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DESCRIPTION

BACKGROUND

[0001] The present disclosure relates generally to the field of electrical power distribution and, more particularly, to a system and method for providing electrical power to one or more power consuming weapon accessories which are mounted on a powered accessory platform of a weapon.

[0002] US8091265 (B1) discloses an improved floating rail system for mounting accessories on a firearm having a barrel including a chassis and a clamp adapted to attach the chassis about the barrel of the firearm. A plurality of elongate accessory mounting rails are attached to the chassis and extend parallel to an axis of the barrel. The accessory mounting rails are supported in the chassis radially spread apart from the barrel.

SUMMARY

[0003] The present disclosure provides a powered accessory platform as detailed in claim 1.

[0004] Advantageous features are provided in dependent claims.

[0005] A powered accessory platform for a weapon includes a handguard assembly including an upper handguard portion and an opposed lower handguard portion. The upper handguard portion and the lower handguard portion cooperate to define a sleeve, the sleeve having a proximal end configured to attach to the weapon and a distal end opposite the proximal end. The sleeve is configured to surround at least a portion of the weapon when the proximal end is attached to the weapon. A flexible circuit is disposed within the sleeve, the flexible circuit comprising one or more circuit elements disposed on a flexible circuit substrate. An accessory mounting rail is located on a top portion of the upper handguard portion, the mounting rail having at least one electrical connector thereon. An accessory mounting pad is mechanically and electrically coupled to the accessory mounting rail. A power supply connector on the sleeve configured to attach a power supply.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The invention may take form in various components and arrangements of components, and in various steps and arrangements of steps. The drawings are only for purposes of illustrating preferred embodiments and are not to be construed as limiting the invention.

FIG. 1 is an isometric view of a firearm employing a powered weapon accessory system in

accordance with an exemplary embodiment of the invention.

FIG. 2 is a partially exploded view of the firearm and powered weapon accessory platform system appearing in FIG. 1.

FIG. 3 is an isometric view of the powered accessory system appearing in FIG. 1, with the firearm and legacy accessory devices removed.

FIG. 4 is a partially exploded view of the powered weapon accessory platform appearing in FIG. 1.

FIG. 5 is an exploded isometric view of the hand guard assembly appearing in FIG. 1.

FIG. 6A is a partially exploded view illustrating the manner of attaching the handgrip.

FIG. 6B is an enlarged view of the handgrip illustrating the manner of inserting and removing batteries.

FIG. 7 is a partially exploded view illustrating the manner of attaching the flashlight.

FIGS. 8 and 9 are partially exploded views illustrating the construction of the removably hand guard pads.

FIGS. 10 and 11 are partially exploded views illustrating the manner of attaching and removing the keypad.

FIG. 12 is an exploded isometric view of the hand guard, handgrip, and flashlight, taken generally from the bottom.

FIG. 13 is an isometric view of a further exemplary embodiment of a powered accessory system, taken generally from the bottom, illustrating an alternative connector for remote power supply located in the weapon buttstock.

FIGS. 14A and 14B are fragmentary and partially exploded isometric views, respectively, illustrating an alternative connector for remote power supply which replaces the handgrip power supply.

FIGS. 15 and 16 are isometric and rear elevational views, respectively, of exemplary first electrically operated accessory device.

FIG. 17 is an enlarged, exploded view of an exemplary keypad.

FIG. 18 is an enlarged, isometric view of the keypad appearing in FIG. 17, taken generally from the bottom.

FIG. 19 is an enlarged, fragmentary, exploded view of the hand guard sleeve illustrating the manner of connecting the upper and lower shells.

FIG. 20 is a block diagram illustrating the electrical operation of the powered accessory system embodiment herein.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0007] Referring now to the drawing FIGS. 1-5, 6A, 6B, 7-13, 14A, 14B, and 15-20, wherein like reference numbers refer to like components throughout the several views, an exemplary powered weapon accessory platform **100** includes a hand guard assembly **A**, a vertical handgrip **B**, a first electrically operated accessory device **C**, and a second electrically operated device **D**. The hand guard assembly **A** is configured to attach to a firearm **110** or other weapon. In certain embodiments, the present system is configured to attach to a military or tactical weapon, such as an AR-15, M4 Carbine, M-16, other like firearms, in place of a conventional accessory rail system, such as a Picatinny rail system (MIL-STD-1913 or NATO equivalent STANAG 4694) that extends around the barrel of the weapon. It will be recognized, however, that the hand guard assembly **A** may include one or more accessory rail sections **112**, **114** of conventional configuration to allow legacy accessory devices to be mounted to the weapon **110**. In the illustrated embodiment, each of the rail sections **112**, **114** have generally T-cross sectional shaped rail members **116** having recoil grooves **118** therebetween, as is known in the art.

[0008] The hand guard assembly **A** includes an upper shell **120** and a lower shell **122** which cooperate to define an axially extending sleeve **124** defining a channel which is attached to the firearm **110** at or near a first, proximal end **126** and extends distally to surround at least a portion of a barrel **128** of the firearm **110**. The upper and lower shells **120**, **122** may be formed of a metal (including metal alloys) and may be formed by casting, extrusion, molding, machining, additive manufacturing, or any combination thereof.

[0009] A flex circuit **130** includes a flexible circuit substrate **132** formed of a material such as a polyimide or other suitable flexible film material having printed circuit elements formed thereon. The flex circuit **130** includes an axially extending portion **134**, a first pair of transversely extending arms **136** at or near the proximal end of the hand guard assembly **A** and partially surrounding the barrel **128** and a second pair of transversely extending arms **138** located at or near the distal end of the hand guard assembly **A** and partially surrounding the barrel **126**. Each of the arms **136**, **138** has a plurality of contact pads **140** formed thereon.

[0010] A heat shield **150** is disposed between the barrel **128** and the flex circuit **130** to protect the flex circuit **130** and the user's hands from heat buildup in the barrel **128**. The flex circuit **130** is sandwiched between the heat shield **150** and the sleeve **124**. Fasteners passing through aligned openings in the flex circuit substrate and the heat shield **150** may be employed to secure the flex circuit within the sleeve **124**. The heat shield **150** extends in the axial direction and partially surrounds the barrel **128**. The heat shield **150** may be formed of aluminum or other thermally conductive material.

[0011] The upper shell **120** includes a pair of opposing axially extending edges **160a**, **160b**, which engage complementary axially extending edges **162a**, **162b**, respectively, on the lower shell **122**. In preferred embodiments, the edges of one pair have a retaining groove which receives a complementary tongue on the edges of the other pair. In the illustrated embodiment, the axially extending edges **160a**, **160b**, each have axially extending grooves **164a**, **164b**, which have a generally T-shaped cross-sectional shape. The axially extending edges **162a**, **162b**, each have an axially extending tongue members including vertically extending tongue members **166a**, **166b**, which extend continuously along the axial length of the lower shell **122**, and horizontally extending tongue members **168a**, **168b**, which are segmented along the axial length of the bottom shell **122**.

[0012] The upper facing surface **170** of the upper shell **120** includes a mounting region **172** intermediate the front rail section **112** and the rear rail section **114**. The mounting region **172** includes a generally flat surface having first and second apertures **174a**, **174b** for receiving electrical connector elements **182a**, **182b** therethrough. The connector elements **182a**, **182b** include a plurality of contacts electrically coupled to the circuit elements on the flex circuit **130**.

[0013] The flex circuit **130** includes a connector portion **180** having the connector elements **182a**, **182b** mounted thereon. A backer or stiffener board **184** formed of a rigid material is disposed beneath the portion **180** to reinforce the flex circuit at the connector portion **180**. The connector portion **180** with stiffener board **184** is disposed on a mounting plate **186** which is secured within the interior of the upper shell **120** in alignment with the mounting region **172** via a plurality of fasteners such as threaded fasteners **188** which pass through openings **190** in the upper surface and engage complementary openings **192** in the mounting plate. Rubber or other polymeric (e.g., elastomeric) seals **194a**, **194b** may be disposed in the apertures **174a**, **174b** between the upper surface **170** and the connector elements **182a**, **182b**, e.g., to seal around the connector elements to protect against water or moisture entering into the interior of the sleeve **124** via the apertures **174a**, **174b**.

[0014] The lower shell **122** includes a reinforced portion **200** at or near the proximal end of the lower shell and includes one or more openings **202** for receiving one or more fasteners for securing the hand guard assembly **A** to the weapon. In certain embodiments, the hand guard assembly **A** is attached to the weapon at its proximal end and extends distally. In certain embodiments, the hand guard assembly **A** is configured to attach to a receiver portion, e.g., upper receiver in the case of a two piece type of receiver, of a firearm. In preferred embodiments, the hand guard assembly **A** is attached to the firearm via a barrel nut which attaches the firearm barrel to the receiver.

[0015] The contact pads **140** define a plurality of contacts electrically coupled to the circuit elements on the flex circuit **130** and are aligned with corresponding apertures **210** in the upper shell **120**.

[0016] The electrically operated device assembly **C** includes or is attached to an adapter or accessory mounting pad **220** configured to attached to the mounting region **172**, e.g., via

fasteners 222 passing through openings in the pad 220 and removably engaging aligned openings 224 in the mounting region 172. The platform 220 includes electrical connector elements (not shown) on a bottom surface of the accessory mounting pad which are aligned with the connector elements 182a, 182b. A circuit board is housed within the pad 220 to provide electrical communication between the connector elements 182a, 182b and contact elements 226 on the upper surface of the pad 220.

[0017] The electrically operated device C, in turn, is attached to the pad 220, e.g., via fasteners 232 passing through openings 234 in the pad 220 and engaging aligned openings in the device C housing. The illustrated pad 220 and device C are exemplary only. Electrical contacts 230 on the device C engage the contacts 226 on the pad 220.

[0018] In certain embodiments, a plurality of interchangeable pads may be provided to accommodate different devices C. In preferred embodiments, the electrically operated device is a sighting device, such as a reflex sight and/or laser sight. In preferred embodiments, the device C may be a combined laser/reflex sight, such as that described in commonly owned U.S. provisional application no. 62/063,210 filed October 13, 2014, and U.S. nonprovisional application no. 14/881,779 filed October 13, 2015. The device C may be used in combination with other accessory devices. For example, in the exemplary embodiment appearing in FIG. 1, the reflex sight of the device C may be used in combination with an optical magnifier 240 positioned behind the device C and a thermal camera device 250 positioned in front of the device C. The thermal camera 250 is secured to the front rail section 112 via a pivoting rail clamp 260, which allows the thermal camera 250 to be pivoted out of the line of sight of the user when not in use. The scope/magnifier 240 is secured to a rail section 242 on the upper receiver portion of the firearm via a second pivoting rail clamp 260, which allows the magnifier 240 to be pivoted out of the line of sight of the user when not in use.

[0019] The vertical handgrip B includes a housing 270 which defines a battery compartment receiving one or more batteries or battery packs 272, which is accessible via a battery compartment cover 274. The upper end of the handgrip B includes a hot shoe receptacle 280, such as a dovetail type hot shoe, having a plurality of electrical contacts 282 thereon. The contacts 282 engage aligned contacts 286 on a hot shoe 284 on the lower shell 122. The hot shoe 284 is attached to a lower surface 294 of the lower shell 122, e.g., via threaded fasteners, and the hot shoe electrical contacts are electrically coupled to the circuit carried on the flex circuit board 130. In certain embodiments, the electrical contacts on the hot shoe are electrically coupled to pick up points on the flex circuit via a wired connection, e.g., via soldering. The electrical contacts 282 on the hot shoe receptacle 280 and the electrical contacts 286 on the hot shoe 284 thus provide an electrical communication between the power supply 272 and the flex circuit 130.

[0020] The upper shell 120 includes two side surfaces 290 on opposite sides of the upper surface 170. The lower shell 122 includes two side surfaces 292 on opposite sides of a lower surface 294. Each of the side surfaces includes a plurality of recesses 300a, 300b axially spaced along its length. Each recess 300a, 300b is configured to receive a removable pad 302

which is configured to improve a user's grip and insulate the user's hand from heat generated in the barrel **128**. Each of the pads **302** includes a rigid stiffener **304** which may be formed of a high temperature composite material and a cover **310** which may be formed of a flexible, heat-resistant material. In preferred embodiments, the cover **310** is formed of a silicone rubber (polysiloxane) material, having low thermal conductivity and high thermal stability. Preferably, the pads **302** are sized to protrude from the recesses **300a**, **300b** such that the protruding pads and soft cover materials provide improved traction between the user's hand and the fore end portion of the weapon.

[0021] Each of the stiffeners **304** is sized to be removably snap fit or press fit into a corresponding opening **314** in a recess **300a**, **300b**. Each of the stiffeners **304** also includes a protruding boss **316** on an outward facing surface which is sized to engage a complementary opening (not shown) on the inward facing surface of the cover **310**. In the illustrated embodiment, the pads **302** are triangular in shape with every other pad **302** being inverted, although it will be recognized that other shapes are contemplated.

[0022] Four of the recesses in the upper shell **120**, designated **300a**, include the apertures **210** to provide access to the contact pads **140** on the flex circuit **130**. A keypad **320** includes front cover **322** having a plurality of depressible buttons (designated **332**, **334**, **336**, **338**) extending therethrough. A rear cover **326** includes a first triangular fastener **328a** which is sized to be removably received within a desired one of the recesses **300a**. A second triangular fastener **328b** is configured to be received in an adjacent recess **300b**. As shown in FIG. 17, each of the buttons **332**, **334**, **336**, **338** includes a dome switch **324** on a circuit board **325** having a circuit matrix or grid. An electrical connector **330** includes a plurality of contacts **331** which engage the contacts **140** to electrically communicate a signal to the flex circuit **130** representative of which button **322** was pressed by the user.

[0023] The keypad **320** can be operatively connected to the flex circuit by attaching the key pad **320** at one of four designated positions on the upper shell **120**, namely front left, front right, rear left, and rear right. As best seen in FIG. 11, when the key pad **320** is employed at one of the rearward positions, the corresponding pad **302** and one adjacent pad **302** must be removed. When the key pad **320** is employed at one of the front positions, the corresponding pad **302** and two adjacent pads **302** must be removed. Once the appropriate pads **302** are removed, the fasteners **328a**, **328b** are snap fit into the corresponding receptacle **300a**, **300b**.

[0024] In the illustrated embodiment, the key pad **320** includes a first actuator button **332** (designated "L" in the illustrated embodiment) for actuating the first electrically operated device and a second actuator button **334** (designated "F" in the illustrated embodiment) for actuating the second electrically operated device, and an increment up button **336** and an increment down button **338**.

[0025] In the depicted embodiment, the second electrically operated device **D** is a flashlight comprising a flashlight head **350** extending distally from a mounting arm **360**. The flashlight head **350** may have one or more light emitting elements, preferably LEDs. In certain

embodiments, the flashlight head **350** includes one or more LEDs which emit radiation in a visible portion of the electromagnetic spectrum. In other embodiments, the flashlight head **350** includes one or more LEDs which emit radiation in an infrared portion of the electromagnetic spectrum. In still further embodiments, the flashlight head **350** is a dual mode flashlight which includes one or more LEDs which emit radiation in a visible portion of the electromagnetic spectrum and one or more LEDs which emit radiation in an infrared portion of the electromagnetic spectrum.

[0026] The mounting arm **360** includes a housing **362** which is configured for mounting to a complementary mounting pad **364** on distal end of the lower surface **294** of the shell **122**. The mounting arm also includes an electrical connector **366** which mates with a complementary electrical connector **368** on the flashlight mounting pad **364**.

[0027] The key pad **320** is operative to remotely control operation of both the first device **C** and the second device **D**. The flex circuit **130** operates as a power bus wherein both the first and second devices **C**, **D** are operable to receive power through the bus responsive to a processor **380** (see FIG. 20) such as a microprocessor or microcontroller within the first device driving the bus. The first device **C** includes a selector knob **382** which functions as an input device to the processor **380**. The knob **382** includes an indicator or mark **384** which is rotatable to select a desired function represented by indicia **390a-390h**.

[0028] The selector knob **382** is used to select the source(s) that are operated by the keypad buttons. Indicum **390a** ("Off") corresponds to the off position wherein the device **C** is powered down and no light sources will be activated by the actuator button **332**. Indicum **390b** ("Ir A") corresponds to the IR aiming or pointing laser **400** of a laser module **398**, which is actuated by the button **332** in this configuration. Indicum **390c** ("Ir F") corresponds to the IR flood laser **402**, which is actuated by the button **332** in this configuration. Indicum **390d** ("Ir D") corresponds to the dual IR mode wherein both the IR aiming laser **400** and the IR flood laser **402** are operated simultaneously by the button **332**. Indicum **390e** ("Rfx") corresponds to the reflex sight **410** and its corresponding light source is actuated by the button **332** in this configuration. Indicum **390f** ("Vis") corresponds to the visible wavelength aiming or pointing laser **404**, which is operated by the button **322** in this configuration. Indicum **390g** ("FL") corresponds to the flashlight **350** which is operated by the button **334** in this configuration. Indicum **390h** ("Vis FL") corresponds to a dual mode wherein the visible aiming laser **404** and the flashlight **350** are operated simultaneously by the buttons **332** and/or **334**. The intensity increment button **336** and intensity decrement button **338** are provided to increase and decrease, respectively, the intensity output of whichever light source(s) are selected by the selector knob **382**.

[0029] In certain embodiments, the user may not wish to use the vertical grip **B**. In such cases, the hot shoe **284** may be coupled to an alternative remotely located power supply. For example, as shown in FIGS. 13, 14A, and 14B, the handgrip **B** may be replaced with an electrical connector **420** which is configured to receive the hot shoe **284**. A cable **422** is provided to electrically couple the hot shoe **284** to a remote power supply, which is preferably a

remote power supply located elsewhere on the weapon. It will be recognized, however, that alternative remote power supplies are also contemplated, such as a power supply configured to be worn by the user.

[0030] In certain embodiments, as shown in FIG. 13, a remote power supply **424** is housed within the buttstock **426** of the weapon. In alternative embodiments, as shown in FIGS. 14A and 14B, the cable **422** may terminate in an electrical connector **428** for a removable electrical connection to a remote power supply.

[0031] The invention has been described with reference to the preferred embodiments. Modifications and alterations will occur to others upon a reading and understanding of the preceding detailed description. It is intended that the invention be construed as within the scope of the appended claims.

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- [US8091265B1](#) [0002]
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Patentkrav

1. Strømforsynet tilbehørsplatform (100) til et våben (110), hvilken tilbehørsplatform omfatter:

en håndbeskyttersamling (A), der indbefatter en øvre håndbeskytterdel (120) og en modstillet nedre håndbeskytterdel (122), idet den øvre håndbeskytterdel og den nedre håndbeskytterdel samvirker med henblik på at definere en muffe (124), hvor muffen har en proksimal ende (126), der er konfigureret til at fastgøres til våbnet, og en distal ende modsat den proksimale ende (126), idet muffen (124) er konfigureret til at omgive mindst en del af våbnet, når den proksimale ende (126) er fastgjort til våbnet;

et fleksibelt kredsløb (130) inde i muffen (124), hvilket fleksible kredsløb omfatter ét eller flere kredsløbselementer, som er anbragt på et fleksibelt kredsløbssubstrat (132);

en tilbehørsmonteringsskinne (112, 114), der er lokaliseret på en øverste del af den øvre håndbeskytterdel, idet monteringsskinnen har mindst én elektrisk konnektor derpå;

et første tilbehørsmonteringsunderlag (220), der mekanisk og elektrisk er koblet til tilbehørsmonteringsskinnen (112, 114);

en strømforsyningskonnektor på muffen (124), hvilken strømforsyningskonnektor er konfigureret til at tilslutte en strømforsyning (272), den øvre håndbeskytterdel (120), der indbefatter første og sekundære aksialt forløbende sideflader (290) på modsatte tværgående sider af en aksialt forløbende øverste del;

den nedre håndbeskytterdel (122), der indbefatter tredje og fjerde aksialt forløbende sideflader (292) på modsatte tværgående sider af en aksialt forløbende nederste del; og

idet hver af de første, sekundære, tredje og fjerde sideflader (290, 292) indbefatter en flerhed af fordybninger (300a, 300b), som aksialt er anbragt med mellemrum langs længden, kendetegnet ved, at hver fordybning er konfigureret til at modtage et flytbart underlag (302), der er konfigureret til at forbedre en brugers greb og/eller isolere brugerens hånd fra varme, der genereres i løbet under drift af skydevåbnet (110), hvor hver af underlagene (302) indbefatter en stiv afstivning (304), som er dannet af et temperaturbestandigt materiale, og en

tildækning (310), der modtages oven over den stive afstivning (304), idet tildækningen (310) er dannet af et fleksibelt, varmebestandigt materiale; og hvor det fleksible kredsløb (130) indbefatter en aksialt forløbende del (134), et første par på tværs forløbende arme (136), der er nabostillet til den proksimale ende af muffen (124), og et andet par på tværs forløbende arme (138), der er nabostillet til den distale ende af håndbeskyttersamlingen (A), hvor mindst én af armene af det første par arme (136) har en første flerhed af kontaktunderlag (140), som er dannet derpå, og mindst én af armene af det andet par arme (138) har en anden flerhed af kontaktunderlag (140), som er dannet derpå; eller hvor den øvre håndbeskytterdel (120) har en første kant (160a, 160b), og den nedre håndbeskytterdel (122) har en anden kant (162a, 162b), idet den første og den anden kant har en komplementær tværsnitsform, og hvor én af den første kant (160a, 160b) og den anden kant (162a, 162b) har en fastholdelsesrille, der modtager en komplementær tunge den anden af den første kant og den anden kant.

2. Strømforsynet tilbehørsplatform (100) ifølge krav 1, der endvidere omfatter et varmeskjold (150), som modtages inde i muffen (124), hvor det fleksible kredsløb (130) er anbragt mellem varmeskjoldet (150) og muffen (124); eller hvor det første tilbehørsmonteringsunderlag (220) kan flyttes fra tilbehørsmonteringsskinnen (112, 114); eller hvor det første tilbehørsmonteringsunderlag (220) kan udskiftes med ét eller flere alternative tilbehørsmonteringsunderlag; eller hvor en del af tilbehørsmonteringsskinnen (112, 114) er valgt blandt en MIL-STD-1913-skinne og en STANAG 4694-skinne.

3. Strømforsynet tilbehørsplatform (100) ifølge krav 1, hvor strømforsyningskonnektoren (420) er anbragt på den nedre håndbeskytterdel (122).

4. Strømforsynet tilbehørsplatform (100) ifølge krav 1, hvor den mindst ene elektriske konnektor er fastgjort til en kredsløbsplade og elektrisk koblet til det ene eller flere kredsløbselementer, som er anbragt på det fleksible kredsløbssubstrat (132).

5. Strømforsynet tilbehørsplatform (100) ifølge krav 1, hvor en øverste del af den øvre håndbeskytterdel (120) har et generelt fladt afsnit, og yderligere hvor hver af den mindst ene elektriske konektor strækker sig gennem en tilsvarende flugtende åbning (190) i det generelt flade afsnit.

6. Strømforsynet tilbehørsplatform (100) ifølge krav 5, hvor det første tilbehørsmonteringsunderlag (220) er konfigureret til at fastgøres til det generelt flade afsnit under anvendelse af ét eller flere gevindskårne fastgørelsesmidler (188), der passerer gennem åbninger (192) i det første tilbehørsmonteringsunderlag og flytbart går i indgreb med flugtende åbninger (190) i det generelt flade afsnit.

7. Strømforsynet tilbehørsplatform (100) ifølge krav 6, hvor det første tilbehørsmonteringsunderlag (220) indbefatter en kredsløbsplade, der elektrisk kobler et første sæt af elektriske konnektorelementer (182a, 182b) på en øvre overflade af det første tilbehørsmonteringsunderlag (220) og et andet sæt af konnektorelementer (182a, 182b) på en nedre overflade af det første tilbehørsmonteringsunderlag; eller
der endvidere omfatter en elektrisk drevet indretning (C), som er valgt fra gruppen bestående af et refleksvisir, et laservisir og et kombineret laser-/refleksvisir.

8. Strømforsynet tilbehørsplatform (100) ifølge krav 1, hvor den nedre håndbeskytterdel (122) indbefatter et forstærket afsnit (200) med én eller flere åbninger (202) til modtagelse af ét eller flere fastgørelsesmidler til fastgørelse af håndbeskyttersamlingen (A) til våbnet (110), hvor det ene eller flere fastgørelsesmidler til fastgørelse af håndbeskyttersamlingen (A) til våbnet (110) er konfigureret til at gå i indgreb med en løbsmøtrik i skydevåbnet.

9. Strømforsynet tilbehørsplatform (100) ifølge krav 1, der endvidere omfatter: et håndgreb (B), som flytbart er forbundet med strømforsyningskonnektoren, idet håndgrebet (B) indbefatter et hus (270), der definerer et batterirum, som

flytbart modtager ét eller flere batterier eller batteripakker (272), og en øvre ende med et blitzskomodtageelement (280); og strømforsyningen, der indbefatter en blitzsko (284), som flytbart går i indgreb med blitzskomodtageelementet (280), hvilket blitzskomodtageelement (280) har en første flerhed af elektriske kontakter (282), der flugter med en anden flerhed af elektriske kontakter (286) på blitzskoen, hvor blitzskoen (284) er fastgjort til en nedre overflade af muffen (124), og den anden flerhed af elektriske kontakter (286) er elektrisk koblet til det fleksible kredsløb (130).

10. Strømforsynet tilbehørsplatform (100) ifølge krav 1, der endvidere omfatter en tastgruppe (320), der flytbart er fastgjort til én eller begge af den første og den anden sideflade og er i elektrisk forbindelse med det fleksible kredsløb (130), idet tastgruppen (320) er konfigureret til at styre driften af mindst én elektrisk drevet indretning (C), som er fastgjort til den strømforsynede tilbehørsplatform (100).

11. Strømforsynet tilbehørsplatform (100) ifølge krav 10, hvor tastgruppen (320) kan fastgøres til en flerhed af lokaliteter på den første sideflade og den anden sideflade.

12. Strømforsynet tilbehørsplatform (100) ifølge krav 1, der endvidere omfatter et andet tilbehørsmonteringsunderlag, som er anbragt på en nederste overflade af den nedre håndbeskytterdel (122), idet det andet tilbehørsmonteringsunderlag indbefatter en flerhed af konnektorelementer, der elektrisk er koblet til det fleksible kredsløb (130).

13. Strømforsynet tilbehørsplatform (100) ifølge krav 12, der endvidere omfatter én eller begge af:

et lommelygtemodul, der indbefatter lommelygtehoved (350), der strækker sig distalt fra en monteringsarm (360), idet monteringsarmen (360) flytbart kan fastgøres til det andet tilbehørsmonteringsunderlag; og

en strømforsyning (272), der er fjernt lokaliseret i forhold til lommelygtemodulet, idet strømforsyningen er forbundet med strømforsyningskonnektoren og elektrisk koblet til lommelygtemodulet.

DRAWINGS

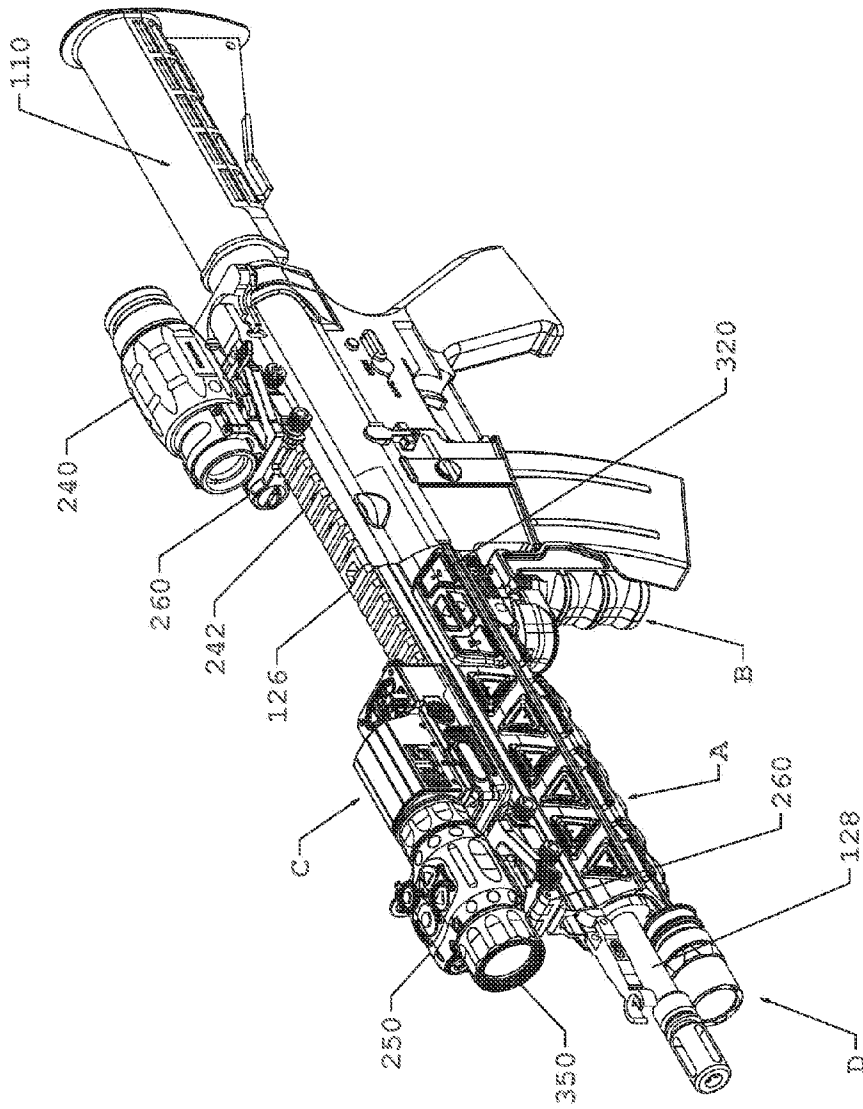


FIG. 1

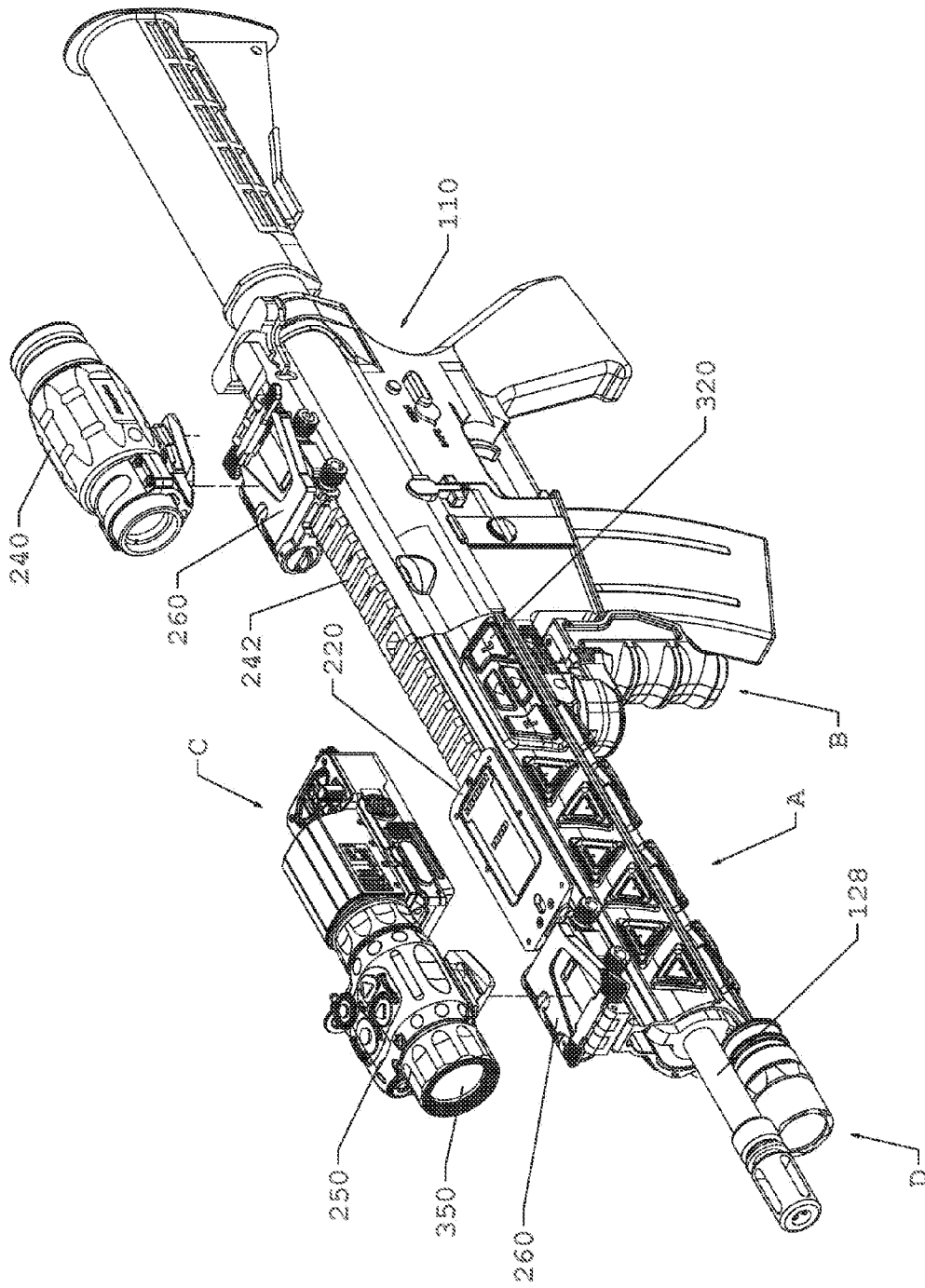


FIG. 2

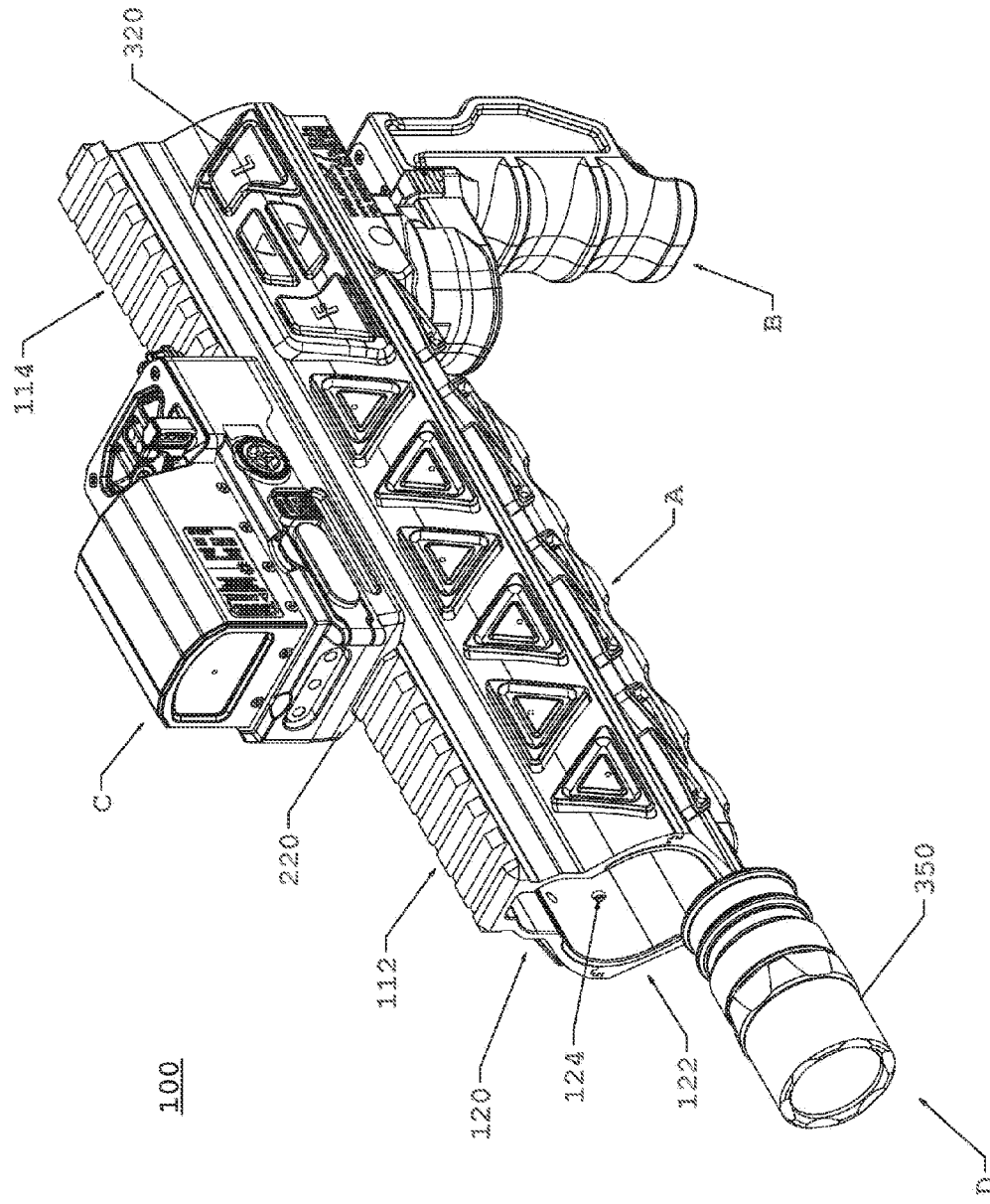


FIG. 3

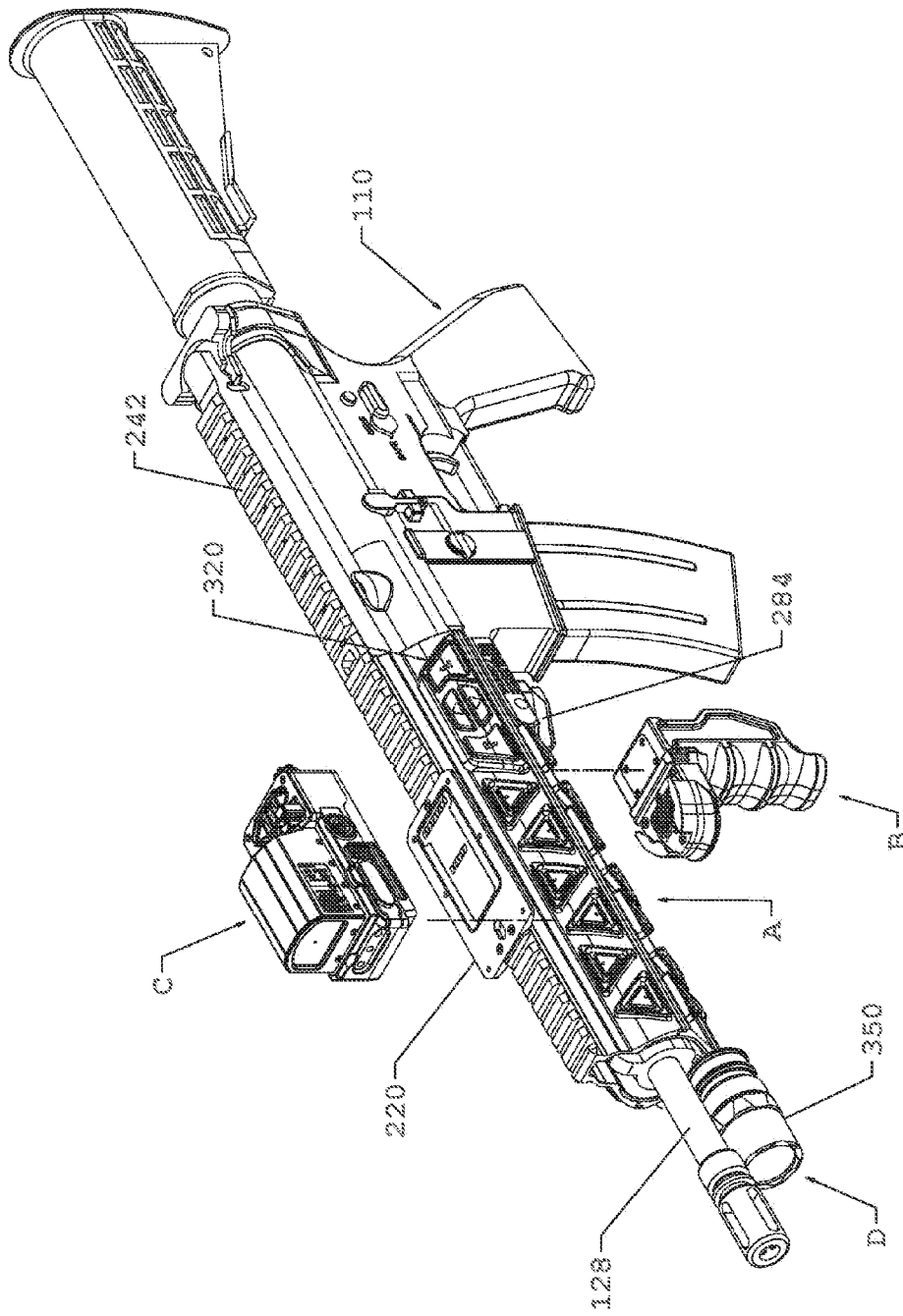


FIG. 4

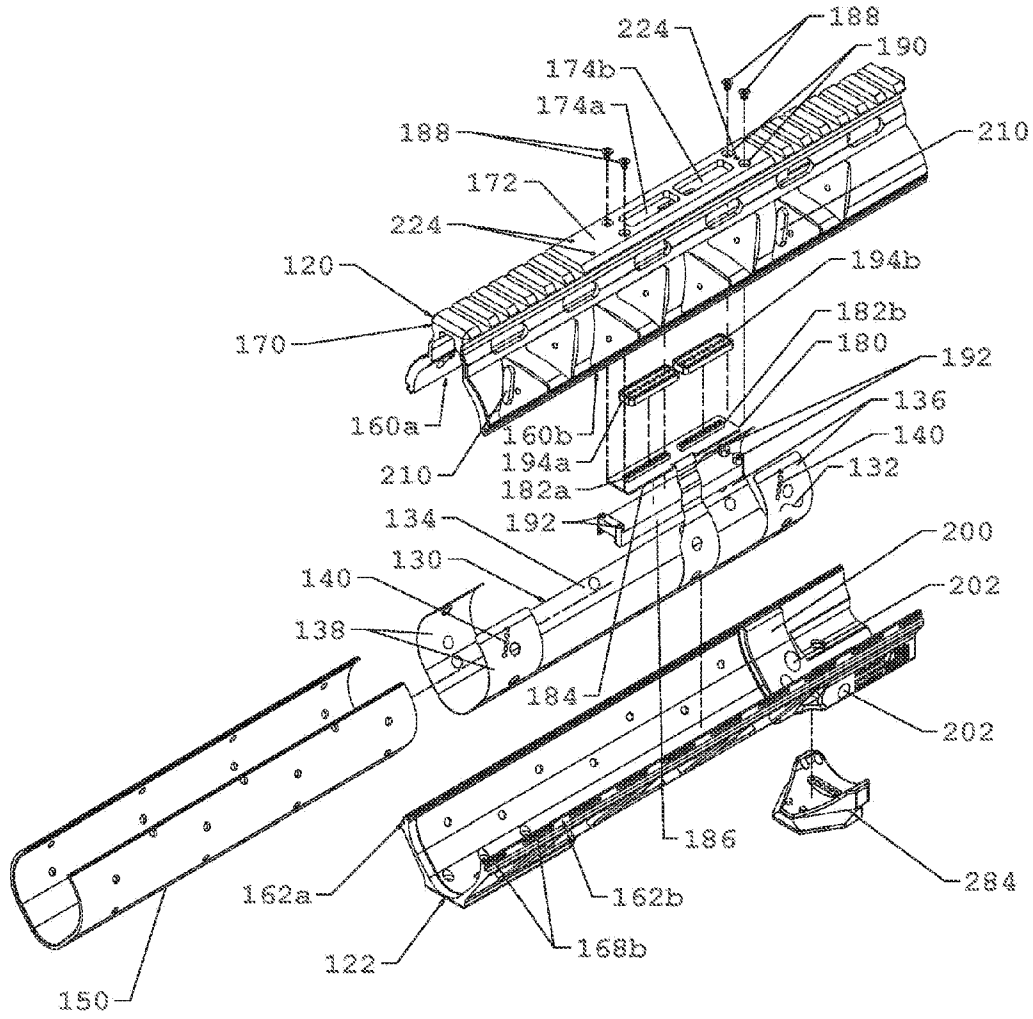


FIG. 5

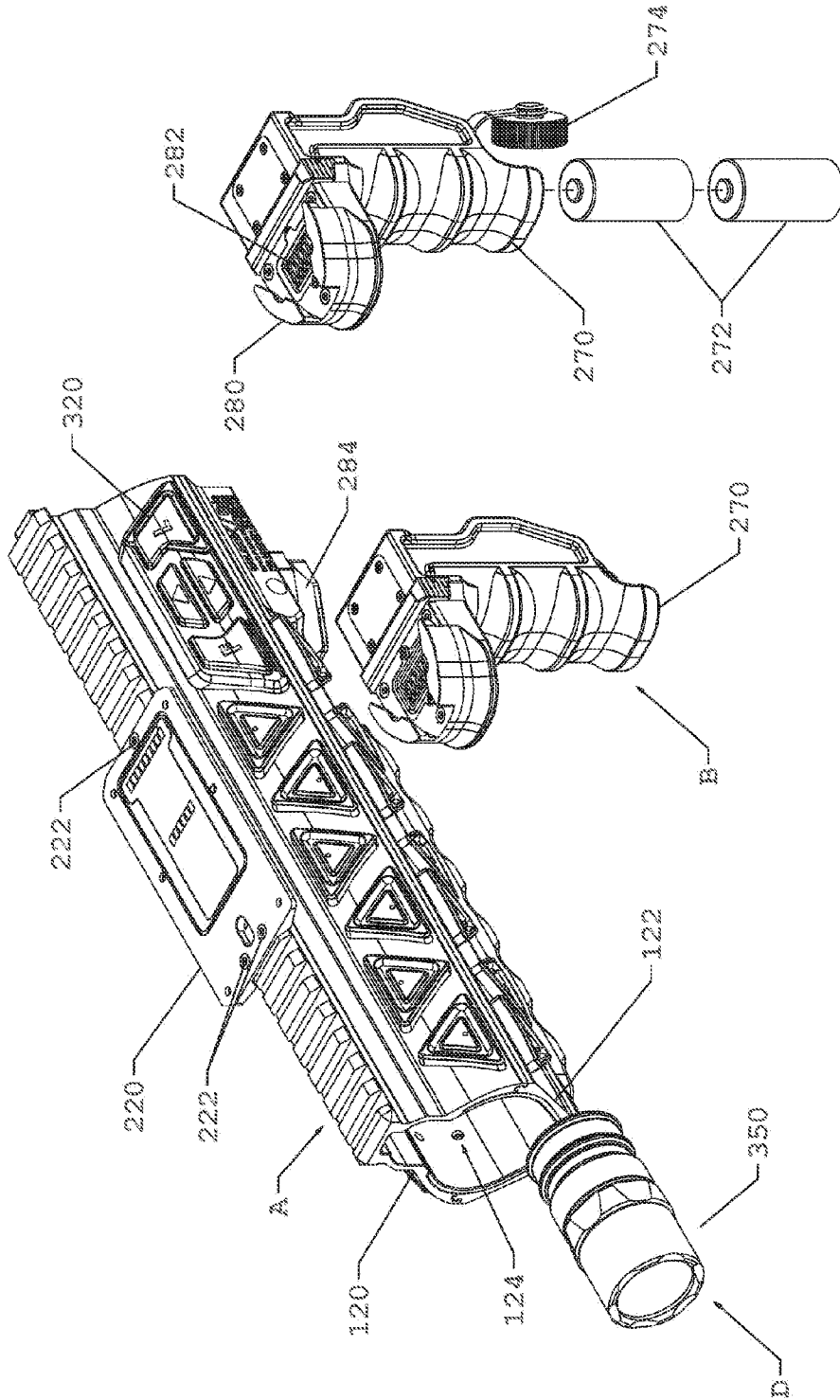


FIG. 6A

FIG. 6B

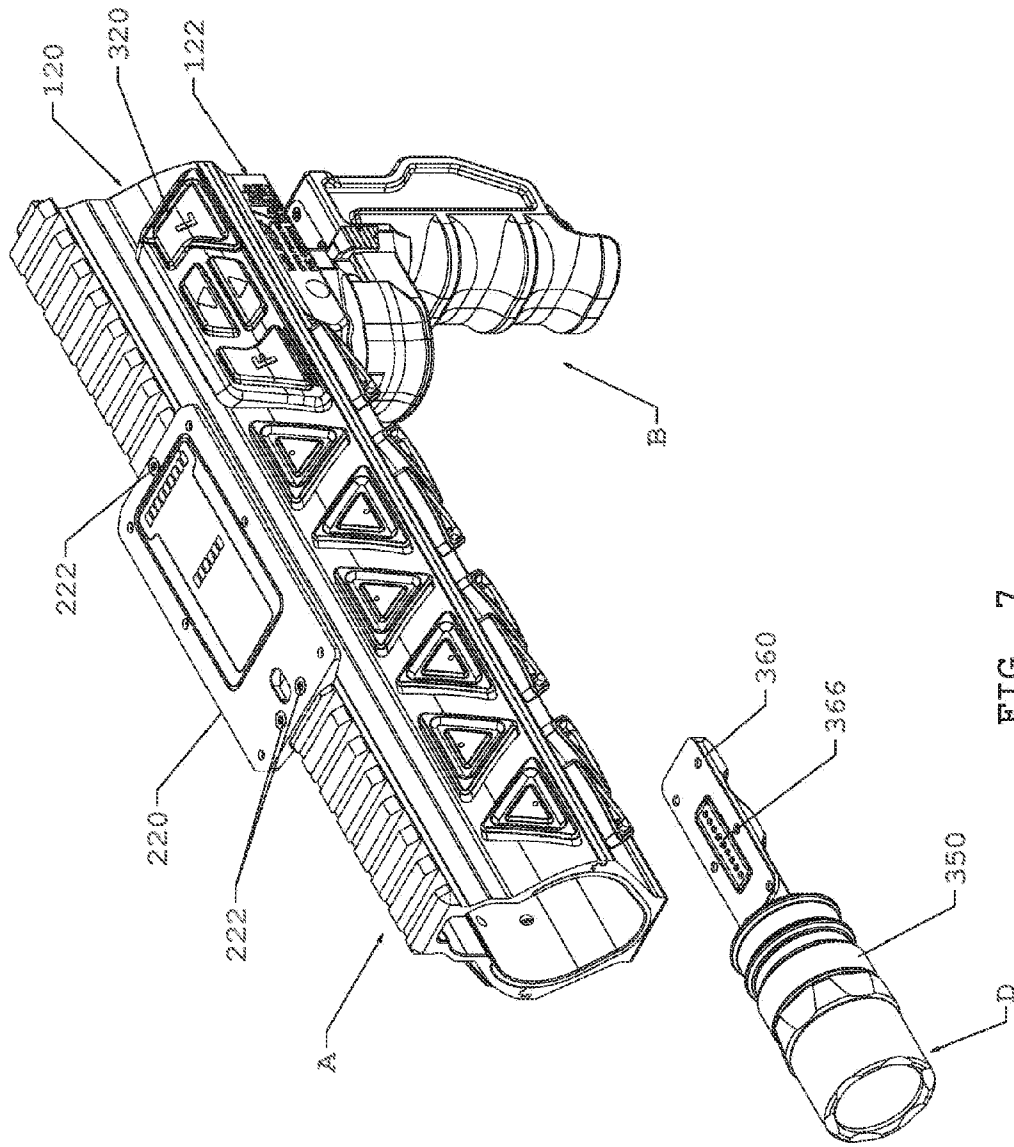


FIG. 7

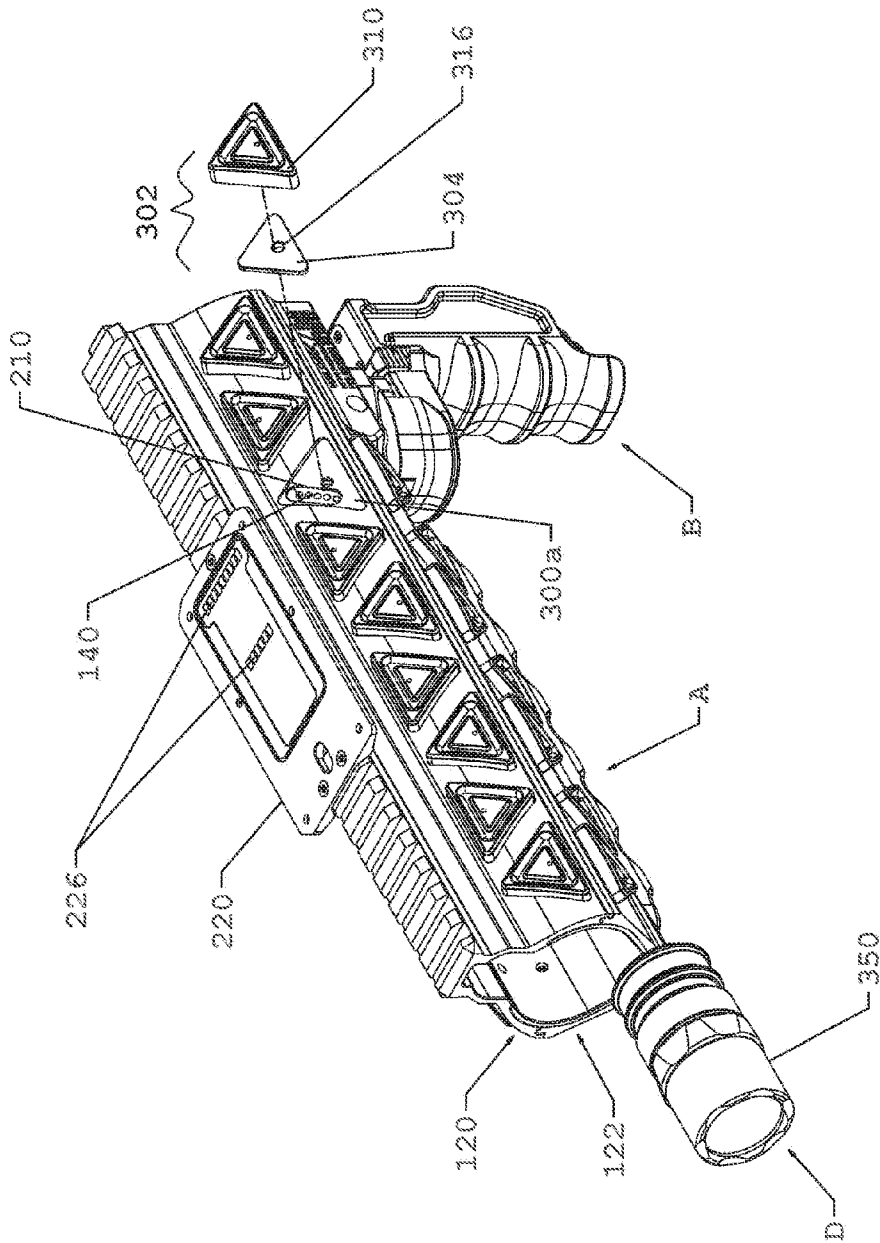


FIG. 8

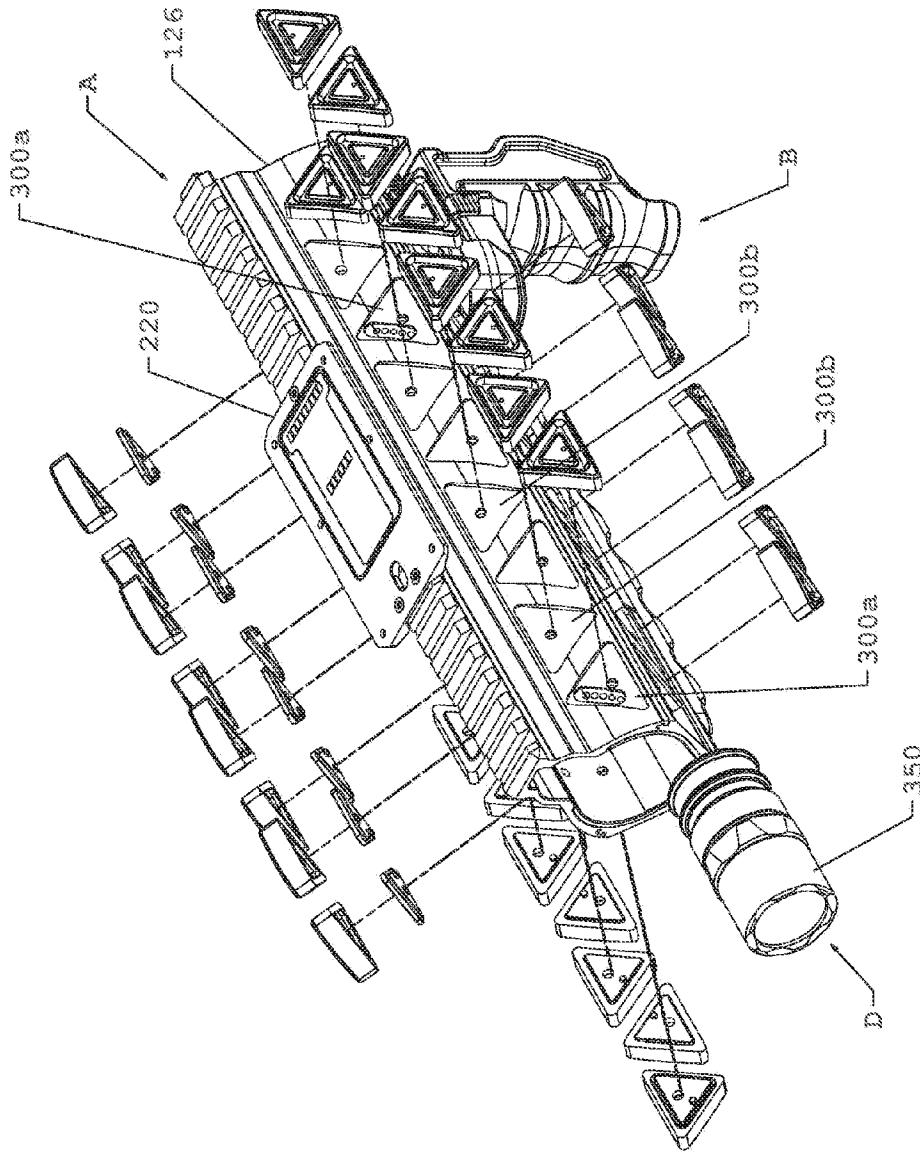


FIG. 9

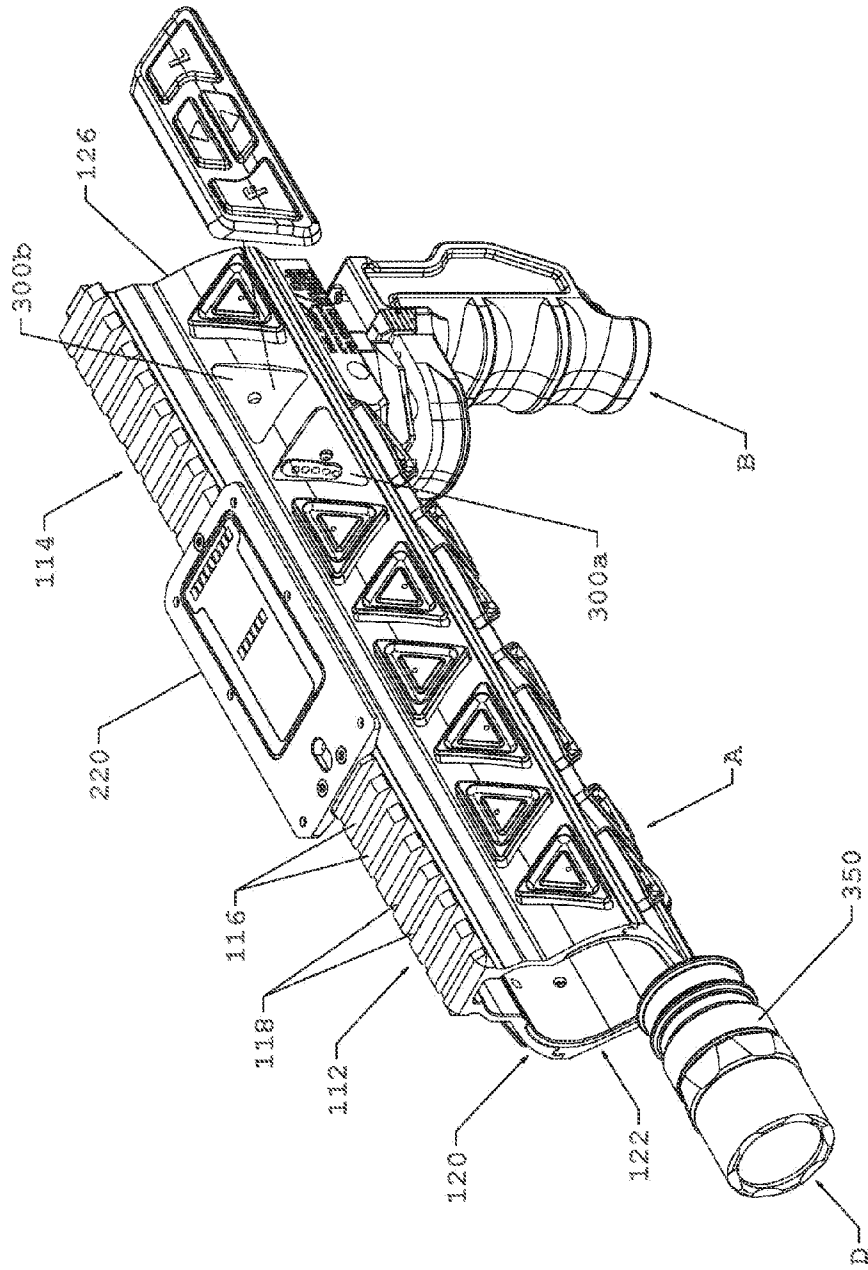


FIG. 10

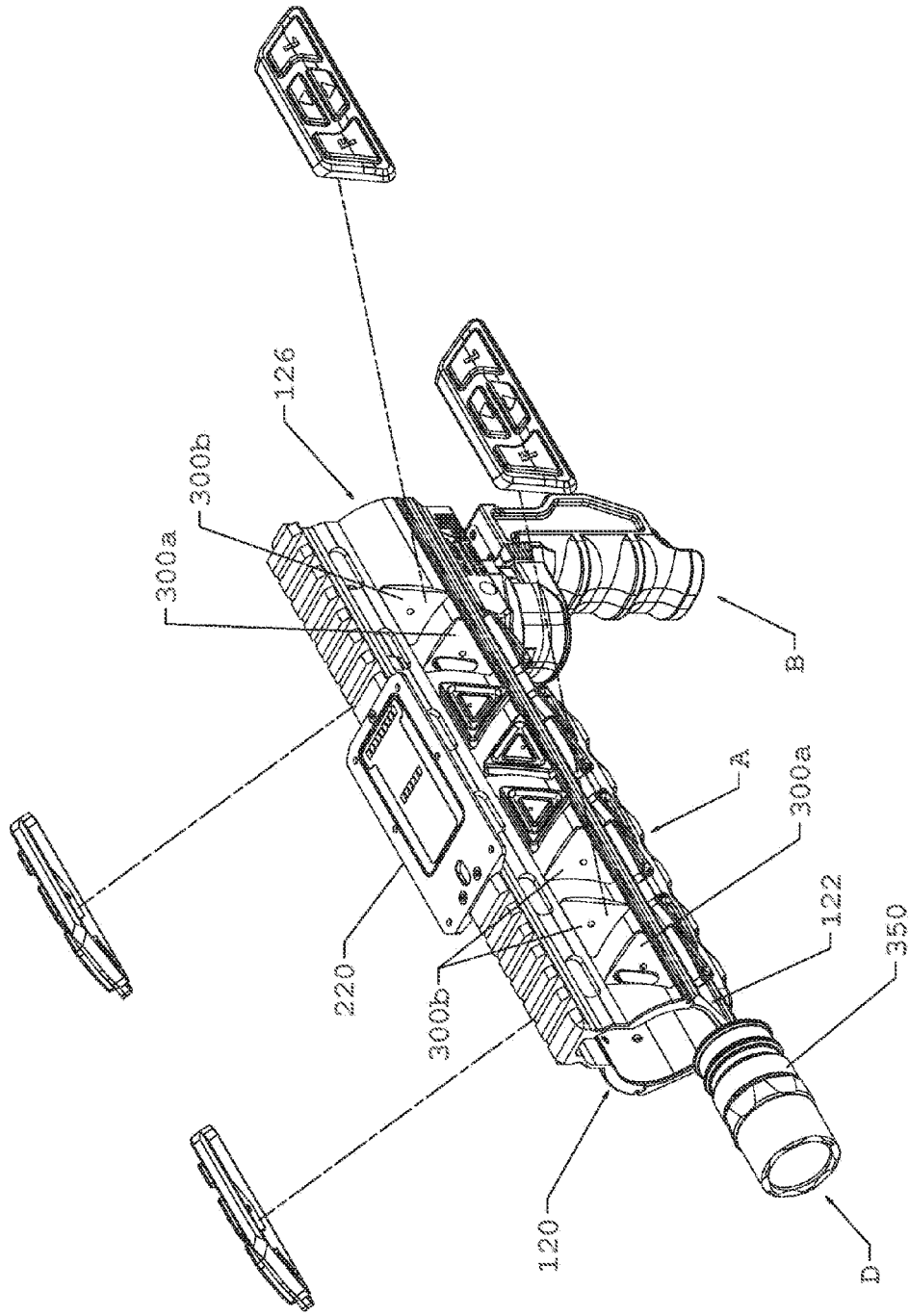


FIG. 11

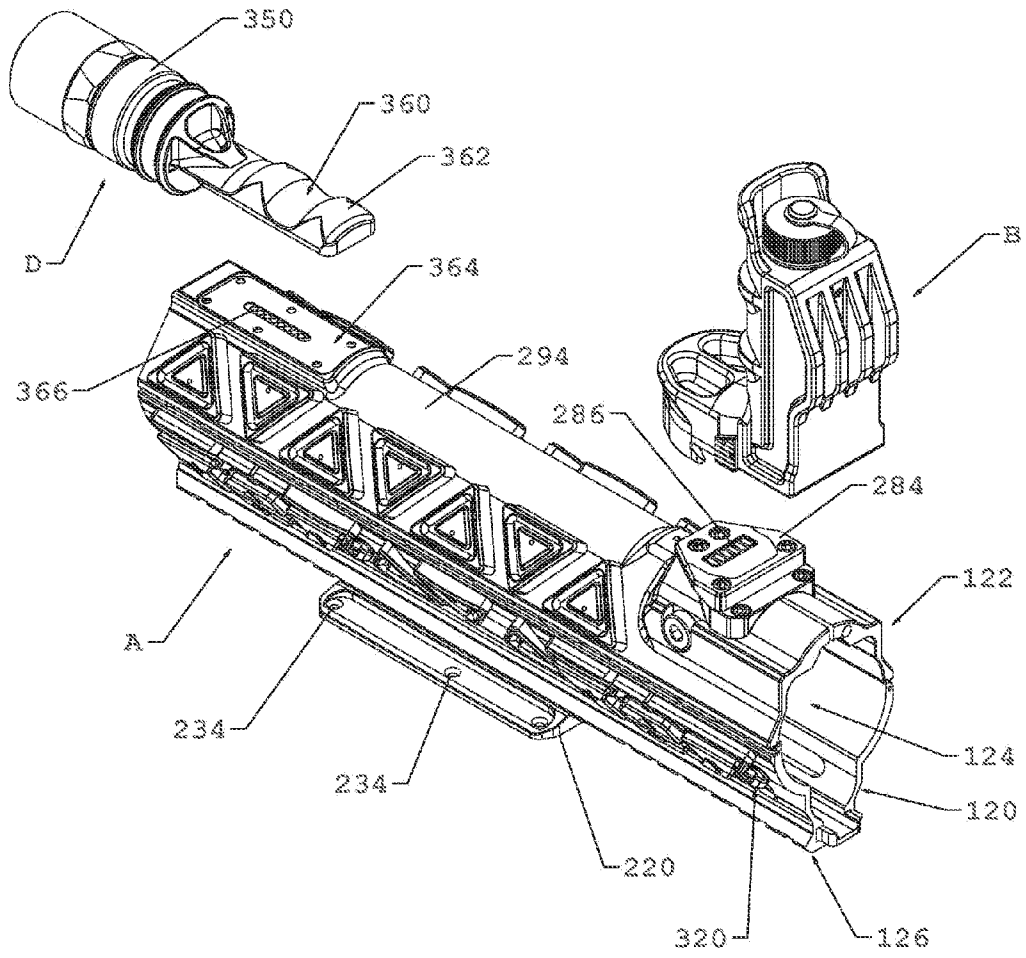


FIG. 12

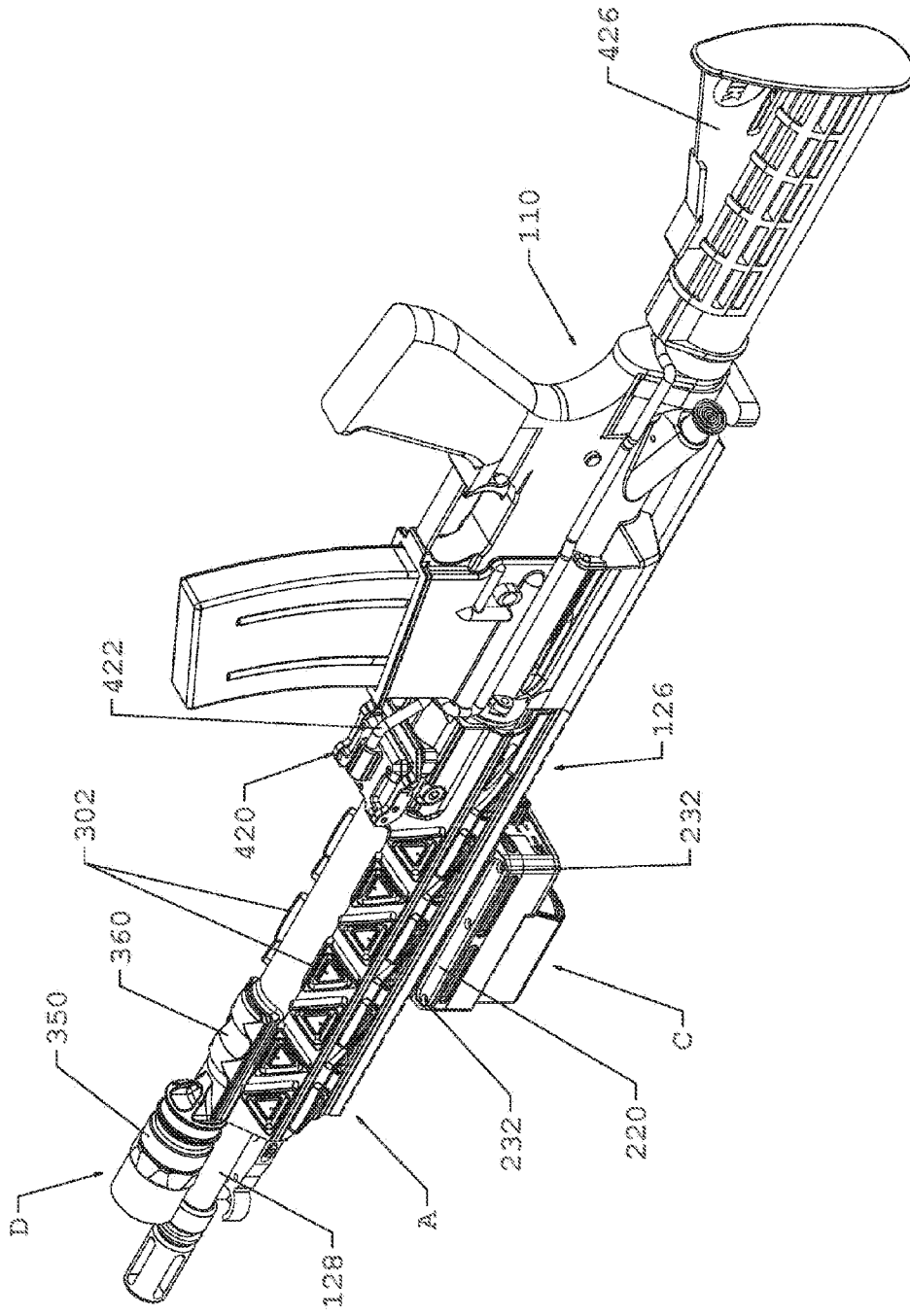


FIG. 13

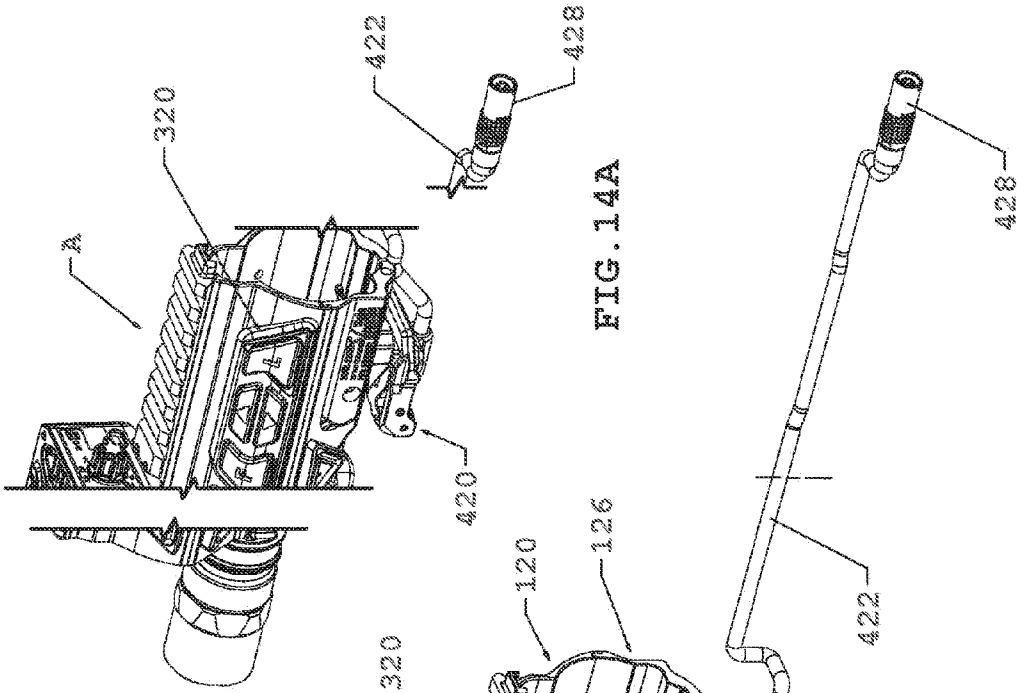


FIG. 14A

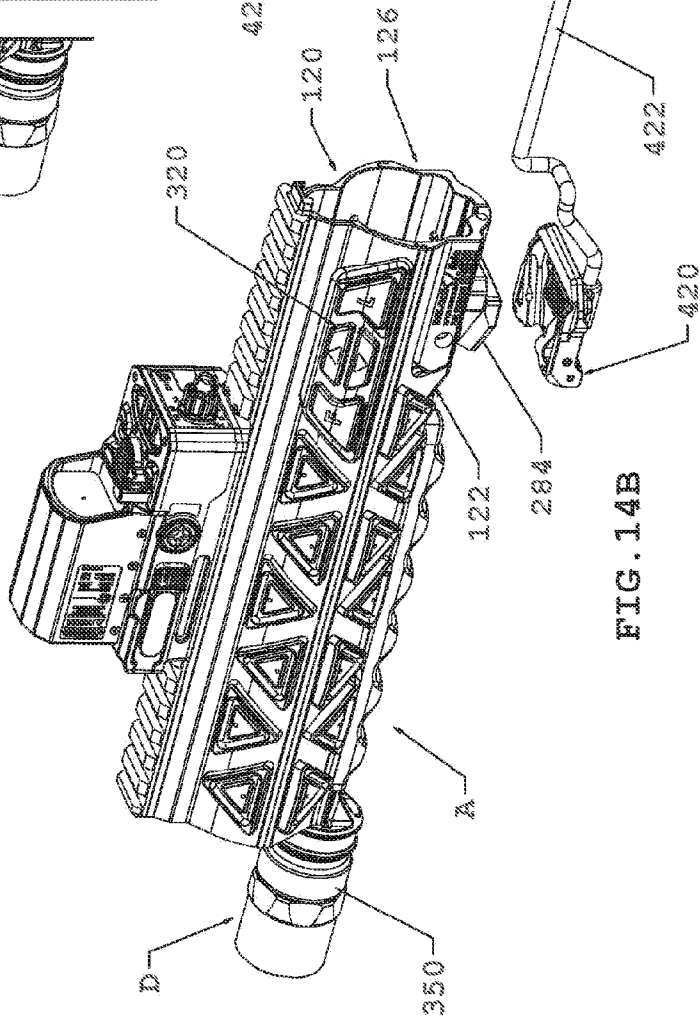


FIG. 14B

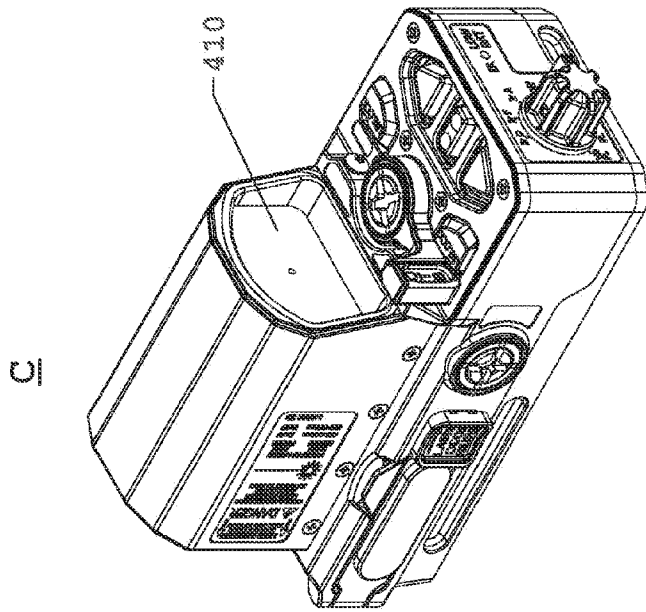


FIG. 15

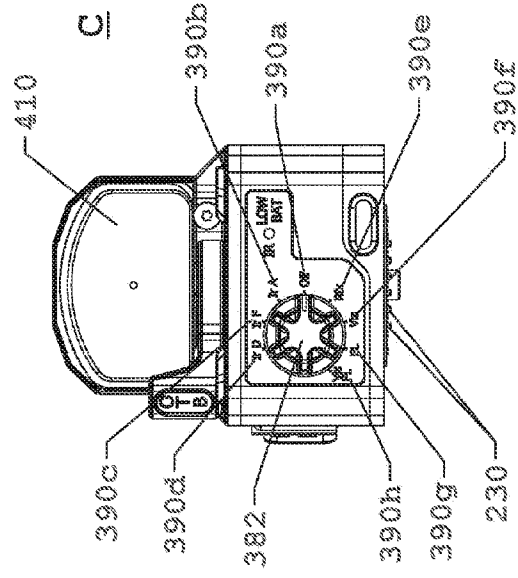


FIG. 16

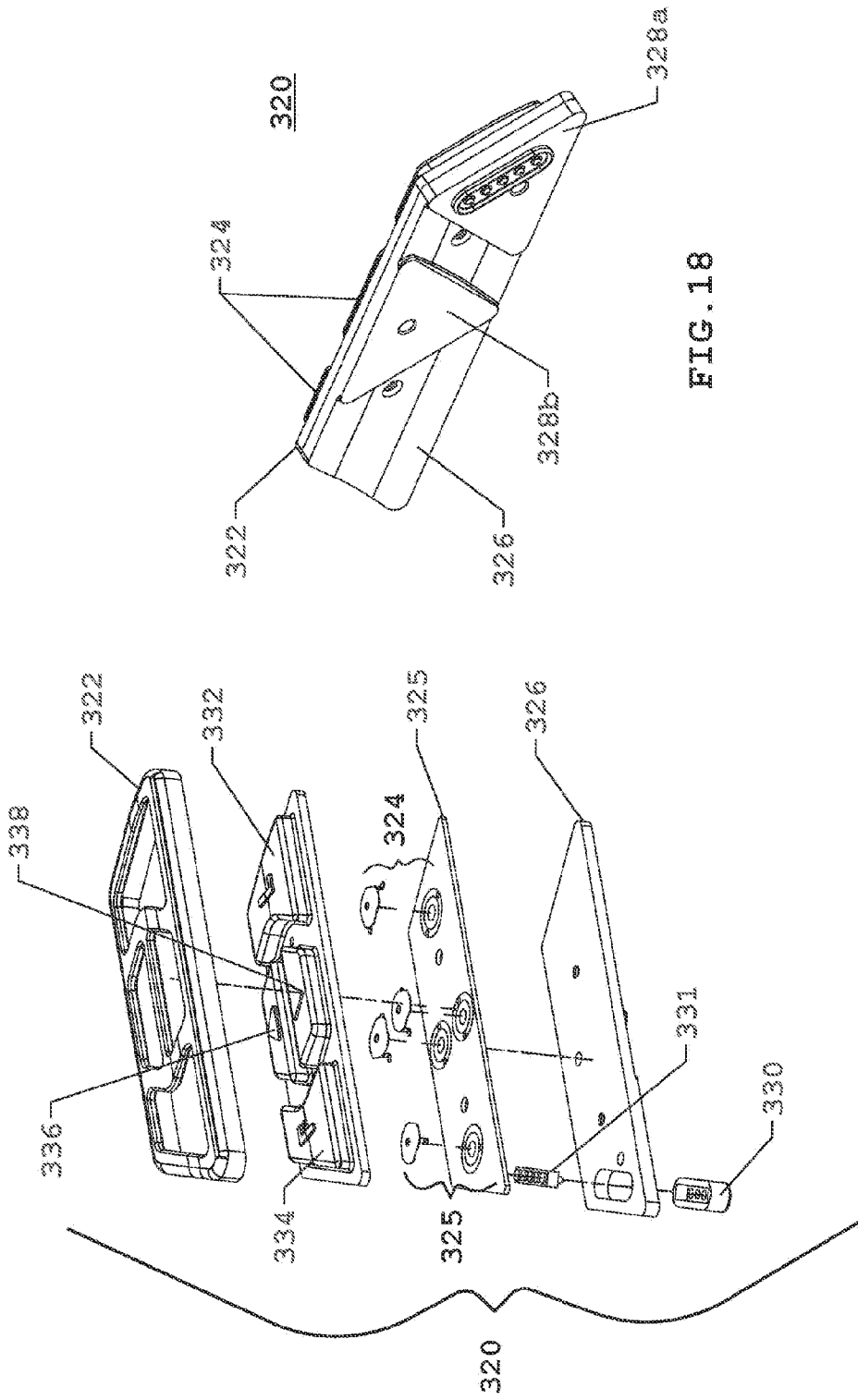


FIG. 18

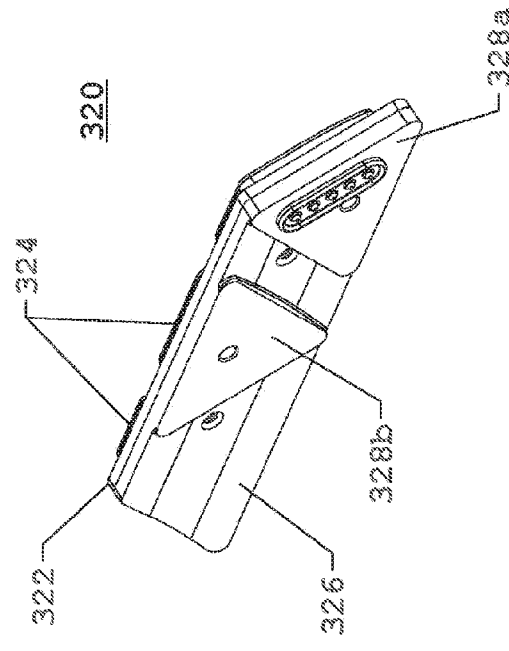


FIG. 17

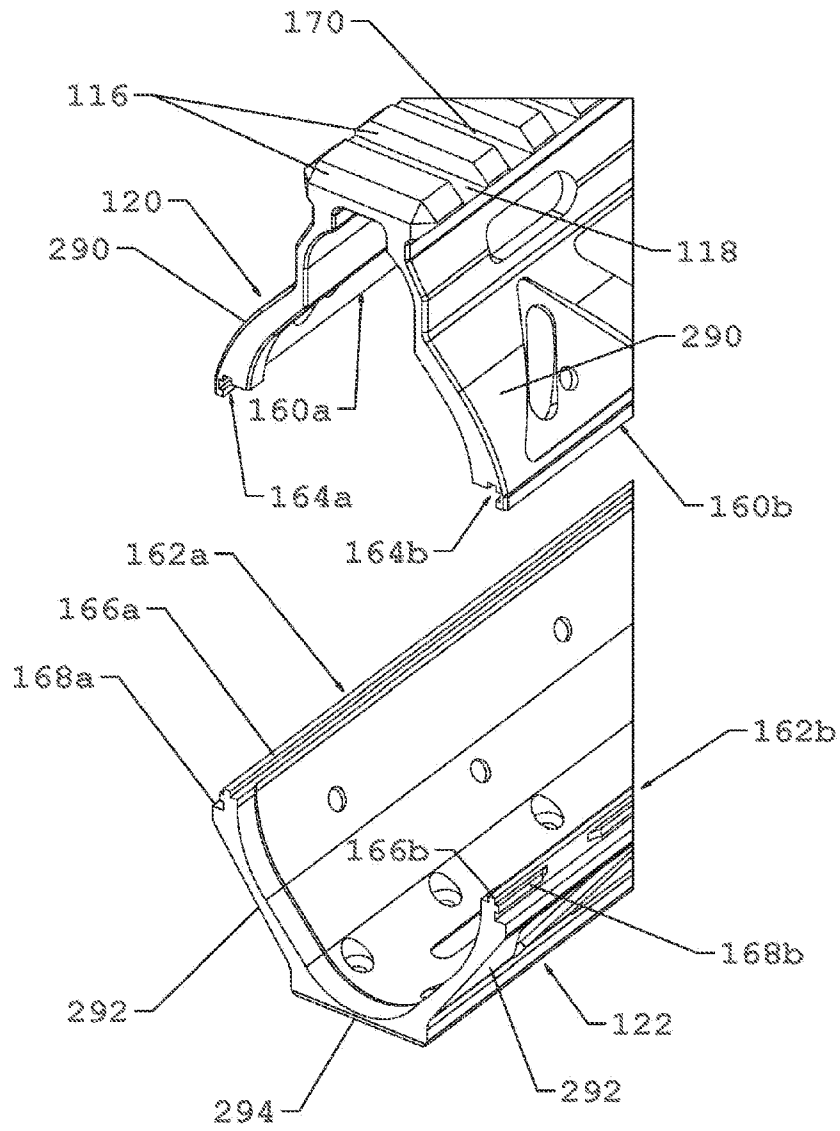


FIG. 19

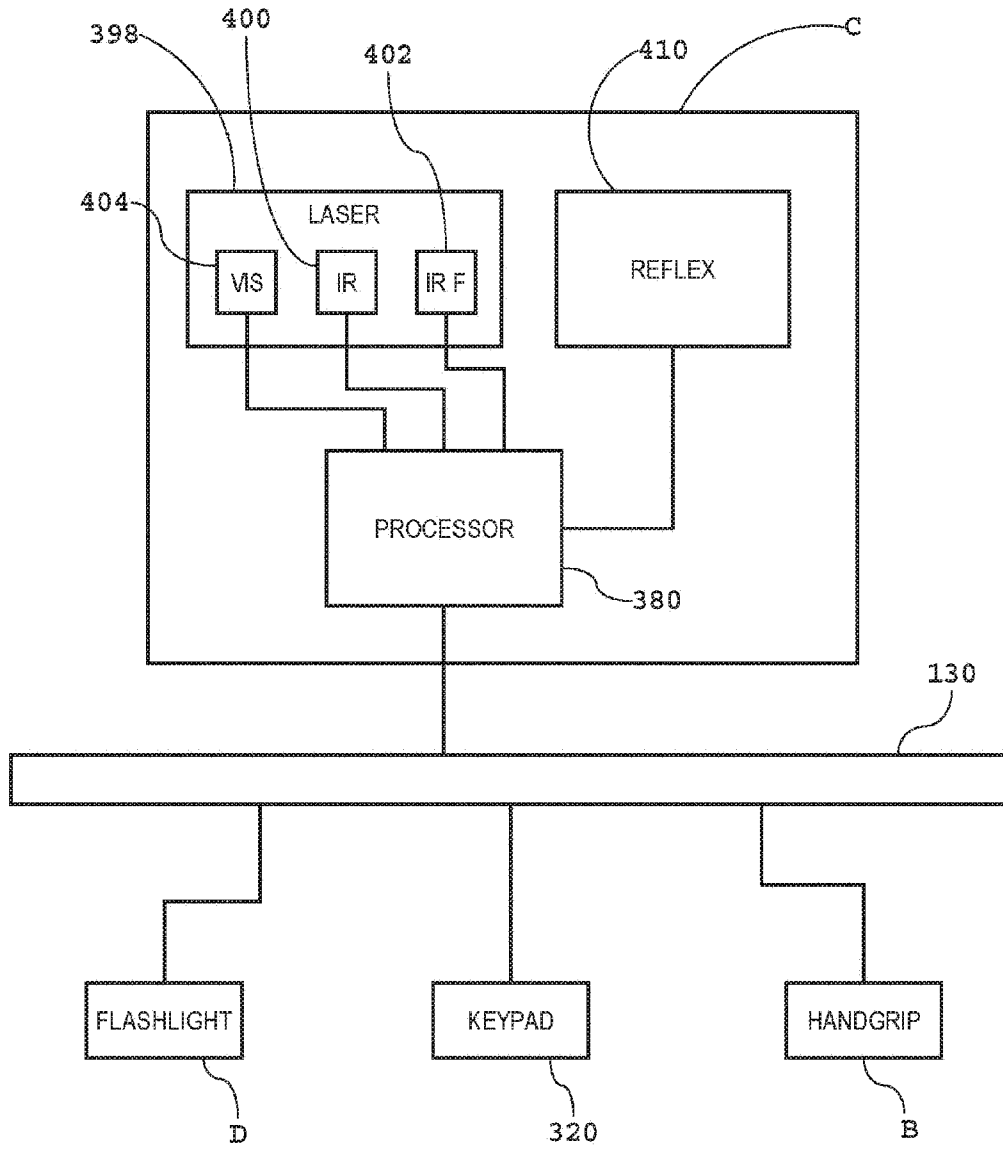


FIG. 20