974	NONE	
FR 2325782 A	22-04-1977	NONE	
US 4919234 A	24-04-1990	NONE	
US 4060148 A	29-11-1977	NONE	

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/22113

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 060 148 A (SIDNEY JAMES T) 29 November 1977 (1977-11-29) figure 1	1-20

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/22113

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A62C27/00 E06C5/06 B64F1/315 B60P3/00 E04G1/22
B66F11/04 A62B1/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A62C E06C B64F B60P E04G B66F A62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 94 16 065 U (FLUGHAFEN MUENCHEN GMBH) 1 February 1996 (1996-02-01) page 1, line 5 - line 17; figure 1	1-20
X	US 3 850 283 A (NORDSTROM A) 26 November 1974 (1974-11-26) figures 1,14,15	1-5,9, 10,14-20
A	FR 2 325 782 A (PASQUIER YVES) 22 April 1977 (1977-04-22) figures 1,3	1-20
A	US 4 919 234 A (PEARSON DECEASED THEODORE S ET AL) 24 April 1990 (1990-04-24) figures 1,2,10	1-20

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 February 2001	21. 05. 2001

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Joosting, T

Form PCT/ISA/210 (second sheet) (July 1992)

FIG. 1

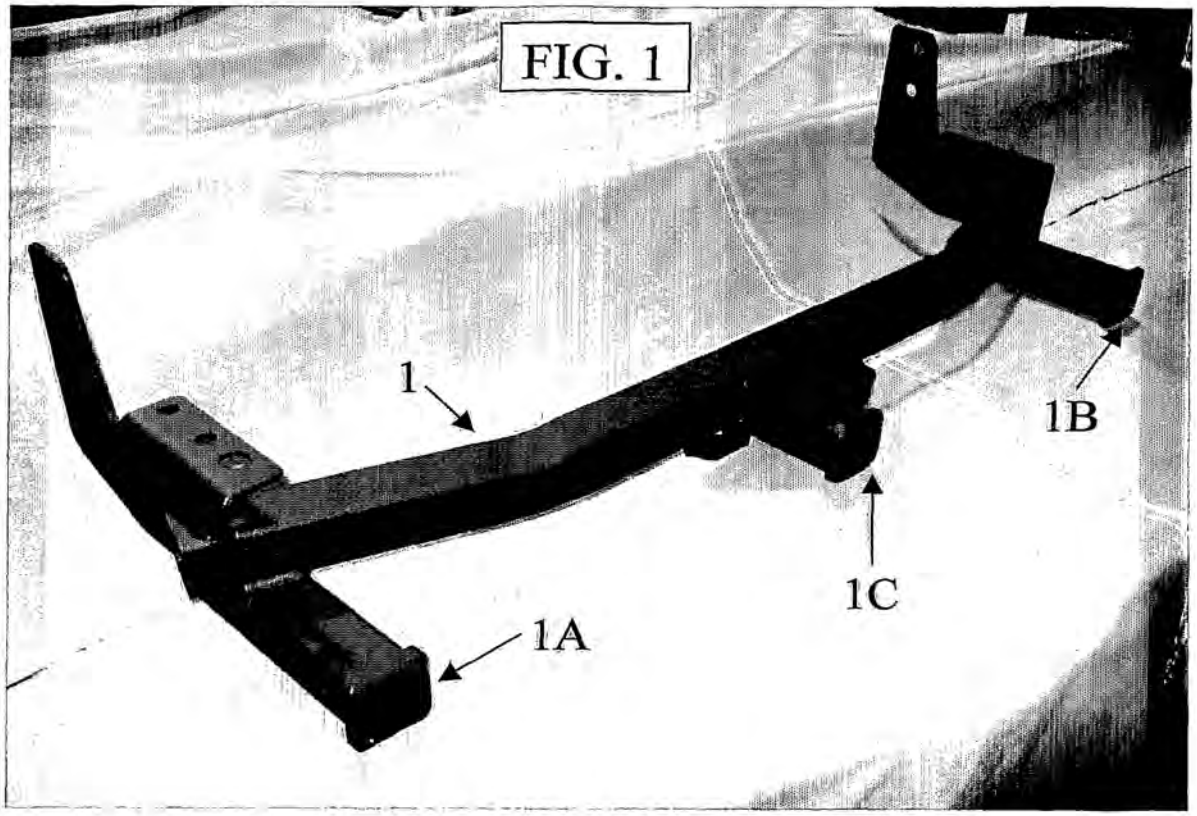
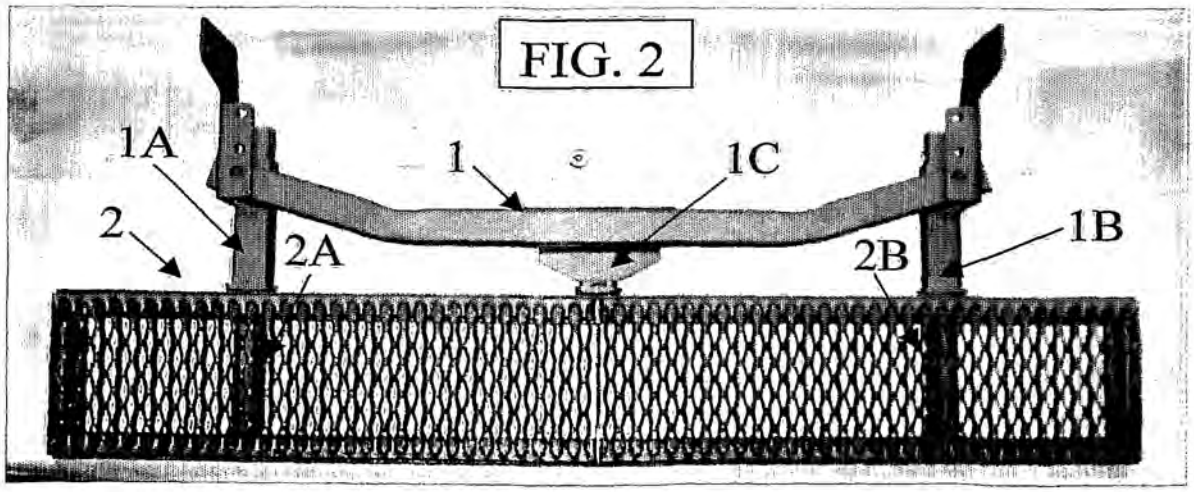
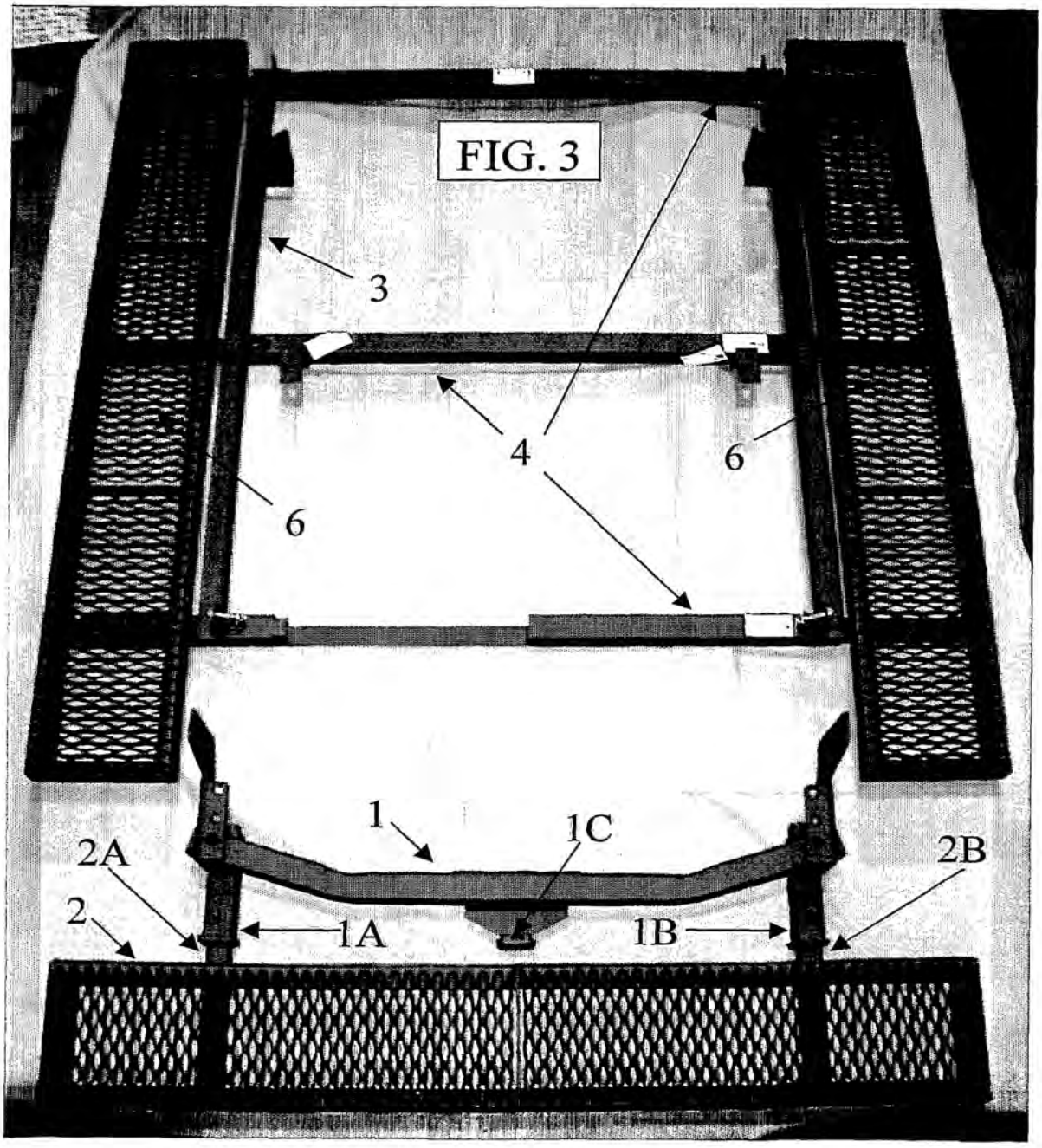
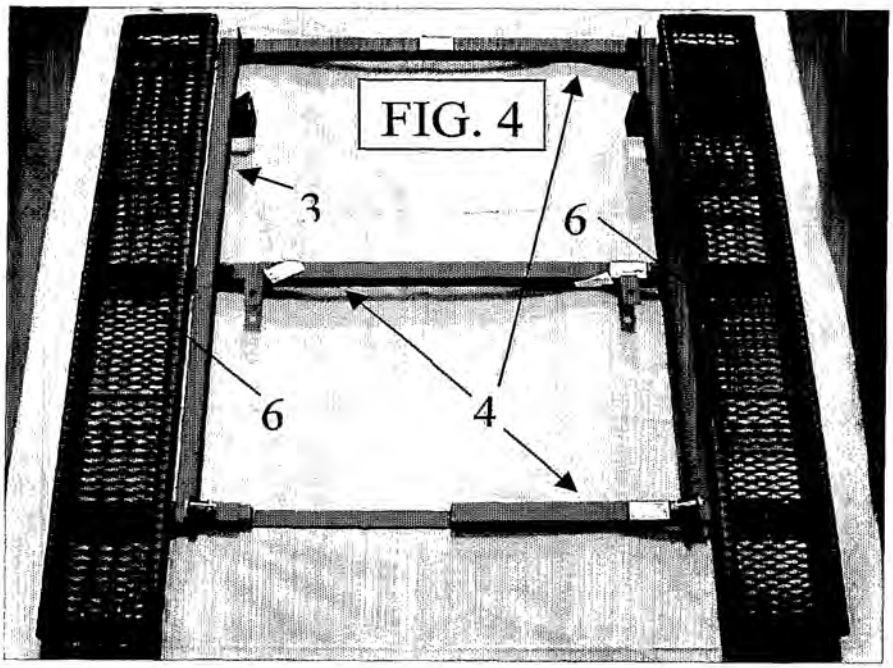


FIG. 2




FIG. 3
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2A
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1A
1B


FIG. 4
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4

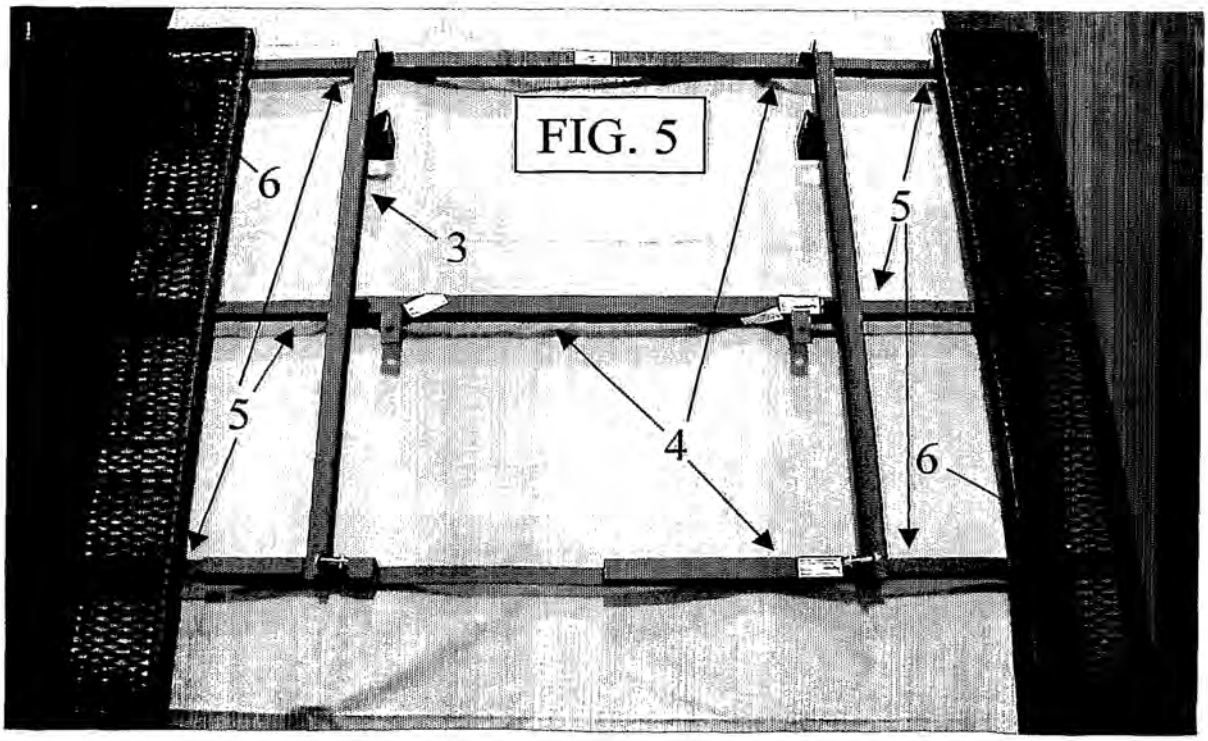

FIG. 5
6
3
5
5
4
6



FIG. 6



FIG. 7

FIG. 8

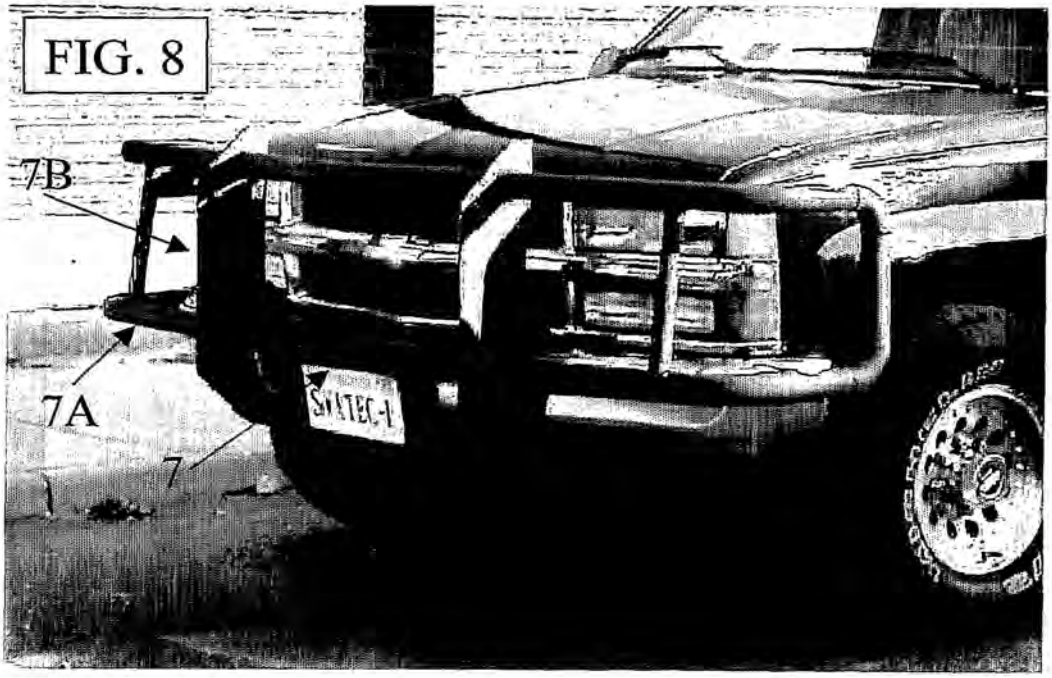


FIG. 9

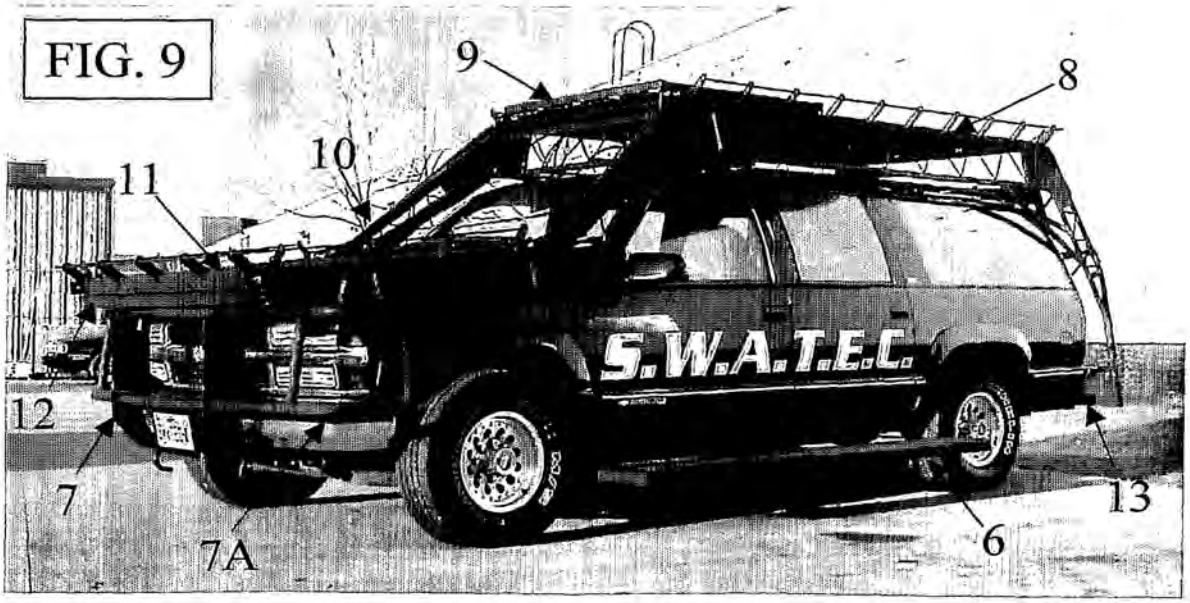


FIG. 10

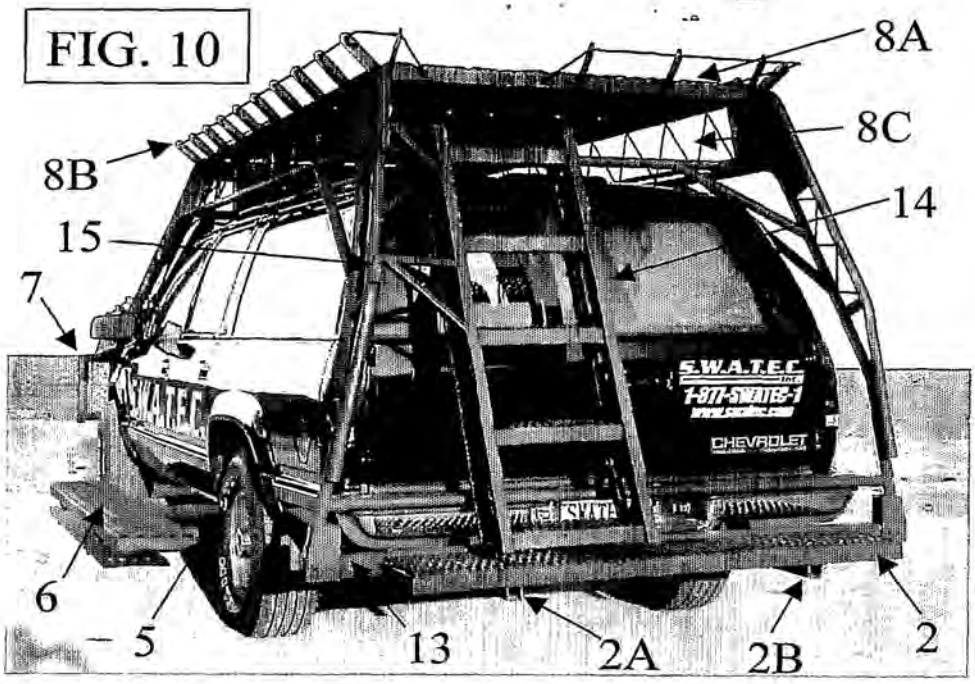

8A
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1-877-SWATEC-1
CHEVROLET

FIG. 11

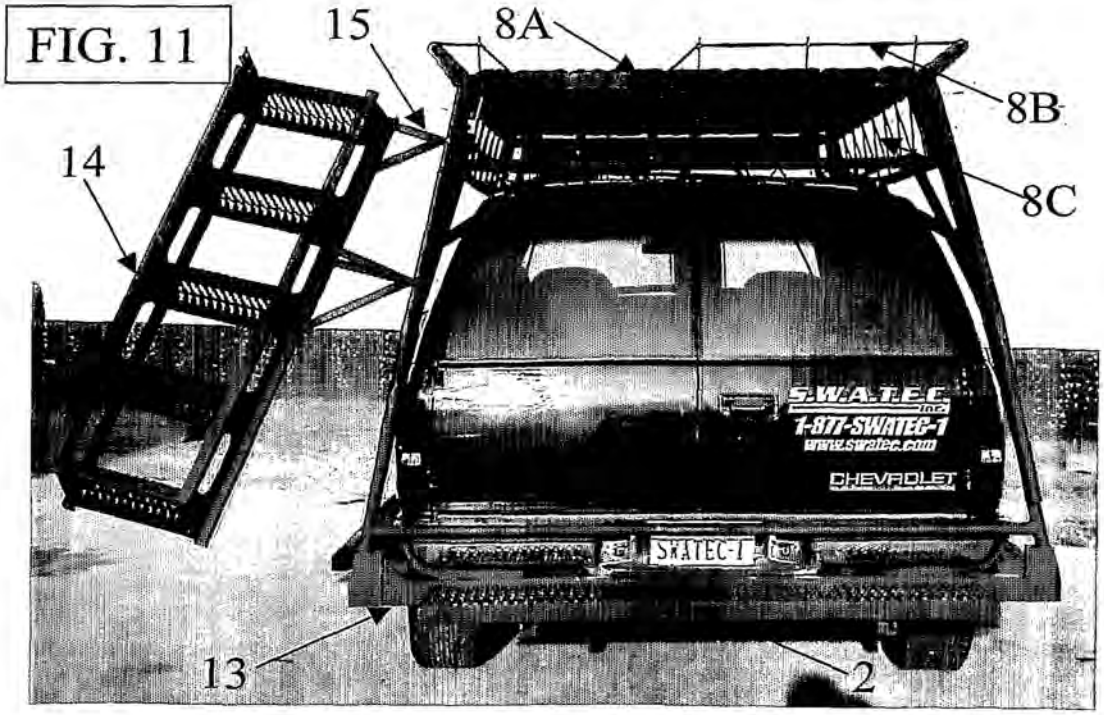

15
8A
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CHEVROLET
SWATEC-1



FIG. 12

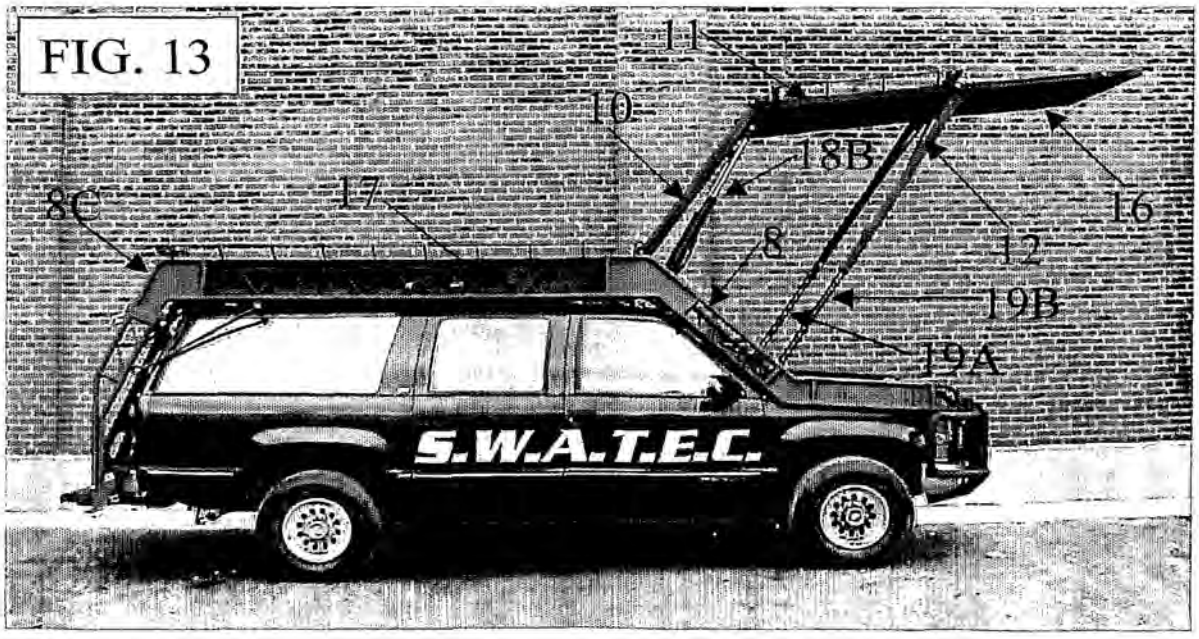


FIG. 13

FIG. 14



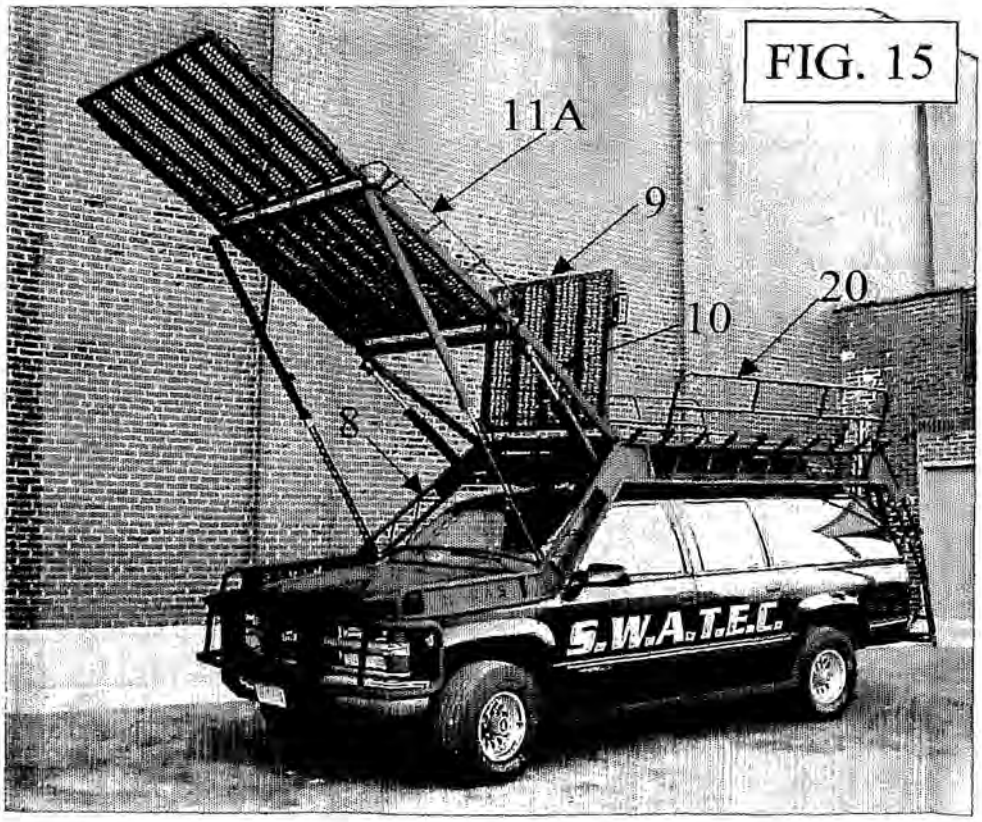


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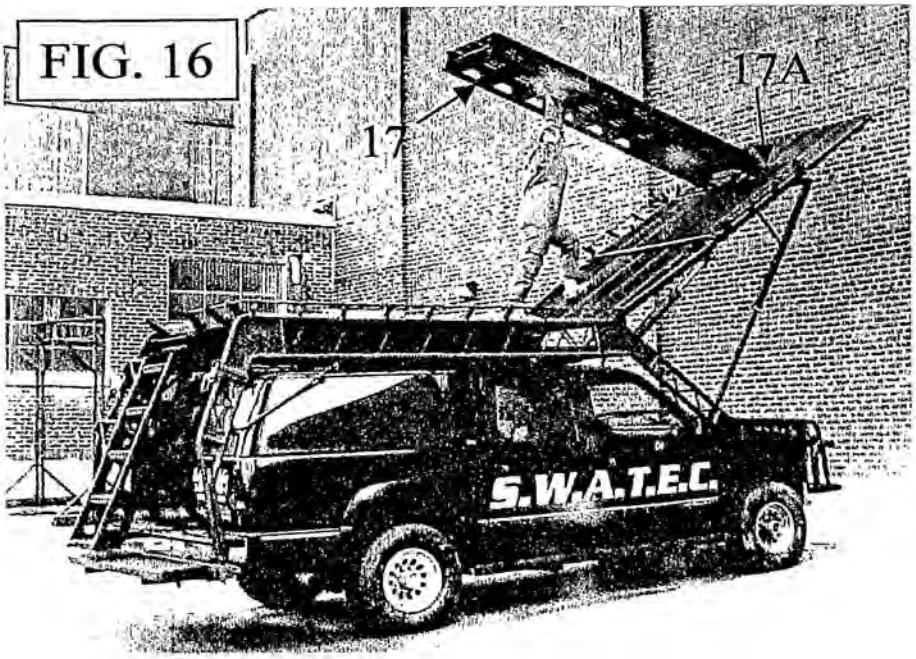


FIG. 17



FIG. 18

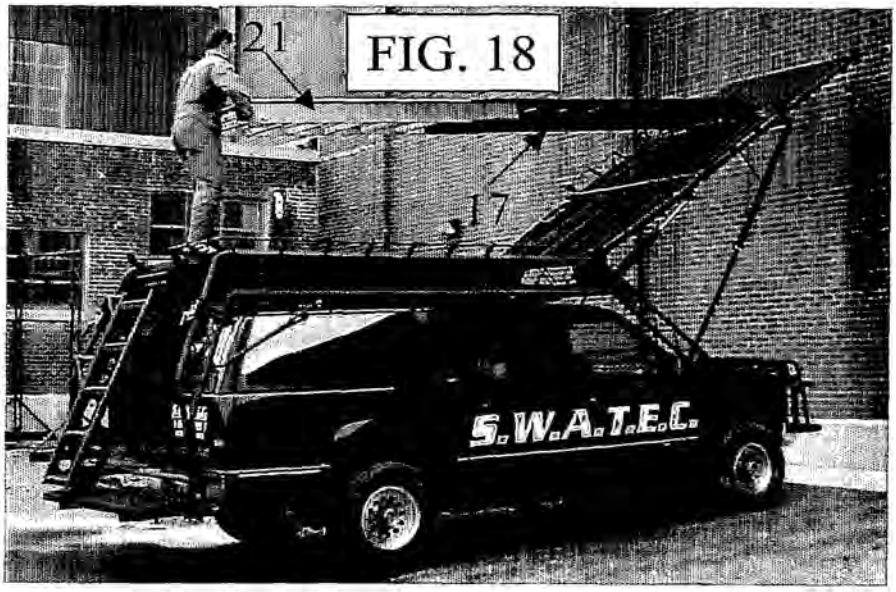


FIG. 19



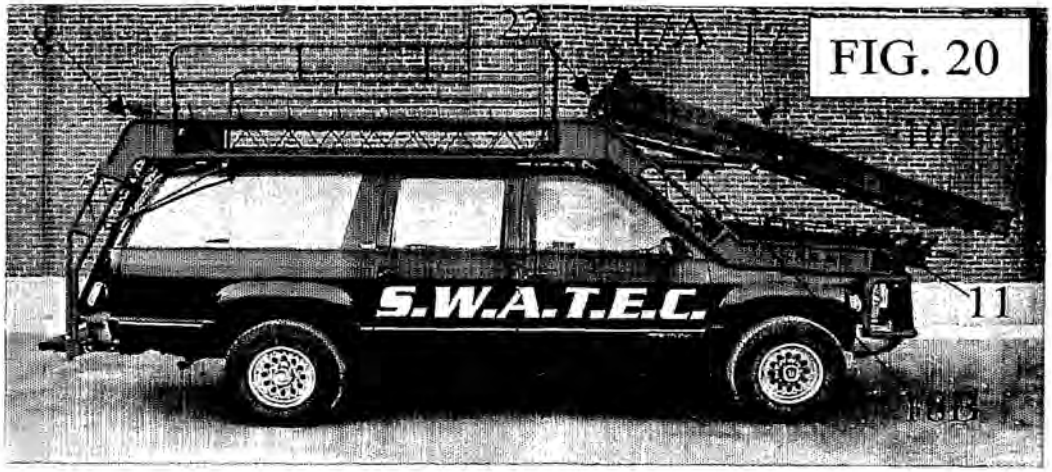


FIG. 20

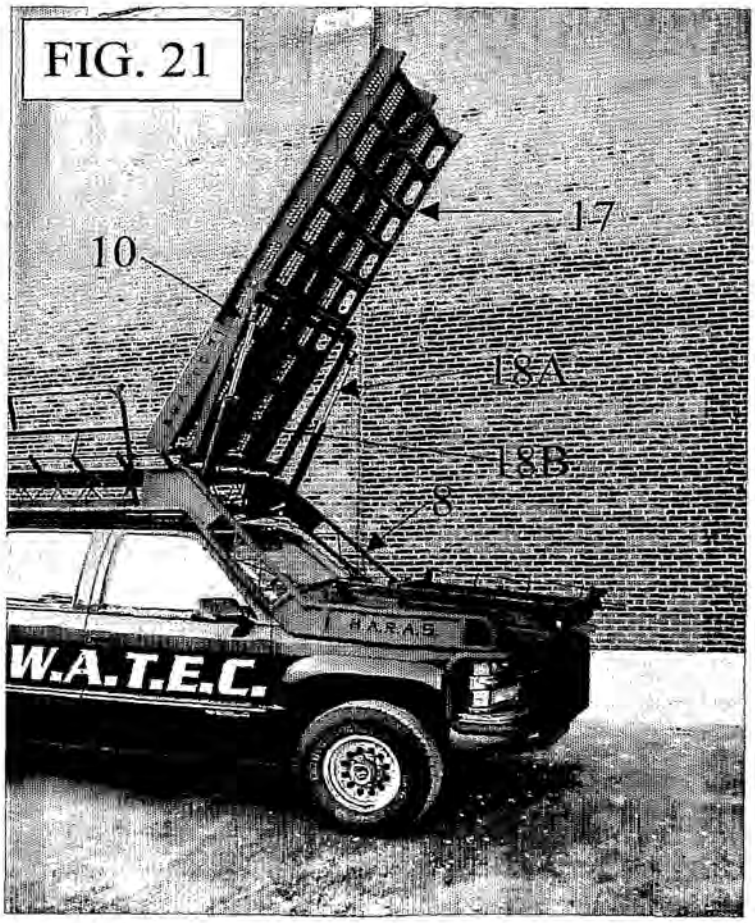


FIG. 21

FIG. 22



FIG. 23



FIG. 24

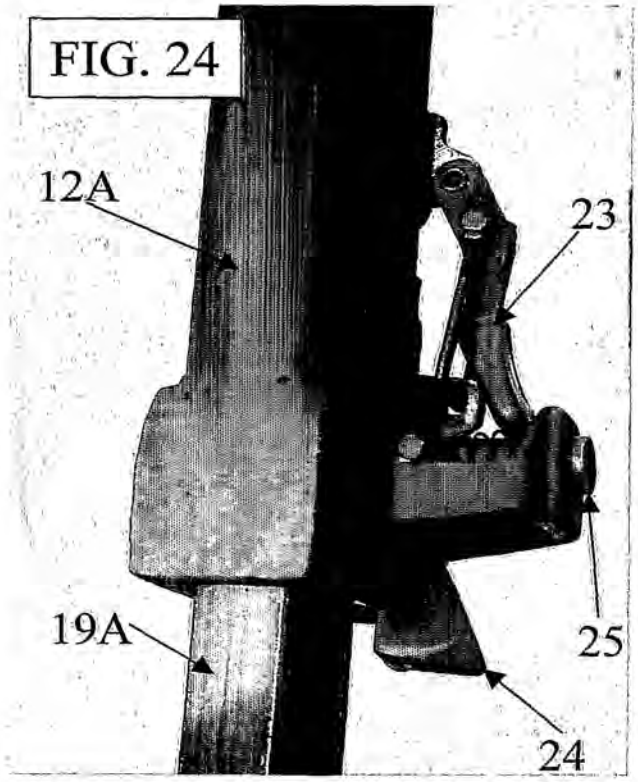


FIG. 25

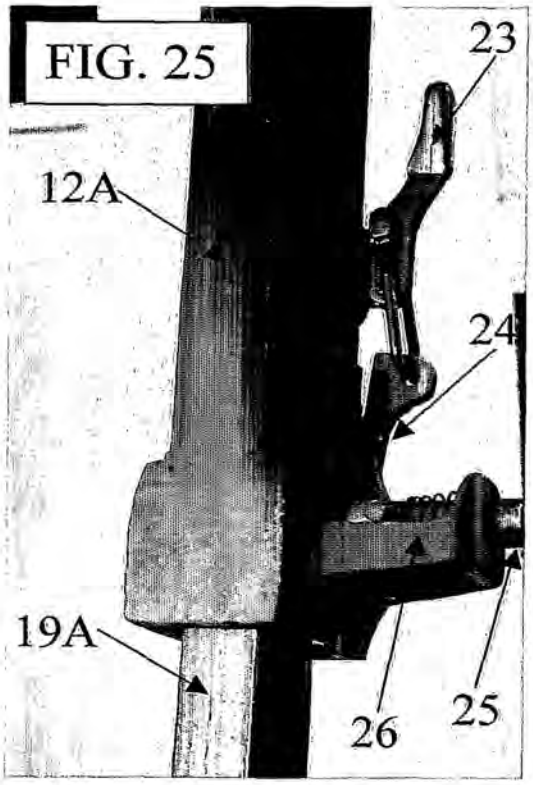


FIG. 26

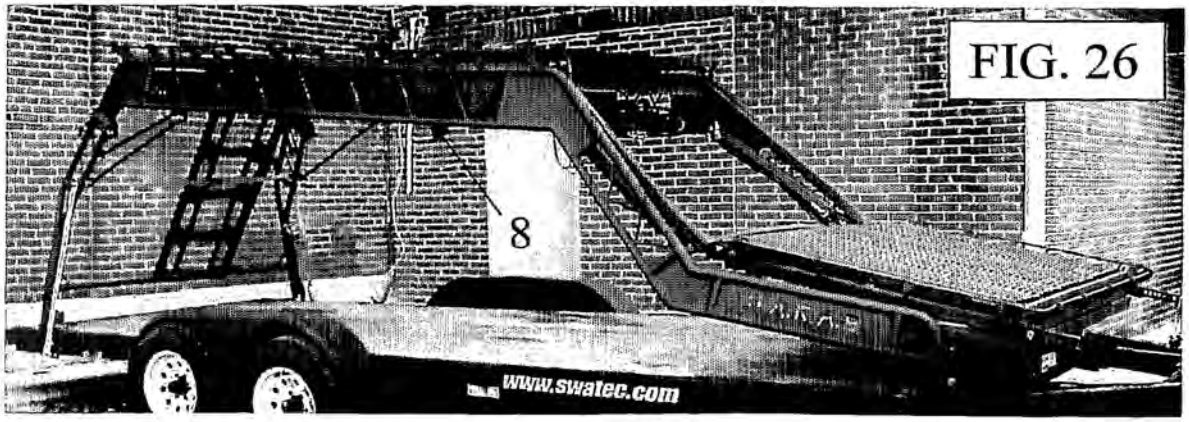


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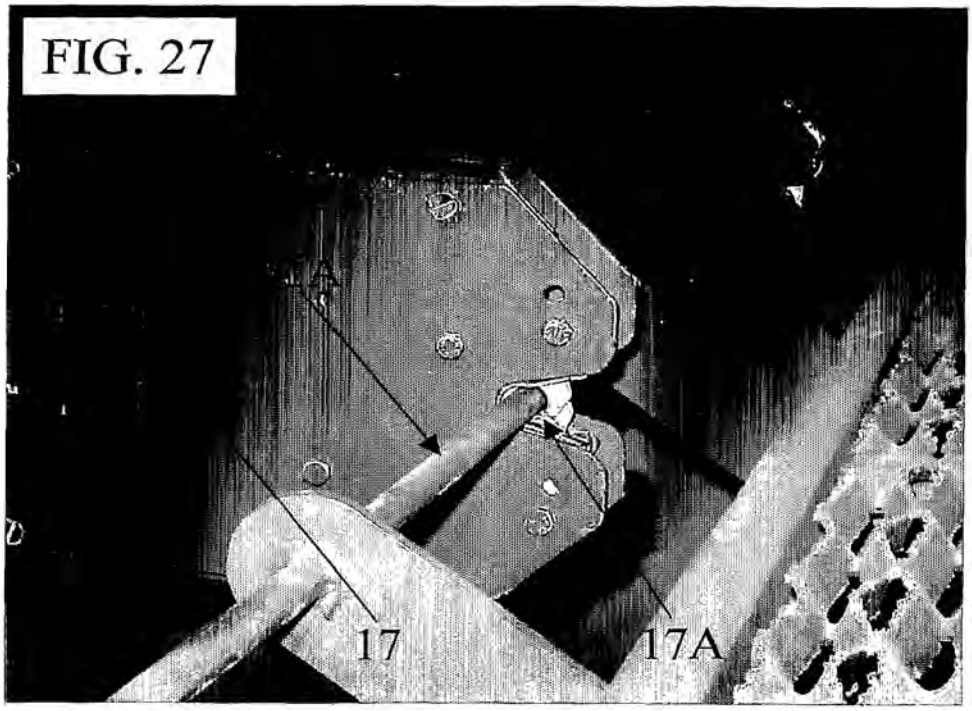
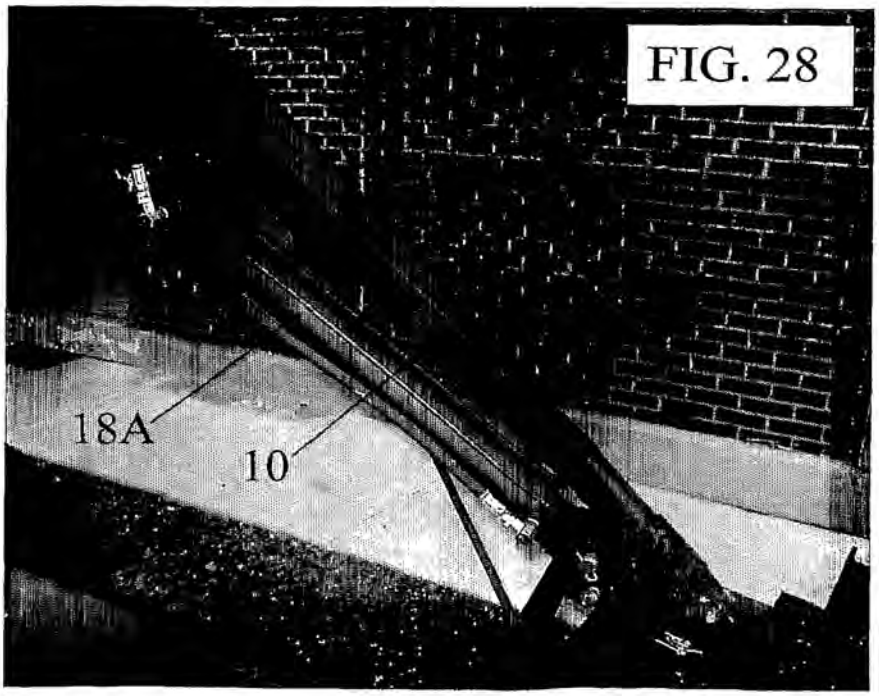


FIG. 28



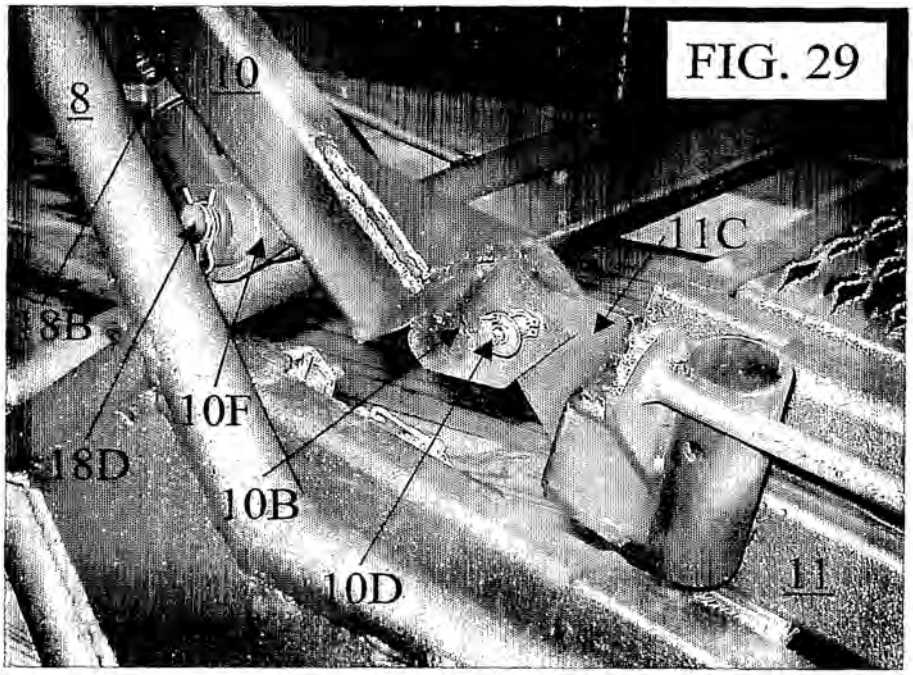


FIG. 29

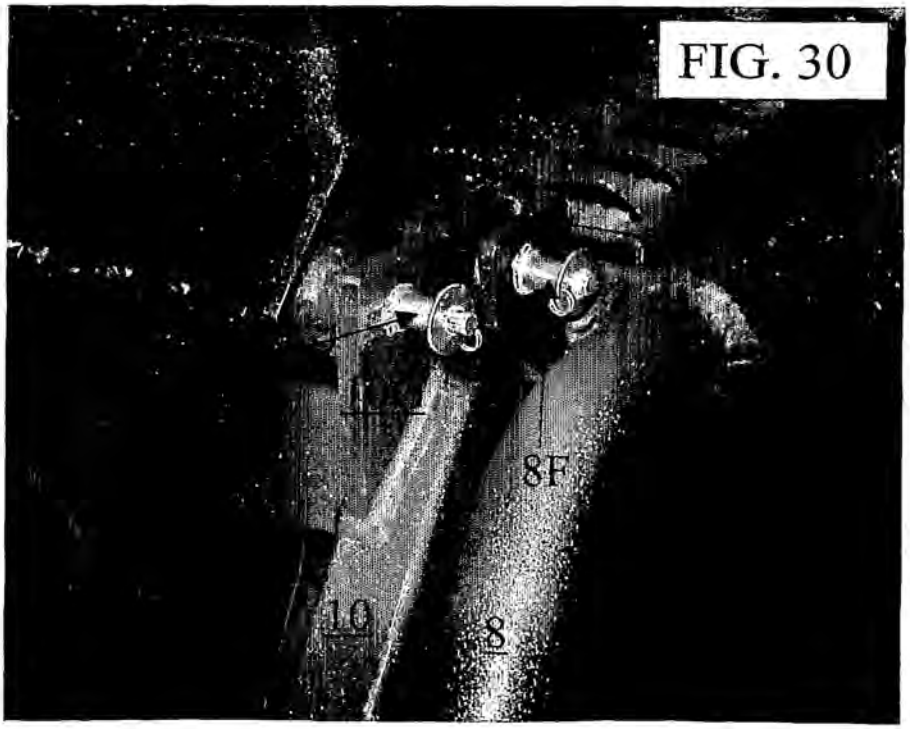


FIG. 30

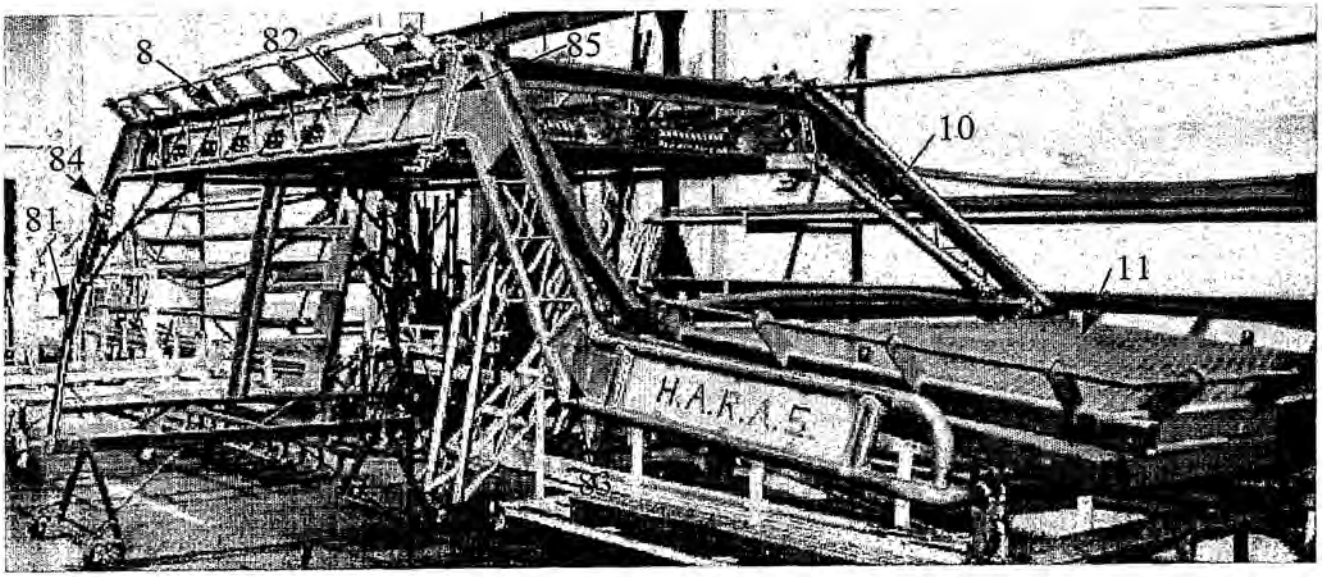


FIG. 31

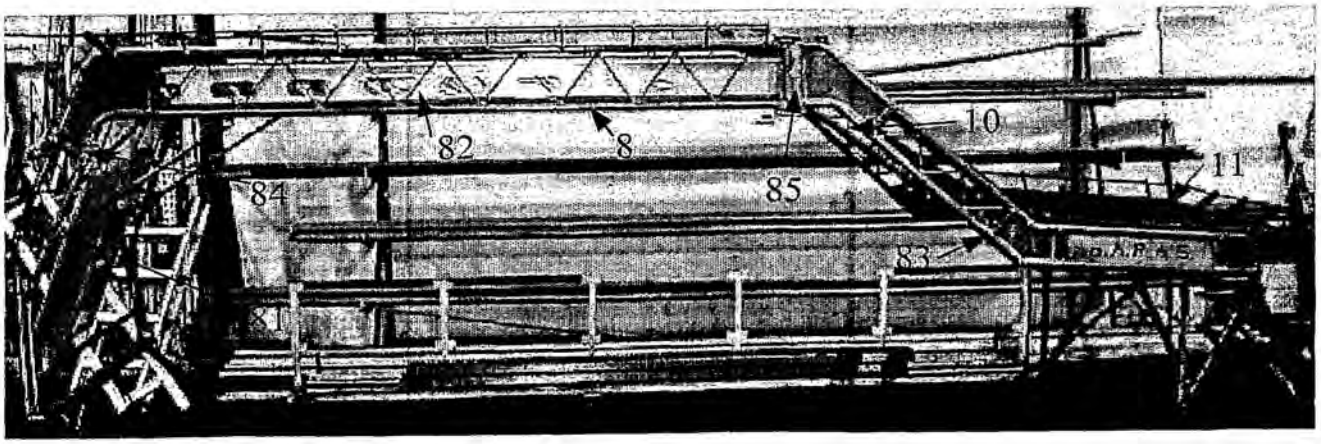


FIG. 32

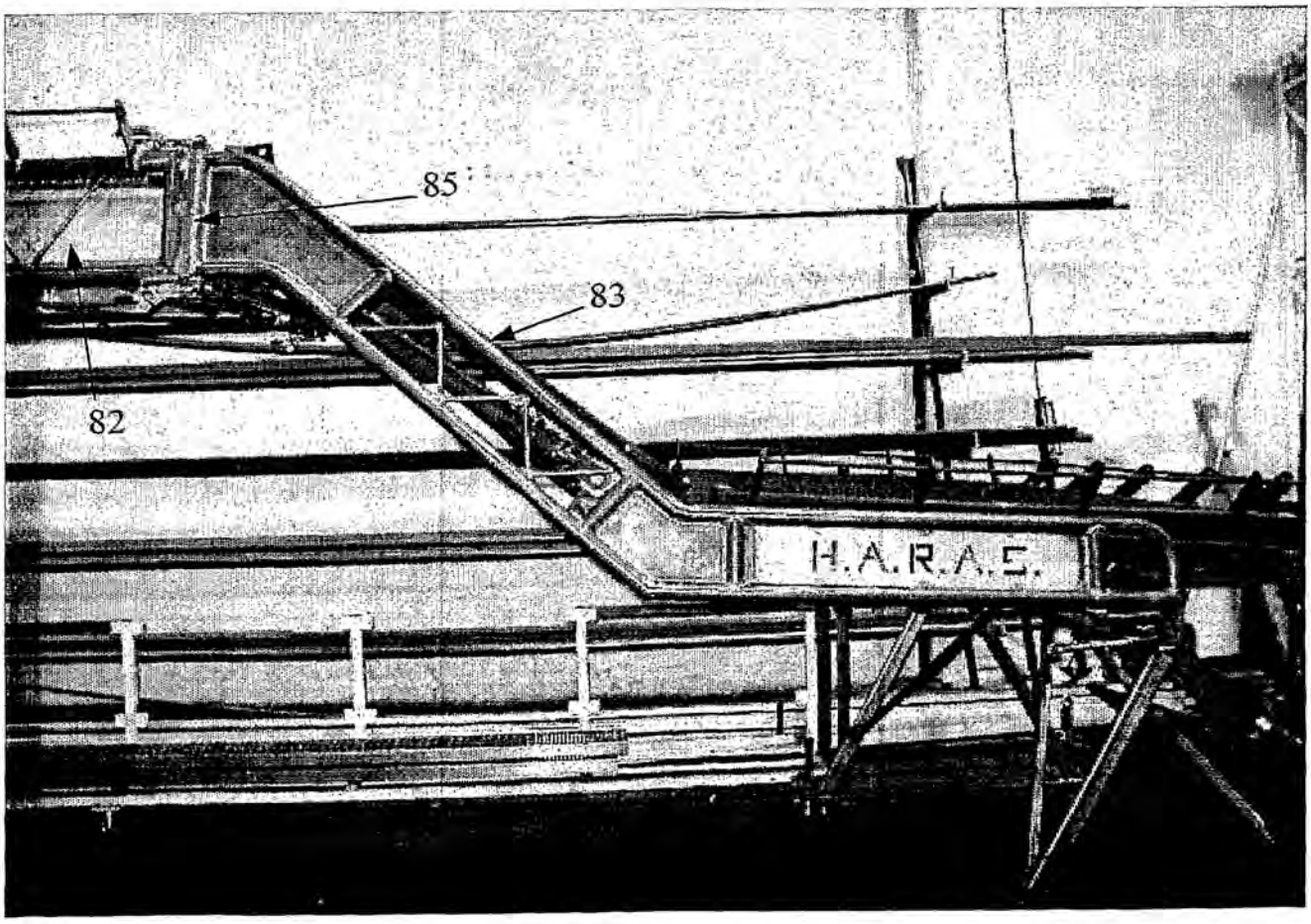


FIG. 33

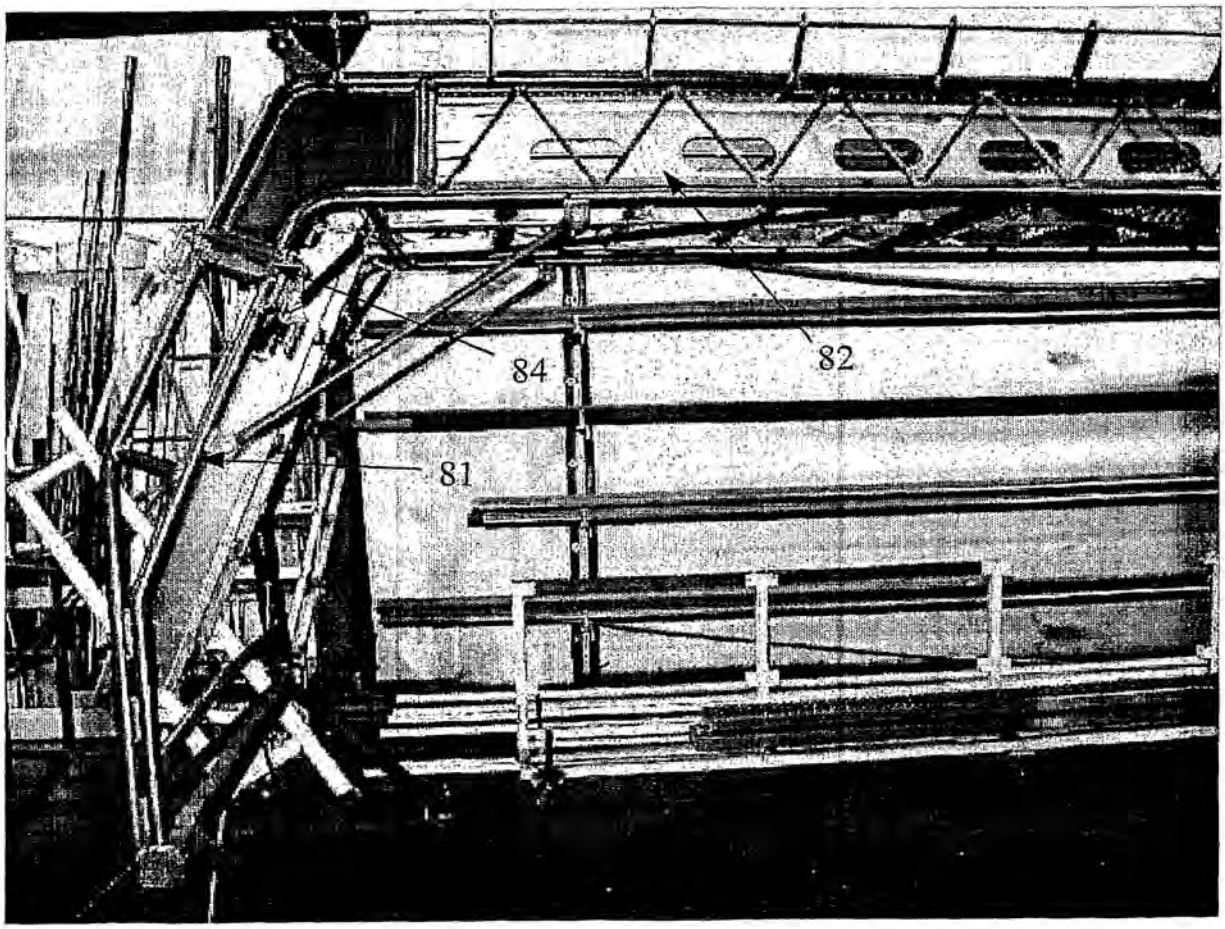


FIG. 34

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HEIGHT ADJUSTABLE RESCUE ASSAULT SYSTEM WITH SECTIONAL COMPONENTS



(57) Abstract: This invention is an improvement over prior scaffolding and ladder systems. Accordingly, a main object of the invention is the provision of improved conveyance of personnel to a given location and a precisely positioned elevation relative to a structure, aircraft or edifice, with rapidity, facility, and safety. In addition, the invention affords a reliable, stable platform for use at thedesired elevation, and facilitates safe and rapid egress from that location under ordinary and exigent circumstances. Unlike a ladder, the Height Adjustable Rescue Assault System, or HARAS, provides a stable platform regardless of the nature of the terrain upon which it is deployed, since it is attached to, and has as its'base, an inherently stable vehicle. Although similar in working surface area to a scaffold, the HARAS is much more mobile than a conventional scaffold, in that it can be driven to, set up at, and utilized at a variety of locations in a matter of seconds. The invention's removable/retractable side running boards and removable rear platform, with horizontal surface of high traction aluminum weep decking enables personnel to ride in an elevated position alongside the system during operation. Sectional construction adds to the systems' portability and flexibility.

WO 01/97919 A1

TITLE: Height Adjustable Rescue Assault System with Sectional Components

FIELD OF THE INVENTION

The present invention is drawn to a height adjustable platform for mounting on vehicles. More particularly, it is drawn to a sectional, vehicle-mounted platform system with a height adjustable ramp adapted to be useful for rescue and assault applications.

BACKGROUND INFORMATION

There are myriad fields of endeavor requiring personnel to access elevated areas located at distances inaccessible from ground level. As the elevation and the complexity of the task to be completed increases, the need for safety and stability at those heights increases proportionately. Many of the fields of endeavor identified below are intrinsically dangerous, while others become so due to the nature of the technology available to negotiate vertical distances to perform requisite tasks.

Following are some of the numerous fields of endeavor which require personnel to operate or negotiate at various elevations:

- Law enforcement officers and tactical team members in the execution of warrant service and hostage rescue,
- Military operations in urban terrain, including many of the same types operations performed by law enforcement as identified above
- Fire and emergency medical rescue,
- Contractors and construction workers in remodeling and new construction work, i.e., framing, roofing, or siding work,
- Maintenance workers such as building or sign upkeep,
- Highway overpass and bridge inspection and maintenance personnel,
- Aircraft and other conveyance servicing and maintenance personnel,

- Television, motion picture, video, and still photography personnel requiring an elevated vantage point to record an event, and
- Electrical and power company, cable company, and telephone company linemen and installers.

The above fields of endeavor require personnel to at least temporarily perform certain functions while at elevations well above ground level. Prior art affords these personnel access to ladders, scaffolds, or specialty vehicles (i.e., bucket trucks, cherry pickers, or aircraft servicing vehicles) in order to traverse vertical distances, and or conduct varying tasks while there. While each of these means of ascent are quite sufficient in and of themselves, often times they are inadequate in specific circumstances for any number of reasons.

A ladder is often used in many of the fields of endeavor listed above, however, it presents a very unstable and dangerous means of negotiating a task at varying elevations. If the terrain it is situated on is uneven or sloping, the ladder, although firmly resting on the ground, can succumb to the forces of gravity and topple over. Even if properly deployed, a ladder can easily become unstable and cause its' operator(s) to fall unless it is secured in some fashion to create a stable base.

As an example, a team of law enforcement officers attempting to execute a warrant (i.e., the Bureau of Alcohol Tobacco and Firearms (BATF) raid on the Branch Davidian Compound in Waco, Texas) may need to deploy several operators to the second or third story of a building quickly and safely. In the Waco raid several men carried ladders to the edifice and ascended the ladders to the sloping roof over the first floor. Once on the roof, several of the operators were shot or shot at from occupants within the building, causing the operators to attempt to exit the roof Unfortunately, due to the inherently unstable nature of the ladder, the operators ladders were incapable of conveying the operators back to the ground, causing some of the ladders and their occupants to topple to the ground, stranding other operators on the roof with no means of egress. Existing prior art does not offer many other options in a circumstance such as this, in that a scaffold could not have

been deployed in such a circumstance, and prior to this application, no specialty vehicle would have been suited to fill this need.

In addition, another inherent flaw of a ladder, as relates to many of the endeavors above, most especially military and law enforcement applications, is the ability to convey only one individual at a time to the required elevation. This runs in stark contrast to the military and law enforcement mission requiring the simultaneous deployment of as many individuals as is possible in as short a time period as is feasible, preferably never allowing an individual to be alone for even a short period of time.

BRIEF SUMMARY OF THE INVENTION

A main object of the invention is the provision of improved conveyance of personnel to a given location and a precisely positioned elevation relative to a structure, aircraft or edifice, with rapidity, facility, and safety.

It is therefore an object of the invention to provide vehicles with a reliable, stable platform for use by personnel at a desired elevation.

It is a further object of the invention to facilitate safe and rapid egress from a vehicle-mounted, adjustable height platform under ordinary and exigent circumstances.

It is another object of the invention to provide a vehicle-mounted, adjustable height platform that is sectional for improved handling and flexibility.

It is another object of the invention to provide a vehicle-mounted, adjustable height platform that can be quickly attached and detached from the vehicle without tools.

It is yet another object of the invention to provide said vehicle-mounted, adjustable height platform in a configuration useful for rescue and assault purposes.

Other objects of the invention will appear from the following detailed description which, in connection with the accompanying photographs, discloses one embodiment of the invention for purposes of illustration only and not for definition of the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side angled view of the Triple Hitch Receiver (THP) used with the present invention.

FIG. 2 is an overhead view of the THP and Removable Rear Platform of the present invention.

FIG. 3 is a top view of the configuration of the running boards and rear platform as they would be placed on a vehicle.

FIG. 4 is a top view of the running boards retracted into their frame.

FIG. 5 is a top view of the running boards extended from their frame.

FIG. 6 is a longitudinal view of the running boards retracted under the vehicle.

FIG. 7 is a longitudinal view of the running boards fully extended from under the vehicle.

FIG. 8 is an oblique view of the Pit-Boss Grill Guard Xoskeleton Support on the vehicle. **FIG. 9** is a side view of the HARAS deployed on a typical SUV type vehicle.

FIG. 10 is a left rear view of the HARAS deployed on a typical SUV type vehicle.

FIG. 11 is a straight on rear view of the HARAS deployed on a typical SUV type vehicle.

FIG. 12 is a right side view of the HARAS with front extension platform attached and lowered.

FIG. 13 is a right side view of the HARAS with front extension platform attached and raised.

FIG. 14 is a right side view of the HARAS with front extension platform and in full ramp position.

FIG. 15 is a front left side view of the HARAS with front extension platform and in full ramp position and windshield ramp raised.

FIG. 16 is a right side rear view of the HARAS and a version of its stair/rampway.

FIG. 17 is a right side rear view of the HARAS and the attachment of its

stair/rampway.

FIG. 18 is a right rear side view of the HARAS with the stair extension being mounted.

FIG. 19 is a right rear side view of the HARAS with the stair extension fully raised.

FIG. 20 is a right side view of the HARAS with the stair/rampway attached to the windshield frame.

FIG. 21 is a right front side view of the HARAS with stair/rampway attached and fully raised.

FIG. 22 is a right rear side view of the HARAS with stair/rampway and fully raised ramp side up.

FIG. 23 is a right rear side view of the HARAS with stair/rampway and fully raised stair side up.

FIG. 24 is a view of the telescoping leg connection.

FIG. 25 is a view of the telescoping leg connection.

FIG. 26 is a view of the entire Xoskeleton removed from vehicle.

FIG. 27 is a close up view of stair/rampway attachment.

FIG. 28 is a close up view of the vertically mounted hydraulic cylinder.

FIG. 29 is a close up of the windshield frame and hood platform connecting hinge.

FIG. 30 is a close up of the windshield ramp/frame connection to the Xoskeleton.

FIG. 31 is a quarter-view of a three-piece, sectional Xoskeleton.

FIG. 32 is a side-view of a three-piece, sectional Xoskeleton.

FIG. 33 is a side-view of a front section of a three-piece, sectional Xoskeleton.

FIG. 34 is a side-view of a rear section of a three-piece, sectional Xoskeleton.

DETAILED DESCRIPTION OF THE INVENTION

The present **H**eight **A**djustable **R**escue **A**ssault **S**ystem invention or HARAS, will enable a group of as many as twelve or more individuals to be transported rapidly and

safely to elevations one to three stories above the ground. It is a height adjustable system that can be mounted on a variety of vehicles at considerably lower expense than the purchase of a dedicated specialty lift vehicle.

The HARAS system is sectional, with the major elements including a central upper portion and front and rear support portions that can be disassembled from each other for shipping, handling and storage. This sectional aspect also allows the system to be adapted to various vehicles by changing one or more of the sections. For example, a system designed for a Chevrolet Suburban can be adapted for use with a similar, but shorter-length, Chevrolet K-Blazer by providing a shorter central portion.

The entire HARAS system, less mounting hardware and front push bars and grill guard, can easily be removed from the vehicle in a matter of minutes without the use of tools, and can be reinstalled just as easily, utilizing quick release clamps and locking safety pins. The system can be adapted and configured for installation on a number of differing vehicles, and consists of extendable and retractable side running boards, a rear platform and rear door ladder, a one-piece exterior frame called an Xoskeleton that supports a roof platform (size dependent upon vehicle type, for a standard Chevrolet Suburban it is approximately 5' wide by 11' long, and 7' x 10' for HUMMVEE), a windshield ramp (size dependent upon vehicle type, for a Chevrolet Suburban it is approximately 4' wide by 4' long, 7' x 7' for a HUMMVEE), a hood platform (size dependent upon vehicle type, for a Chevrolet Suburban approximately 6' wide by 4' long, for a HUMMVEE 7' x 4'), and a variety of fixed length ramp/stairways (these can be of any length up to 16' long and up to 7' wide depending upon the desired application) with adjustable depth stair treads from 4.75" to 11.75" deep.

All horizontal surfaces on the HARAS are extremely high traction aluminum weep decking. The windshield ramp and hood platform are raised by hydraulic cylinders to elevations from 4' to approximately 18' above the ground depending on the system configuration. With windshield ramp and hood platform elevated, individuals can easily access a second story of a structure or aircraft, and due to the approximately 6' width of the

hood platform, as many as three individuals can deploy side by side at the required elevation. In addition, the ramp/stairways can be securely fixed on its' pivoting base to a perimeter rail around the hood and roof platforms, providing safe stable access to elevations of 20' to 25' above the ground. The extendable/retractable running boards can be configured for hydraulic or manual operation. The running boards and rear platform mount to brackets on the vehicle frame and can be easily installed or removed by one person without the use of tools.

Unlike a ladder, the HARAS provides a stable platform regardless of the nature of the terrain upon which it is deployed, since it is attached to, and has as its' base, an inherently stable vehicle. Although similar in working surface area to a scaffold, the HARAS is much more mobile than a conventional scaffold, in that it can be driven to, set up at, and utilized at a variety of locations in a matter of seconds. In law enforcement and military applications, as identified above in the Waco raid, the HARAS would be utilized to rapidly transport operators on the roof platform to the eave of the building, where they could speedily ascend the windshield ramp and hood platform onto the building's roof. As happened in the Waco raid, exigent circumstances often arise where the immediate evacuation of operators is of primary concern. In such a circumstance, the operators could quickly return to the HARAS' ramps or platforms, where they could safely remain during a speedy withdrawal.

The removable/retractable running boards and removable rear platform provide a secure and stable platform for personnel to ride on each side and the rear of the vehicle. This feature of the invention is of particular value to law enforcement and military operators who would utilize the system in a high-risk arrest or assault operation. By placing the operators on the exterior and at street level they are able to quickly deploy to ground level entries or withdraw without giving up their ability to employ personal weapons during ingress or egress from the site. Likewise cameramen can utilize them to operate their cameras while moving relative to an object, workers can utilize them to carry out maintenance/construction at a height lesser than accessed by the roof or hood platform, and

a wide variety of unnamed uses is possible.

In construction or maintenance applications, the HARAS, which can be installed on an SUV, pickup truck, van, box truck, or similar vehicle, can be driven to the desired location where it could be raised to the required elevation enabling workers to stand on a stable, high traction surface while performing myriad functions (i.e., installing siding or trim on a building, repairing signs, or performing maintenance on a building or aircraft). A highway bridge or overpass inspection or maintenance function could be performed much more simply from the HARAS, than from virtually any other vehicle or structure.

FIG. 1 is a side angled view of the Triple Hitch Receiver (THP) **1** showing its three distinct hitch receivers in the same plane, one in the center and one at each end, directly under the supports which mount to the vehicle frame. **FIG. 2** is an overhead view of the THP **1** into which the Removable Rear Platform (RRP) **2** is mounted.

FIG. 3 is a top view of the configuration of the running boards and rear platform as they would be placed on a vehicle. THP **1**, with RRP **2**, mounted in it, Running Board Frame (RBF) **3**, Running Board Frame Support Receivers (RBFSR) **4** which can number as many as two or three, Running Board Frame Support Arms (RBFSA) **5**, which can number two or three depending upon vehicle used, and the two removable/retractable Running Boards (RB) **6**.

FIG. 4 is a top view of the running boards RB **6**, retracted into their receivers RBFSR **4**, mounted onto the frame RBF **3**.

FIG. 5 is a top view of the running boards RB **6**, fully extended from their receivers RBFSR **4**, mounted onto the frame RBF **3**.

FIG. 6 is a longitudinal view of the running boards, RB **6**, retracted under the vehicle.

FIG. 7 is a longitudinal view of the running boards RB **6**, fully extended from under the vehicle, and the Frame Support Arms **5**.

FIG. 8 is an oblique view of the Pit - Boss Grill Guard Xoskeleton Support (Pit - Boss) **7**, mounted onto the front of the vehicle, heavy duty tubular steel brush bars **7A**, and

ramming/push bar plates **7B** are secured to the vehicle with three hardened 5/8" diameter frame mounting bolts on each side of the frame at the vehicle bumper.

FIG. 9 depicts the HARAS deployed on a typical SUV type vehicle, showing the Pit-Boss Grill Guard **7**, heavy duty tubular steel brush bars **7A**, the Xoskeleton **8**, the hood platform **11**, the hood platform leg assembly **12**, the Windshield Frame **10**, the Windshield Ramp (WR) **9** in its stowed travel position on top of the roof platform **8A**, during ordinary operation of the vehicle without utility of the HARAS system.

FIG. 10 depicts a left rear view of the HARAS deployed on a typical SUV type vehicle, showing the Xoskeleton **8** back mounting on the removable rear platform **2**, and resting on the integrated Xoskeleton Support Crossbar (XSC) **13**. Also depicted is the integrated roof platform **8A**, perimeter and stair/rampway mounting rail **8B**, stair/rampway storage well **8C**, rear platform support arms left **2A**, and right **2B**, removable retractable running board 6, extended by the running board support arms **5**, a rear view of the heavy duty tubular steel brush bars **7A**, the rear stairway ladder **14**, which is comprised of solid aluminum "C" channel stringer with lightening holes, and seven inch deep high traction aluminum weep deck tread and is secured to the Xoskeleton by the hinged rear stairway support bracket **15**, which permits the stairway to swung away in order to open the rear cargo doors of the vehicle.

FIG. 11 is a straight on rear view of the HARAS depicting the rear stairway ladder **14**, swung open on the hinged rear stairway support bracket **15**, the integrated roof platform **8A**, perimeter and stair/rampway mounting rail **8B**, stair/rampway storage well **8C**, the integrated Xoskeleton Support Crossbar (XSC) **13**, and the removable rear platform **2**.

FIG. 12 depicts a right side view of the HARAS with windshield frame **10**, hood platform **11**, and mounted extension platform **16**.

FIG. 13 depicts stair/rampway (depicted here in 10' configuration) **17** stowed in its stair/rampway storage well **8C** (also see **FIG. 10**), the vertically mounted hydraulic

cylinder **18**, mounted to the Xoskeleton **8**, and attached to and lifting the windshield frame **10**, which simultaneously lifts the hood platform **11**, extending the internal telescoping perforated legs **19A** and **19B**, and external telescoping leg sleeves **12A** and **12B**, which attach to the front hood platform **11**, and lock to support and hold it and the mounted extension platform **16** in position.

FIG. 14 depicts the windshield ramp **9**, windshield frame **10**, hood platform **11**, and mounted extension platform **16** aligned and extended to full ramp position by the vertically mounted hydraulic cylinder **18**.

FIG. 15 depicts the HARAS from a front left side view with the windshield ramp **9**, disconnected and raised from the windshield frame **10** in a vertical position, with removable perimeter railing **20**.

FIG. 16 depicts the stair/rampway **17**, and stair/rampway rail attaching mechanism **17A** comprised of a standard vehicle door latch, being lifted by one person.

FIG. 17 depicts the stair/rampway **17**, and stair/rampway rail attaching mechanism **17A** comprised of a standard vehicle door latch, being attached to the hood platform perimeter rail **11A**.

FIG. 18 depicts the stair extension **21** being attached to the stair/rampway **17**.

FIG. 19 depicts the stair extension **21**, and stair/rampway **17** raised to full height

FIG. 20 depicts the HARAS configured with a stair/rampway **17**, mounted onto the Xoskeleton **8** by means of the stair/rampway rail attaching mechanism **17A**, and stair/rampway mounting bracket **22**, and connected to the windshield frame **10** so that it is elevated by the right vertically mounted hydraulic cylinder **18B**, and capable of being depressed to rest on the hood platform **11**.

FIG. 21 depicts the stair/rampway **17**, connected to the windshield frame **10** and Xoskeleton **8**, and fidly elevated by the vertically mounted hydraulic cylinders **18A** and **18B**.

FIG. 22 depicts a rear view of the elevated stair/rampway **17** with the ramp side up

and combined with another stair/rampway **17** to provide a broader ramp.

FIG. 23 depicts the stair/rwnpway configuration **17**, with the stair side up to provide an easily ascendable broad staircase.

FIG. 24 depicts the auto-locking leg assembly being closed. With die release of the lever **23** the connected wedge **24** releases the auto locking pin **25**, which allows the pin to be inserted into one of the perforations of **19A** thereby locking the telescoping leg **19A**.

FIG. 25 depicts the auto-locking leg assembly being opened. With the pulling of the release lever **23** the connected wedge **24** retracts the auto locking pin **25**, from the perforated internal telescoping leg **19A** thereby allowing the telescoping leg to slide freely.

FIG. 26 depicts the Xoskeleton **8**, removed from the vehicle.

FIG. 27 depicts the stair/rampway **17** attached to the hood perimeter rail **11A**, by means of the stair/rampway rail attaching mechanism **17A**.

FIG. 28 depicts the vertically mounted hydraulic cylinder **18**, mounted to the Xoskeleton **8**, and the windshield frame **10**.

FIG. 29 depicts a close up of the windshield frame connecting hinge **10B**, windshield frame hinge pin **10D**, the hood platform **11** hinge platform connecting hinge **11C**, Xoskeleton **8**, windshield frame hydraulic cylinder mount block **10F** connected to hydraulic cylinder **18B** by means of the hydraulic cylinder mounting pin **18D**.

FIG. 30 depicts a close up of the windshield frame **10**, windshield ramp **9**, Xoskeleton **8**, windshield frame connecting hinge **10G**, windshield ramp connecting hinge **9A** windshield frame connecting pin **101**, Xoskeleton connecting hinge **8D**, Xoskeleton connecting pin **8F**.

FIGS. 31-34 illustrate a three-piece sectional Xoskeleton **8**. As shown in **FIGS. 31-32**, Xoskeleton **8** supports windshield frame **10** and hood platform **11**, and includes rear portion **81**, central portion **82**, and front portion **83** joined together at interfaces **84-85** by conventional tool-mounted hardware or quick-release pins, as discussed above.

FIG. 33 shows front portion **83** that attaches to the lower front of the vehicle via

Pit-Boss Grill Guard **7** (not shown) or other similar means. An upper part of front portion **83** includes one half of interface **85**, with the other half of interface **85** being at the front end of central portion **82**.

Likewise, **FIG. 34** shows rear portion **81** that attaches to the lower rear of the vehicle via THP **1**/RRP **2** (not shown) or other similar means. An upper part of front portion **81** includes one half of interface **84**, with the other half of interface **84** being at the rear end of central portion **82**.

In the narrative of the foregoing detailed description, one embodiment of the invention has been described. Many other embodiments are possible. For example, the hood platform could be extended utilizing a hydraulically extendable sub platform providing additional height and reach for the overall system. Scissor jacks, screw jacks, or racks and pinions could replace the hydraulic cylinder assemblies illustrated as the means of raising and lowering the windshield ramp and hood platform. Or, principles of the invention can be adapted to create a lifting capability for the ramp and platform section in order to accommodate the raising and lowering for people, products , and materials along a vertical axis. These and many, many other modifications can be made without departing from the principles of the invention, for definition of which reference will be made to the appended claims.

I CLAIM:

1. A height adjustable platform system for vehicles, comprising:

a substantially horizontal platform for mounting parallel to the roof of a vehicle;

a first support for said platform extending between said platform and a lower rear support on said vehicle;

a second support for said platform extending between said platform and a lower front support on said vehicle; and

at least one height adjustable personnel support mounted to said platform,

wherein at least two of said platform, first support, and second support are separable, sectional elements.

2. The height adjustable platform system for vehicles of claim 1, wherein said at least one height adjustable personnel support is a ramp pivotally mounted to said platform.

3. The height adjustable platform system for vehicles of claim 1, wherein all three of said platform, first support, and second support are separable, modular elements.

4. The height adjustable platform system for vehicles of claim 1, wherein said first support further includes a series of steps to form a ladder.

5. The height adjustable platform system for vehicles of claim 4, wherein said ladder is movably mounted so as to allow access to the rear of said vehicle.

6. The height adjustable platform system for vehicles of claim 4, wherein an upper surface of said steps includes high traction aluminum weep decking.

7. The height adjustable platform system for vehicles of claim 1, wherein an upper surface of said platform includes high traction aluminum weep decking.

8. The height adjustable platform system for vehicles of claim 1, wherein an upper surface of said at least one height adjustable surface includes high traction aluminum weep decking.

9. The height adjustable platform system for vehicles of claim 1, further

comprising a brush guard for mounting on the front of the vehicle and a rear platform for mounting to the lower rear of the vehicle.

10. The height adjustable platform system for vehicles of claim 1, wherein said lower front and rear support are selected from the group consisting of vehicle frame members, brush guards, platforms, and bumpers.

11. The height adjustable platform system for vehicles of claim 1, further comprising running boards mounted to said vehicle.

12. The height adjustable platform system for vehicles of claim 11, wherein said running boards are retractably mounted.

13. The height adjustable platform system for vehicles of claim 11, wherein said running boards are mounted with quick release pins.

14. The height adjustable platform system for vehicles of claim 2, wherein said ramp comprises a hydraulically lifted platform.

15. The height adjustable platform system for vehicles of claim 14, wherein said ramp further comprises a pivoting windshield ramp.

16. The height adjustable platform system for vehicles of claim 14, wherein said ramp further comprises an extension for said hydraulically lifted platform.

17. The height adjustable platform system for vehicles of claim 14, wherein said ramp further comprises a ladder attachment for said hydraulically lifted platform.

18. The height adjustable platform system for vehicles of claim 14, wherein said ramp further includes telescoping supports spaced from a hydraulic lifting mechanism of said hydraulically lifted platform.

19. The height adjustable platform system for vehicles of claim 1, further comprising removable rails for said horizontal platform.

20. The height adjustable platform system for vehicles of claim 1, wherein said a second support for said platform extending between said platform and a lower front support on said vehicle approximates the contour of the vehicle hoodline and windshield.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		
	Attorney Docket Number	180720
	Application Number	16/688,884
	Filing Date	November 19, 2019
	Inventor(s)	Joshua Clemente
	Group Art Unit	3634
	Examiner Name	TBD

U.S. PATENT DOCUMENTS

EXAMINER INITIALS	Cite No.[1]	DOCUMENT NUMBER Number - Kind Code[2] (If Known)	PUBLICATION DATE OR ISSUE DATE MM-DD-YYYY	NAME OF PATENTEE
		6,832,667 B1	12-21-2004	Kahre et al.
		8,622,173 B2	01-07-2014	Fuqua et al.

FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T[6] (✓)
		WO 01/97919 A1	12-27-2001	Clemente	

OTHER DOCUMENTS

EXAMINER INITIALS	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

EXAMINER SIGNATURE		DATE CONSIDERED	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.pto.gov or MPEP 901.4. [3]Enter Office that issued the document, by the two-letter code (WIPO standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6]Applicant is to place a check mark here if English Language Translation is attached.

KWK/srh

Sheet 1 of 1

111267804.1

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/688,884	11/19/2019	Joshua Clemente	180720 (306317-00001)

CONFIRMATION NO. 6650

23363
Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

PUBLICATION NOTICE



Title:VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

Publication No.US-2020-0157884-A1
Publication Date:05/21/2020

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/688,884	11/19/2019	Joshua Clemente	180720 (306317-00001)	6650

23363 7590 04/29/2021
Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

EXAMINER
CHIN-SHUE, ALVIN CONSTANTINE

ART UNIT	PAPER NUMBER
3634	

NOTIFICATION DATE	DELIVERY MODE
04/29/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PLPrivatePair@lrrc.com
pto@lewisroca.com

Office Action Summary	Application No. 16/688,884	Applicant(s) Clemente, Joshua	
	Examiner ALVIN C CHIN-SHUE	Art Unit 3634	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-17 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☐ Claim(s) _____ is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-17 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-16, drawn to a vehicle-mounted access system, classified in E06C 5/04.

II. Claim 17, drawn to a method of deploying a vehicle-mounted access system, classified in B66F 11/04.

The inventions are independent or distinct, each from the other because:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the product, as set forth in claim 1, can be used in a process without a touchscreen interface.

Restriction for examination purposes as indicated is proper because all the inventions listed in this action are independent or distinct for the reasons given

above and there would be a serious search and/or examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(b) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(c) the prior art applicable to one invention would not likely be applicable to another invention.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention**.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under

37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103 or pre-AIA 35 U.S.C. 103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN CONSTANTINE CHIN-SHUE whose telephone number is (571)272-6828. The examiner can normally be reached on Mon-Fri 8.00-5.00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Mitchell can be reached on 28800. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALVIN C CHIN-SHUE/
Primary Examiner, Art Unit 3634

Information:	
Total Files Size (in bytes):	97992

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	42944037
Application Number:	16688884
International Application Number:	
Confirmation Number:	6650
Title of Invention:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
First Named Inventor/Applicant Name:	Joshua Clemente
Customer Number:	23363
Filer:	Daniel A. Salgado/Sheila Harter
Filer Authorized By:	Daniel A. Salgado
Attorney Docket Number:	180720 (306317-00001)
Receipt Date:	09-JUN-2021
Filing Date:	19-NOV-2019
Time Stamp:	16:34:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response to Election / Restriction Filed	180720Response.pdf	97992 2d585585nda4e64cf31cando4f88947fbfa0f999	no	1

Warnings:

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being EFS-Web transmitted to the United States Patent and Trademark Office on June 9, 2021 at or before 11:59 p.m. Pacific Time under the Rules of 37 CFR § 1.8.

/Sheila R. Harter/
Sheila R. Harter

Appl No.	: 16/688,884	Confirmation No. 6650
Inventor	: Joshua Clemente	
Filed	: November 19, 2019	
Title	: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	
TC/A.U.	: 3654	
Examiner	: Alvin Constantine Chin-Shue	
Docket No.	: 180720	
Customer No.	: 23363	

RESPONSE TO RESTRICTION REQUIREMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 29001
Glendale, CA 91209-9001
June 9, 2021

Commissioner:

In response to the Office action of April 29, 2021, Applicant hereby elects Claims 1-16, drawn to a vehicle-mounted access system, without traverse.

Applicant reserves the right to pursue the non-elected claims in a divisional application.

Respectfully submitted,

LEWIS ROCA ROTHGERBER CHRISTIE LLP

By /Daniel Salgado/
Daniel A. Salgado
Reg. No. 76,283
626/795-9900

DAS/srh

Bibliographic Data

Application No: 16/688,884

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: /ALVIN C CHIN-SHUE/ Examiner's Signature | Initials

Title: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/19/2019	182	3634	180720 (306317-00001)
RULE			

APPLICANTS

INVENTORS

Joshua Clemente, Philadelphia, PA, UNITED STATES

CONTINUING DATA

This application has PRO of 62770022 11/20/2018

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

12/05/2019

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		
	Attorney Docket Number	180720
	Application Number	16/688,884
	Filing Date	November 19, 2019
	Inventor(s)	Joshua Clemente
	Group Art Unit	3634
	Examiner Name	TBD

U.S. PATENT DOCUMENTS

EXAMINER INITIALS	Cite No.[1]	DOCUMENT NUMBER Number - Kind Code[2] (If Known)	PUBLICATION DATE OR ISSUE DATE MM-DD-YYYY	NAME OF PATENTEE
		6,832,667 B1	12-21-2004	Kahre et al.
		8,622,173 B2	01-07-2014	Fuqua et al.

FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T[6] (✓)
		WO 01/97919 A1	12-27-2001	Clemente	

OTHER DOCUMENTS

EXAMINER INITIALS	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

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Sheet 1 of 1

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TYPE	IPC	DATE
IPCP	B60P1/43 20060101	
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ABSTRACT:

The vehicle has a walling path (12) on its chassis (2) which consists of telescopic sections (18-20) which are vertically movable up and down about a swivel axis (12). In the aircraft (33) side end the path has a section (28) joined to the path telescopic section (14). The aircraft side section can be swivelled and arrested w.r.t. the telescopic path section. The aircraft side section may contain aircraft contacting extension (34) swivelable about an axis (35) orthogonal to its walling surface (21).

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DOCUMENT-IDENTIFIER:	**DE 4400741 A1**
TITLE:	**Vehicle for evacuating people from aircraft**
PUBN-DATE:	**July 20, 1995**
PATENT-FAMILY-ID:	**6507799**

APPLICANT:

NAME	**COUNTRY**
TREPEL HEBE FOERDERTECH	**DE**

APPL-NO:	**DE 4400741 A**
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PRIORITY-DATA:

PRIORITY-NO	**PRIORITY-APPL-DATE**
DE 4400741 A	**19940113**

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CPCI	**B64F1/315**	**20130101**

ZEICHNUNGEN SEITE 2

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FIG.2

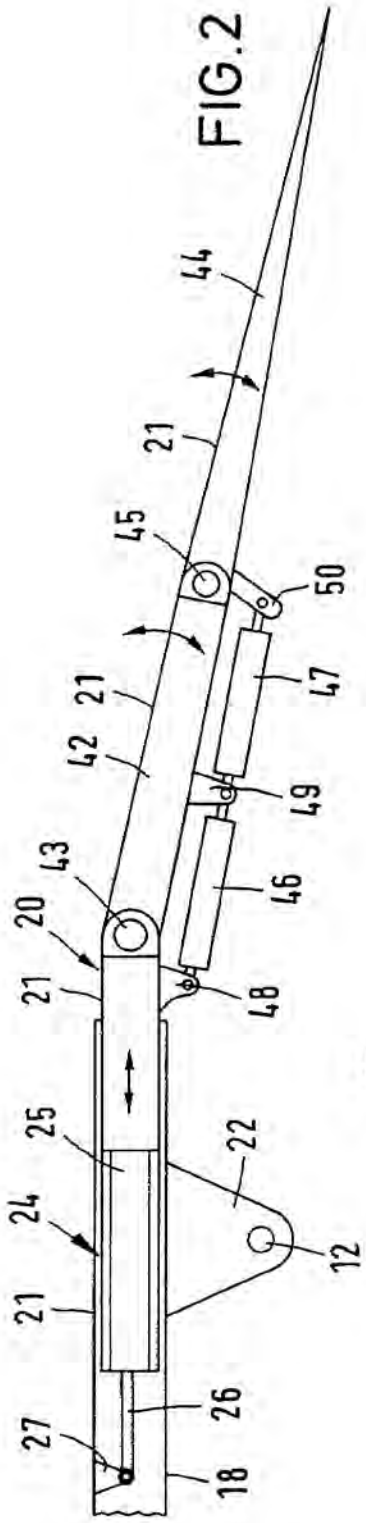
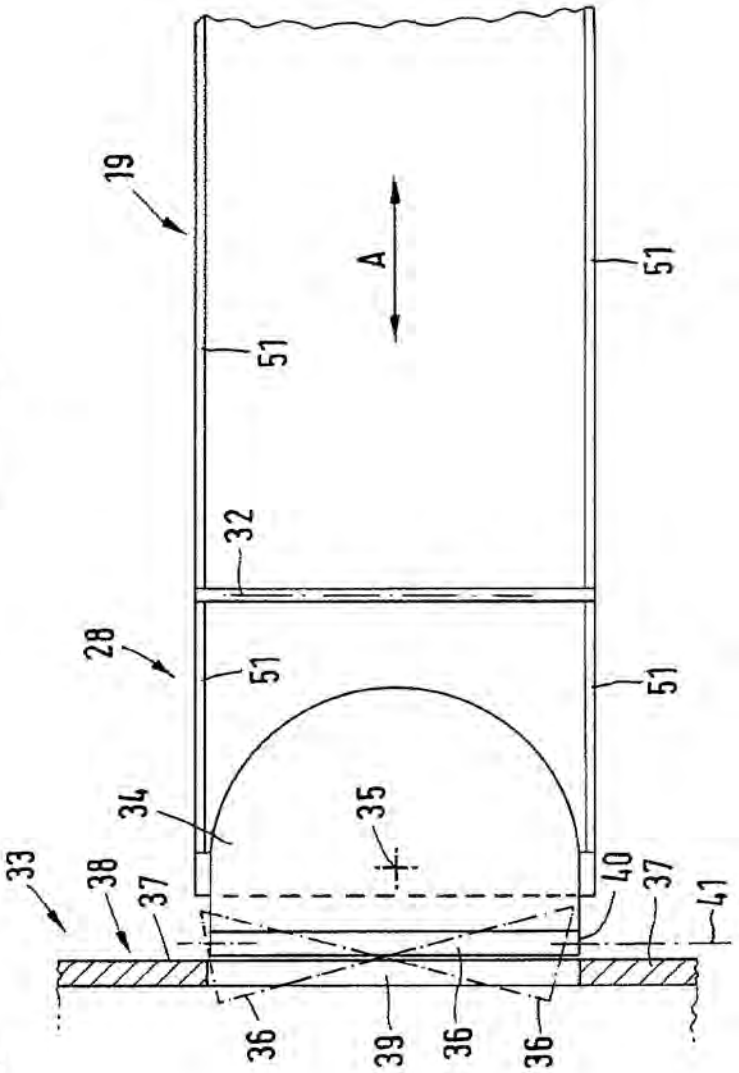


FIG.3

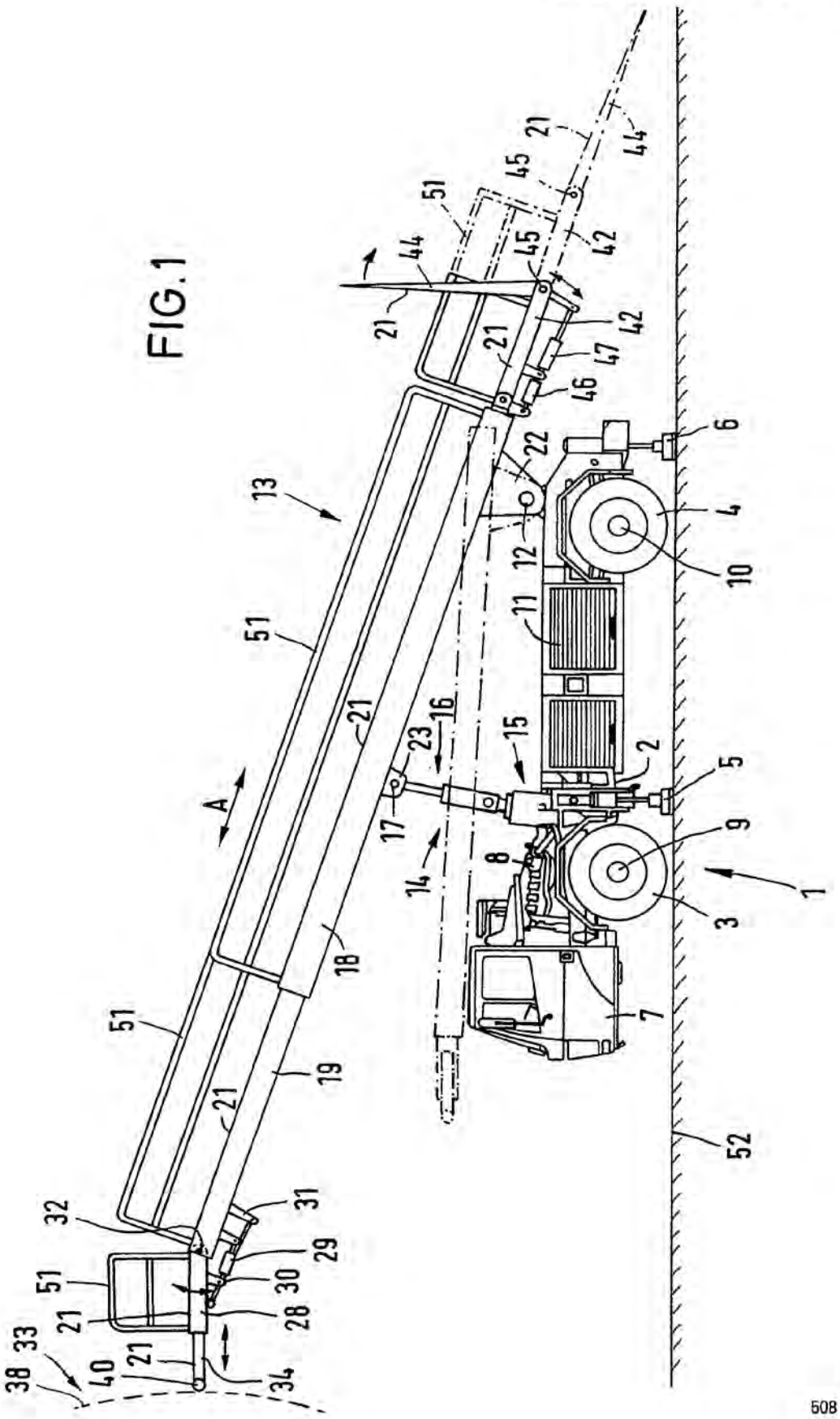


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ZEICHNUNGEN SEITE 1

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FIG. 1



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18 und des bodenseitigen Laufstegabschnittes 20 darstellen. Anschließend wird der bodenseitige Laufstegabschnitt 20 so weit aus dem chassisseitigen Laufstegabschnitt 18 herausgefahren, bis die Verlängerung 44 mit ihrem freien Ende den Boden 52 berührt. Bei dem nunmehr zur Evakuierung bereiten Fahrzeug können die zu evakuierenden Personen das Flugzeug 33 verlassen und betreten zunächst die im Bereich des Laufstegabschnittes 28 und der Verlängerung 34 horizontal ausgerichtete Lauffläche 21, können sich in diesem Bereich des Laufsteges 13 orientieren, um dann über die geneigt angeordnete Lauffläche 21 des Laufsteges 13 im Bereich der Laufstegabschnitte 19, 18, 20, 42 und der Verlängerung 44 den Laufsteg hinabzugehen. Um sicherzustellen, daß die Personen auf dem Laufsteg 13 nicht ausgleiten, ist dessen Lauffläche 21 als rutschfester Belag ausgebildet.

Das Überführen des Fahrzeuges in dessen Fahrstellung erfolgt nach der Evakuierung der Personen im umgekehrten Sinne wie vorstehend aufgezeigt.

Patentansprüche

1. Fahrzeug zum Evakuieren von Personen aus Flugzeugen mit folgenden Merkmalen:
   - ein verfahrbares Chassis (2),
   - einen im Chassis (2) gelagerten, um eine Schwenkachse (12) anhebbaren und absenkbaren Laufsteg (13), der in Laufrichtung (A) aus- und einfahrbare Laufstegabschnitte (19, 18, 20) aufweist.

2. Fahrzeug nach Anspruch 1, bei dem der Laufsteg (13) im Bereich seines an das Flugzeug (33) anzulegenden Endes einen schwenkbar an einen aus- und einfahrbaren Laufstegabschnitt (19) angelenkten, flugzeugseitigen Laufstegabschnitt (28) aufweist, sowie Mittel (29) zum Verschwenken und Mittel (29) zum Festhalten des flugzeugseitigen Laufstegabschnittes (28) relativ zu diesem aus- und einfahrbaren Laufstegabschnitt (19) vorgesehen sind.

3. Flugzeug nach Anspruch 2, bei dem im flugzeugseitigen Laufstegabschnitt (28) eine an das Flugzeug (33) anlegbare Verlängerung (34) gelagert ist.

4. Fahrzeug nach Anspruch 3, bei dem die Verlängerung (34) um eine senkrecht zu deren Lauffläche (21) angeordnete Achse (35) schwenkbar in dem flugzeugseitigen Laufstegabschnitt (28) gelagert ist.

5. Flugzeug nach einem der Ansprüche 1 bis 4, bei dem der Laufsteg (13) mindestens zwei zentrale teleskopierbare Laufstegabschnitte (18, 19) aufweist, wobei der eine teleskopierbare Laufstegabschnitt (18) im Bereich seines flugzeugfernen Endes im Chassis (2) schwenkbar gelagert ist und an diesem teleskopierbaren Laufstegabschnitt (18), beabstandet zu dessen Schwenkachse (12), sowie am Chassis (2) ein Huborgan, insbesondere ein hydraulisch wirksamer Hubzylinder (14) angreift.

6. Fahrzeug nach Anspruch 5, bei dem in dem einen Laufstegabschnitt (18) der flugzeugseitige Laufstegabschnitt (19) teleskopierbar gelagert ist.

7. Fahrzeug nach einem der Ansprüche 1 bis 6, bei dem der Laufsteg (13) im Bereich seines dem Boden (52) zugewandten Endes eine an einen aus- und einfahrbaren Laufstegabschnitt (20) angelenkte, auf den Boden (52) auflegbare Verlängerung (42, 44) aufweist, wobei die Verlängerung (42, 44) parallel zur chassisseitigen Schwenkachse (12) des Laufsteges (13) schwenkbar angelenkt ist, sowie Mittel (46, 47) zum Festhalten und Mittel (46, 47) zum Verschwenken der bodenseitigen Verlängerung (42, 44) relativ zu dem zugeordneten Laufstegabschnitt (20) vorgesehen sind.

8. Fahrzeug nach Anspruch 7, bei dem die auf den Boden (52) auflegbare Verlängerung (42, 44) an einen dritten teleskopierbaren Laufstegabschnitt (20) schwenkbar angelenkt ist, der in dem chassisseitigen Laufstegabschnitt (18) gelagert ist.

9. Fahrzeug nach Anspruch 7, bei dem im chassisseitigen Laufstegabschnitt (18) ein dritter teleskopierbarer Laufstegabschnitt (20) gelagert ist, mit dem ein bodenseitiger Laufstegabschnitt (42) schwenkbar verbunden ist, dessen bodenseitiges Ende die Verlängerung (44) aufnimmt, wobei die Schwenkachsen (45, 43) von Verlängerung (44) und bodenseitigem Laufstegabschnitt (42) bzw. bodenseitigem Laufstegabschnitt (42) und drittem teleskopierbarem Laufstegabschnitt (20) parallel zur Schwenkachse (12) des chassisseitigen Laufstegabschnitts (18) angeordnet sind, sowie Mittel (46, 47) zum Festhalten und Mittel (46, 47) zum Verschwenken des bodenseitigen Laufstegabschnittes (42) relativ zum dritten teleskopierbaren Laufstegabschnitt (20) sowie der Verlängerung (44) relativ zum bodenseitigen Laufstegabschnitt (42) vorgesehen sind.

10. Fahrzeug nach einem der Ansprüche 1 bis 9, bei dem das Ausfahren und Einfahren der teleskopierbaren Laufstegabschnitte (18, 19, 20) mittels Stellelementen, insbesondere mittels hydraulischen Hubzylindern (24) und/oder Kettentrieben erfolgt.

11. Fahrzeug nach einem der Ansprüche 1 bis 10, bei dem der Laufsteg (13) auf beiden Seiten Geländer (51) aufweist, die sich im wesentlichen über die gesamte Lauflänge des Laufsteges (13) erstrecken.

Hierzu 2 Seite(n) Zeichnungen

Der Laufsteg 13 weist drei in Laufrichtung, d. h. in Begehrichtung, die durch den Doppelpfeil A verdeutlicht ist, aus- und einfahrbare Laufstegabschnitte 18, 19 und 20 (Laufstegabschnitt 20 siehe Fig. 2) auf. Diese sind teleskopierbar ausgebildet, womit der flugzeugseitige Laufstegabschnitt 19 über nicht dargestellte Führungen im chassisseitigen Laufstegabschnitt 18 und der bodenseitige Laufstegabschnitt 20 über nicht dargestellte Führungen im chassisseitigen Laufstegabschnitt 18 verschieblich gelagert ist. Im Bereich des bodenseitigen Laufstegabschnittes 20 weist der chassisseitige Laufstegabschnitt 18 auf der der Lauffläche 21 des Laufsteges 13 abgewandten Seite einen Lageransatz 22 zur Aufnahme der Schwenkachse 12 auf, um die der Laufsteg 13 mit seinem chassisseitigen Laufstegabschnitt 18 schwenkbar ist. In Abstand zum Lageransatz 22 ist an der der Lauffläche 21 des chassisseitigen Laufstegabschnittes 18 abgewandten Seite dieses Abschnittes ein weiterer Lageransatz 23 angeordnet, den die Schwenkachse 17 der Kolbenstange 16 durchsetzt. Ein- und ausgefahren werden der flugzeugseitige Laufstegabschnitt 19 und der bodenseitige Laufstegabschnitt 20 mittels Hydraulikzylindern, wobei nur der Hydraulikzylinder 24 zum Ein- und Ausfahren des bodenseitigen Laufsteges 20 in der Fig. 2 gezeigt ist. Der eigentliche Zylinder 25 des Hydraulikzylinders 24 ist im bodenseitigen Laufstegabschnitt 20 gelagert und es greift die Kolbenstange 26 des Hydraulikzylinders 24 schwenkbar an einem mit dem chassisseitigen Laufstegabschnitt 18 verbundenen Lageransatz 27 an.

Wie insbesondere der Darstellung der Fig. 1 und 3 zu entnehmen ist, weist der Laufsteg 13 im Bereich seines an ein Flugzeug 33 anzulegenden Endes einen schwenkbar an den flugzeugseitigen Laufstegabschnitt 19 angelenkten, weiteren flugzeugseitigen Laufstegabschnitt 28 auf. Dieser ist mittels eines Hubzylinders 29 verschwenkbar, der schwenkbar an Lageransätzen 30 und 31 angreift, die an der Unterseite des Laufstegabschnittes 28 und des Laufstegabschnittes 19 angeordnet sind. Die parallel zu der Schwenkachse 12 angeordnete Schwenkachse des Laufstegabschnittes 28 ist mit der Bezugsziffer 32 bezeichnet.

Im Laufstegabschnitt 28 ist eine an das Flugzeug 33 anlegbare Verlängerung 34 gelagert, die in Art eines Drehtellers ausgebildet ist. Die Verlängerung 34 ist um eine senkrecht zu deren Lauffläche 21 angeordnete Achse 35 schwenkbar im Laufstegabschnitt 28 gelagert und im wesentlichen in Art eines Halbkreises ausgebildet, dessen gerade Stirnkante 36 an die Außenhaut 37 der Wandung 38 des Flugzeuges 33 im Bereich einer Ausstiegsöffnung 39 legbar ist. Fig. 3 verdeutlicht, daß entsprechend dem Winkel, den die Wandung 38 des Flugzeuges 33, bezogen auf dessen Längsrichtung, mit dem Laufsteg 13 einschließt, die Verlängerung 34 mehr oder weniger verschwenkt wird, so daß die Stirnkante 36 der Verlängerung 34 über deren ganze Länge an der Außenhaut 37 der Flugzeugwandung 38 anliegt. Mit strichlierten Linien sind zwei von vielen anderen möglichen Stellungen der schwenkbaren Verlängerung 34 zur Anlage der Stirnkante 36 an ein entsprechend ausgerichtetes Flugzeug 33 verdeutlicht. Die Stirnkante 36 wird durch eine Rolle 40 gebildet, die um eine Achse 41 im Drehtellerabschnitt der Verlängerung 34 schwenkbar ist und zu einem beschädigungsfreien Anfahren des Laufsteges 13 an das Flugzeug 33 beitragen soll.

Insbesondere der Darstellung der Fig. 2 ist zu entnehmen, daß mit dem bodenseitigen Laufstegabschnitt 20 ein weiterer bodenseitiger Laufstegabschnitt 42 über

eine parallel zur Schwenkachse 12 angeordnete Schwenkachse 43 und mit dem bodenseitigen Ende des Laufstegabschnittes 42 eine Verlängerung 44 über eine parallel zur Schwenkachse 43 angeordnete Schwenkachse 45 verbunden ist. Die Verlängerung 44 ist dabei, ausgehend von der Schwenkachse 45, keilförmig verjüngend ausgebildet. Zum Verschwenken des Laufstegabschnittes 42 und der Verlängerung 44 sind zwei Hydraulikzylinder 46 und 47 vorgesehen, wobei der Hydraulikzylinder 46 an einem an der Unterseite des Laufstegabschnittes 20 angeordneten Lageransatz 48 und einem an der Unterseite des Laufstegabschnittes 42 angeordneten Lageransatz 49 schwenkbar angreift sowie der Hydraulikzylinder 47 am Lageransatz 49 und einem an der Unterseite der Verlängerung 44 angeordneten Lageransatz 50 schwenkbar angreift.

Die Hydraulikzylinder zum Verfahren der Ständer 5 und 6, der Hydraulikzylinder 14 zum Verschwenken des chassisseitigen Laufstegabschnitts 18, die Hydraulikzylinder zum Aus- und Einfahren der teleskopierbaren Laufstegabschnitte 18 und 20, die Hydraulikzylinder 29, 46 und 47 zum Verschwenken der Laufstegabschnitte 28 und 42 sowie der Verlängerung 44 sind mittels des Hydraulikaggregates beaufschlagbar, wobei darauf verzichtet wurde, die bekannten Komponenten des Hydrauliksystems bis ins einzelne zu verdeutlichen. Das Festhalten der genannten Teile in ihren Fahr- bzw. Schwenkpositionen erfolgt auf bekannte Art und Weise durch das hydraulische Arretieren der Hydraulikzylinder.

Wie der Darstellung der Fig. 1 und 3 zu entnehmen ist, sind beidseitig der Lauffläche 21 des Laufsteges 13 im Bereich der Laufstegabschnitte 28, 19, 18, 20 und 42 Geländer 51 angebracht.

Im Fahrzustand des Fahrzeuges befindet sich der Laufsteg 13 in der in Figur zusätzlich verdeutlichten eingefahrenen Position, in der der chassisseitige Laufstegabschnitt 18 bis geringfügig oberhalb des Fahrerhauses 7 abgesenkt ist und der flugzeugseitige Laufstegabschnitt 19 sowie der bodenseitige Laufstegabschnitt 20 in diesen eingefahren sind. Der weitere flugzeugseitige Laufstegabschnitt 28 ist in eine solche Position verschwenkt, daß dessen Lauffläche 21 parallel zur Aufstandsfläche des Fahrzeugunterbaus 1 auf dem Boden 52 orientiert ist. Die Verlängerung 44 ist in die Lotrechte zum Boden 52 verschwenkt. Der weitere bodenseitige Laufstegabschnitt 42 kann mit seinem verlängerungsseitigen Ende geringfügig zum Boden hin geneigt sein, um die Bauhöhe des Fahrzeuges im Bereich der Verlängerung 44 zu minimieren.

Sind Personen aus einem Flugzeug zu evakuieren, verfährt das Fahrzeug zum Flugzeug 33 und wird über die Stützen 5 und 6 hydraulisch aufgeständert und dabei über nicht dargestellte Mittel horizontal nivelliert. Entsprechend der Position des Fahrzeuges zum Flugzeug wird dann der chassisseitige Laufstegabschnitt 18 soweit erforderlich angehoben und der flugzeugseitige Laufstegabschnitt 19 soweit erforderlich ausgefahren, ferner der weitere flugzeugseitige Laufstegabschnitt 28 soweit erforderlich in die Horizontale verschwenkt, wobei sich die Rolle 40 der Verlängerung 34 unter Berücksichtigung der Position des Flugzeuges 33 relativ zum Fahrzeug an die Außenhaut 37 des Flugzeuges 33 anlegt. Anschließend werden der weitere bodenseitige Laufstegabschnitt 42 und die bodenseitige Verlängerung 44 in eine solche Position verschwenkt, daß diese Teile die in Fig. 1 zusätzlich angedeutete, geradlinige Verlängerung des chassisseitigen Laufstegabschnittes

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Beschreibung

Die Erfindung betrifft ein Fahrzeug zum Evakuieren von Personen aus Flugzeugen.

Die Evakuierung von Personen aus Flugzeugen erfolgt in aller Regel mittels Flugzeugrutschen, die im Bereich der Flugzeugtüren vom Flugzeug herabgelassen werden. Fälle, in denen Personen evakuiert werden müssen, sind vielfältig denkbar, beispielsweise dann, wenn ein Flugzeug beim Landen über die Landebahn hinausgelangt ist. Die Evakuierung muß unter komplizierten Bedingungen beherrscht werden, beispielsweise aufgrund des in aller Regel nicht befestigten Bodens und der damit verbundenen Schräglage des Flugzeuges, sowohl in Längsrichtung als auch in Querrichtung, ferner wegen eventueller Defekte am Flugzeug, beispielsweise infolge des gebrochenen Flugzeugfahrgestelles und der auch aus diesem Grunde bedingten Schräglage des Flugzeuges gegenüber seiner Normalposition.

Nachteilig ist bei den genannten Flugzeugrutschen, daß sie einerseits nur vom Flugzeug aus aktivierbar sind, andererseits bei Verwendung solcher Flugzeugrutschen die Gefahr besteht, daß sich die zu evakuierenden Personen in erheblichem Umfang verletzen. Dies deshalb, weil infolge der Paniksituation Personen in zu kurzen Abständen über die Rutschen abgleiten und mit noch im Bereich des unteren Endes der Fahrzeugrutschen befindlichen Personen zusammenprallen.

Es ist Aufgabe der vorliegenden Erfindung, ein Fahrzeug anzugeben, das bei baulich einfacher Gestaltung und kostengünstiger Ausführung eine wirksame, sichere Evakuierung von Personen aus Flugzeugen gestattet.

Die Erfindung schlägt hierzu ein Fahrzeug zum Evakuieren von Personen aus Flugzeugen vor, das ein verfahrbares Chassis sowie einen im Chassis gelagerten, um eine Schwenkachse anhebbaren und absenkbaren Laufsteg aufweist, der in Laufrichtung aus- und einfahrbare Laufstegabschnitte besitzt.

Wesentliches Merkmal der vorliegenden Erfindung ist somit der im verfahrbaren Chassis schwenkbar gelagerte, anhebbare und absenkbare Laufsteg. Diese Gestaltung ermöglicht es, zum Evakuieren von Personen mit dem Fahrzeug so dicht wie möglich an das Flugzeug heranzufahren und, ausgehend von dieser Position, den Laufsteg von der abgesenkten Ruhestellung in die gewünschte, mehr oder weniger ausgefahrene Hubposition der Laufstegabschnitte zu überführen. Die Personen können somit über den, entsprechend der angefahrenen Türhöhe ausgerichteten Laufsteg das Flugzeug verlassen.

Der Laufsteg kann dabei auf die unterschiedlichste Art und Weise gestaltet sein. So geht eine grundsätzliche Gestaltung davon aus, daß der Laufsteg mehrere teleskopierbare Laufstegabschnitte aufweist, von denen einer schwenkbar im Chassis gelagert ist, wobei beabstandet zur Schwenkachse des Laufstegabschnittes an diesem sowie am Chassis mindestens ein Huborgan angreift, insbesondere ein als hydraulisch wirkender Hubzylinder ausgebildetes Huborgan. Gemäß einer grundsätzlichen weiteren Gestaltung des Laufsteges können mit den im Evakuierungszustand zur Horizontalen geneigt angeordneten teleskopierbaren Laufstegabschnitten weitere Laufstegabschnitte schwenkbar verbunden sein, so daß der Laufsteg im Andockbereich an das Flugzeug horizontal ausgerichtet und im Bodenbereich exakt auf den Boden abgesenkt werden kann. Hierzu kann beispielsweise das bodenseitige Ende des Laufsteges als schwenkbare, plattenförmige Verlängerung ausgebildet sein.

Das Ausfahren und Einfahren der teleskopierbaren Laufstegabschnitte erfolgt mittels Stellelementen, die insbesondere als hydraulische Hubzylinder und/oder Kettentriebe ausgebildet sind. Bekannte Arretiervorrichtungen dienen dem Blockieren der teleskopierbaren Laufstegabschnitte nach Erreichen von deren gewünschten Positionen. Die teleskopierbaren Laufstegabschnitte sind mittels Führungen ineinandergeführt. Das Verschwenken und Festhalten der dem Flugzeug und dem Boden zugeordneten Laufstegabschnitte erfolgt über separate Mittel, die insbesondere als hydraulisch wirksame, in ihrer jeweiligen Stellposition arretierbare Zylinder ausgebildet sind.

Aus Sicherheitsgründen sollte der Laufsteg auf beiden Seiten mit Geländern versehen sein, die sich im wesentlichen über die gesamte Lauflänge des Laufsteges erstrecken. Dies bedeutet, daß in den durch die Schwenkverbindungen vorgegebenen Knickbereichen des Laufsteges geringfügige Abschnitte des Laufsteges ohne Geländer vorgesehen sein können. Auf ein Geländer kann insbesondere auch im Bereich der bodenseitigen Verlängerung des Laufsteges verzichtet werden.

Das eigentliche Fahrzeug ist bevorzugt als geländegängiges Kraftfahrzeug ausgebildet. Es sollte daher auch eine Mehrpunktabstützung aufweisen, auf der das Fahrzeug bei Erreichen der Einsatzposition abgestützt und möglichst horizontal ausgerichtet werden kann.

Wenn das Fahrzeug nicht im Einsatz ist, ist der Laufsteg in eine im wesentlichen horizontal ausgerichtete Position abgesenkt und es sind die einzelnen Laufstegabschnitte eingefahren, so daß die eingefahrene Laufsteglänge nur geringfügig länger als die Länge des Chassis ist.

Weitere Merkmale der Erfindung sind in den Unteransprüchen, der Beschreibung der Figuren und den Figuren selbst dargestellt, wobei bemerkt wird, daß alle Einzelmerkmale und alle Kombinationen von Einzelmerkmalen erfindungswesentlich sind.

In den Figuren ist die Erfindung anhand einer bevorzugten Ausführungsform beispielsweise dargestellt, ohne auf diese beschränkt zu sein. Es zeigt:

Fig. 1 das erfindungsgemäße Fahrzeug zum Evakuieren von Personen in einer schematischen Darstellung, von der Seite gesehen,

Fig. 2 den bodenseitigen Bereich des Laufsteges von der Seite gesehen, in einer vergrößerten Darstellung und

Fig. 3 den flugzeugseitigen Bereich des Laufsteges in einer Draufsicht gesehen, in einer vergrößerten Darstellung.

Fig. 1 zeigt den Fahrzeugunterbau **1**, der im wesentlichen aus dem Chassis **2**, in diesem über Vorder- und Hinterachsen **9**, **10** gelagerten Vorder- und Hinterrädern **3**, **4**, diesen zugeordneten Stützen **5**, **6**, einem Fahrerhaus **7**, einem dahinter angeordneten Motor **8** sowie einem zwischen Vorder- und Hinterachsen **9**, **10** angeordneten, auf dem Chassis **2** gelagerten Hydraulikaggregat **11** besteht. Im Bereich der Hinterachse **10** ist um eine parallel zur Hinterachse angeordnete Schwenkachse **12** ein Laufsteg **13** schwenkbar im Chassis **2** gelagert. Verschwenkt wird der Laufsteg **13** mittels eines hydraulisch wirkenden Hubzylinders **14**, dessen Zylinder **15** um eine parallel zur Schwenkachse **12** angeordnete Achse schwenkbar im Chassis **2** gelagert ist und dessen teleskopierbare Kolbenstange **16** um eine gleichfalls parallel zur Schwenkachse **12** angeordnete Achse **17** an der Unterseite des Laufsteges **13** angreift.

(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENTAMT

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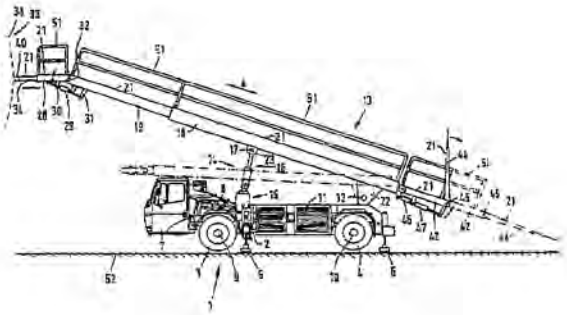
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Antrag auf Nichtnennung

(54) Fahrzeug zum Evakuieren von Personen aus Flugzeugen

(57) Die Erfindung schlägt ein Fahrzeug zum Evakuieren von Personen aus Flugzeugen (33) vor, das ein verfahrbares Chassis (2) aufweist sowie einen im Chassis gelagerten, um eine Schwenkachse (12) anhebbaren und absenkbaren Laufsteg (13), der in Laufrichtung (A) aus- und einfahrbare Laufstegabschnitte (18, 19) aufweist.
Das erfindungsgemäße Fahrzeug ermöglicht es bei dessen baulich einfacher Gestaltung und kostengünstiger Ausführung eine wirksame, sichere Evakuierung von Personen aus Flugzeugen durchzuführen.



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Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen

BUNDESDRUCKEREI 05. 95 508 029/64

			DERWENT; IBM_TDB			
L11	288	E06C5/36.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/08/26 11:46
L12	124	E06C5/44.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/08/26 11:48
L13	2,331	E06C7/16.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/08/26 11:49
L14	489	E06C7/183.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/08/26 11:51

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L6	85	("1890940" | "1898826" | "1899742" | "20040052622" | "2005990" | "2116470" | "2586531" | "2946397" | "3013681" | "3058607" | "3563342" | "3621935" | "3672549" | "4058243" | "4059281" | "4062464" | "4139078" | "4161997" | "4170331" | "4234285" | "4239438" | "4344508" | "4408680" | "4618083" | "4738582" | "4751981" | "4827742" | "4858725" | "4877108" | "4909352" | "4953757" | "5009350" | "5048641" | "5064022" | "5071308" | "5104280" | "5172952" | "5297912" | "5421495" | "5447408" | "5469933" | "5518357" | "5538100" | "5632591" | "5743702" | "5791857" | "5850891" | "6003633" | "6012545" | "6029750" | "6092972" | "6257534" | "6315181" | "6427889" | "D331030").PN. OR ("7137479").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2021/08/26 11:02
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L8	0	B66F1/315.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/08/26 11:31
L9	376	B64F1/315.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/08/26 11:31
L10	1,917	E06C1/39.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2021/08/26 11:41

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("20200157884").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2021/08/26 10:22
L2	8	(("6832667") or ("8622173")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2021/08/26 10:24
L3	0	("2020/0157884").URPN.	USPAT	OR	ON	2021/08/26 10:59
L4	28	("20030000769" | "2116470" | "3605943" | "3664456" | "4081091" | "4251179" | "4456420" | "4479753" | "4613155" | "4718812" | "4877108" | "5110252" | "5286049" | "5538100" | "5702222" | "5749436" | "5769439" | "6105721" | "6347686" | "6382650" | "6484344" | "6491331").PN. OR ("6832667").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2021/08/26 11:00
L5	80	("1890940" | "1898826" | "1899742" | "20040052622" | "2005990" | "20110148057" | "20120263561" | "20130181091" | "20160221510" | "2116470" | "2586531" | "2946397" | "3013681" | "3058607" | "3563342" | "3621935" | "3672549" | "4058243" | "4059281" | "4062464" | "4139078" | "4161997" | "4170331" | "4234285" | "4239438" | "4344508" | "4408680" | "4603908" | "4618083" | "4738582" | "4751981" | "4827742" | "4858725" | "4877108" | "4909352" | "4953757" | "5009350" | "5048641" | "5064022" | "5071308" | "5104280" | "5172952" | "5297912" | "5421495" | "5447408" | "5469933" | "5518357" | "5538100" | "5632591" | "5743702" | "5791857" | "5850891" | "6003633" | "6012545" | "6029750" | "6092972" | "6257534" |	US-PGPUB; USPAT; USOCR	OR	ON	2021/08/26 11:01

ABSTRACT:

A step-ladder which provides access to an aircraft for the passenger is mounted on the chassis of a motor vehicle so that it can be positioned close to the aircraft. The actual ladder forms one link of a parallelogram. The ladder and its parallel link are pivoted at their lower ends to the vehicle chassis with the end part of the chassis forming part of the parallelogram. The upper ends of the ladder (2) and link (26) are pivoted to the platform (3) which forms the fourth link of the parallelogram. The step-ladder is raised and lowered by a hydraulic cylinder. ADVANTAGE - The step-ladder is suitable for use with any size of aircraft.

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(54) Bezeichnung des Gegenstandes
Fluggasttreppe

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Fluggasttreppe

Die Erfindung betrifft eine Fluggasttreppe auf einem insbesondere fahrbaren Untergestell, die mittels einer Hubvorrichtung in Gebrauchsstellungen unterschiedlicher Höhe und Neigung anhebbar ist und deren Treppenwangen je ein Paar von Parallelogrammstangen umfassen, an denen die Treppenstufen so angelenkt sind, daß sie in jeder Gebrauchsstellung im wesentlichen horizontal sind, wobei sich an das obere Ende der Treppe eine Übergangsplattform anschließt, an die die Parallelogrammstangen der Treppe zu gemeinsamer Neigungseinstellung der Übergangsplattform und der Treppenstufen angelenkt sind.

Bei bekannten Bauarten wird die Übergangsplattform von der Treppe getragen; die Hubvorrichtung greift dementsprechend an der Treppe an. Bei einer Treppenausführung der eingangs genannten Art setzt dies voraus, daß die Last von den Parallelogrammstangen in den Treppenwangen aufgenommen wird, was in anbetracht ihres geringen gegenseitigen Abstandes zu hoher Beanspruchung führt, zumal bei einer weit auskragenden Übergangsplattform. Das Problem wird noch dadurch erschwert, daß

ein möglichst großer Höheneinstellbereich erwünscht ist. Dies drängt den Konstrukteur, den Anlenkpunkt der Treppe am Untergestell möglichst weit hinten vorzusehen. Entsprechend groß ist dort das bei Belastung der Übergangsplattform zu übertragende Moment.

Die Erfindung will eine Fluggasttreppe der eingangs genannten Art schaffen, bei der die Funktionen der Lastaufnahme und der Neigungseinstellung der Plattform und der Treppenstufen einfach und wirkungsvoll erfüllt werden und gleichzeitig ein weiter Höheneinstellbereich ermöglicht wird.

Die erfindungsgemäße Lösung besteht darin, daß die Hubvorrichtung an der Übergangsplattform angreift und das obere Ende der Treppe von der Übergangsplattform getragen ist.

Durch den Angriff der Hubvorrichtung an der Übergangsplattform wird die Treppe entlastet. Die Treppe kann entsprechend leichter ausgeführt sein. Dies gilt insbesondere für die Parallelogrammstangen, die der Neigungseinstellung der Treppenstufen dienen.

Die Hubvorrichtung kann auch zur Einstellung der Neigung der Übergangsplattform herangezogen werden. Da die Neigung der Treppenstufen der Neigung der Übergangsplattform passiv folgt, kann in diesem Fall die Verbindung des unteren Endes der Treppe mit dem Untergestell sehr einfach ausgeführt sein. Es genügt, wenn sie nahe ihrem unteren Ende verschiebbar auf einer Stütze des Untergestells aufliegt.

Für die Neigungseinstellung mittels der Hubvorrichtung sieht die Erfindung vorzugsweise ein Gestänge-Gelenkviereck vor, dessen Stellung die Neigung der Übergangsplattform bestimmt, indem diese die obere Horizontalstange des Gelenkvierecks bildet oder damit verbunden ist. In einer ersten Ausführung

kann das Gelenkviereck in seiner Gesamtheit mittels eines besonderen Antriebs schwenkbar sein, um die Neigungseinstellung zu bewirken. Dabei wird die Verbindung zwischen dem Gelenkviereck und dem Untergestell möglichst weit hinten vorgesehen, damit bei einem vorgegebenen maximalen Schwenkwinkel, der durch die größtmöglichen Neigungswinkel der Übergangsplattform und der Treppenstufen vorgegeben ist, ein möglichst großer Höheneinstellbereich am äußeren Ende der Übergangsplattform erreicht wird.

Bei einer anderen Ausführungsform der Erfindung sind die unteren Gelenkpunkte des Gelenkvierecks mit dem Fahrgestell verbunden und ist das Gelenkviereck derartig unsymmetrisch ausgeführt, daß jedem Aufrichtzustand eine vorbestimmte Neigungseinstellung der Übergangsplattform zugeordnet ist. Bspw. kann das Gelenkviereck ähnlich einem Parallelogramm aber mit einer gegenüber der hinteren Stange verkürzten vorderen Stange oder mit einem geringeren Horizontalabstand der unteren Gelenkpunkte als der oberen Gelenkpunkte ausgeführt sein, so daß beim Aufrichten des Vierecks gleichzeitig eine Änderung der Plattform- und Stufenneigung stattfindet, und zwar in dem Sinne, daß bei geringen Einstellhöhen die Übergangsplattform zum freien Ende hin sich absenkt, bei mittlerer Höheneinstellung horizontal ist und bei maximaler Höheneinstellung zum freien Ende hin ein wenig ansteigt. Bei einer anderen Ausführungsform wird das Gelenkviereck von einer Schere gebildet, also von zwei einander überkreuzenden und im Überkreuzungspunkt gelenkig miteinander verbundenen Streben, von denen je ein Ende fest und ein anderes Ende in einer Führung gleitbar mit dem Untergestell bzw. mit der Übergangsplattform verbunden ist. Diese Schere ist so unsymmetrisch ausgeführt, daß sich die soeben erläuterte Neigungsverstellung der Übergangsplattform der Treppenstufen beim Anheben ergibt.

Es ist nicht erforderlich, daß das Gelenkviereck vollständig gesondert von der Treppe ausgeführt ist; diese kann vielmehr in das Gelenkviereck einbezogen sein. Bspw. kann die hintere

Stange des Gelenkvierecks von der Treppe gebildet sein, insbesondere von deren hinterer Parallelogrammstange. Es kann sogar das gesamte Gelenkviereck von den Parallelogrammstangen der Treppe gebildet sein. Voraussetzung ist in beiden Fällen, daß die Treppe von den Hubkräften entlastet bleibt. So sind bspw. Ausführungen denkbar, bei denen die Hubvorrichtung von einer Übergangsplattform angreifenden Einzelstütze gebildet ist, während davon gesondert das die Neigung bestimmenden Gelenkviereck vorgesehen ist, in das die Treppe einbezogen ist. Bei Verwendung einer Einzelstütze, die zumindest an ihrem Fuß oder an ihrem oberen Ende gelenkig ist, kann die Neigungseinstellung der Plattform nicht durch diese Einzelstütze erfolgen. Dies geschieht vielmehr durch das Gelenkviereck. Zu diesem Zweck kann ein unterer Gelenkpunkt des Gelenkvierecks über eine die Neigung bestimmende Führung mit dem Untergestell verbunden sein.

Wenn von dem Gelenkviereck, der Einzelstütze und dergleichen im Singular gesprochen wird, so soll dadurch nicht ausgeschlossen werden, daß die Teile in der Mehrzahl nebeneinander bspw. in doppelter Ausführung beiderseits der Treppe bzw. der Übergangsplattform angeordnet sind.

Die Erfindung wird im folgenden näher unter Bezugnahme auf die Zeichnung erläutert, die vorteilhafte Ausführungsbeispiele veranschaulicht. Es zeigen:

Fig. 1 die Seitenansicht einer Fluggasttreppe mit Parallelogramm-Hubgestell,
Fig. 2 eine Variante der Ausführung gemäß Fig. 1,
Fig. 3 die Ausführung gemäß Fig. 2 in unterschiedlichen Funktionsstadien,
Fig. 4 eine Variante der Ausführung nach Fig. 2 und 3,
Fig. 5 eine Fluggasttreppe, bei der die Hubvorrichtung scherenartig ausgeführt ist,
Fig. 6 eine schematische Einzeldarstellung der Scheren,
Fig. 7 eine Ausführung, bei welcher die Treppe an der

Bildung der hinteren Stange des Gelenkvierecks beteiligt ist,

Fig. 8 eine Ausführung, bei welcher das Gelenkviereck von dem Parallelogrammgestänge der Treppe gebildet ist, und

Fig. 9 die vergrößerte Darstellung eines Details der Fig. 8.

In allen Ausführungsbeispielen erhebt sich auf dem Fahrzeug 1 die Treppe 2, an deren oberes Ende sich die Übergangsplattform 3 anschließt. Diese Teile können, wie in Fig. 5 dargestellt, mit einer Verkleidung versehen sein. Wie gleichfalls in dieser Fig. gezeigt, kann die Übergangsplattform 3 durch Änderung der Treppenneigung auf unterschiedliche Höhen eingestellt werden. Damit die Einstellung der Stufen unabhängig ist von der Treppenneigung, sind die Stufen 4 an Parallelogrammstangen 5, 6 angelenkt, die den Seitenwangen der Treppe zugeordnet sind. Diese sind über Gelenkpunkte 7, 8 mit der Übergangsplattform 3 verbunden. Dies ermöglicht es, die Treppen auf unterschiedliche Neigungen einzustellen und dennoch die Stufen und die Übergangsplattform etwa horizontal zu halten.

Wenn man die Treppenneigung ändert und die Treppenstufen horizontal hält, ändert sich das Verhältnis von Stufenhöhe zu Stufentiefe, für das behördlich gewisse Grenzen vorgeschrieben sind. Dadurch werden der Neigungsverstellung der Treppe Grenzen gesetzt. Diese können dadurch ausgeweitet werden, daß die Treppenstufen nicht genau horizontal gehalten werden, sondern zusätzlich im Rahmen der behördlich zugelassenen Grenzen (+/- 5°) geneigt werden. Bei geringen Einstellhöhen werden die Stufen und die Übergangsplattform so geneigt, daß sie sich nach vorne hin senken, während sie bei großen Einstellhöhen so geneigt werden, daß sie nach vorne hin ansteigen. Dies erkennt man leicht bei den in Fig. 5 dargestellten zwei Höheneinstellungen. Der zur Verfügung stehende Höheneinstellungsbereich wird dadurch beträchtlich erweitert. Dabei ist es im allgemeinen zweckmäßig, die Stufenneigung gleich

derjenigen der Übergangsplattform zu wählen; unbedingt erforderlich ist dies jedoch nicht.

Im Ausführungsbeispiel gemäß Fig. 1 wird die Übergangsplattform 3 von einem Parallelogrammgestänge getragen und geführt, das aus der unteren Horizontalstange 8, der hinteren Stange 9, der vorderen Stange 10 und der oberen Stange 11 besteht, die mit der Übergangsplattform 3 verbunden ist. Am Gelenkpunkt 12 zwischen den Stangen 8 und 9 ist das Parallelogramm mit dem Fahrgestell verbunden. Dieser Gelenkpunkt ist soweit hinten angeordnet, wie dies mit Rücksicht auf die Treppenlänge möglich ist, d.h. etwa über dem hinteren Treppenende. Um für einen gegebenen Schwenkwinkel einen möglichst großen Größeneinstellbereich an der Übergangsplattform zu gewinnen, ist der Gelenkpunkt 12 über die Treppe 2 und vorzugsweise auch über das Fahrgestell des Fahrzeugs 1 angehoben.

Das Parallelogrammgestänge 8, 9, 10, 11 führt die Übergangsplattform 3 und - abhängig von dieser - die Treppenstufen 4 zu sich selbst parallel. Um die Vergrößerung des Höheneinstellbereichs - wie weiter oben erläutert - durch zusätzliche Neigung der Übergangsplattform 3 und Stufen 4 zu nutzen, ist die untere Stange 8 über den vorderen Gelenkpunkt 13 hinaus verlängert und an ihrem vorderen Ende 14 über einen Zylinderantrieb 15 mit dem Fahrgestell verbunden. Mittels dieses Antriebs kann das Parallelogrammgestänge und mit ihm die Übergangsplattform 3 insgesamt verschwenkt werden, so daß sich die erwähnte Neigungsverstellung der Übergangsplattform 3 der Treppenstufen 4 ergibt. Am vorderen Ende 14 der Stange 8 greift auch der Zylinderantrieb 16 zum Aufrichten des Parallelogrammgestänges an. Die Höhen- und Neigungsverstellungen erfolgen zweckmäßigerweise synchron und in vorbestimmter gegenseitiger Abhängigkeit.

Da die Last der Übergangsplattform 3 und des oberen Endes der Treppe 2 von dem Parallelogrammgestänge 8-11 übernommen wird,

kann die Treppe 2 sehr leicht ausgeführt sein. Sie liegt unten lose auf einem Anschlag des Fahrgestells.

Die zu der Ausführungsform gemäß Fig. 1 gegebene Erläuterung gilt auch für diejenige nach Fig. 2 und 3. Der Unterschied besteht darin, daß die hintere Stange 19 des Parallelogrammgestänges zwischen ihren Enden, die die Gelenkpunkte 7 und 12 bilden, nicht geradlinig, sondern derart abgewinkelt geführt ist, daß sie bei der Treppe 2 verläuft und sich mit deren hinterer Parallelogrammstange 6 zu einer Stabeinheit vereinigen kann, an der auch die einzelnen Stufen der Treppe im hinteren Auflagepunkt gelagert sind. Die Wirklinie der hinteren Stange 19 ist jedoch gegenüber Fig. 1 unverändert.

In Fig. 3 sind die einzelnen Hubbereiche 20, 21, 22 dargestellt. Im Bereich 20 findet ausschließlich Parallelschiebung der Übergangsbrücke und der Treppenstufen statt. In den Bereichen 21 und 22 tritt eine positive bzw. negative Neigungsverstellung hinzu. Dies ist ein Beispiel von nicht synchroner Höhen- und Neigungsverstellung.

Die Ausführungsform gemäß Fig. 4 gleicht derjenigen gemäß Fig. 2 und 3 mit dem Unterschied, daß der Gelenkpunkt 13 des Trägerparallelogramms über eine verstellbare Hebelanordnung 23 mit dem Fahrzeugrahmen verbunden ist. Der untere Stab zwischen den Gelenkpunkten 12 und 13 wird durch den Fahrzeugrahmen ersetzt.

In der Ausführungsform gemäß Fig. 5 ruht die Übergangsplattform 3 vollständig auf der Schere 41, die von zwei Stäben 42 und 43 gebildet ist, die am Kreuzungspunkt 44 gelenkig miteinander verbunden sind und jeweils an einem Ende 45 bzw. 46 mit dem Fahrgestell bzw. der Übergangsbrücke fest verbunden sind, während das andere Ende 47, 48 in einer Gleitführung 49 bzw. 50 parallel zum Fahrgestell bzw. zu der Übergangsbrücke verschiebbar ist. Ein Zylinderantrieb 51 spreizt die Schere zum Anheben der Übergangsbrücke. Die beiden Extremstellungen

der Schere und der Übergangsbrücke sind in der Darstellung angegeben.

Die Schere ist nicht symmetrisch aufgebaut, wie sich insbesondere aus der Schemadarstellung in Fig. 6 ergibt. Vielmehr ist die Stange 42 an ihrem oberen Ende um den Winkelbetrag 52 zu der anderen Stange hin abgewinkelt und verkürzt. Daraus ergeben sich die geometrischen Beziehungen der Extremlagen, die in Fig. 6 schematisch angedeutet sind und in der unteren Extremlage zu einer nach vorne fallenden und in der oberen Extremlage zu einer nach vorne steigenden Neigung der Übergangsplattform führen.

Die Treppenstufen stellen sich aufgrund der Verbindung des Parallelogrammgestänges der Treppe mit der Übergangsplattform parallel zu dieser ein. Das untere Ende der Treppe 2 ist in einer am Fahrgestell festen, waagerechten Kulissenführung 53 gehalten und kann sich bei Hubbewegungen in Längsrichtung frei bewegen.

Der Vorteil dieser Anordnung liegt in der nahezu vertikalen Hub- und Senkbewegung des vorderen Übergangspunktes 54 der Übergangsplattform.

In der Ausführung gemäß Fig. 7 ist der Hubantrieb 24 als Einzelstütze unter der Übergangsplattform 3 angeordnet und ist das Trägerparallelogramm 25, 26, 27, 28 asymmetrisch verzerrt. Der vordere Stab 26 ist gegenüber dem hinteren Stab 25 verkürzt. Dadurch ergibt sich eine kinematische Verknüpfung der Hubbewegung mit der Verstellung der Neigung der Übergangsplattform 3 zwischen den mit durchgezogenen und gestrichelten Linien in Fig. 7 gezeichneten Extremstellungen. Die Lage des Gelenkpunktes 29 kann auf der Winkelhalbierenden 30 zwischen der oberen und der unteren Lage der Stange 26 beliebig gewählt werden, ohne daß sich dadurch die kinematischen Verhältnisse wesentlich ändern. Auf diese Weise läßt sich eine Anpassung an die baulichen Gegebenheiten erreichen.

Da bei dieser Ausführung die Höheneinstellung und die Neigungsverstellung kontinuierlich und zwangsläufig verknüpft erfolgt, ist lediglich ein Hubantrieb 24 erforderlich.

Die hintere Stange 25 des Gelenkvierecks 25, 26, 27, 28 bildet auch eine der beiden Parallelogrammstangen der Treppe 2. Der untere, hintere Drehpunkt 31 beider Parallelogramme ist identisch. Der vordere Drehpunkt 32 des Treppenparallelogramms ist frei.

In der Ausführung gemäß Fig. 8 wird die Last der Übergangsplattform wiederum größtenteils durch die als Antrieb ausgebildete Einzelstütze 24 übernommen. Ihr hinteres Ende stützt sich auf dem Trägerparallelogramm 33, 34, 35, 36 ab, das auch gleichzeitig das Parallelogrammgestänge für die Treppe 2 bildet. Sein unterer, hinterer Gelenkpunkt 37 ist feststehend am Fahrgestell angeordnet. Der vordere untere Gelenkpunkt 38 ist gegenüber dem Fahrgestell frei. Um die kinematische Bestimmtheit der Anordnung festzulegen, ist daher eine zusätzliche Einrichtung erforderlich. Diese wird von einer Führungsverbindung zwischen dem unteren Ende der vorderen Stange 34 mit dem Fahrgestell gebildet, die so ausgebildet ist, daß jeder Hubeinstellung der Übergangsplattform eine Neigungseinstellung zugeordnet ist. Diese Führung wird im dargestellten Beispiel von der Gleitrolle 39 am unteren Ende der Parallelogrammstange 34 und einer am Fahrgestell festen Gleitführung 40 gebildet, in deren Längsrichtung sich die Gleitrolle frei bewegen kann. Bei Höhenverstellung dreht sich das Parallelogramm um den Gelenkpunkt 37. Die vordere Stange 34 bewegt sich parallel zur hinteren Stange 33. Dabei verschiebt sich die Rolle 39 innerhalb der Führung 40 und wandert je nach Verschwenkungsrichtung nach oben bzw. unten und stellt so zwangsweise die positive bzw. negative Neigung ein.

Schutzansprüche

1. Fluggasttreppe auf einem insbesondere fahrbaren Untergestell (1), die mittels einer Hubvorrichtung in Gebrauchsstellungen unterschiedlicher Höhe und Neigung anhebbar ist und deren Treppenwangen je ein Paar von Parallelogrammstangen (5, 6; 19; 25; 33, 34) umfassen, an denen die Treppenstufen (4) so angelenkt sind, daß sie in jeder Gebrauchsstellung im wesentlichen horizontal sind, wobei sich an das obere Ende der Treppe eine Übergangsplattform (3) anschließt, an die die Parallelogrammstangen der Treppe (2) zu gemeinsamer Neigungseinstellung der Übergangsplattform (3) und der Treppenstufen (4) angelenkt sind, dadurch gekennzeichnet, daß die Hubvorrichtung an der Übergangsplattform angreift und das obere Ende der Treppe (2) von der Übergangsplattform (3) getragen ist.

2. Fluggasttreppe nach Anspruch 1, dadurch gekennzeichnet, daß die Hubvorrichtung die Neigung der Übergangsplattform bestimmt.

3. Fluggasttreppe nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Treppe (2) nahe ihrem unteren Ende verschiebbar auf eine Stütze des Untergestells aufliegt.

4. Fluggasttreppe nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, daß die Hubvorrichtung für die Übergangsplattform (3) ein Gestänge-Gelenkviereck umfaßt, dessen obere Horizontalstange (11) von der Übergangsplattform (3) oder einem mit dieser verbundenen Teil gebildet wird.

5. Fluggasttreppe nach Anspruch 4, dadurch gekennzeichnet, daß das Gelenkviereck zur Einstellung der Neigung der Übergangsplattform (3) und der Treppenstufen (4) um einen weit hinten am Untergestell angeordneten Anlenkpunkt (12) in seiner Gesamtheit schwenkbar ist.

6. Fluggasttreppe nach Anspruch 5, dadurch gekennzeichnet, daß gesonderte Antriebe (15, 16) zum Aufrichten und zum Neigen des Parallelogrammgestänges vorgesehen sind.

7. Fluggasttreppe nach Anspruch 6, dadurch gekennzeichnet, daß die untere Horizontalstange (8) des Parallelogrammgestänges über den Anlenkpunkt (13) der vorderen Stange (10) hinaus nach vorne verlängert ist und ihr vorderes Ende (14) einerseits mit dem Untergestell und andererseits mit dem gegenüberliegenden Teil des Parallelogrammgestänges über je einen Arbeitszylinder verbunden ist.

8. Fluggasttreppe nach Anspruch 4, dadurch gekennzeichnet, daß die unteren Gelenkpunkte (29, 31; 37, 39; 45, 47) des Gelenkvierecks mit dem Fahrgestell verbunden sind und das Gelenkviereck derart unsymmetrisch ausgeführt ist, daß jedem Aufrichtzustand eine vorbestimmte Neigungseinstellung der Übergangsplattform (3) zugeordnet ist.

9. Fluggasttreppe nach Anspruch 8, dadurch gekennzeichnet, daß das Gelenkviereck als Schere (41) ausgebildet ist.

10. Fluggasttreppe nach Anspruch 1, dadurch gekennzeichnet, daß die Hubvorrichtung von einer Einzelstütze (24) gebildet ist und die Neigung der Übergangsplattform (3) und der Treppenstufen (4) von einem Parallelogrammgestänge bestimmt ist, von dem wenigstens eine Stange (25, 33, 34) von einer der Parallelogrammstangen der Treppenwangen gebildet ist.

11. Fluggasttreppe nach Anspruch 10, dadurch gekennzeichnet, daß das Parallelogrammgestänge von den Parallelogrammstangen (33, 34) der Treppenwangen gebildet ist.

12. Fluggasttreppe nach Anspruch 10 oder 11, dadurch gekennzeichnet, daß das untere Ende einer der Stangen (33) des Gelenkvierecks ein am Untergestell festes Gelenk (37)

aufweist, während das untere Ende der anderen Stange (34) mit dem Untergestell über eine die Neigung der Übergangsplattform (3) und der Treppenstufen (4) bestimmende Führung (39, 40) verbunden ist.

13. Fluggasttreppe nach einem der Ansprüche 1 bis 12, dadurch gekennzeichnet, daß das Gelenkviereck oder ein Teil desselben um einen gegenüber dem Fahrgestell und/oder der Treppe angehobenen Punkt (12) schwenkbar ist.

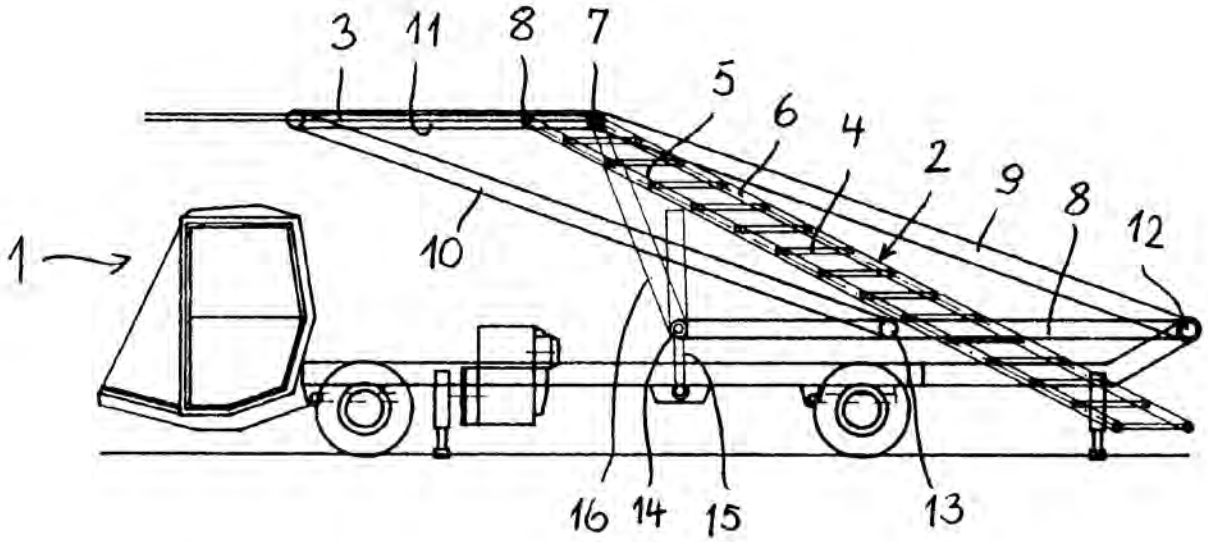


Fig. 1

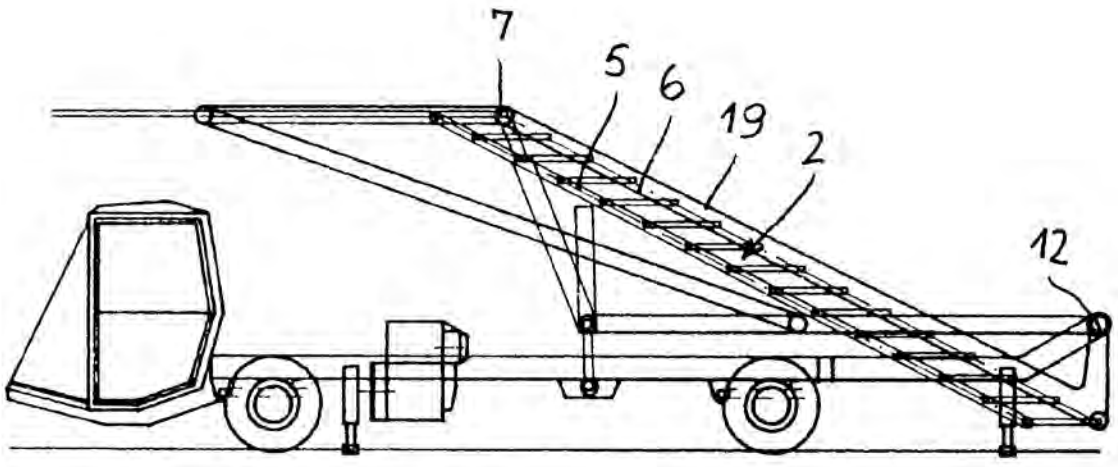


Fig. 2

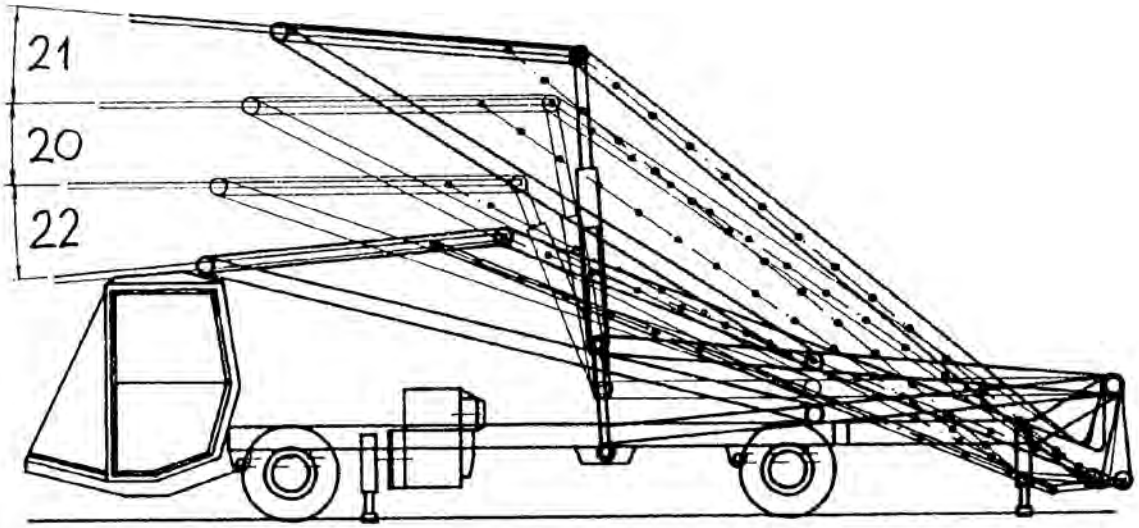


Fig. 3

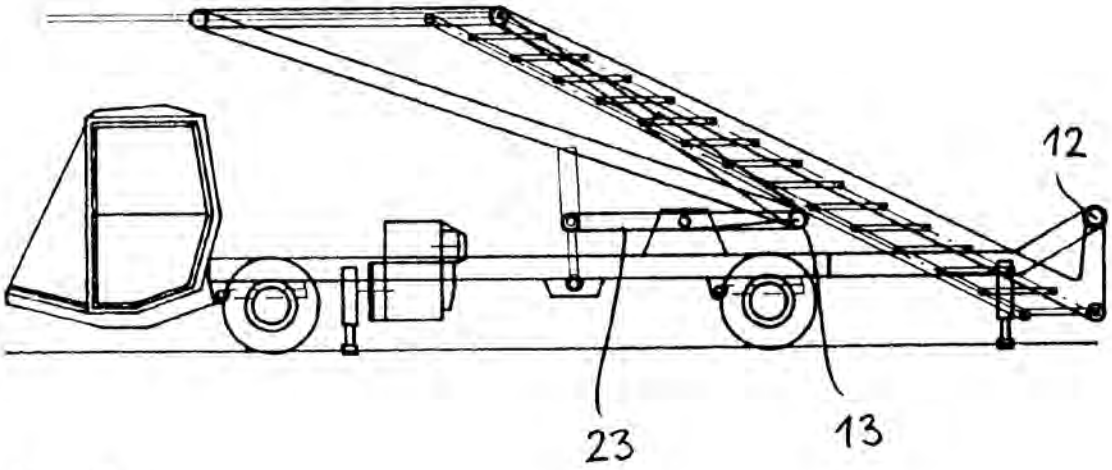


Fig. 4

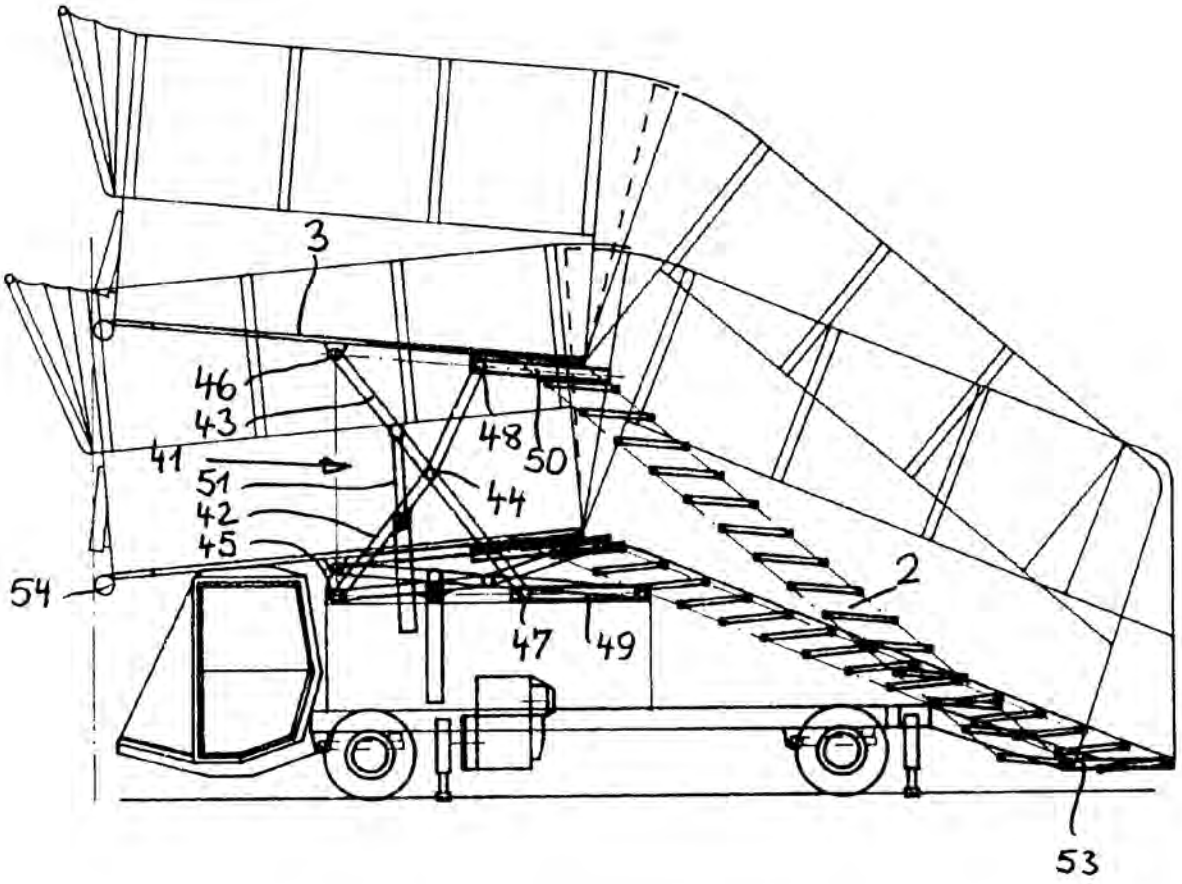


Fig. 5

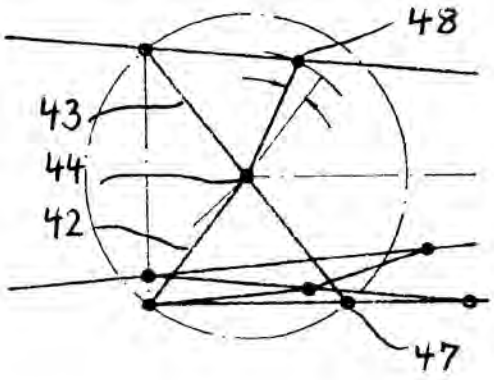


Fig. 6

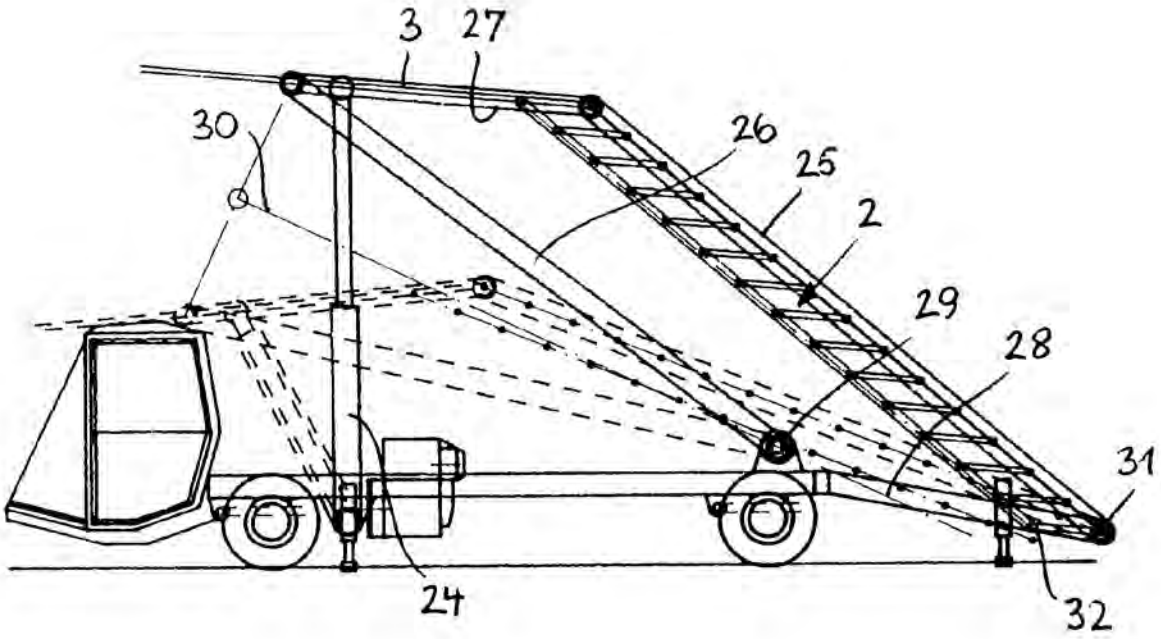


Fig. 7

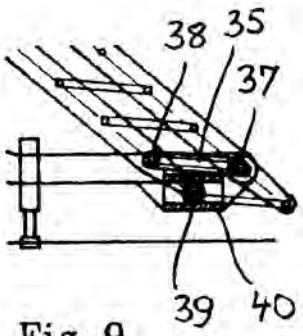


Fig. 9

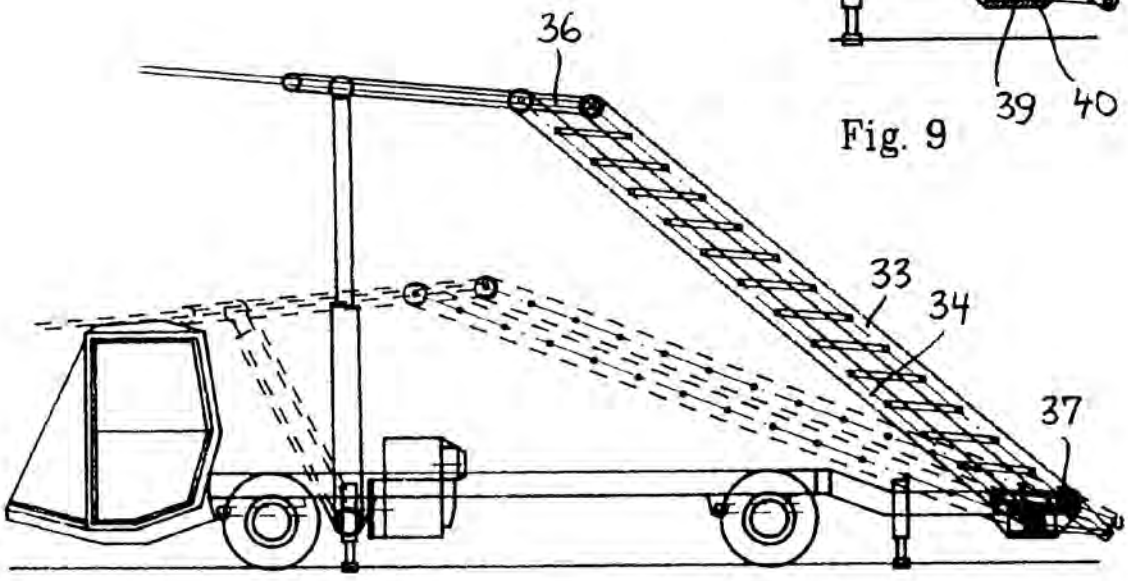


Fig. 8

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/688,884	Clemente, Joshua
	Examiner	Art Unit
	ALVIN C CHIN-SHUE	3634

CPC - Searched*		
Symbol	Date	Examiner
B64F 1/315. E06C 5/04; 1/39; 5/36; 5/44; 7/16; 7/183.	08/26/2021	ACS

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
see attached search history	08/26/2021	ACS

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
B64F	1/315.	08/26/2021	ACS
E06C	5/04	08/26/2021	ACS

/ALVIN C CHIN-SHUE/ Primary Examiner, Art Unit 3634	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/688,884	Clemente, Joshua
	Examiner	**Art Unit**
	ALVIN C CHIN-SHUE	3634

☑ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	10	10												
2	2	11	11												
3	3	12	12												
4	4	13	13												
5	5	14	14												
6	6	15	15												
7	7	16	16												
8	8	17	17												
9	9														

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	17	
/ALVIN C CHIN-SHUE/ Primary Examiner, Art Unit 3634	26 August 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office Part of Paper No.: 20210826

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/688,884	Clemente, Joshua
	Examiner	**Art Unit**
	ALVIN C CHIN-SHUE	3634

INTERNATIONAL CLASSIFICATION				
CLAIMED				
E06C	/	5	/	04

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	17	
/ALVIN C CHIN-SHUE/ Primary Examiner, Art Unit 3634	26 August 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20210826

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/688,884	Clemente, Joshua
	Examiner	Art Unit
	ALVIN C CHIN-SHUE	3634

CPC						
Symbol					Type	Version
E06C	/	5	/	04	F	2013-01-01
B64F	/	1	/	315	I	2013-01-01
E06C	/	5	/	36	I	2013-01-01
E06C	/	5	/	44	I	2013-01-01
E06C	/	7	/	16	I	2013-01-01
E06C	/	1	/	39	I	2013-01-01
E06C	/	7	/	183	I	2013-01-01

CPC Combination Sets							
Symbol					Type	Set	Ranking	Version
	/		/					

NONE (Assistant Examiner)	(Date)	Total Claims Allowed: 17	
/ALVIN C CHIN-SHUE/ Primary Examiner, Art Unit 3634 (Primary Examiner)	26 August 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office — Part of Paper No.: 20210826

Notice of Allowability	Application No. 16/688,884	Applicant(s) Clemente, Joshua	
	Examiner ALVIN C CHIN-SHUE	Art Unit 3634	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 6/9/21.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-17 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☑ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/ALVIN C CHIN-SHUE/
Primary Examiner, Art Unit 3634

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Withdrawn claim 17 has been re-joined.

The following is an examiner's statement of reasons for allowance:

The prior art does not show the means for lifting the inclinable access structure comprising movable hinge carriages configured to move along a plurality of track channels; a lifting mast being connected to the distal end of the inclinable access structure by forward tension elements and being connected to the fixed base structure by rear tension, and the actuator connected between the movable hinge carriages and the fixed base structure and configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The prior art does not show the means for lifting the inclinable access structure comprising movable hinge carriages configured to move along a plurality of track channels; a lifting mast being connected to the distal end of the inclinable

access structure by forward tension elements and being connected to the fixed base structure by rear tension, and the actuator connected between the movable hinge carriages and the fixed base structure and configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN CONSTANTINE CHIN-SHUE whose telephone number is (571)272-6828. The examiner can normally be reached on Mon-Fri 8.00-5.00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Mitchell can be reached on 28800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALVIN C CHIN-SHUE/
Primary Examiner, Art Unit 3634

Notice of References Cited	Application/Control No. 16/688,884	Applicant(s)/Patent Under Reexamination Clemente, Joshua	
	Examiner ALVIN C CHIN-SHUE	Art Unit 3634	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-3605943-A	09-1971	Beaudet	E06C5/04	182/66.2
*	B	US-1162413-A	11-1915	Sperling	E06C5/04	182/68.1
*	C	502484	08-1893	Dederick		
*	D	US-8631905-B2	01-2014	Parrish; Jack	E06C7/183	182/127
*	E	US-8813911-B2	08-2014	Fuqua; Charles L.	B66F11/044	182/69.6
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N	DE-9116020-U1	04-1993	DE	Name not available	B64F1/315
	O	DE-4400741-A1	07-1995	DE	Name not available	B64F1/315
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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23363 7590 09/01/2021

Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

EXAMINER	
CHIN-SHUE, ALVIN CONSTANTINE	
ART UNIT	PAPER NUMBER
3634	

DATE MAILED: 09/01/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/688,884	11/19/2019	Joshua Clemente	180720 (306317-00001)	6650

TITLE OF INVENTION: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	MICRO	$300	$0.00	$0.00	$300	12/01/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

23363 7590 09/01/2021
Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/688,884	11/19/2019	Joshua Clemente	180720 (306317-00001)	6650

TITLE OF INVENTION: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	MICRO	$300	$0.00	$0.00	$300	12/01/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHIN-SHUE, ALVIN CONSTANTINE	3634	182-064100

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PART B - FEE(S) TRANSMITTAL

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Commissioner for Patents
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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Sheila R. Harter	(Typed or printed name)
/Sheila R. Harter/	(Signature)
October 13, 2021	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/688,884	11/19/2019	Joshua Clemente	180720.306317-00001	6650

TITLE OF INVENTION: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	MICRO	$300	$0.00	$0.00	$300	12/01/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHIN-SHUE, ALVIN CONSTANTINE	3634	182-006100

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Lewis Roca Rothgerber Christie LLP
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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies

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☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 031728

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Daniel Salgado/ Date October 13, 2021

Typed or printed name Daniel Salgado Registration No. 76,283

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/688,884	11/19/2019	Joshua Clemente	180720 (306317-00001)	6650

23363 7590 09/01/2021

Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

EXAMINER	
CHIN-SHUE, ALVIN CONSTANTINE	
ART UNIT	PAPER NUMBER
3634	

DATE MAILED: 09/01/2021

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	180720IssueFeeTransmittal.pdf	208118 f49d0bb80b3171cc6d791f2e4555fd7abe23ce91	no	1
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	180720RFA.pdf	98618 df7e9c7797e37677fdcd7dde177bc35250ce9313	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	37820 826ba857653c0669601e7516aae4fa9d879dd7d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	344556		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	44020651
Application Number:	16688884
International Application Number:	
Confirmation Number:	6650
Title of Invention:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
First Named Inventor/Applicant Name:	Joshua Clemente
Customer Number:	23363
Filer:	Daniel A. Salgado/Sheila Harter
Filer Authorized By:	Daniel A. Salgado
Attorney Docket Number:	180720 (306317-00001)
Receipt Date:	13-OCT-2021
Filing Date:	19-NOV-2019
Time Stamp:	15:07:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$300
RAM confirmation Number	E20210CF08301526
Deposit Account	031728
Authorized User	Sheila Harter

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**300**

Electronic Patent Application Fee Transmittal

Application Number:	16688884
Filing Date:	19-Nov-2019
Title of Invention:	VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM
First Named Inventor/Applicant Name:	Joshua Clemente
Filer:	Daniel A. Salgado/Sheila Harter
Attorney Docket Number:	180720 (306317-00001)

Filed as Micro Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY ISSUE FEE	3501	1	300	300

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being EFS-Web transmitted to the United States Patent and Trademark Office on October 13, 2021 at or before 11:59 p.m. Pacific Time under the Rules of 37 CFR § 1.8.

/Sheila R. Harter/
Sheila R. Harter

Appl No.	: 16/688,884	Confirmation No. 6650
Inventor	: Joshua Clemente	
Filed	: November 19, 2019	
Title	: VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM	
TC/A.U.	: 3634	
Examiner	: Alvin Constantine Chin-Shue	
Docket No.	: 180720	
Customer No.	: 23363	

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 29001
Glendale, CA 91209-9001
October 13, 2021

Commissioner:

Applicant believes the Examiner's stated reasons for allowance are unnecessary. The applicant does not necessarily agree with each statement in the reasons for allowance. While applicant agrees that the claims are allowable, applicant does not acquiesce with each statement in the reasons for allowance, that patentability requires each stated feature exactly as expressed by the Examiner, nor that each stated feature is required for patentability.

Respectfully submitted,
LEWIS ROCA ROTHGERBER CHRISTIE LLP

By /Daniel Salgado/
Daniel A. Salgado
Reg. No. 76,283
626/795-9900

DAS/srh

115439938.1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/688,884	11/16/2021	11174677	180720 (306317-00001)	6650

23363 7590 10/27/2021

Lewis Roca Rothgerber Christie LLP
PO BOX 29001
Glendale, CA 91209-9001

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 100 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site http://pair.uspto.gov for additional inventors):

Joshua Clemente, Philadelphia, PA;

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

EXHIBIT H

US011174677B2

(12) **United States Patent**
Clemente

(10) **Patent No.: US 11,174,677 B2**
(45) **Date of Patent: Nov. 16, 2021**

(54) **VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM**

(71) Applicant: **Joshua Clemente**, Philadelphia, PA (US)

(72) Inventor: **Joshua Clemente**, Philadelphia, PA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 100 days.

(21) Appl. No.: **16/688,884**

(22) Filed: **Nov. 19, 2019**

(65) **Prior Publication Data**

US 2020/0157884 A1 May 21, 2020

Related U.S. Application Data

(60) Provisional application No. 62/770,022, filed on Nov. 20, 2018.

(51) **Int. Cl.**

E06C 5/04	(2006.01)
B64F 1/315	(2006.01)
E06C 5/36	(2006.01)
E06C 5/44	(2006.01)
E06C 7/16	(2006.01)
E06C 1/39	(2006.01)
E06C 7/18	(2006.01)

(52) **U.S. Cl.**

CPC ***E06C 5/04*** (2013.01); ***B64F 1/315*** (2013.01); ***E06C 1/39*** (2013.01); ***E06C 5/36*** (2013.01); ***E06C 5/44*** (2013.01); ***E06C 7/16*** (2013.01); ***E06C 7/183*** (2013.01)

(58) **Field of Classification Search**

CPC ... B64F 1/315; E06C 5/04; E06C 1/39; E06C 5/36; E06C 5/44; E06C 7/16; E06C 7/183

See application file for complete search history.

(56) **References Cited**

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(Continued)

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WO	WO 01/97919 A1	12/2001	

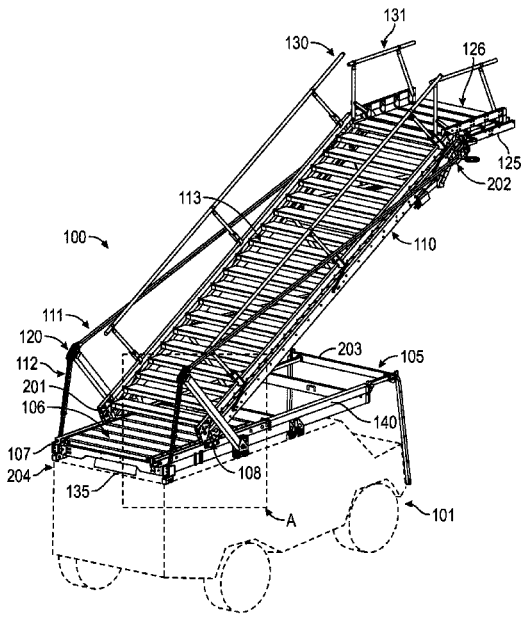
Primary Examiner — Alvin C Chin-Shue

(74) *Attorney, Agent, or Firm* — Lewis Roca Rothgerber Christie LLP

(57) **ABSTRACT**

A vehicle-mounted access system includes a fixed base structure including a plurality of track channels; a plurality of movable hinge carriages configured to move along the plurality of track channels; an inclinable access structure pivotably connected to the movable hinge points and connected to lifting masts by forward tension elements, lifting masts connected to the fixed base structure by rear tension elements and pivotably connected to the fixed base structure; an actuator connected between the movable hinge carriages and the fixed base structure, the actuator configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

17 Claims, 10 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

8,631,905	B2 *	1/2014	Parrish	E06C 7/183 182/127
8,813,911	B2 *	8/2014	Fuqua	B66F 11/044 182/69.6

* cited by examiner

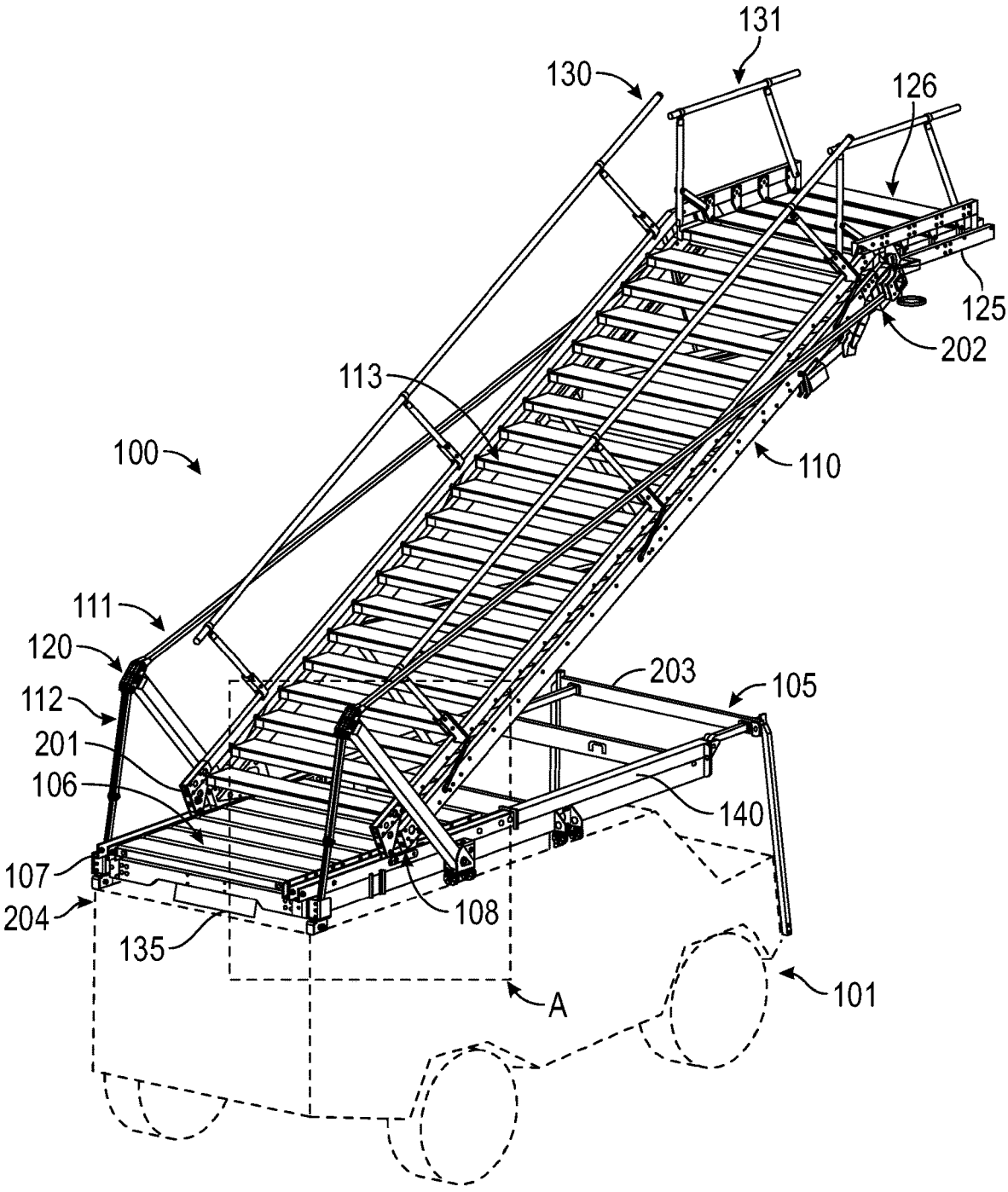

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FIG. 1

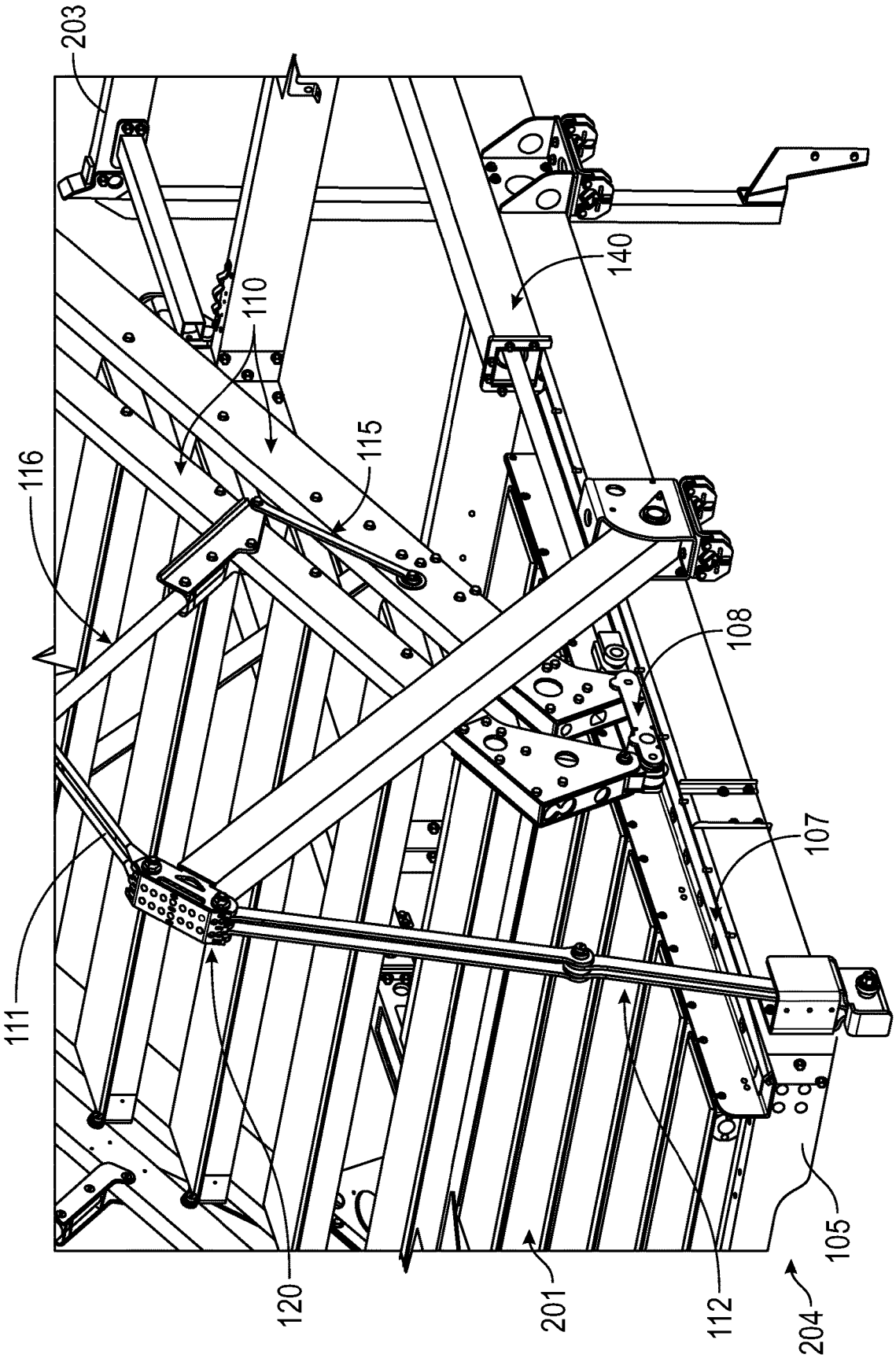


FIG. 2

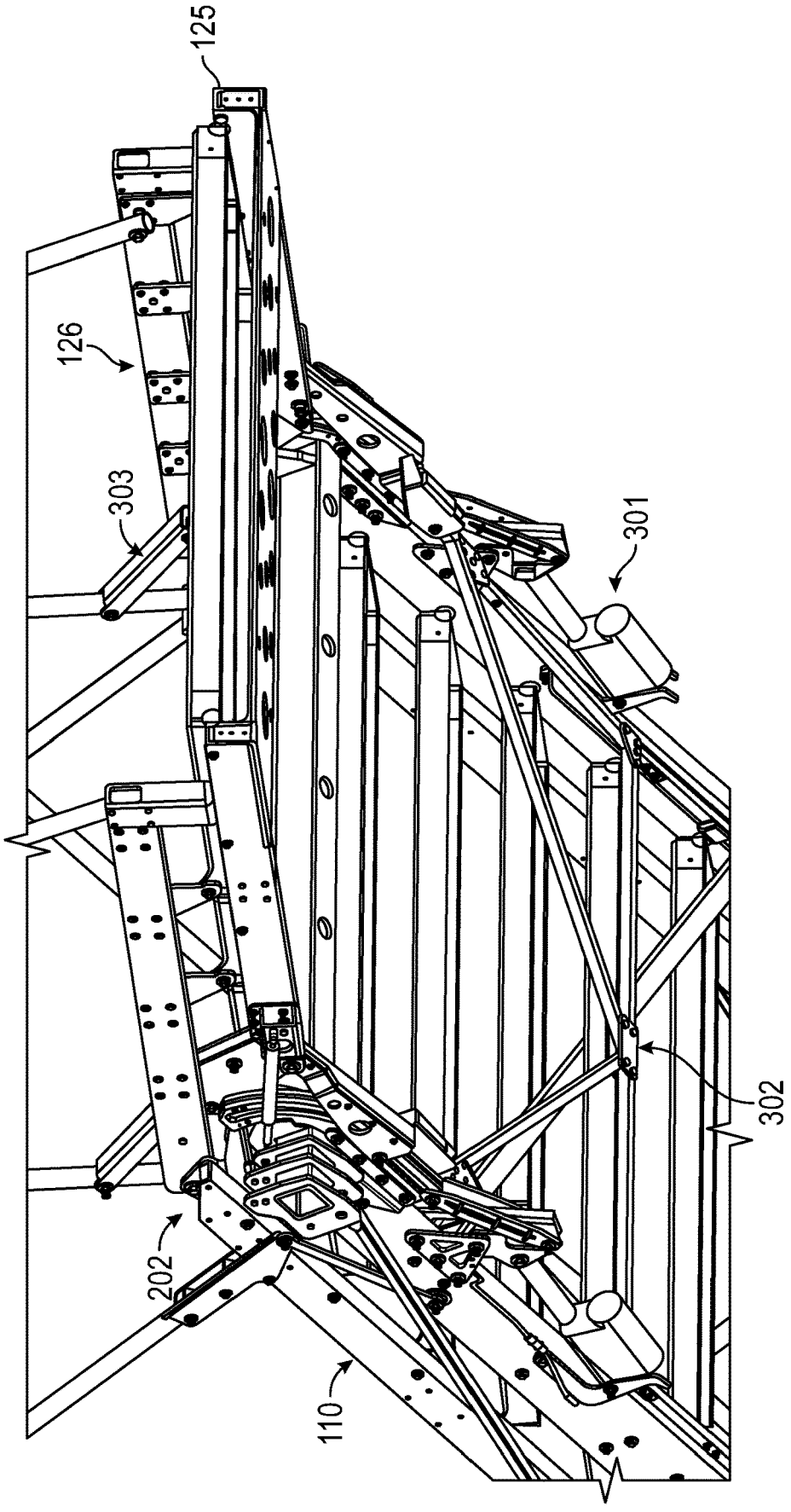


FIG. 3

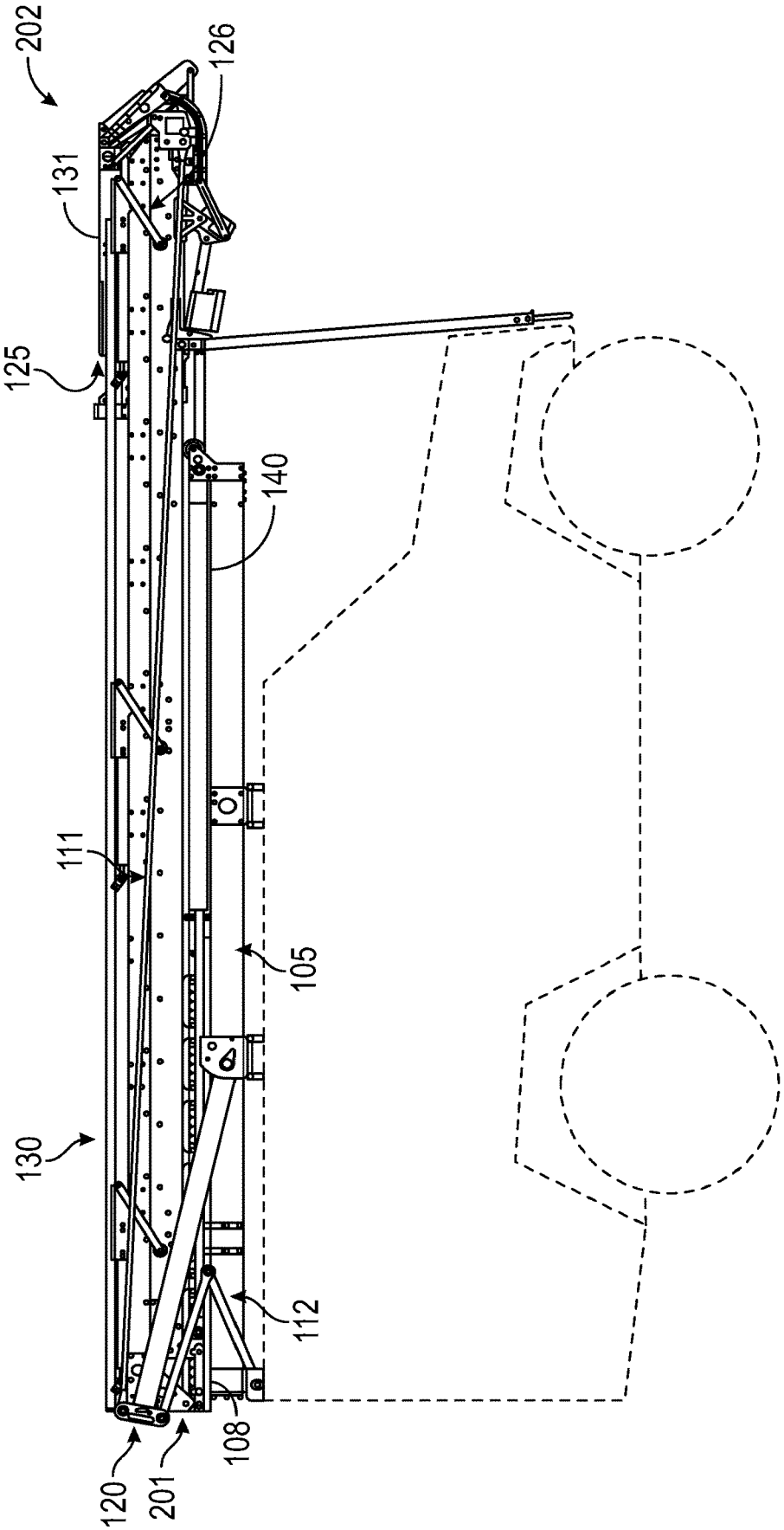


FIG. 4

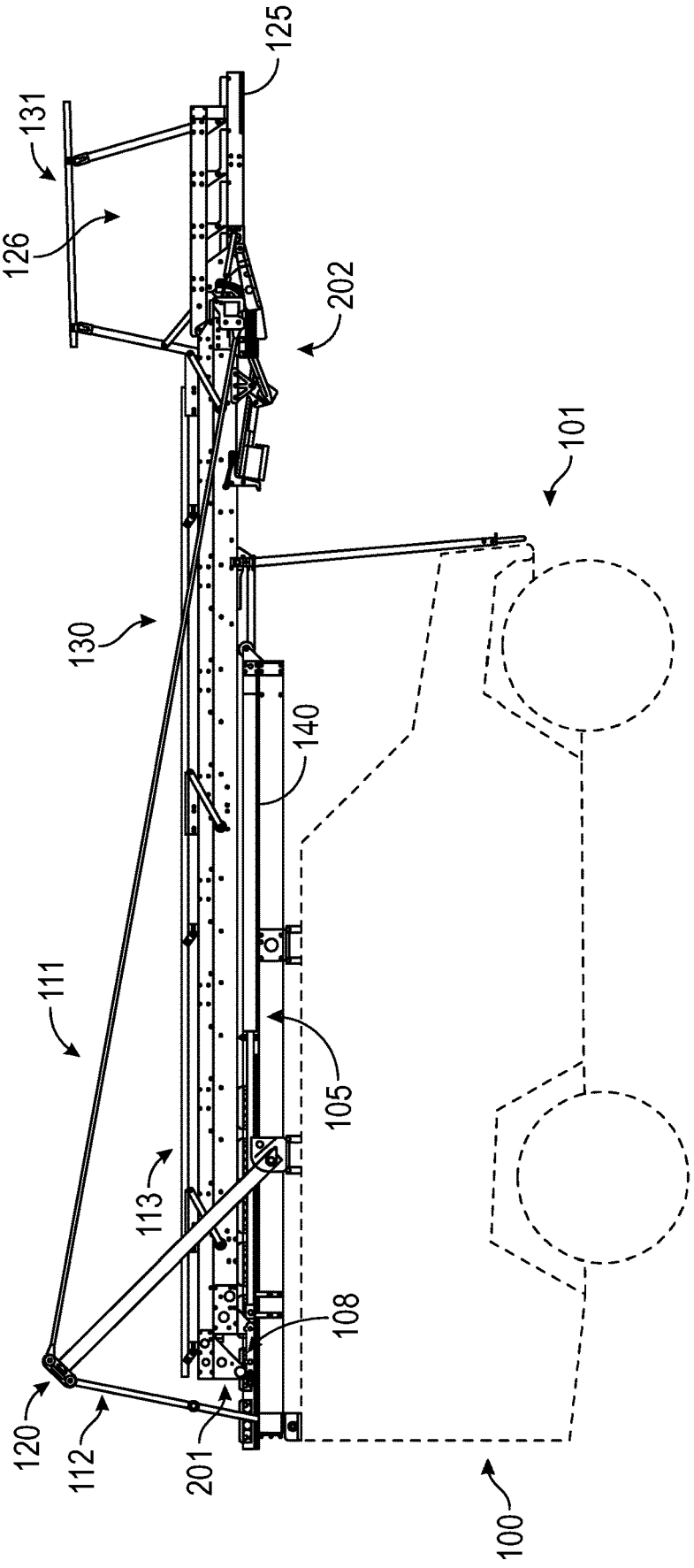


FIG. 5

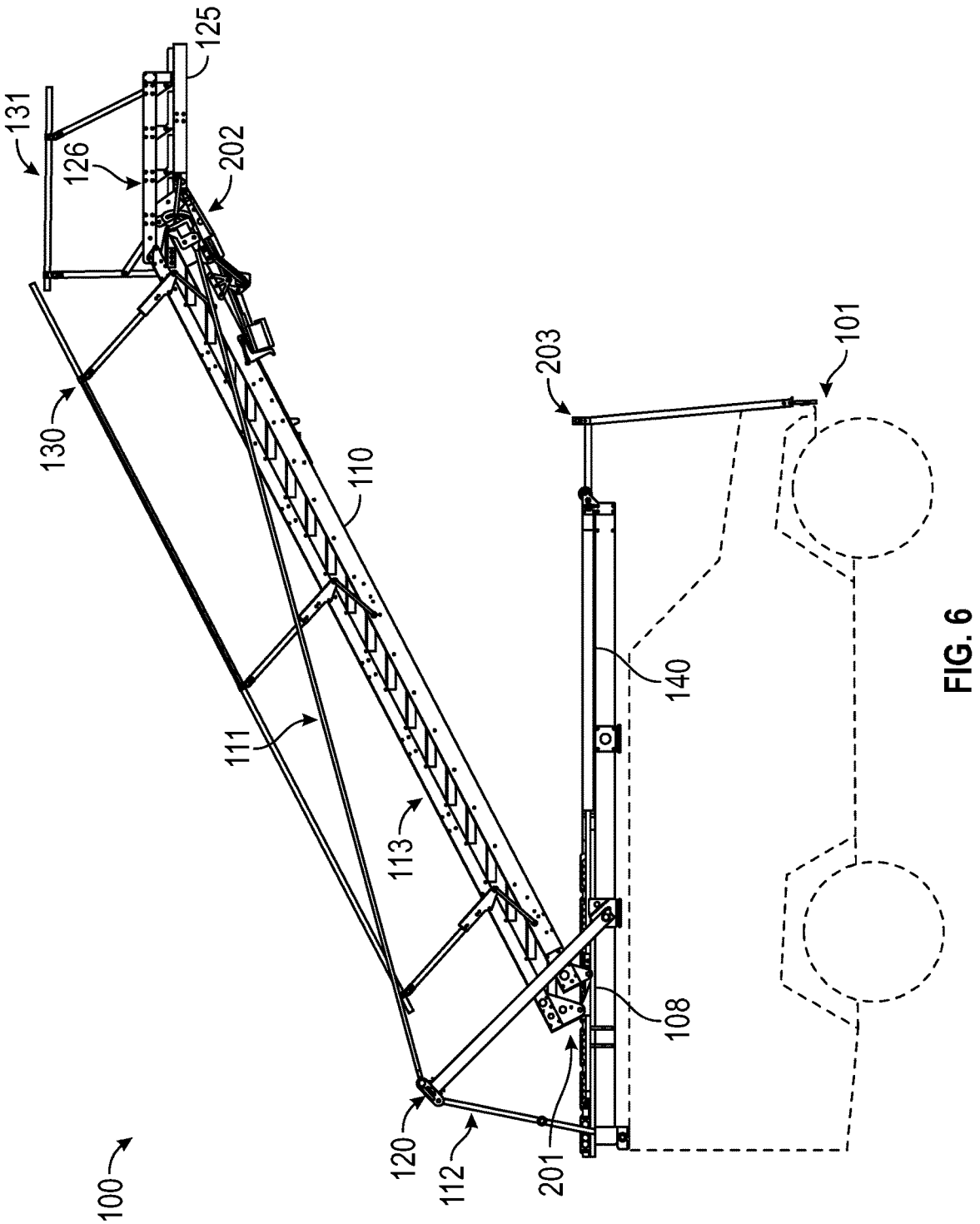


FIG. 6

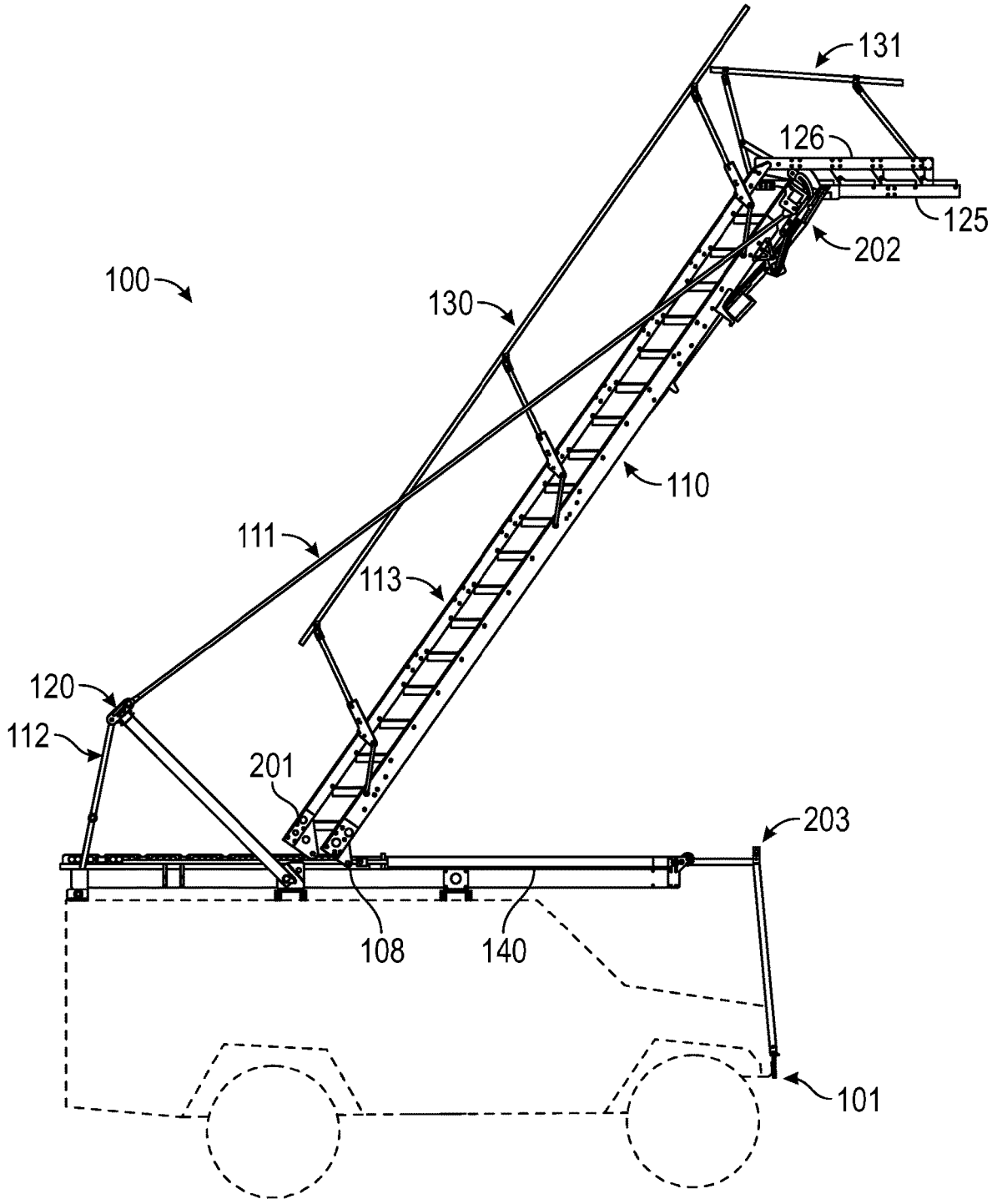


FIG. 7

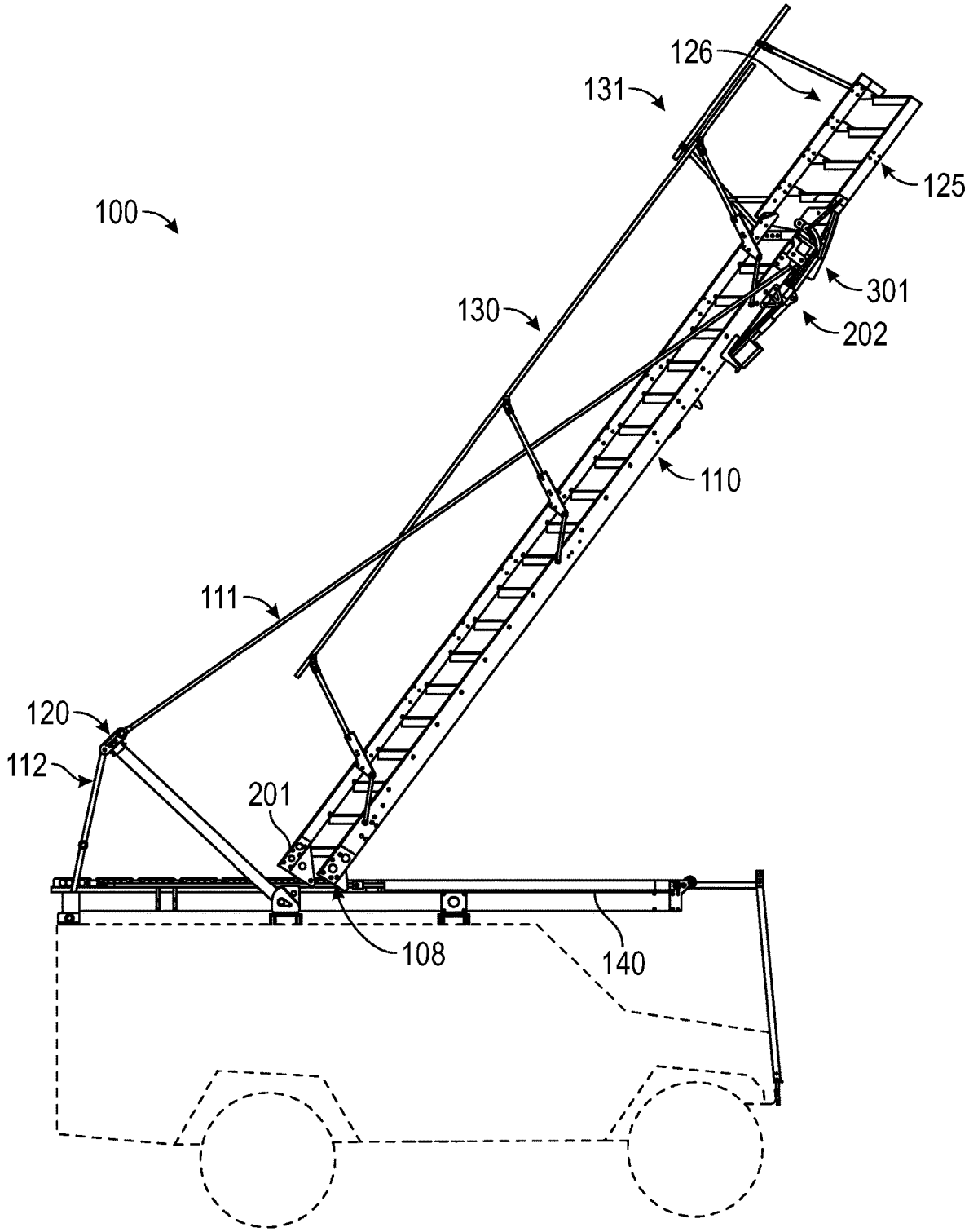


FIG. 8

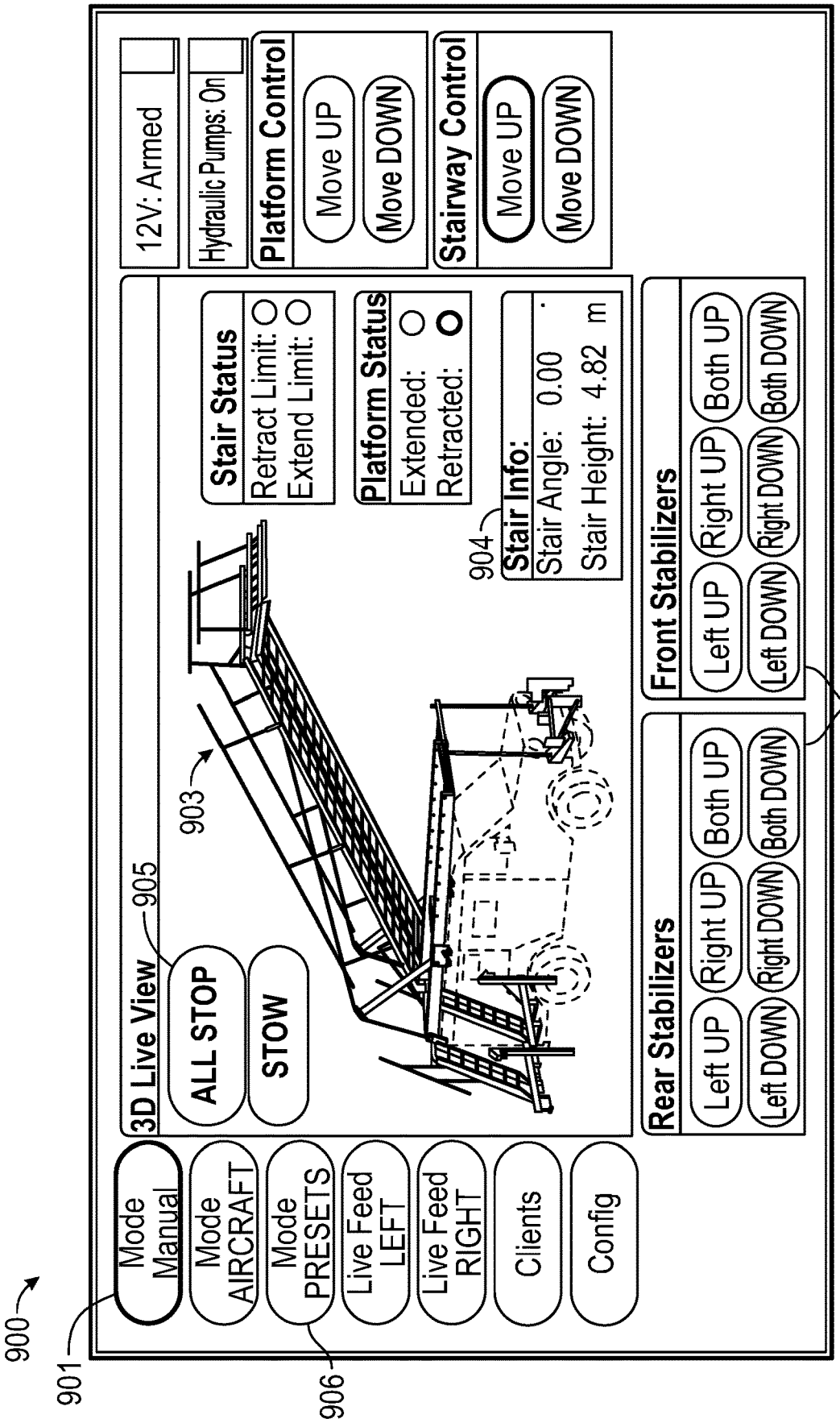

900
901
906
Mode Manual
Mode AIRCRAFT
Mode PRESETS
Live Feed LEFT
Live Feed RIGHT
Clients
Config
3D Live View
905
ALL STOP
STOW
903
12V: Armed
Hydraulic Pumps: On
Platform Control
Move UP
Move DOWN
Stairway Control
Move UP
Move DOWN
Stair Status
Retract Limit:
Extend Limit:
Platform Status
Extended:
Retracted:
904
Stair Info:
Stair Angle: 0.00
Stair Height: 4.82 m
Rear Stabilizers
Left UP
Right UP
Both UP
Left DOWN
Right DOWN
Both DOWN
Front Stabilizers
Left UP
Right UP
Both UP
Left DOWN
Right DOWN
Both DOWN
902

FIG. 9

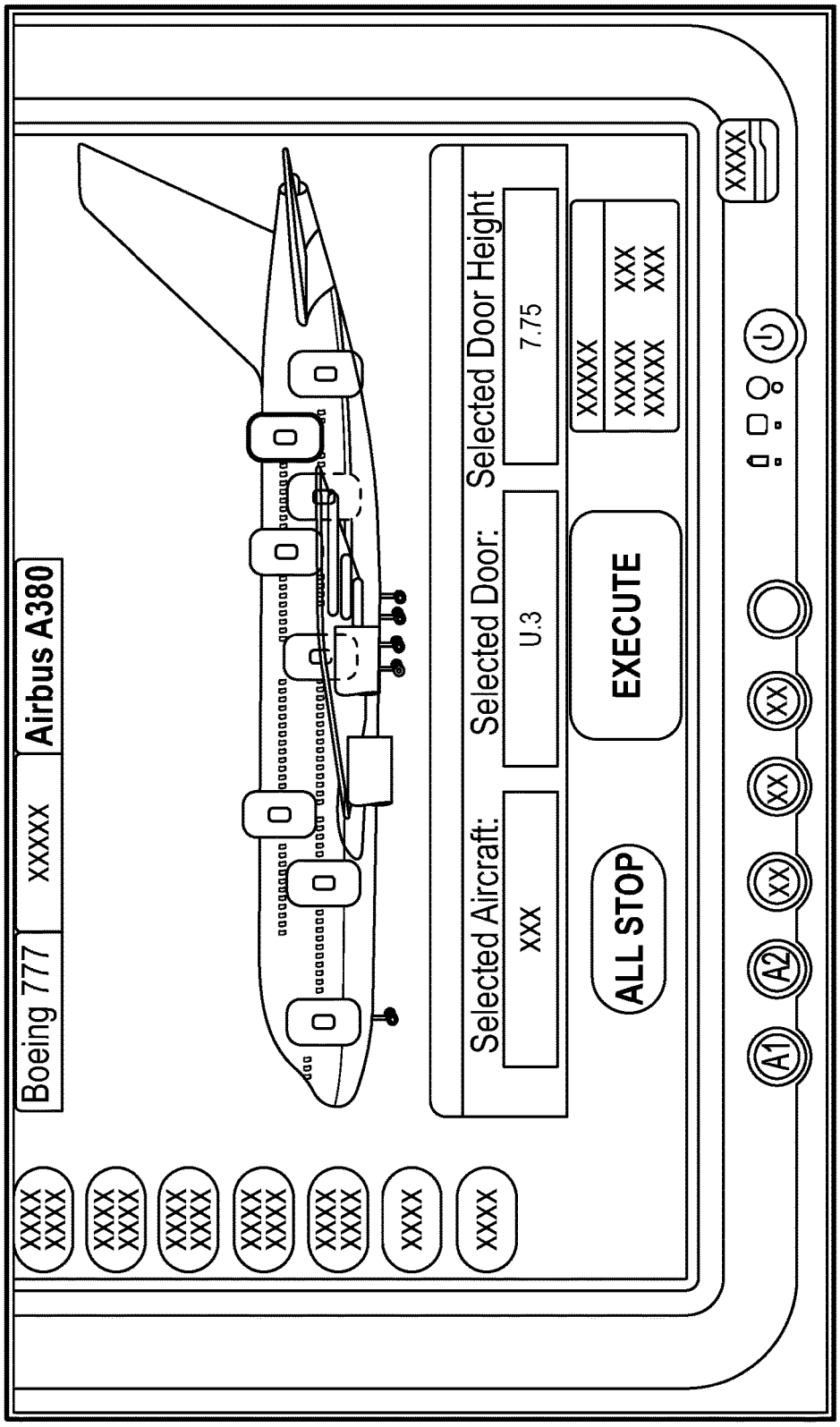

900
Boeing 777
XXXXX
Airbus A380
XXXX XXXX
XXXX XXXX
XXXX XXXX
XXXX XXXX
XXXX XXXX
XXXX
XXXX
Selected Aircraft:
XXX
Selected Door:
U.3
Selected Door Height
7.75
EXECUTE
ALL STOP
XXXXX
XXXXX XXX
XXXXX XXX
XXXX
A1
A2
XX
XX
XX

FIG. 10

VEHICLE-MOUNTED ELEVATED ACCESS SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION

The present application claims priority to and the benefit of U.S. Provisional Patent Application No. 62/770,022, filed on Nov. 20, 2018, the content of which is incorporated herein by reference in its entirety.

BACKGROUND

1. Field

Aspects and features of embodiments of the present invention relate to a vehicle-mounted elevated access system.

2. Description of Related Art

In the course of, for example, tactical (police, SWAT, or military), firefighting, and rescue operations, groups of people may need to rapidly enter and/or exit elevated points of interest, including buildings, structures, environmental features, or mobile targets (e.g., commercial aircraft parked on tarmac). To easily and quickly reach these elevated points of interest, external structures, such as external staircases, may be used. Further, in some instances, it may be desired that a continuous route of access and/or egress between the ground and the elevated point of interest be maintained such that rapid movements of personnel between elevations may be achieved at any time throughout the operation.

Conventional elevated access systems exist which may be mounted or dismounted from various suitable vehicles in order that the vehicle may be used in a variety of functions (e.g., so that the vehicle's utility is not limited). When mounted to a suitable vehicle, such systems generally include a base structure connected to the vehicle at a plurality of points and an access structure including a ramp or stairway, which can be inclined with respect to the base structure, providing personnel access between ground level and points some height above the ground.

However, these conventional elevated access systems suffer drawbacks including:

- a reduction in horizontal overhang of the access structure;
- substantial cantilevered sections of the access structure that are subject to increased bending forces and deflections (e.g., movement under load) as compared to non-cantilevered structures; and
- inherent instability and failure modes such as buckling.

The above information disclosed in this Background section is only for enhancement of understanding of the background, and therefore, it may contain information that does not constitute prior art.

SUMMARY

Embodiments of the present invention provide an elevated access system including:

- a movable hinge between an access structure and a base structure, which improves horizontal reach;
- self-deploying and self-stowing handrails/guardrails along the access structure and end platform;
- a self-deploying and self-stowing end platform; and
- access structure actuation components that are substantially loaded in tension and that are attached further along the access structure, thereby reducing cantilevered lengths of the access structure.

Aspects of embodiments of the present disclosure are directed toward a vehicle-mounted elevated access system.

According to some example embodiments of the present disclosure, a vehicle-mounted access system including: a fixed base structure including a plurality of track channels; a plurality of movable hinge carriages respectively on and configured to move along the plurality of track channels; an inclinable access structure having a proximal end and a distal end, the proximal end of the inclinable access structure being pivotably connected to the plurality of movable hinge carriages; a lifting mast having a proximal end and a distal end, the distal end of the lifting mast being connected to the distal end of the inclinable access structure by forward tension elements and being connected to the fixed base structure by rear tension elements, the proximal end of the lifting mast being pivotably connected to the fixed base structure; and an actuator connected between the movable hinge carriages and the fixed base structure, the actuator being configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

According to some example embodiments, the vehicle-mounted access system further includes an inclinable access handrail positioned along to and pivotably attached to the inclinable access structure.

According to some example embodiments, the inclinable access handrail is configured to extend into a deployed position by a plurality of linkages.

According to some example embodiments, the vehicle-mounted access system further including a multi-position end breaching platform that is pivotably connected to the distal end of the inclinable access structure.

According to some example embodiments, the vehicle-mounted access, further including a platform handrail positioned along and pivotably attached to the multi-position end breaching platform.

According to some example embodiments, the platform handrail is configured to extend into a deployed position by an action of a multilink kinematic mechanism.

According to some example embodiments, the vehicle-mounted access system further including a plurality of secondary actuators connected between the distal end of the inclinable access structure and the multi-position end breaching platform.

According to some example embodiments, the secondary actuators are configured to extend to pivot the multi-position end breaching platform relative to the inclined access structure and to transition a surface of the multi-position end breaching platform into a series of stairs.

According to some example embodiments, the inclinable access structure further includes a ramp.

According to some example embodiments, the inclinable access structure further includes a plurality of stairs.

According to some example embodiments, the plurality of stairs are configured to remain passively parallel to the ground.

According to some example embodiment, the vehicle-mounted access system further including a controller configured to control movement of the actuator.

According to some example embodiments, the controller is operated by a touchscreen user interface including: a manual mode; a preset mode; a video streaming mode; and an aircraft mode.

According to some example embodiments, the preset mode is configured to allow a selection of pre-programmed heights of the distal end of the inclinable access structure.

According to some example embodiments, in the aircraft mode, the touchscreen user interface displays an aircraft, wherein, in the aircraft mode, the controller is configured to allow for a selection of a pre-programmed height of the distal end of the inclinable access structure by selecting a window on the displayed aircraft.

According to some example embodiments, the actuator is configured to pull the movable hinge carriages toward the actuator to raise the distal end of the inclinable access structure.

According to some example embodiments, a method for deploying the vehicle-mounted access system by using a touchscreen user interface, the method including: displaying, by the touchscreen user interface, an image of an aircraft; transmitting, by the touchscreen user interface, a preprogrammed height selected by a user by selecting a window on the image of the aircraft to a controller of the vehicle-mounted access system; and raising, by the controller, a distal end of an inclinable access structure connected to the vehicle-mounted access system to the preprogrammed height.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a vehicle-mounted elevated access system according to an embodiment of the present invention;

FIG. **2** shows an enlarged portion A of FIG. **1**;

FIG. **3** is a perspective view of an end platform shown in FIG. **1** in a deployed configuration;

FIGS. **4-8** show steps of deploying the vehicle-mounted elevated access system from a stowed configuration according to an embodiment of the present invention;

FIG. **9** shows a graphical user interface (GUI) for controlling the vehicle-mounted elevated access system in a manual mode according to an embodiment of the present invention; and

FIG. **10** shows the GUI shown in FIG. **9** in an aircraft mode according to an embodiment of the present invention.

DETAILED DESCRIPTION

The exemplary embodiments of the present invention disclosed herein are directed to a vehicle-mounted platform including one or more inclinable access structures connected to a base structure at movable hinge points, which allows the entire access structure to advance toward an above-ground target prior to and/or during elevation/inclination. In some embodiments, the actuation devices, structures, and mechanisms of the access structure are substantially loaded in tension, and the handrails/guardrails and end platform(s) may be deployed automatically and without manual effort.

Referring to FIGS. **1-3**, a vehicle-mounted elevated access system **100** according to an embodiment of the present invention includes an inclinable access structure **110** connected to (e.g., positioned upon) a fixed base structure (e.g., a fixed base) **105**. In some embodiments, a plurality of inclinable access structures **110** may be included in the vehicle-mounted elevated access system **100**. In such embodiments, the inclinable access structures **110** may be arranged adjacent to each other or in front/behind each other. The fixed base structure **105** may be mounted to a suitable host vehicle **101** so the vehicle-mounted elevated access system **100** is mobile. In such an embodiment, the fixed base structure **105** has a front end **203** that is positioned near the front of the host vehicle **101** and a rear end **204** opposite to the front end **203** and positioned near the rear of the host vehicle **101**.

The inclinable access structure **110** has a proximal end **201** that is partially connected (e.g., movably and/or pivotably connected to, not rigidly connected) to the fixed base structure **105** and a distal end **202** opposite to the proximal end **201**. In a deployed configuration, the distal end **202** is positioned further away from the fixed base structure **105** than is the proximal end **201**.

In various embodiments, the inclinable access structure **110** may include one or more ramps and/or one or more stairways. In the illustrated embodiment, the inclinable access structure **110** includes a stairway including a plurality of steps **113**. The steps **113** may be configured to remain passively parallel to the ground (e.g., may remain parallel to the ground due to gravity) during all angles of operation of the inclinable access structure **110** (e.g., during inclination and declination of the inclinable access structure **110**).

Hereinafter, the lifting mechanism for the inclinable access structure **110** will be described in more detail. A plurality of lifting masts **120** (e.g., one lifting mast **120** on each side of the inclinable access structure **110**, or one lifting mast **120** on each side of each of the inclinable access structures **110**) are pivotably connected to the fixed base structure **105** at a proximal end of the lifting masts **120**. A distal end of each of the lifting masts **120** is connected to (e.g., pivotably connected to) forward tension element(s) **111** and rear tension element(s) **112**. The forward tension elements **111** are respectively connected to (e.g., extend between) the distal end of the lifting masts **120** and the distal end **202** of the inclinable access structure **110**, and the rear tension elements **112** are respectively connected to (e.g., extend between) the distal end of the lifting masts **120** and the fixed base structure **105**.

The forward and rear tension elements **111/112** may be rods, or plates, such as metal or composite rods or plates, or they may be cables or ropes, such as metal cable or synthetic fiber rope or cable. In other embodiments, the forward and rear tension elements **111/112** may be cables or ropes, such as metal cables or synthetic fiber ropes or cables. In some embodiments, the forward tension elements **111** may each be a single, continuous element between the lifting mast **120** and the distal end **202** of the inclinable access structure **110**, and the rear tension elements **112** may each include a plurality of elements pivotably connected to each other. Referring to, for example, FIG. **4**, by adding a pivotable joint (e.g., a pivotable connection) in the rear tension element **112**, the rear tension element **112** may be more compactly folded in a retracted/declined position.

In addition, the fixed base structure **105** includes a plurality of track channels **107** (e.g., one track channel **107** on each side of the inclinable access structure **110**). The track channels **107** are oriented from the front end **203** to the rear end **204** of the fixed base structure **105** (e.g., an axis of each of the track channel **107** extends in a direction from the front end **203** toward the rear end **204** of the fixed base structure **105**).

One or more movable hinge points (e.g., moveable hinge carriages) **108** may be arranged on each track channel **107**. The movable hinge points **108** may include a plurality of bearings (e.g., wheels or sliding/bearing surfaces and plates) such that they may move longitudinally along the respective track channel **107**.

The inclinable access structure **110** may be pivotably attached to the movable hinge points **108**, which are

arranged on the track channels **107**. For example, a proximal end **201** of the inclinable access structure **110** may be connected to one movable hinge point **108**.

Actuators **140** may be connected between the movable hinge points **108** and the front end **203** of the fixed base structure **105**. In various embodiments, the actuators **140** may be hydraulic cylinders (e.g., double-acting hydraulic cylinders), and in such an embodiment, the barrel is connected to the front end **203** of the fixed base structure **105** and the piston rod is connected to the movable hinge points **108**, but the present invention is not limited thereto. In other embodiments, the actuators **140** may be screw-type actuators, such as ACME or ball screw actuators, or a belt drive, rack and pinion, gear and track, or a set of winches, but the present invention is not limited thereto. The actuators **140** may be configured to translate (e.g., move or pull) the movable hinge points **108** along the track channels **107** toward the front end **203** of the fixed base structure **105**, thereby moving the proximal end **201** of the inclinable access structure **110**. As the proximal end **201** of the inclinable access structure **110** moves toward the front end **203** of the fixed base structure **105**, the distal end **202** of the inclinable access structure **110** is elevated (e.g., pivoted upwardly) about the lifting masts **120** due to the fixed lengths of the front and rear tension elements **111/112**. For example, because the front and rear tension elements **111/112** do not extend (e.g., stretch), as the proximal end **201** of the inclinable access structure **110** moves forward due to the movement of the movable hinge points **108**, the distal end **202** of the inclinable access structure **110** is pulled upwardly (e.g., is inclined) due to the restrictive force applied by the front and rear tension elements **111/112**. Put another way, because the length of the front and rear tension elements **111/112** cannot extend beyond a maximum length, as the proximal end **201** of the inclinable access structure **110** moves toward the front end **203** of the fixed base structure **105**, the distal end **202** of the inclinable access structure **110** moves upwardly (e.g., inclines). Reversing the actuators **140** translates (e.g., moves or pushes) the movable hinge points **108** rearward (e.g., toward a rear of the vehicle **101**), thereby declining the inclinable access structure **110** and stowing the inclinable access structure **110**.

In some embodiments, the fixed base structure **105** includes a deck section **106** that is positioned near the rear end **204** thereof and at (or adjacent to) the proximal end **201** of the inclinable access structure **110**. The deck section **106** may have a substantially flat surface parallel to and facing away from the ground (e.g., facing upward). The surface of the deck section **106** is suitable for standing and walking, and may have a similar surface structure as that of the inclinable access structure **110** or may have a different surface structure than that of the inclinable access structure **110**. For example, because the deck section **106** does not incline (e.g., remains flat), the deck section **106** may have a continuous, flat surface, optionally with ribs or grooves formed therein for additional traction, as opposed to stairs as in the inclinable access structure **110**.

In addition, the elevated access system **100** includes a multi-position end breaching platform **125**. The multi-position end breaching platform **125** may be pivotably connected to the distal end **202** of the inclinable access structure **110**. The multi-position end breaching platform **125** has a surface **126** that, in a deployed configuration, faces away from and is parallel to the ground (e.g., is substantially flat). In the retracted position, the multi-position end breaching platform **125** lies on the inclinable access structure **110** to provide compact overall dimensions. The surface **126** is suitable for standing and walking and may have a similar surface structure as that of the inclinable access structure **110** or a different surface structure as that of the inclinable access structure **110**. For example, when the inclinable access structure **110** is stairs, the surface **126** may also be stairs. But in another embodiment, when the inclinable access structure **110** is stairs, the surface **126** may be a flat (with or without ribs or grooves for traction) surface. Further, the deck section **106**, the inclinable access structure **110**, and the multi-position end breaching platform **125** provide a substantially continuous path (e.g., movement path) for one or more people and/or machines (e.g., drones, robots, etc.) to access an elevated location by walking or running from the deck section **106**, up the inclinable access structure **110**, onto the multi-position end breaching platform **125**, and then into the elevated position. In various embodiments, the multi-position end breaching platform **125** may be configured to remain passively parallel to the ground during operation of the vehicle-mounted elevated access system **100**. For example, the surface **126** may remain parallel to the ground regardless of the inclination angle of the inclinable access structure **110** to which it is connected.

The multi-position end breaching platform **125** may also be controlled to be inclined at an angle corresponding to the inclination angle of the inclinable access structure **110** to allow access to even higher points of interest. For example, in some embodiments, the multi-position end breaching platform **125** may be configured to be raised by actuators (e.g., secondary actuators) **301**. In some embodiments, the actuators **301** may be electric actuators, but the present invention is not limited thereto. The actuators **301** are connected between the distal end **202** of the inclinable access structure **110** and the multi-position end breaching platform **125** (e.g., a proximal end of the multi-position end breaching platform **125** adjacent to the distal end **202** of the inclinable access structure **110**). The actuators **301** can push the multi-position end breaching platform **125** upwardly to match (or substantially match) the angle of the inclinable access structure **110**.

The elevated access system **100** may include handrails **130** mounted to the inclinable access structure **110** and handrails **131** mounted to the multi-position end breaching platform **125**. The handrails **130** may be positioned along and pivotably mounted to the inclinable access structure **110**, and the handrails **131** may be positioned along and pivotably mounted to the multi-position end breaching platform **125**. In some embodiments, handrails **130** and handrails **131** may be configured to operate independently from each other. The handrails **130/131** may operate by gravity. For example, as the inclinable access structure **110** is deployed, the handrails **130/131** may fall backwards, thereby extending the handrails **130/131**. In some embodiments, the handrails **130/131** may be pivotably mounted to the inclinable access structure **110** and the multi-position end breaching platform **125**, respectively, and may have stops such that, when the pivot to the extended position is due to gravity, the stop pivoting at a desired angle due to the stops. In the illustrated embodiment, the handrails **131** and **130** may be connected to the inclinable access structure **110** via a deployment linkage **115** such that the motion of the inclinable access structure **110** passively (e.g. without additional actuation) deploys and stows the handrails **131** and **130** while rigidly maintaining their position (e.g., their stowed or deployed position).

In various embodiments, a control system (e.g., a controller) **135** may be housed in or on the vehicle and/or within the fixed base structure **105**. The control system **135** is

configured to control the operation of the vehicle-mounted elevated access system **100**. For example, the control system **135** may control the movement of the actuators **140** and the movement of the actuators **301** to determine the configuration and overall height of the inclinable access structure **110**.

A method of deploying (e.g., extending, raising, or inclining) an embodiment of the vehicle-mounted elevated access system **100** will be described in more detail hereinafter with reference to FIGS. **4-8**.

Referring to FIG. **4**, which shows the vehicle-mounted elevated access system **100** in the stowed (or retracted) configuration, the inclinable access structure **110** is positioned flat against the fixed base structure **105**, and the multi-position end breaching platform **125** is folded against (e.g., is folded against a top surface of) the inclinable access structure **110**. In this configuration, the handrails **130** and **131** are in a stowed configuration in which they are positioned flat against the fixed base structure **105**, and the lifting masts **120** are in a stowed configuration in which they are pivoted downwardly near the fixed base structure **105**.

Referring to FIG. **5**, in the deployed flat configuration, the inclinable access structure **110** remains flat against the fixed base structure **105**, but the lifting masts **120** are shifted into their deployed position due to retraction (e.g., partial retraction) of the actuators **140**, which pulls the tension elements **111** forward, which cause the movable hinge points **108** to move along the track channels **107**, which causes the lifting masts **120** to move into a deployed configuration (or position). Additionally, as the movable hinge points **108** translate the inclinable access structure **110** forward, the multi-position end breaching platform **125** is shifted into its flat deployed position by way of forces applied through the deployment mechanism **302**, and reacted by the fixed base structure **105**, and host vehicle **101**. The forward tension elements **111** and the rear tension elements **112** pivot relative to the fixed base structure **105** during the movement of the actuators **140** but do not bend or fold. In various embodiments, the lifting masts **120**, the handrails **131**, and the multi-position end breaching platform **125** may be deployed concurrently (or substantially simultaneously).

In the deployed flat configuration, the tops of the lifting masts **120** are raised above the fixed base structure **105**. The inclinable access structure **110** is connected to the lifting masts **120** by the forward tension elements **111**, and the lifting masts **120** are connected to the fixed base structure **105** by way of rear tension elements **112** and the pivotable connection **104**. In the deployed flat configuration, the multi-position end breaching platform **125** is oriented in a flat, deployed position in which the multi-position end breaching platform **125** is folded out so that the surface **126** thereof faces upwardly and is parallel to the inclinable access structure **110**. In various embodiments, the multi-position end breaching platform **125** may be configured to remain passively parallel to the ground in the flat deployed position. In this configuration, the handrails **131** of the multi-position end breaching platform **125** may be deployed automatically (e.g., may be deployed passively, without additional actuation) via a rigid linkage **303** (e.g., may be a multilink kinematic mechanism) while the handrails **130** of the inclinable access structure **110** remain flat against the fixed base structure **105**.

The elevated access system **100** shifts from the deployed flat configuration shown in FIG. **5** to the deployed low angle configuration shown in FIG. **6** by further movement of the actuators **140**. In the deployed low angle configuration shown in FIG. **6**, the distal end **202** of the inclinable access structure **110** is raised to a height above the fixed base structure **105**. As described above, because the steps **113** of the inclinable access structure **110** are configured to remain passively parallel to the ground, they remain parallel to the ground in this configuration without external input. Similarly, the multi-position end breaching platform **125** is pivotably connected to the distal end **202** of the inclinable access structure **110** such that it remains passively parallel to the ground without external input. In various embodiments, the multi-position end breaching platform **125** may be configured to remain passively parallel to the ground during operation of the vehicle-mounted elevated access system **100**. When the inclinable access structure **110** is moved to an angle above parallel, such as the low angle deployed configuration shown in FIG. **6**, the handrails **130** may be extended (or deployed) via the motion of the deployment linkages **115** connected to the inclinable access structure **110** and to the proximal ends of the handrail uprights **116**. Such linkages may be disconnected to allow handrails **130** to lay flat on the inclinable access structure **110** when desired. In the low angle deployed configuration, both the handrails **130** and **131** may be in the extended (or deployed) configuration (or position).

The elevated access system **100** shifts from the deployed low angle configuration shown in FIG. **6** to the deployed high angle configuration as shown in FIG. **7** by further movement of the actuators **140**. Referring to FIG. **7**, in the deployed high angle configuration, the distal end **202** of the inclinable access structure **110** is raised to a height greater than that reached in the deployed low angle configuration shown in FIG. **6**. As in the other configurations, the steps **113** of the inclinable access structure **110** and the surface **126** of the multi-position end breaching platform **125** remain passively parallel to the ground. The handrails **130** remain substantially parallel to the inclinable access structure **110**, and the handrails **131** remain substantially parallel to the multi-position end breaching platform **125**.

The elevated access system **100** shifts from the deployed high angle configuration shown in FIG. **7** to the deployed high angle configuration with the multi-position end breaching platform **125** deployed in a stairway configuration as shown in FIG. **8** by extension (e.g., further extension) of the actuators **301**. Referring to FIG. **8**, when the multi-position end breaching platform **125** is in the stairway configuration, the tread surface **126** of the multi-position end breaching platform **125** separates and rotates into a series of stairs which align as an extension of the inclinable access structure **110** and is not parallel to the ground as in the above-described configurations. The multi-position end breaching platform **125** is deployed into the stairway configuration by movement (e.g., extension) of the actuators **301**.

Although the multi-position end breaching platform **125** is only shown as entering the stairway configuration when the inclinable access structure **110** is in its highest configuration, that is, the high angle configuration, the multi-position end breaching platform **125** may enter the stairway configuration regardless of the position (or configuration) of the inclinable access structure **110** as long as it is in at least the deployed flat configuration shown in FIG. **5** (e.g., as long as the multi-position end breaching platform **125** is folded out from the inclinable access structure **110**).

Further, although the inclinable access structure **110** is shown as being deployed into certain configurations, the inclinable access structure **110** can be deployed to any height between the deployed flat configuration shown in FIG. **5** to the deployed high angle configuration shown in FIG. **8**. Put another way, the inclination angle of the inclinable access structure **110** is not limited to the distinct angles shown in

FIGS. **5-8** but may be raised to any desired height (e.g., to any desired angle) between the deployed flat configuration shown in FIG. **5** and the deployed high angle configuration shown in FIG. **8**. Nor are the angles of the inclinable access structure **110** and the multi-position end breaching platform **125** shown in FIG. **8** intended to be limiting of the possible range of motion of these components.

In some embodiments, a user may be able to control the inclinable access structure **110** and/or the multi-position end breaching platform **125** to reach a desired height by using a controller. For example, a user may input or select a desired height for vehicle-mounted access system **100** (e.g., the distal end of the multi-position end breaching platform **125**), and the vehicle-mounted elevated access system **100** may deploy itself to the desired height. For example, the controller **135** may have a look-up table of values comparing movement of the actuators **140** to the overall height of the elevated access system **100**. And, in some embodiments, the controller **135** may store heights of various entry points, etc., such as the height of a particular aircraft door above the ground. In such an embodiment, a user may select which door of an aircraft the elevated access system **100** is desired to reach, and by using the software look-up table and stored information relating to the height of the selected aircraft door, the elevated access system **100** may deploy the inclinable access structure **110** and the multi-position end breaching platform **125** to substantially the correct height to reach the selected aircraft door.

FIG. **9** illustrates a graphical user interface **900** for communicating with the controller according to an embodiment of the present invention.

Referring to FIG. **9**, the graphical user interface **900** communicates with the controller on the vehicle-mounted elevated access system **100** to control the operation of the system. The graphical user interface **900** may operate on a suitable device using touchscreen input methods, such as mobile devices including mobile phones, tablets, etc. The graphical user interface **900** is compatible with multiple touch enabled operating systems including, but not limited to: macOS, iOS, Android, Windows. The graphical user interface **900** may communicate with the controller of the vehicle-mounted elevated access system **100** via a cellular connection, a WiFi connection by using in-vehicle WiFi hotspot (e.g., a local-area WiFi network), or Bluetooth. Over the Air (OTA) updates are available for software running on device that have an internet connection. The graphical user interface **900** may incorporate programmed logic with feedback from sensors and switches to prevent mechanical interference between mechanisms, such that, for example the multi-position end breaching platform **125** does not extend unless the inclinable access structure **110** is raised to or above 1 degree). In some embodiments, the touchscreen controls are useable by operators in touch-enabled gloves.

In various embodiments, graphical user interface **900** can operate in different control modes, including, but not limited to, manual control mode, preset mode, aircraft mode, and video streaming mode. The manual control mode can be selected by pressing the MODE MANUAL button **901**. When in manual control mode, individual touch sensitive actuation buttons **902**, when held down, control the extension and retraction of various mechanisms and actuators. In some embodiments, the graphical user interface **900** may include an ARM button. In such an embodiment, to move the inclinable access structure **110** and/or the multi-position end breaching platform **125**, the user may be to hold down the ARM button along with any actuation button **902** to execute the selected actuation command to prevent or reduce the occurrence of accidental control inputs. The manual control mode also displays a 3D responsive image **903** of the vehicle-mounted elevated access system **100** that highlights the subsystem (or component) being actuated. A stair info box **904** displays real time angle and height of the inclinable access structure **110** and the multi-position end breaching platform **125** by using on board sensors. A large ALL STOP button **905** can be pushed to immediately cut power to all systems, which will arrest the motion of the system and maintain its position for safety.

The preset mode can be selected by pressing the MODE PRESETS button **906**. When in preset mode, the graphical user interface **900** displays a scrollable list of preset system heights from 3 meters (m) to 9 m in 0.25 m increments. The preset system heights correspond to the height of the overall distal end. While holding down the ARM button (when present), a user presses and release one of the preset height buttons, at which time the graphical user interface **900** will display a "deploying to preset" message and will begin to drive system to the preset height. If at any time, the user releases the ARM button during deployment to the preset height, the control logic will automatically halt all system motion. Once the desired height has been reached, as determined by on-board sensors, the controller will automatically halt all motion and maintain the position (or configuration) of the vehicle-mounted elevated access system **100**. Any configuration (e.g., height) can be stored (e.g., permanently stored) in the controller for quick recall by pressing a SAVE CONFIGURATION button. The stored configuration may then be named by a user, such as "West Wing—2nd Store Balcony".

The video streaming mode can be selected by pressing the VIEW VIDEO STREAM button. When the VIEW VIDEO STREAM button is selected, the device wirelessly streams live high definition (HD) video from Ethernet cameras mounted to the vehicle-mounted elevated access system. During video streaming, a return arrow in corner of the screen allows user to return to the most recent control screen.

FIG. **10** illustrates another screen of the graphical user interface (UI) **900** in an aircraft mode according to an embodiment of the present invention.

When in the aircraft mode, the graphical user interface **900** displays a drop down "Aircraft Selection Menu." The "Aircraft Selection Menu" provides a user with a list of commercial aircraft to choose from, such as the Airbus A380, the Boeing 777, the Boeing 747, etc. Upon selection of an aircraft, a side view of that aircraft (with identification label) is displayed on the screen with each fuselage door represented as an easily visible button. While holding down the ARM button (when present), a user presses and releases one of the fuselage door buttons, at which time the UI displays a "Deploying to Preset" message and begins to drive the vehicle-mounted elevated access system **100** into a configuration corresponding to the selected door preset. Fuselage door configuration settings may be pre-calibrated to aircraft manufacturer specifications. If at any time, the user releases the ARM button during deployment to preset, the control logic will automatically halt all system motion. Once a preset configuration has been reached, the corresponding fuselage door remains highlighted until a different configuration is selected. The user can select a desired height for the distal end of the inclinable access structure **110** and/or the multi-position end breaching platform **125** by selecting a window on the side view of the displayed aircraft. The height of the window corresponds to the height

of the inclinable access structure **110** and/or the multi-position end breaching platform **125**.

It will be understood that when an element or layer is referred to as being "on," "connected to," or "coupled to" another element or layer, it may be directly on, connected, or coupled to the other element or layer or one or more intervening elements or layers may also be present. When an element or layer is referred to as being "directly on," "directly connected to," or "directly coupled to" another element or layer, there are no intervening elements or layers present. For example, when a first element is described as being "coupled" or "connected" to a second element, the first element may be directly coupled or connected to the second element or the first element may be indirectly coupled or connected to the second element via one or more intervening elements.

The same reference numerals designate the same elements. As used herein, the term "and/or" includes any and all combinations of one or more of the associated listed items. Further, the use of "may" when describing embodiments of the present invention relates to "one or more embodiments of the present invention." Expressions, such as "at least one of," when preceding a list of elements, modify the entire list of elements and do not modify the individual elements of the list. Also, the term "exemplary" is intended to refer to an example or illustration. As used herein, the terms "use," "using," and "used" may be considered synonymous with the terms "utilize," "utilizing," and "utilized," respectively. As used herein, the terms "substantially," "about," and similar terms are used as terms of approximation and not as terms of degree, and are intended to account for the inherent variations in measured or calculated values that would be recognized by those of ordinary skill in the art.

It will be understood that, although the terms first, second, third, etc. may be used herein to describe various elements, components, regions, layers, and/or sections, these elements, components, regions, layers, and/or sections should not be limited by these terms. These terms are used to distinguish one element, component, region, layer, or section from another element, component, region, layer, or section. Thus, a first element, component, region, layer, or section discussed below could be termed a second element, component, region, layer, or section without departing from the teachings of example embodiments. In the figures, dimensions of the various elements, layers, etc. may be exaggerated for clarity of illustration.

Spatially relative terms, such as "beneath," "below," "lower," "above," "upper," and the like, may be used herein for ease of description to describe one element or feature's relationship to another element(s) or feature(s) as illustrated in the figures. It will be understood that the spatially relative terms are intended to encompass different orientations of the device in use or operation in addition to the orientation depicted in the figures. For example, if the device in the figures is turned over, elements described as "below" or "beneath" other elements or features would then be oriented "above" or "over" the other elements or features. Thus, the term "below" may encompass both an orientation of above and below. The device may be otherwise oriented (rotated 90 degrees or at other orientations), and the spatially relative descriptors used herein should be interpreted accordingly.

The terminology used herein is for the purpose of describing particular example embodiments of the present invention and is not intended to be limiting of the described example embodiments of the present invention. As used herein, the singular forms "a" and "an" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "includes," "including," "comprises," and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

Also, any numerical range disclosed and/or recited herein is intended to include all sub-ranges of the same numerical precision subsumed within the recited range. For example, a range of "1.0 to 10.0" is intended to include all subranges between (and including) the recited minimum value of 1.0 and the recited maximum value of 10.0, that is, having a minimum value equal to or greater than 1.0 and a maximum value equal to or less than 10.0, such as, for example, 2.4 to 7.6. Any maximum numerical limitation recited herein is intended to include all lower numerical limitations subsumed therein, and any minimum numerical limitation recited in this specification is intended to include all higher numerical limitations subsumed therein. Accordingly, Applicant reserves the right to amend this specification, including the claims, to expressly recite any sub-range subsumed within the ranges expressly recited herein. All such ranges are intended to be inherently described in this specification such that amending to expressly recite any such sub-ranges would comply with the requirements of 35 U.S.C. § 112(a) and 35 U.S.C. § 132(a).

Although example embodiments of the vehicle-mounted elevated access system have been described and illustrated herein, many modifications and variations within those embodiments will be apparent to those skilled in the art. Accordingly, it is to be understood that the vehicle-mounted elevated access system according to the present invention may be embodied in forms other than as described herein without departing from the spirit and scope of the present invention. The present invention is defined by the following claims and equivalents thereof.

What is claimed is:

1. A vehicle-mounted access system comprising:

a fixed base structure comprising a plurality of track channels;

a plurality of movable hinge carriages respectively on and configured to move along the plurality of track channels;

an inclinable access structure having a proximal end and a distal end, the proximal end of the inclinable access structure being pivotably connected to the plurality of movable hinge carriages;

a lifting mast having a proximal end and a distal end, the distal end of the lifting mast being connected to the distal end of the inclinable access structure by forward tension elements and being connected to the fixed base structure by rear tension elements, the proximal end of the lifting mast being pivotably connected to the fixed base structure; and

an actuator connected between the movable hinge carriages and the fixed base structure, the actuator being configured to move the movable hinge carriages to raise the distal end of the inclinable access structure via the forward tension elements, the lifting mast, and the rear tension elements.

2. The vehicle-mounted access system of claim **1**, further comprising an inclinable access handrail positioned along to and pivotably attached to the inclinable access structure.

3. The vehicle-mounted access system of claim **2**, wherein the inclinable access handrail is configured to extend into a deployed position by a plurality of linkages.

4. The vehicle-mounted access system of claim 1, further comprising a multi-position end breaching platform that is pivotably connected to the distal end of the inclinable access structure.

5. The vehicle-mounted access system of claim 4, further comprising a platform handrail positioned along and pivotably attached to the multi-position end breaching platform.

6. The vehicle-mounted access system of claim 5, wherein the platform handrail is configured to extend into a deployed position by an action of a multilink kinematic mechanism.

7. The vehicle-mounted access system of claim 4, further comprising a plurality of secondary actuators connected between the distal end of the inclinable access structure and the multi-position end breaching platform.

8. The vehicle-mounted access system of claim 7, wherein the secondary actuators are configured to extend to pivot the multi-position end breaching platform relative to the inclined access structure and to transition a surface of the multi-position end breaching platform into a series of stairs.

9. The vehicle-mounted access system of claim 1, wherein the inclinable access structure further comprises a ramp.

10. The vehicle-mounted access system of claim 1, wherein the inclinable access structure further comprises a plurality of stairs.

11. The vehicle-mounted access system of claim 10, wherein the plurality of stairs are configured to remain passively parallel to the ground.

12. The vehicle-mounted access system of claim 1, further comprising a controller configured to control movement of the actuator.

13. The vehicle-mounted access system of claim 12, wherein the controller is operated by a touchscreen user interface comprising:

a manual mode;

a preset mode;

a video streaming mode; and

an aircraft mode.

14. The vehicle-mounted access system of claim 13, wherein the preset mode is configured to allow a selection of pre-programmed heights of the distal end of the inclinable access structure.

15. The vehicle-mounted access system of claim 13, wherein, in the aircraft mode, the touchscreen user interface displays an aircraft,

wherein, in the aircraft mode, the controller is configured to allow for a selection of a pre-programmed height of the distal end of the inclinable access structure by selecting a window on the displayed aircraft.

16. The vehicle-mounted access system of claim 1, wherein the actuator is configured to pull the movable hinge carriages toward the actuator to raise the distal end of the inclinable access structure.

17. A method for deploying the vehicle-mounted access system according to claim 1 by using a touchscreen user interface, the method comprising:

displaying, by the touchscreen user interface, an image of an aircraft;

transmitting, by the touchscreen user interface, a preprogrammed height selected by a user by selecting a window on the image of the aircraft to a controller of the vehicle-mounted access system; and

raising, by the controller, a distal end of an inclinable access structure connected to the vehicle-mounted access system to the preprogrammed height.

* * * * *

EXHIBIT I

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This Intellectual Property Assignment Agreement ("**IP Assignment**") is made pursuant and entered into as of the date of the last signature set forth below, between Joshua Clemente, an individual having an address at 1129 Denfield St., Unit B, Austin, TX 78721 ("**Assignor**") and Mission Integrated Technologies, LLC, a Delaware limited liability company having its principal place of business at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182 ("**Assignee**") (each a "**Party**" and collectively, the "**Parties**").

RECITALS

WHEREAS, Assignor states, represents, and warrants that he is the sole and exclusive title owner of all rights, title, and interest in and to the intellectual property set forth in Exhibit A hereto (collectively, the "**IP**");

NOW, THEREFORE, for $10.00 and other good and valuable consideration, in consideration of the mutual covenants, terms, and conditions set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of all of which is fully and hereby acknowledged:

1. Assignment. Assignor irrevocably conveys, transfers, and assigns to Assignee, and Assignee accepts, all of Assignor's rights, title, and interest in and to the following:

(a) The IP set forth in Exhibit A hereto, including pending applications and all issuances, extensions, and renewals thereof, together with the goodwill of the business connected with the use thereof, and symbolized thereby;

(b) All rights of any kind whatsoever of Assignor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world;

(c) Any and all royalties, fees, income, payments, and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and

(d) Any and all claims and causes of actions with respect to any of the foregoing, whether accruing before, on, or after the date hereof, including all rights and claims for damages, restitution, and injunctive and other legal and equitable relief for past, present, and future infringement, dilution, misappropriation, violation, misuse, breach, or default with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

JBC

(e) All patents, rights to inventions, copyright and related rights, trademarks, business names and domain names, rights in get-up, goodwill, and the right to sue for passing off, rights in designs, database rights, rights to use, and protect the confidentiality of, confidential information (including know-how) and all other intellectual property rights, including moral rights, if any, in each case whether registered or unregistered and including all applications and rights to apply for and be granted, renewals or extensions of, and rights to claim priority from, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world.

2. Recordation and Further Actions. Assignor hereby authorizes the United States Patent and Trademark Office and the officials of corresponding entities or agencies in any applicable jurisdiction to record and register this IP Assignment upon request by Assignee. Following the date hereof upon Assignee's reasonable request and at Assignee's sole cost and expense, Assignor shall take such steps and actions, and provide such cooperation and assistance to Assignee and its successors, assigns, and legal representatives, including the execution and delivery of any affidavits, declarations, oaths, exhibits, assignments, powers of attorney, or other documents, as may be reasonably necessary to effect, evidence, or perfect Assignee's rights to the IP as provided hereunder.

3. Representation and Warranties.

(a) Mutual. Each Party represents and warrants to the other that: (i) if an entity, it is duly organized, validly existing, and in good standing under the laws of its jurisdiction of incorporation or organization; and if a natural person, he/she is over the age of eighteen or is otherwise *sui juris*, and he/she is competent to enter into and be bound by this IP Assignment; (ii) it has the full right, power, and authority to enter into this IP Assignment and to perform its obligations hereunder; (iii) if an entity, the execution of this IP Assignment by its representative whose signature is set forth at the end hereof has been duly authorized by all necessary actions; and (iv) when executed and delivered by the other Party, this IP Assignment shall constitute the legal, valid, and binding obligation of the first Party, enforceable against such Party in accordance with its terms.

(b) *By Assignor*. The Assignor represents and warrants to Assignee that: (i) he is the record owner of the IP set forth in Exhibit A, and all registrations issued in connection therewith are valid, subsisting, and in full force and effect; (ii) he has not granted and will not grant any licenses, liens, security interests, or other encumbrances in, to, or under, the IP; (iii) the use of the IP and the exercise by Assignee of the rights granted under this IP Assignment will not infringe or otherwise conflict with the rights of any other Person; (iv) there is no settled, pending, or, to its knowledge, threatened litigation, opposition, or other claim or proceeding challenging the validity, enforceability, ownership, registration, or use of any IP; (v) he has not brought or threatened any claim against any third party alleging infringement of any IP, nor, to its knowledge, there is no third party infringing or threatening to infringe any IP; and (vi) the Assignor warrants and represents that he has not filed any other patent applications related to this patent with the USPTO, and to the extent that he has, he grants a power of attorney to Assignee or any of its officers or designees to convey and transfer any other applications and/or registrations.

4. Miscellaneous

JAC / KCT

(a) Governing Law; Venue; Jurisdiction. This IP Assignment shall be governed and enforced in accordance with Delaware law, regardless of any conflict of law rules. Exclusive venue and jurisdiction for any dispute relating to this IP Assignment, the transactions contemplated hereby, and the relationship of the Parties hereto, shall be in the state and federal courts located in, or for, Fairfax County, Virginia, and each Party submits to the jurisdiction of said courts, consents to the laying of venue therein, and waives any objection or contest thereto.

(b) Interpretation. In this IP Assignment, each gender and number shall include all genders and numbers, as the context requires. Headings are for convenience only and do not affect interpretation. This IP Assignment shall be deemed to have been jointly drafted, and ambiguities in this IP Assignment shall not be resolved against the Party primarily responsible for its drafting.

(c) Entire Agreement; Amendment; Waivers. This IP Assignment, together with any exhibits and attachments hereto, constitutes the entire agreement of the Parties regarding the subject matter hereof, is fully integrated, and supersedes all prior and contemporaneous understandings, written or oral, regarding said subject matter. The terms of this IP Assignment may not be amended, and the rights and obligations of the Parties hereunder may not be waived, except in writing signed by both Parties. Any such written waiver shall be valid only for the specific right and in the specific circumstances set forth in writing in the waiver.

(d) Third-Parties. This IP Assignment is intended to benefit only the Parties hereto, and each of their respective successors and permitted assigns.

(e) WAIVER OF JURY TRIAL. EACH PARTY IRREVOCABLY AND KNOWINGLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY PROCEEDINGS ARISING OUT OF, OR IN CONNECTION WITH, THIS IP ASSIGNMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER, OR THE RELATIONSHIP OF THE PARTIES HERETO.

(f) Counterparts. This IP Assignment may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed one and the same agreement. A signed copy of this IP Assignment delivered by electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this IP Assignment.

[SIGNATURE PAGE FOLLOWS]

JAC / KCS

IN WITNESS WHEREOF, the Parties have caused this IP Assignment to become effective as of the date of the last signature set forth below.

ASSIGNOR:

JOSHUA CLEMENTE

Joshua Clemente

ASSIGNEE:

MISSION INTEGRATED TECHNOLOGIES, LLC

By: Timothy Clemente
Manager/President

EXHIBIT A

IP Type	IP Specimen or Description	USPTO Serial/Reg. Number	Application Filing Date	Registration Date
Patent	ARES Patent	Patent No. 11,174,677 B2	11-19-2019	11-16-2021

EXHIBIT J

AGREEMENT

This Agreement ("**Agreement**") is entered into as of the 21st day of June 2022 (**Effective Date**"), by and between Joshua Clemente, ("**Joshua**"), having an address at 1129 Denfield St., Unit B, Austin, TX 78721, Timothy Clemente, ("**Timothy**"), having an address at 150 Rustic Road, Fredericksburg, Virginia 22405, F2E Holdings LLC having an address at 4094 Majestic Lane, Suite 355, Fairfax, VA 22033 ("**F2E**"), and Mission Integrated Technologies, LLC, ("**Company**"), having an address at 1934 Old Gallows Rd., Suite 402, Vienna, VA 22182 (each a "**Party**" and, collectively, "**Parties**").

Exhibit 1

(IP Assignment)

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This Intellectual Property Assignment Agreement ("**IP Assignment**") is made pursuant and entered into as of the date of the last signature set forth below, between **Joshua Clemente**, an individual having an address at 1129 Denfield St., Unit B, Austin, TX 78721 ("**Assignor**") and Mission Integrated Technologies, LLC, a Delaware limited liability company having its principal place of business at 1934 Old Gallows Road, Suite 402, Vienna, Virginia 22182 ("**Assignee**") (each a "**Party**" and collectively, the "**Parties**").

RECITALS

WHEREAS, Assignor states, represents, and warrants that he is the sole and exclusive title owner of all rights, title, and interest in and to the intellectual property set forth in Exhibit A hereto (collectively, the "**IP**");

NOW, THEREFORE, for $10.00 and other good and valuable consideration, in consideration of the mutual covenants, terms, and conditions set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of all of which is fully and hereby acknowledged:

1. Assignment. Assignor irrevocably conveys, transfers, and assigns to Assignee, and Assignee accepts, all of Assignor's rights, title, and interest in and to the following:

(a) The IP set forth in Exhibit A hereto, including pending applications and all issuances, extensions, and renewals thereof, together with the goodwill of the business connected with the use thereof, and symbolized thereby;

(b) All rights of any kind whatsoever of Assignor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world;

(c) Any and all royalties, fees, income, payments, and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and

(d) Any and all claims and causes of actions with respect to any of the foregoing, whether accruing before, on, or after the date hereof, including all rights and claims for damages, restitution, and injunctive and other legal and equitable relief for past, present, and future infringement, dilution, misappropriation, violation, misuse, breach, or default with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

(e) All patents, rights to inventions, copyright and related rights, trademarks, business names and domain names, rights in get-up, goodwill, and the right to sue for passing off, rights in designs, database rights, rights to use, and protect the confidentiality of, confidential information (including know-how) and all other intellectual property rights, including moral rights, if any, in each case whether registered or unregistered and including all applications and rights to apply for and be granted, renewals or extensions of, and rights to claim priority from, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world.

2. Recordation and Further Actions. Assignor hereby authorizes the United States Patent and Trademark Office and the officials of corresponding entities or agencies in any applicable jurisdiction to record and register this IP Assignment upon request by Assignee. Following the date hereof upon Assignee's reasonable request and at Assignee's sole cost and expense, Assignor shall take such steps and actions, and provide such cooperation and assistance to Assignee and its successors, assigns, and legal representatives, including the execution and delivery of any affidavits, declarations, oaths, exhibits, assignments, powers of attorney, or other documents, as may be reasonably necessary to effect, evidence, or perfect Assignee's rights to the IP as provided hereunder.

3. Representation and Warranties.

(a) Mutual. Each Party represents and warrants to the other that: (i) if an entity, it is duly organized, validly existing, and in good standing under the laws of its jurisdiction of incorporation or organization; and if a natural person, he/she is over the age of eighteen or is otherwise *sui juris*, and he/she is competent to enter into and be bound by this IP Assignment; (ii) it has the full right, power, and authority to enter into this IP Assignment and to perform its obligations hereunder; (iii) if an entity, the execution of this IP Assignment by its representative whose signature is set forth at the end hereof has been duly authorized by all necessary actions; and (iv) when executed and delivered by the other Party, this IP Assignment shall constitute the legal, valid, and binding obligation of the first Party, enforceable against such Party in accordance with its terms.

(b) *By Assignor*. The Assignor represents and warrants to Assignee that: (i) he is the record owner of the IP set forth in Exhibit A, and all registrations issued in connection therewith are valid, subsisting, and in full force and effect; (ii) he has not granted and will not grant any licenses, liens, security interests, or other encumbrances in, to, or under, the IP; (iii) the use of the IP and the exercise by Assignee of the rights granted under this IP Assignment will not infringe or otherwise conflict with the rights of any other Person; (iv) there is no settled, pending, or, to its knowledge, threatened litigation, opposition, or other claim or proceeding challenging the validity, enforceability, ownership, registration, or use of any IP; (v) he has not brought or threatened any claim against any third party alleging infringement of any IP, nor, to its knowledge, there is no third party infringing or threatening to infringe any IP; and (vi) the Assignor warrants and represents that he has not filed any other patent applications related to this patent with the USPTO, and to the extent that he has, he grants a power of attorney to Assignee or any of its officers or designees to convey and transfer any other applications and/or registrations.

4. Miscellaneous

(a) Governing Law; Venue; Jurisdiction. This IP Assignment shall be governed and enforced in accordance with Delaware law, regardless of any conflict of law rules. Exclusive venue and jurisdiction for any dispute relating to this IP Assignment, the transactions contemplated hereby, and the relationship of the Parties hereto, shall be in the state and federal courts located in, or for, Fairfax County, Virginia, and each Party submits to the jurisdiction of said courts, consents to the laying of venue therein, and waives any objection or contest thereto.

(b) Interpretation. In this IP Assignment, each gender and number shall include all genders and numbers, as the context requires. Headings are for convenience only and do not affect interpretation. This IP Assignment shall be deemed to have been jointly drafted, and ambiguities in this IP Assignment shall not be resolved against the Party primarily responsible for its drafting.

(c) Entire Agreement; Amendment; Waivers. This IP Assignment, together with any exhibits and attachments hereto, constitutes the entire agreement of the Parties regarding the subject matter hereof, is fully integrated, and supersedes all prior and contemporaneous understandings, written or oral, regarding said subject matter. The terms of this IP Assignment may not be amended, and the rights and obligations of the Parties hereunder may not be waived, except in writing signed by both Parties. Any such written waiver shall be valid only for the specific right and in the specific circumstances set forth in writing in the waiver.

(d) Third-Parties. This IP Assignment is intended to benefit only the Parties hereto, and each of their respective successors and permitted assigns.

(e) WAIVER OF JURY TRIAL. EACH PARTY IRREVOCABLY AND KNOWINGLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY PROCEEDINGS ARISING OUT OF, OR IN CONNECTION WITH, THIS IP ASSIGNMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER, OR THE RELATIONSHIP OF THE PARTIES HERETO.

(f) Counterparts. This IP Assignment may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed one and the same agreement. A signed copy of this IP Assignment delivered by electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this IP Assignment.

(g) *Reimbursement of Out-of-Pocket Expenses for Legal Fees and Software Development Cost*. Joshua represents that he has incurred up to $40,000 in costs on behalf of the Company, comprising up to $30,000 paid for software and electronics development by "21st Century Group", with offices located at 11438 Cronridge Dr., Owings Mills, MD 21117 in connection with ARES system, as well as an additional up to $10,000 for legal and filing fees in connection with the Patent. Upon providing receipts to the Company and such other documentation/evidence as is required by F2E and the Company for said expenses, the Company shall proportionally reimburse Joshua for said expenses at the time of LLC distributions, subject to any limitations in, and in accordance with, the Operating Agreement of the Company.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have caused this IP Assignment to become effective as of the date of the last signature set forth below.

ASSIGNOR:

JOSHUA CLEMENTE

By: DocuSigned by: Josh Clemente
GE3B6C21935544C...
Joshua Clemente

ASSIGNEE:

MISSION INTEGRATED TECHNOLOGIES, LLC

By: _____
Timothy Clemente
Manager/President

EXHIBIT A

IP Type	IP Specimen or Description	USPTO Serial/Reg. Number	Application Filing Date	Registration Date
Patent	ARES Patent	Patent No. 11,174,677 B2	11-19-2019	11-16-2021