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WEMMER

(54) UNIVERSAL FIREARM SLING

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(21) Appl. No.: **11/874,530**

(22) Filed: **Oct. 18, 2007**

Related U.S. Application Data

(60) Provisional application No. 60/862,023, filed on Oct. 18, 2006, provisional application No. 60/953,681, filed on Aug. 2, 2007.

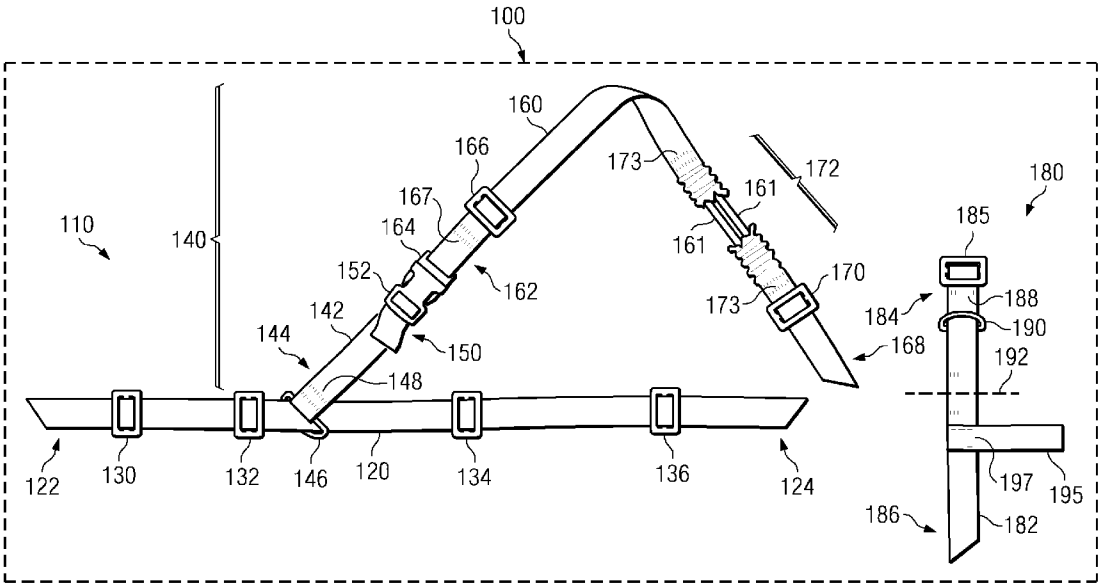
Publication Classification

(51) **Int. Cl.**
F41C 33/00 (2006.01)

(52) **U.S. Cl.** **224/579**; 224/150; 224/255

(57) **ABSTRACT**

An ambidextrous firearm sling having a transverse webbing piece having a first end adapted to removably engage a first sling swivel near a forward end of a firearm and a second end adapted to removably engage a buttloop webbing piece is disclosed. The sling has a top webbing piece attached at a first end to the transverse piece and adapted to attach at a second end to the buttloop webbing piece. The buttloop webbing piece provides first and second mating ends and is adapted to encircle the buttstock of a firearm and engage the buttstock circumferentially by engagement of the first and second mating ends. The buttloop webbing piece is secured against transverse movement along the length of the buttstock by an attached anchor strap with a hook and loop fastener adapted to removably engage a second sling swivel on the buttstock.



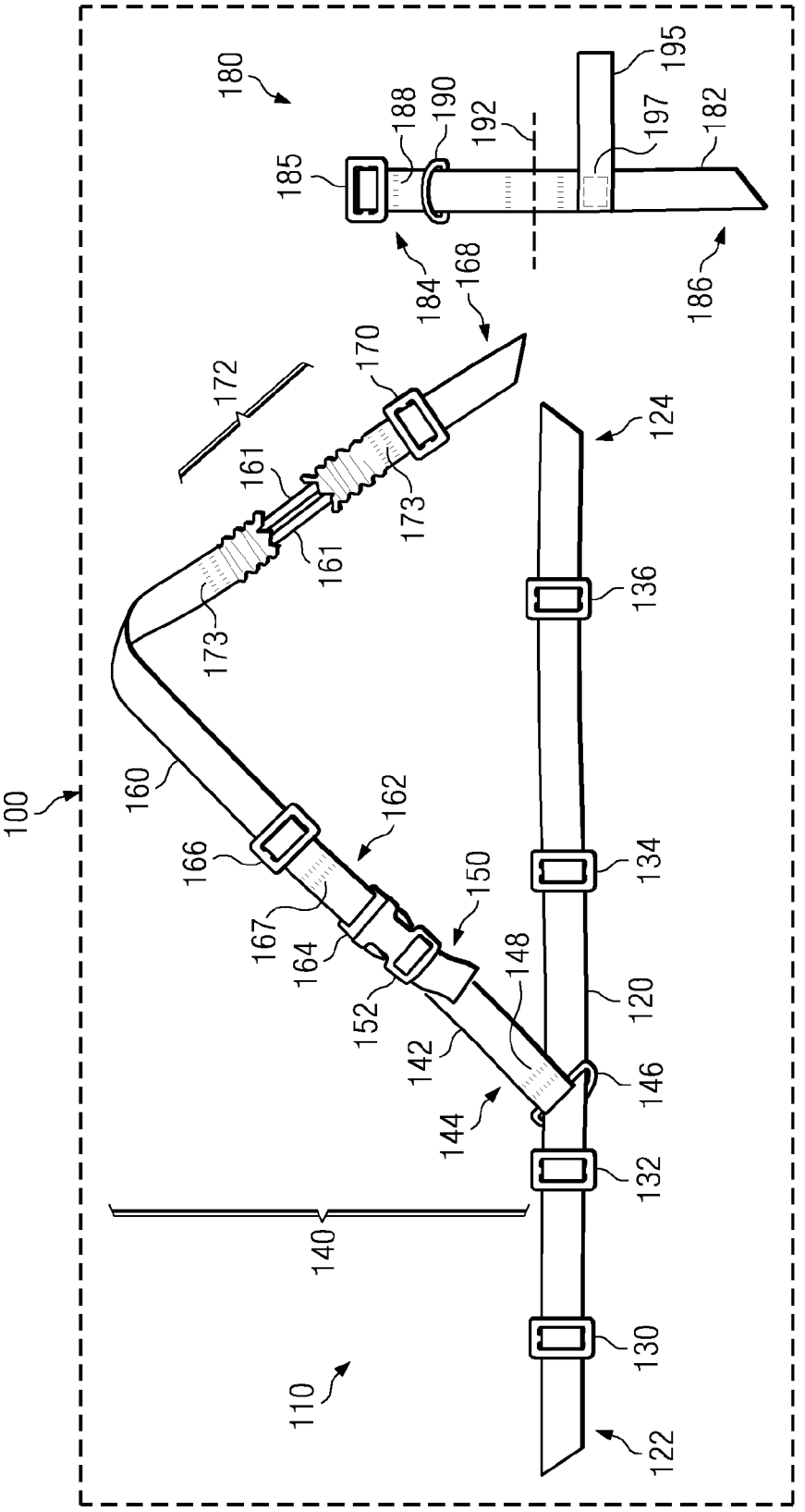

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FIG. 1A

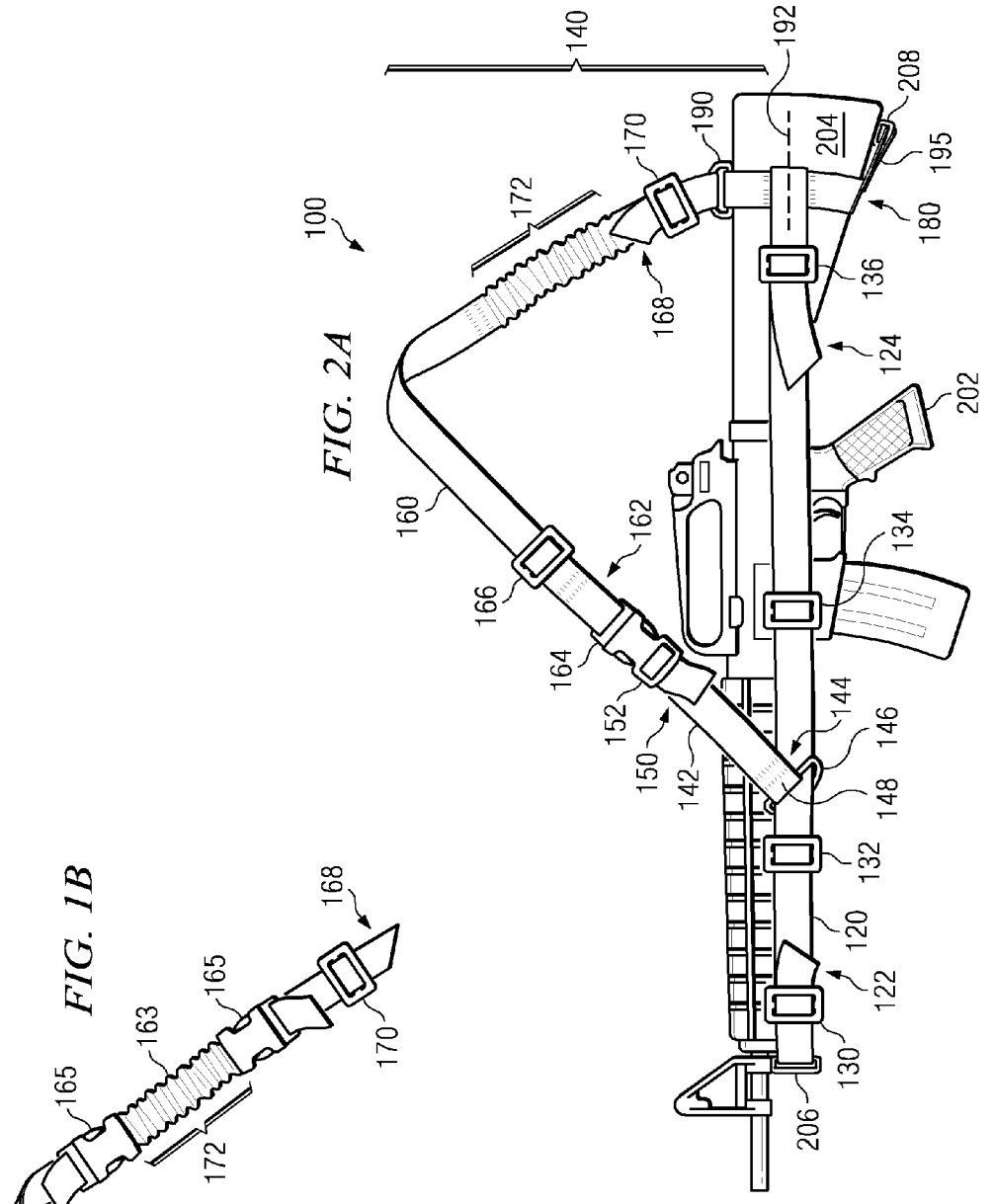

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FIG. 2A

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FIG. 1B

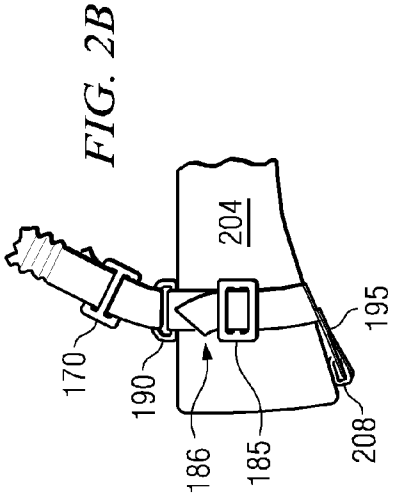

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FIG. 2B

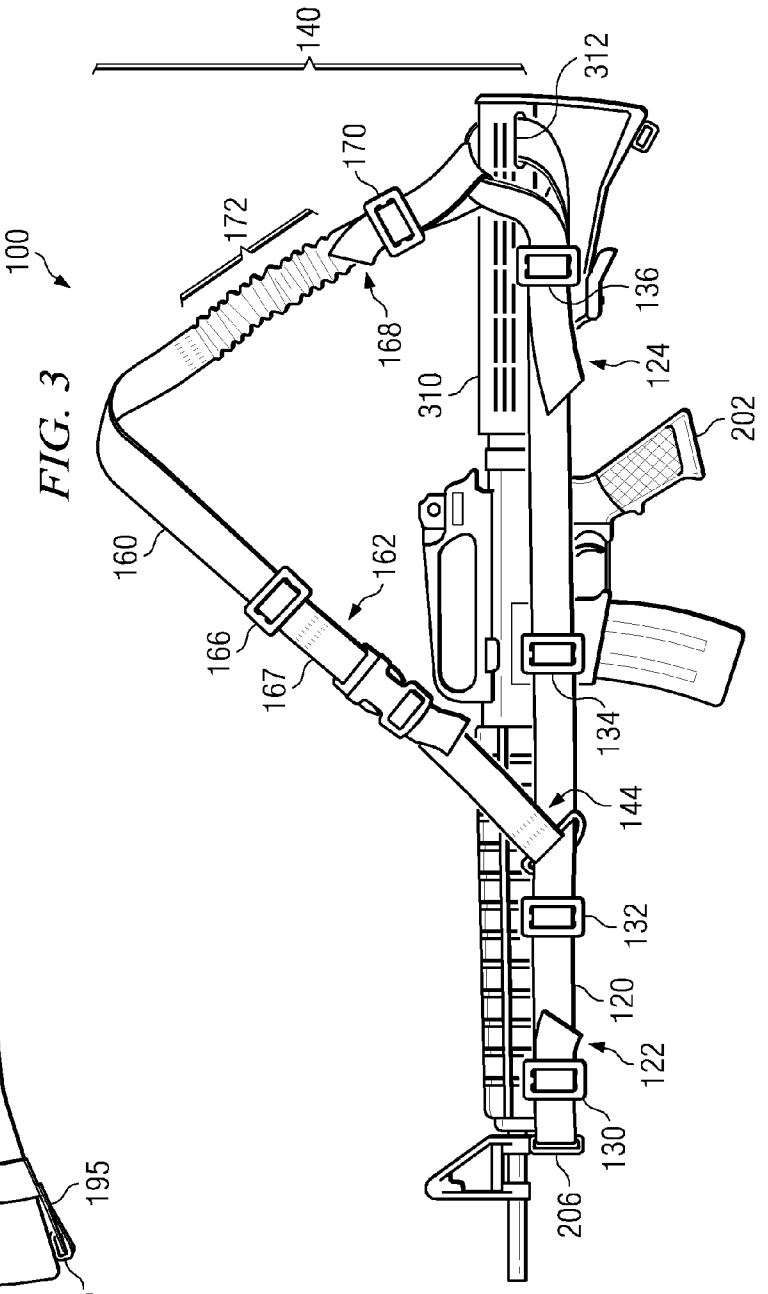

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FIG. 3

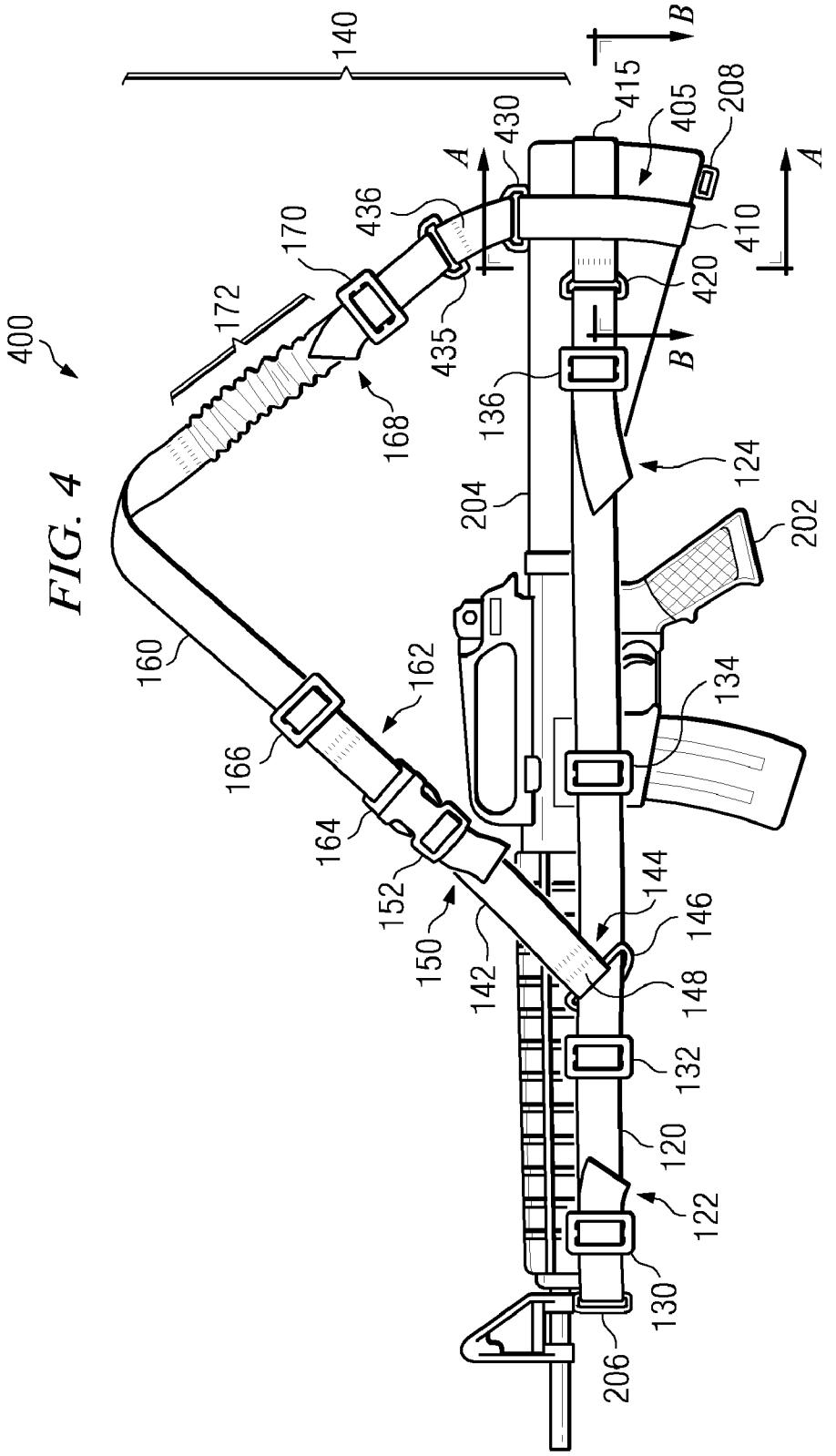

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FIG. 4

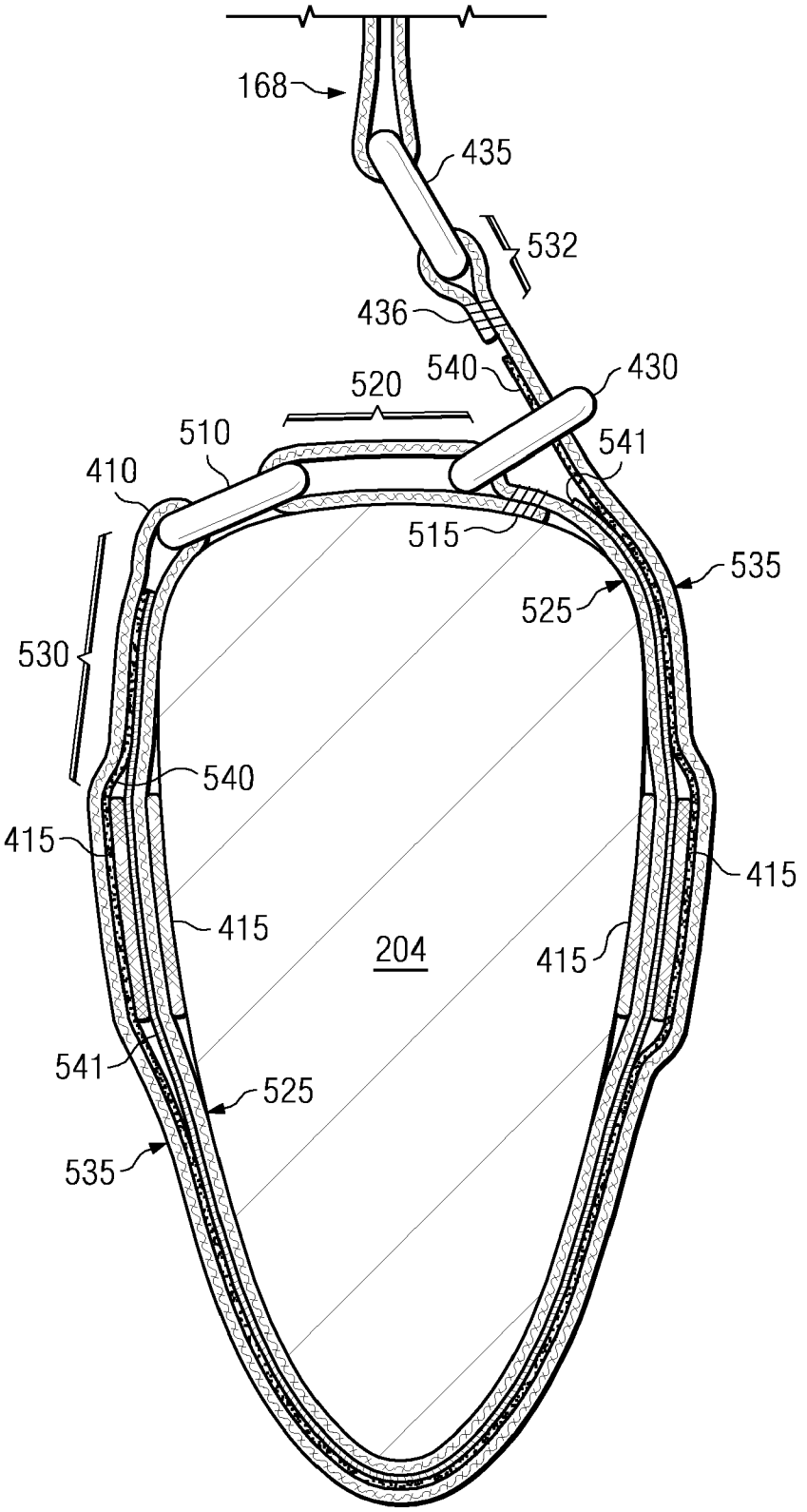

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FIG. 5

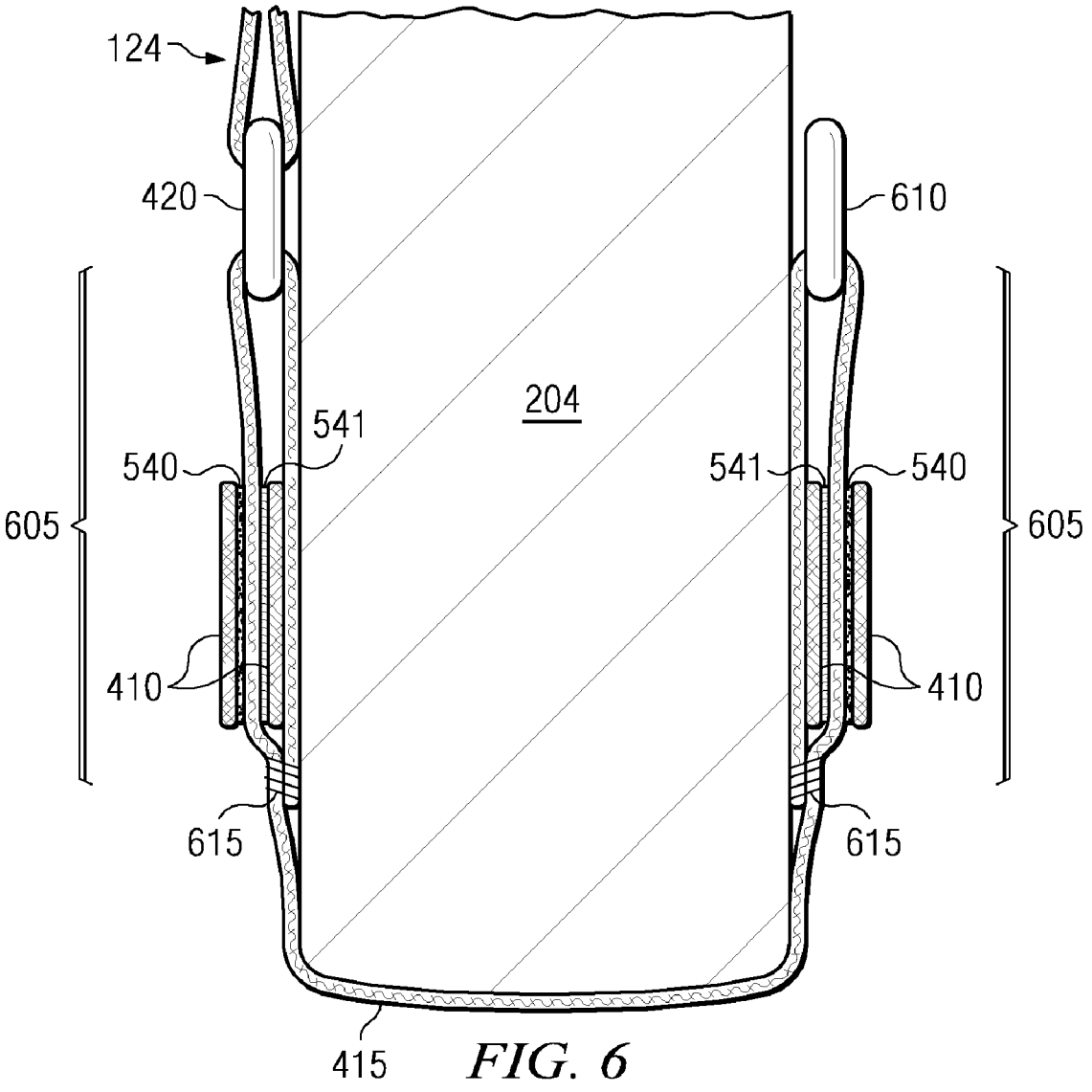


FIG. 6

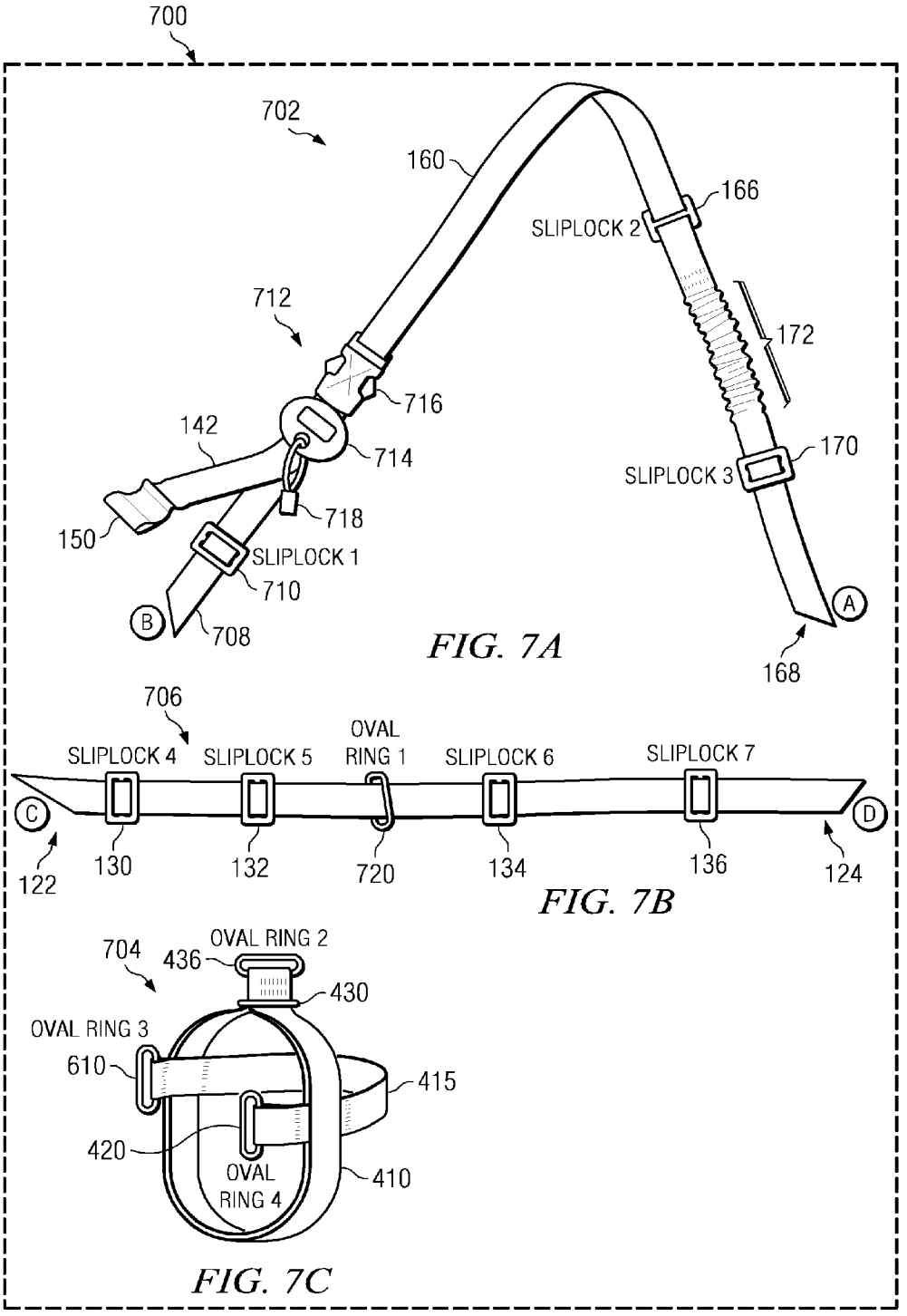


FIG. 7A

FIG. 7B

FIG. 7C

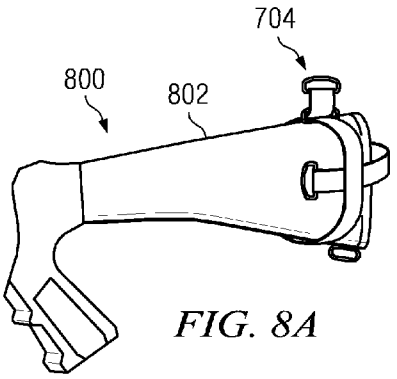


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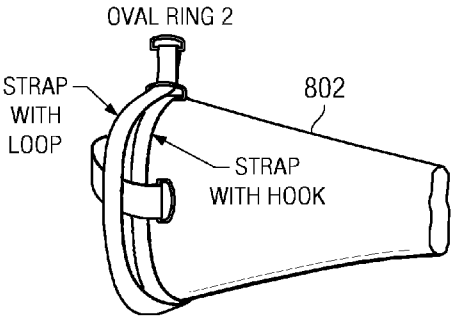


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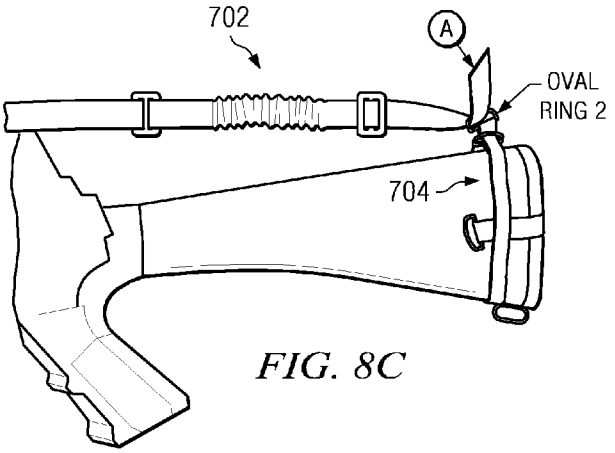


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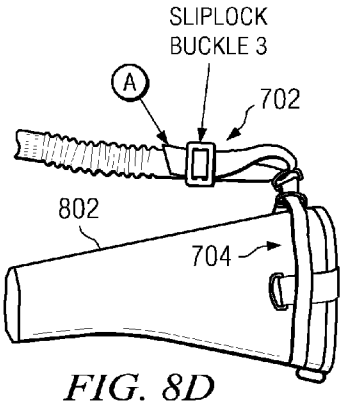


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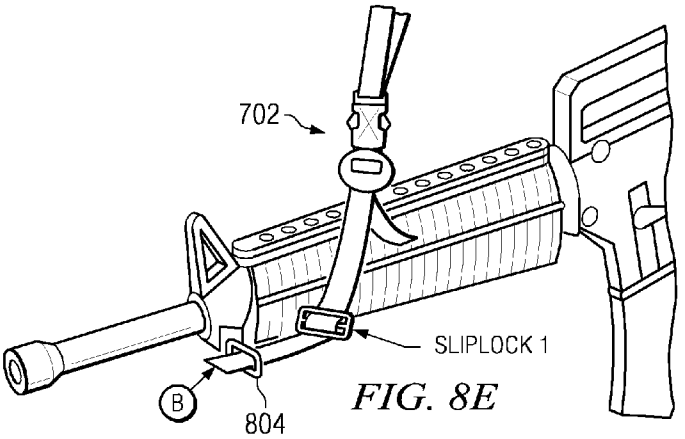


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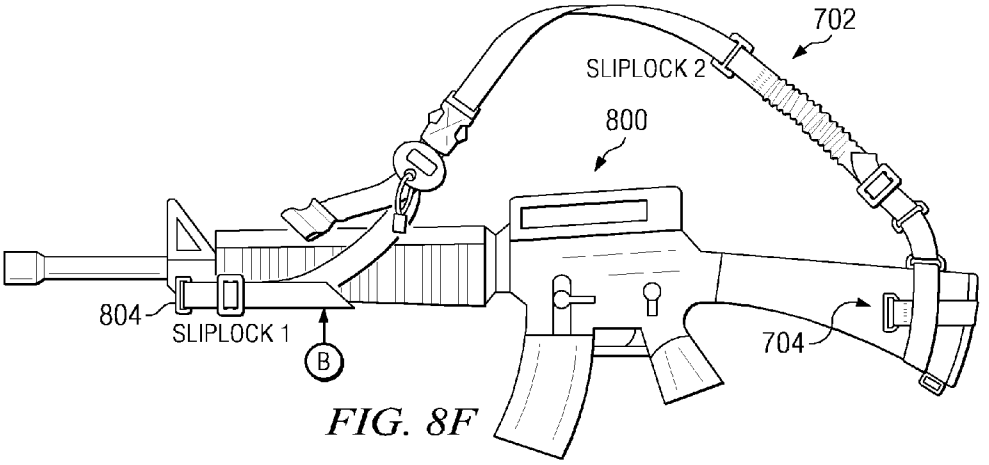


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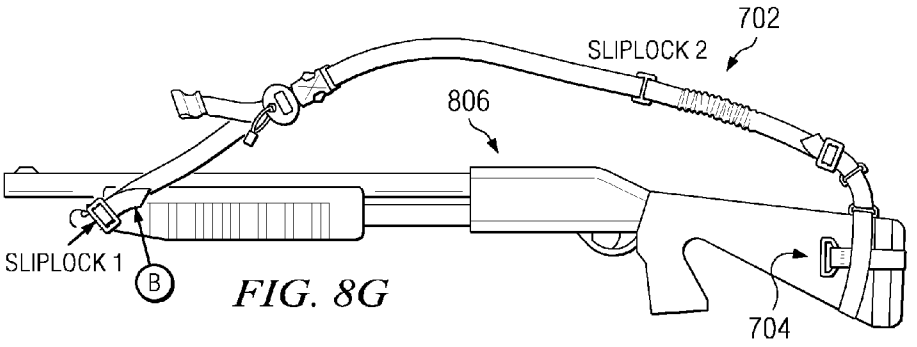


FIG. 8G

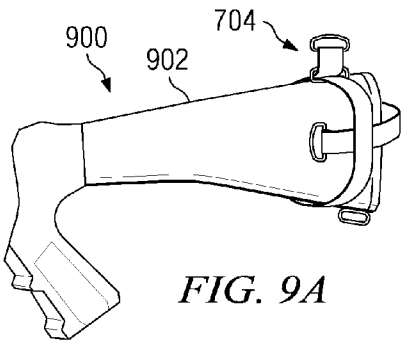


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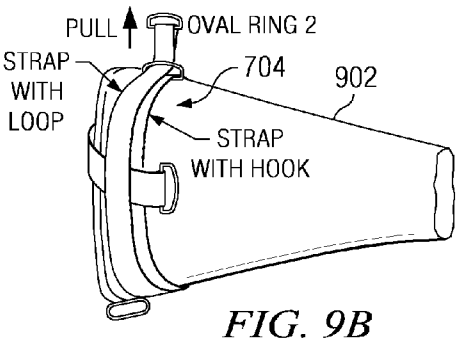


FIG. 9B

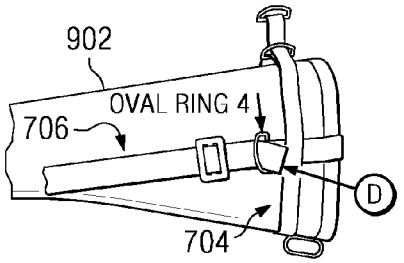


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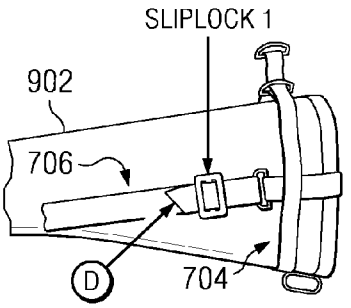


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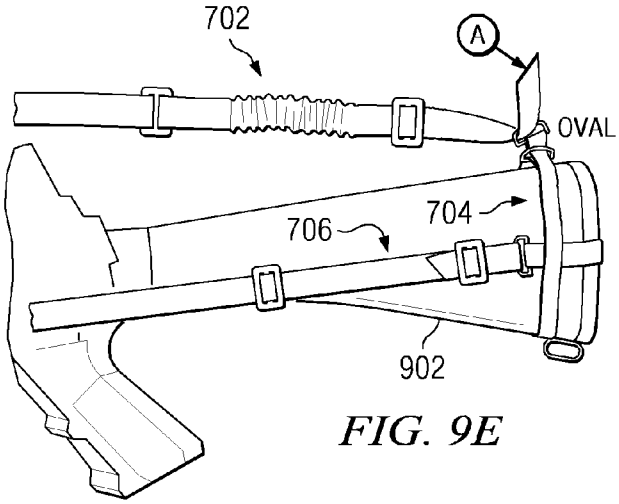


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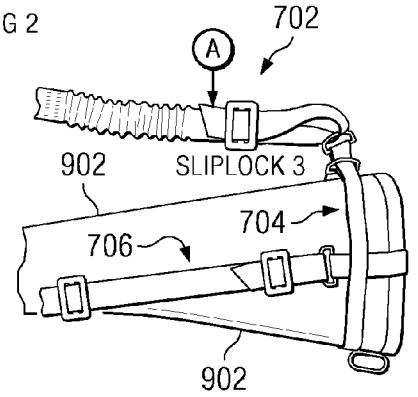


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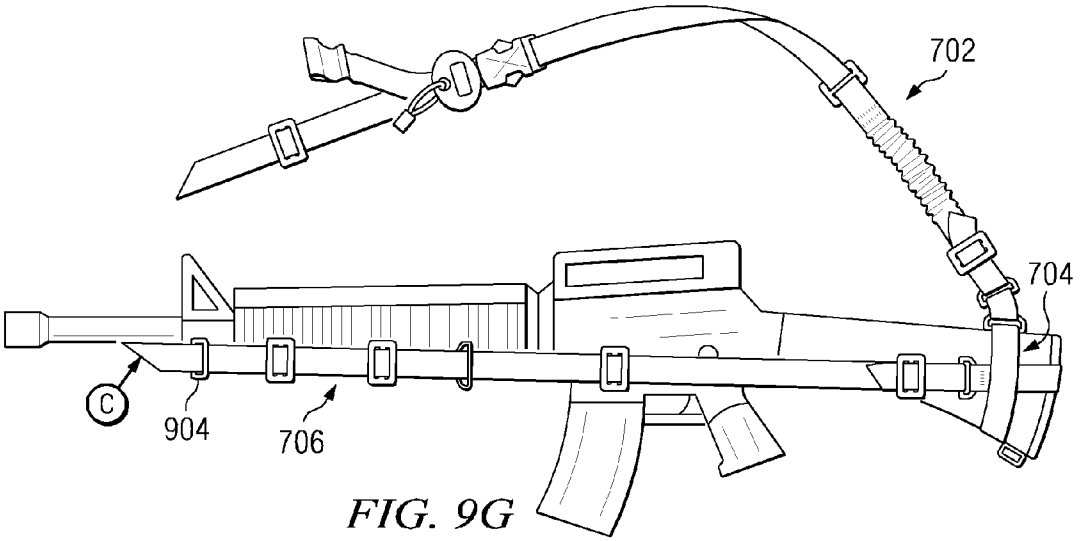


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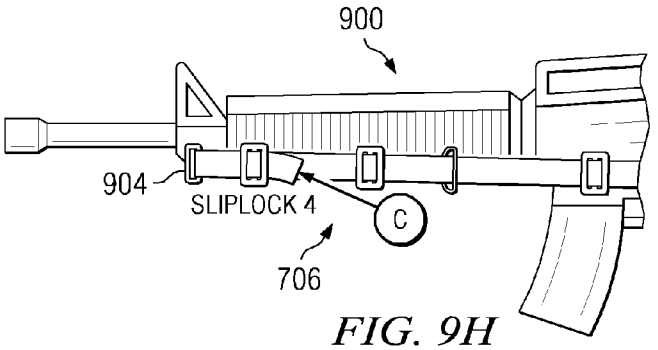


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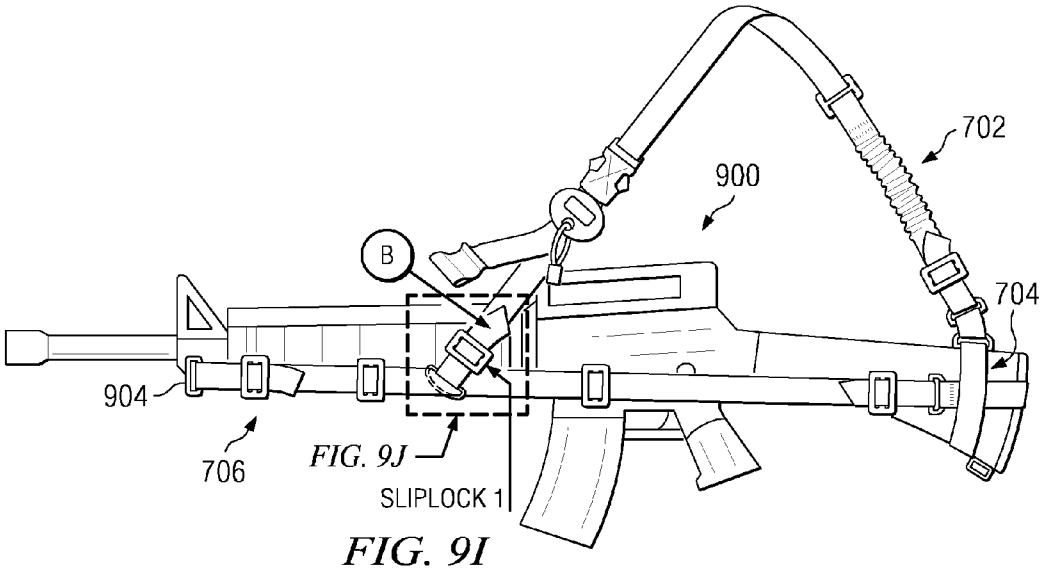


FIG. 9I

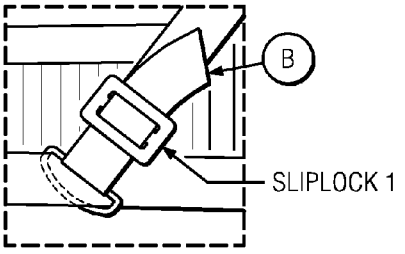


FIG. 9J

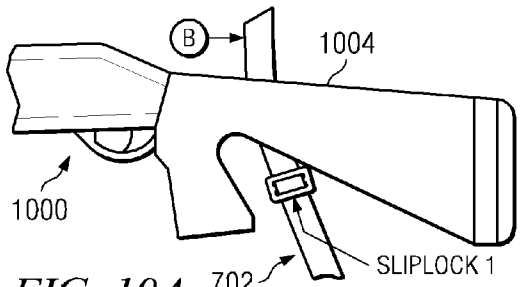


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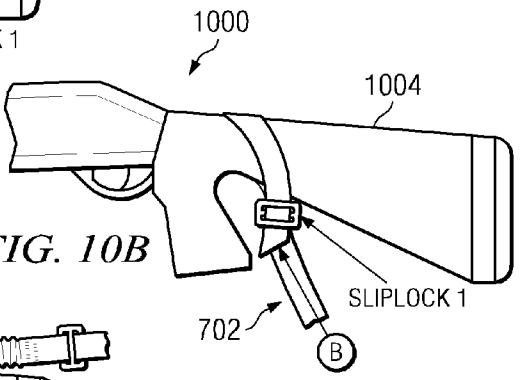


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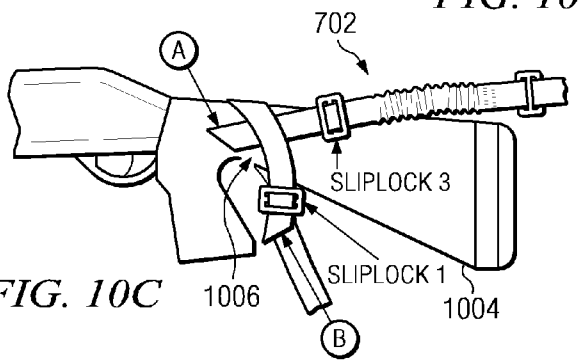


FIG. 10C

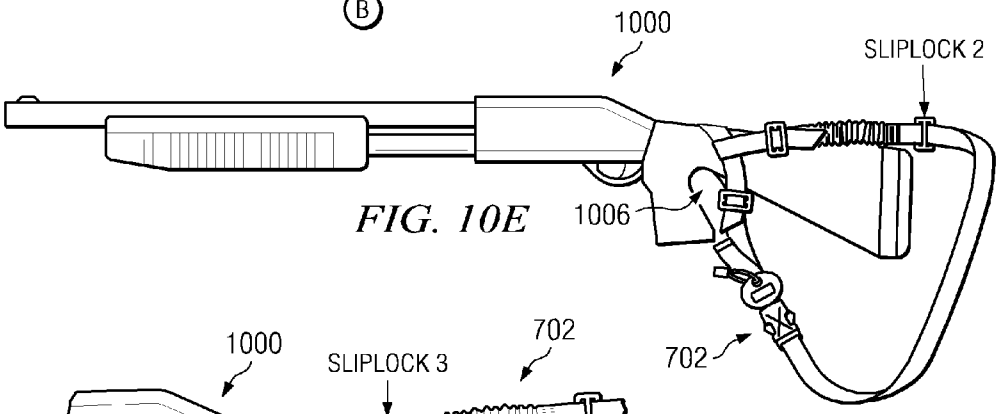


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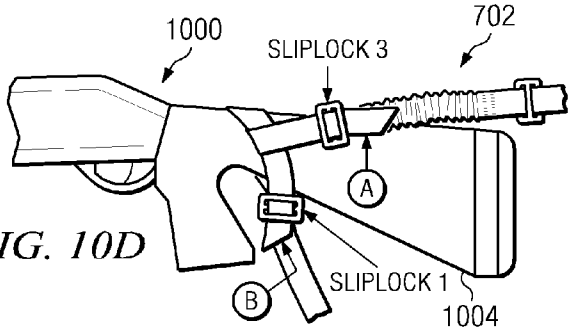


FIG. 10D

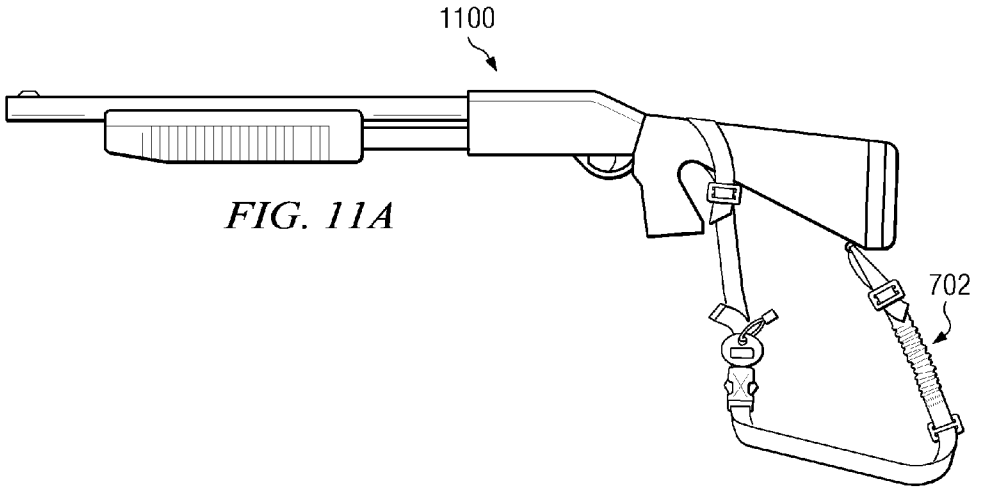


FIG. 11A

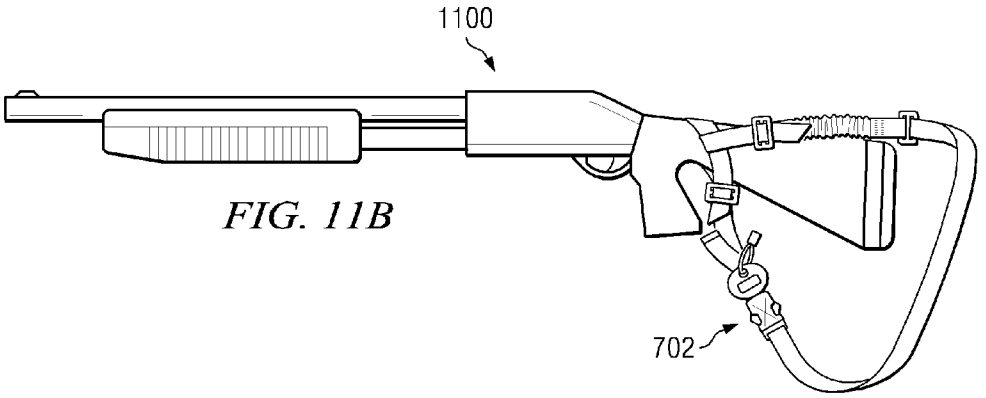


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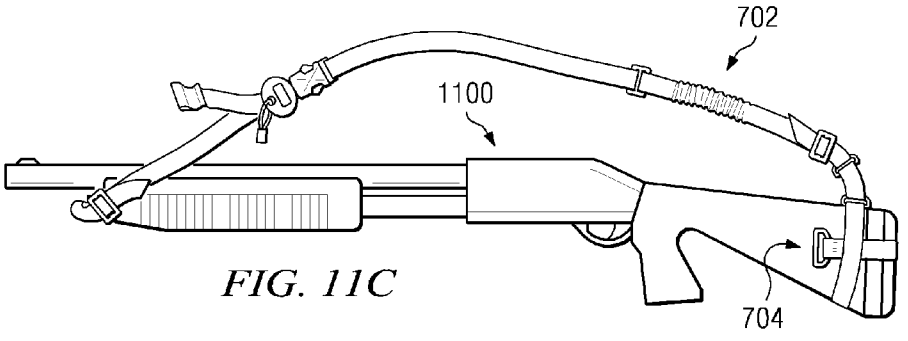


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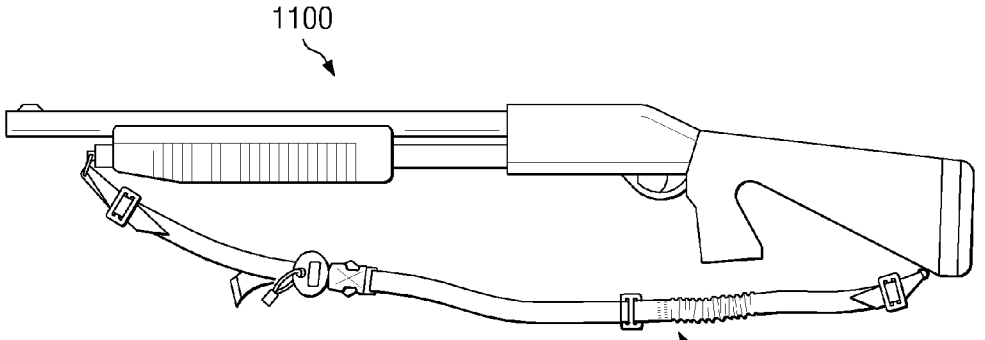


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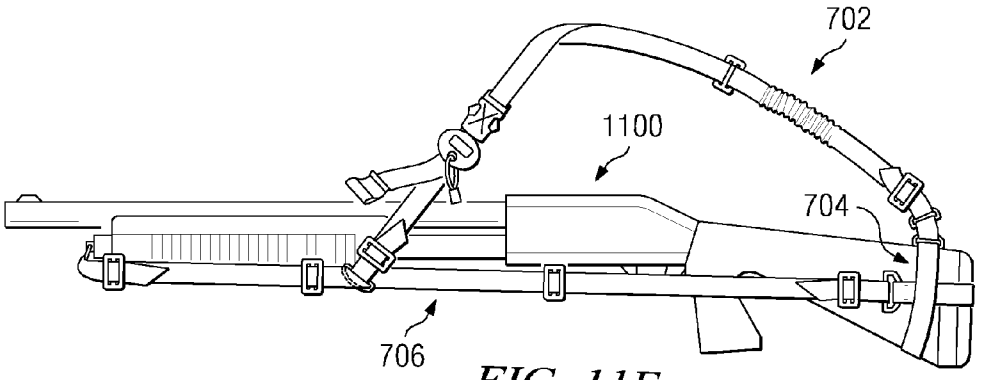


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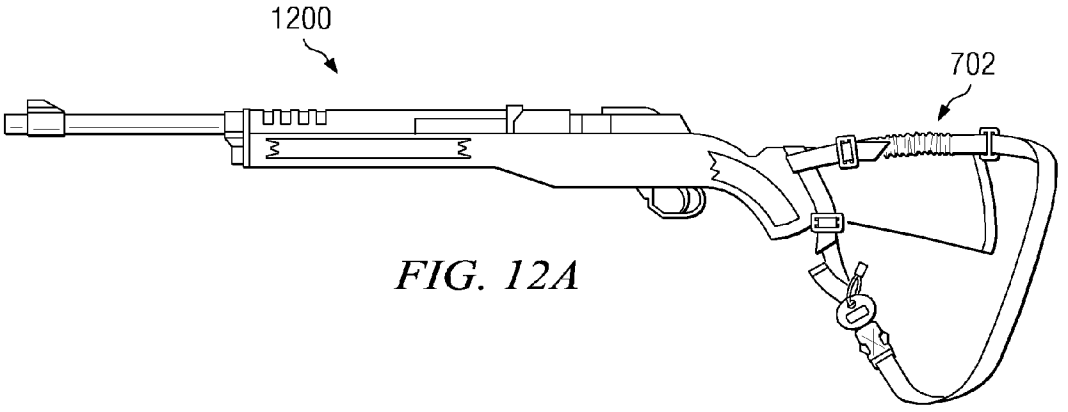


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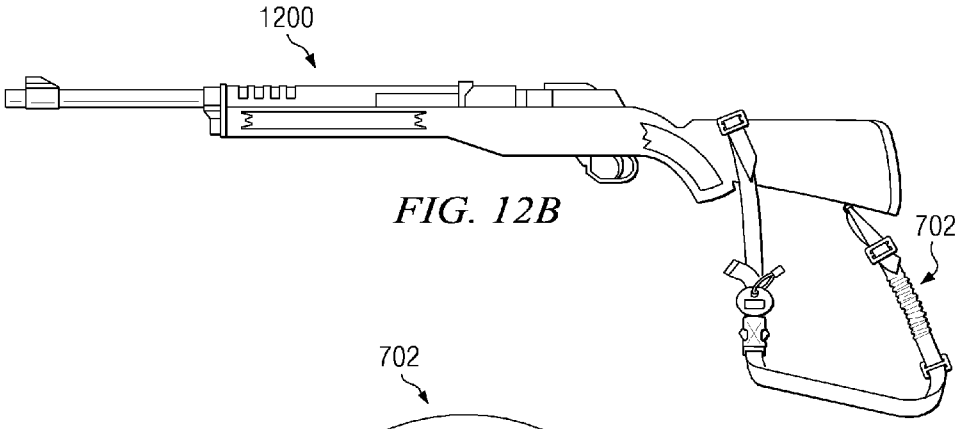


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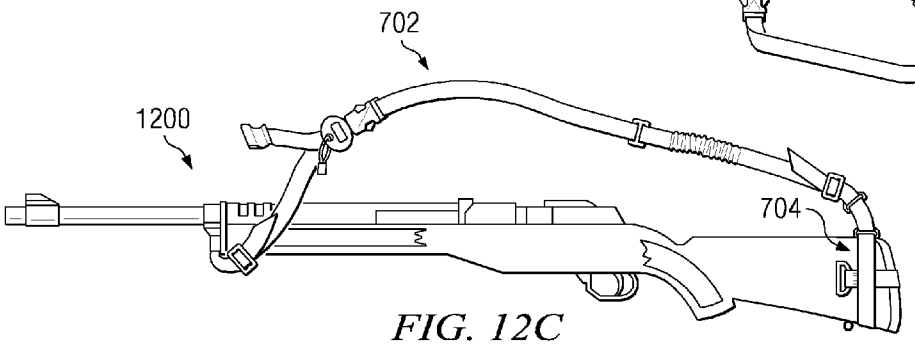


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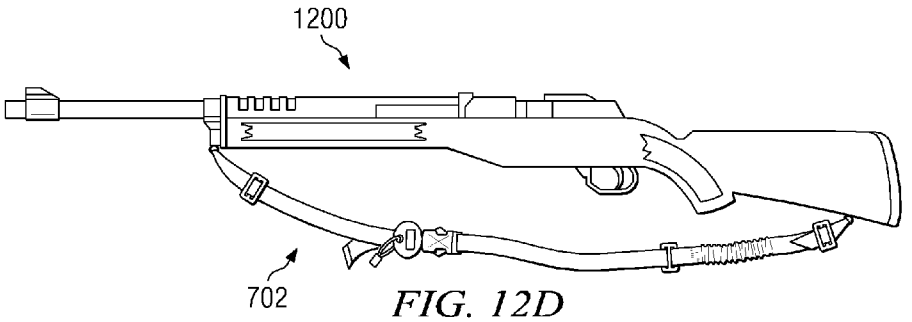


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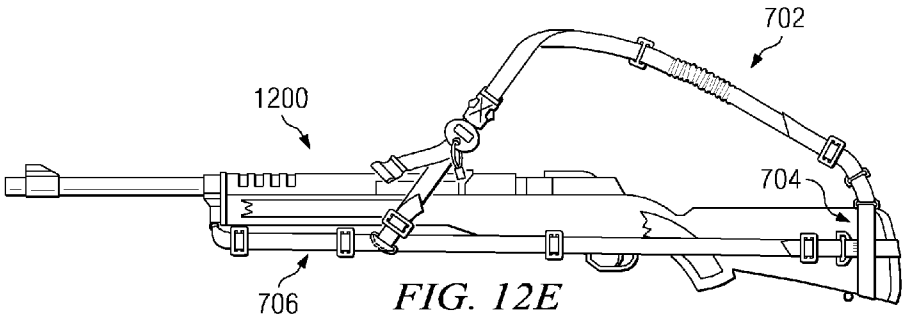


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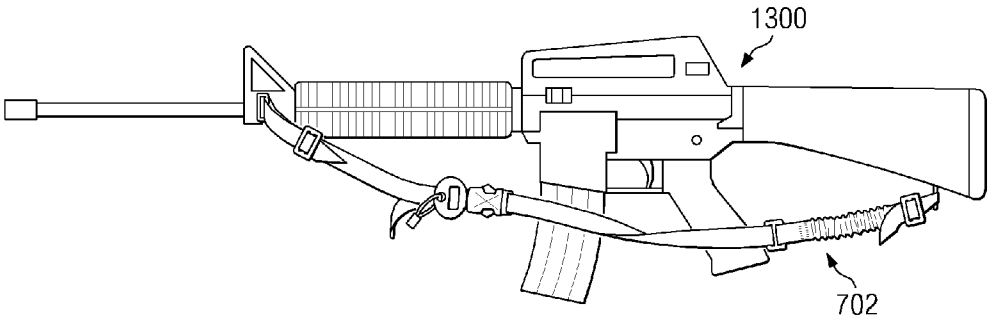


FIG. 13A

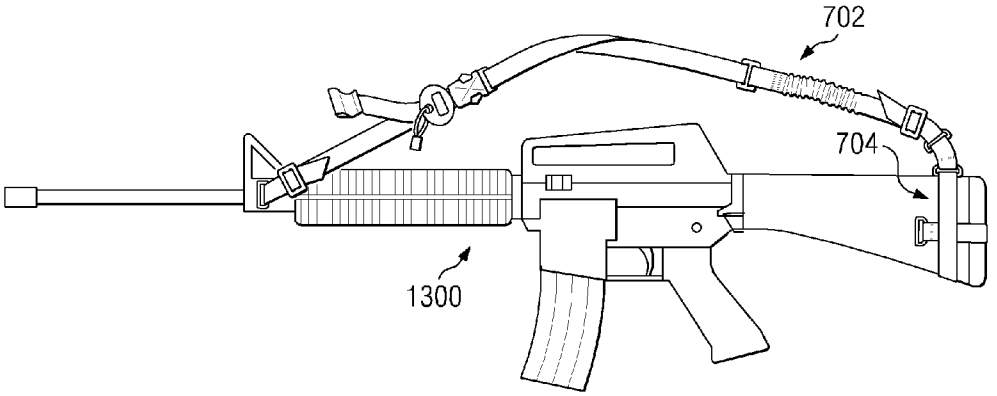


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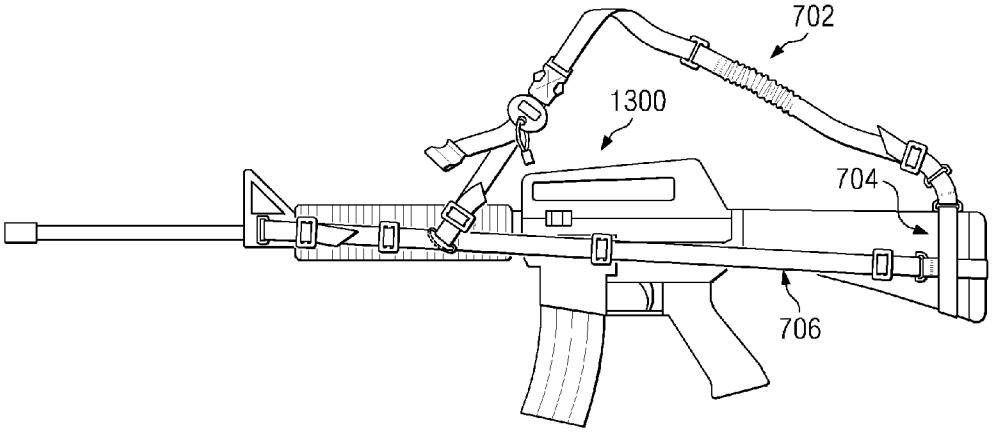


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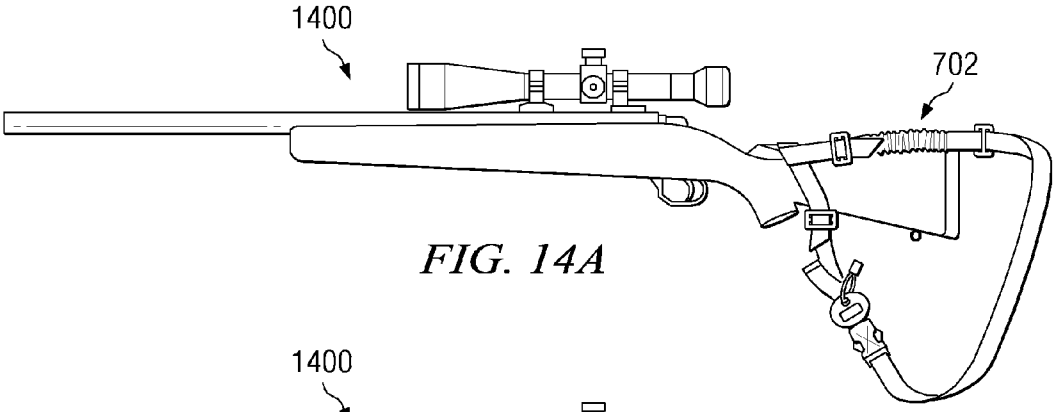


FIG. 14A

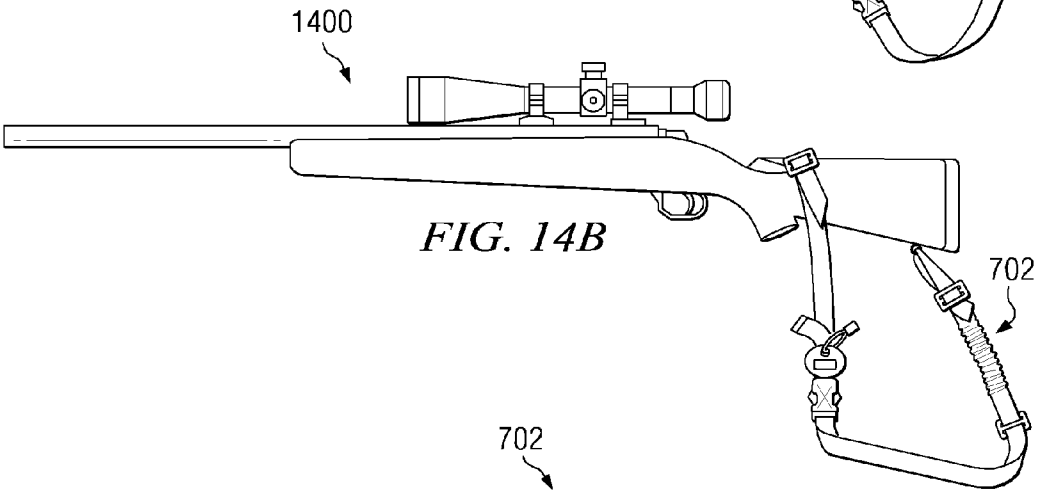


FIG. 14B

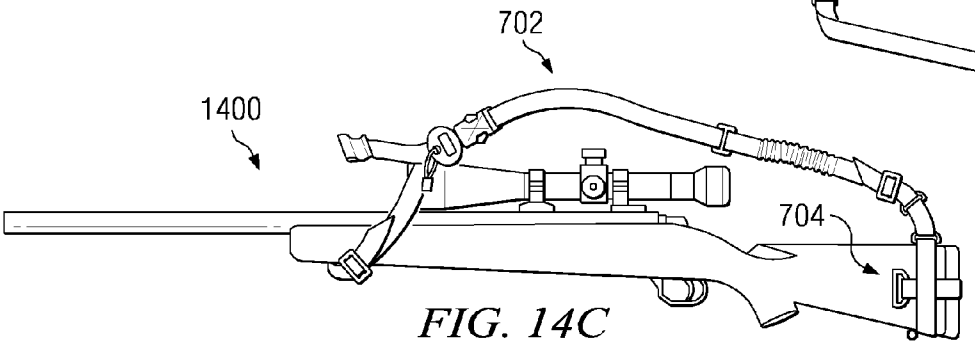


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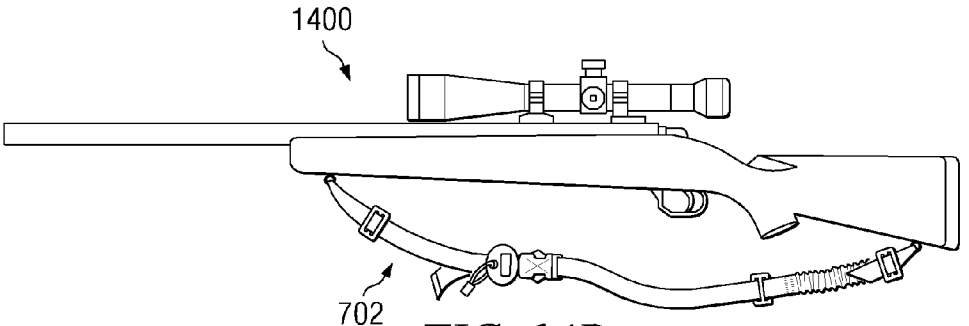


FIG. 14D

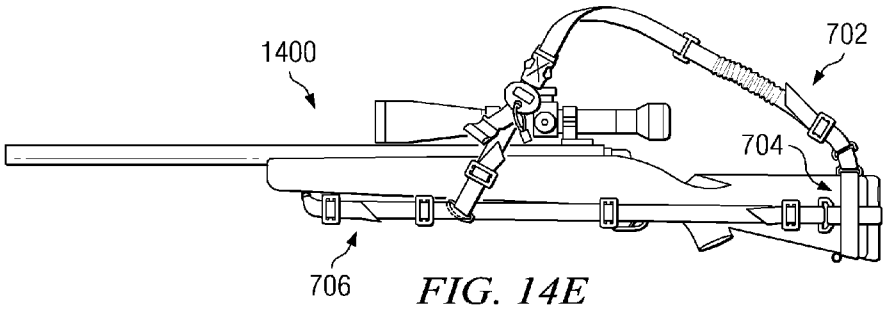


FIG. 14E

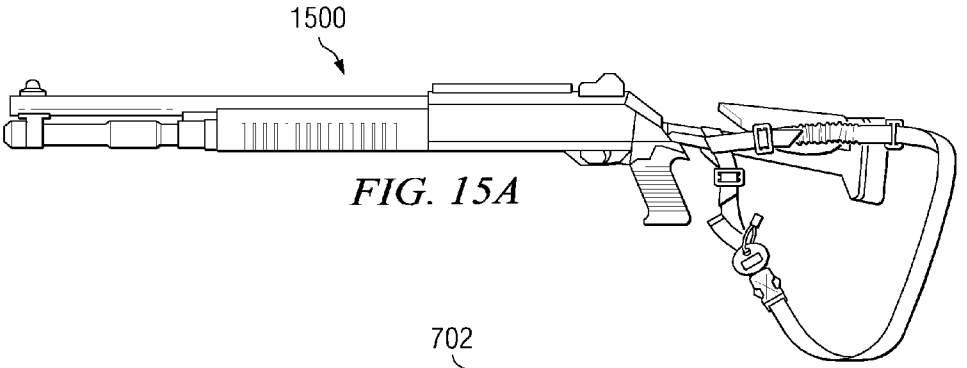


FIG. 15A

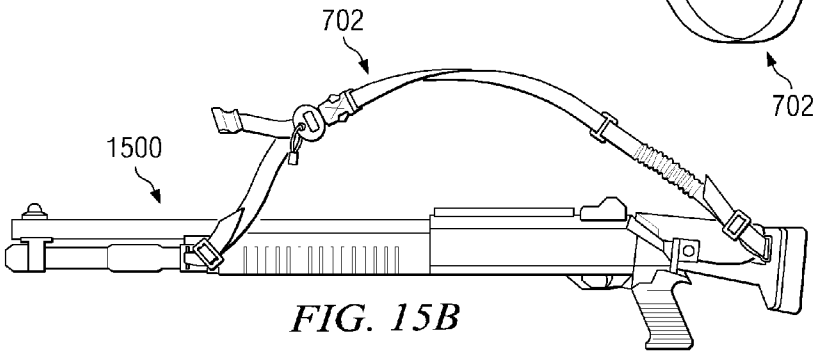


FIG. 15B

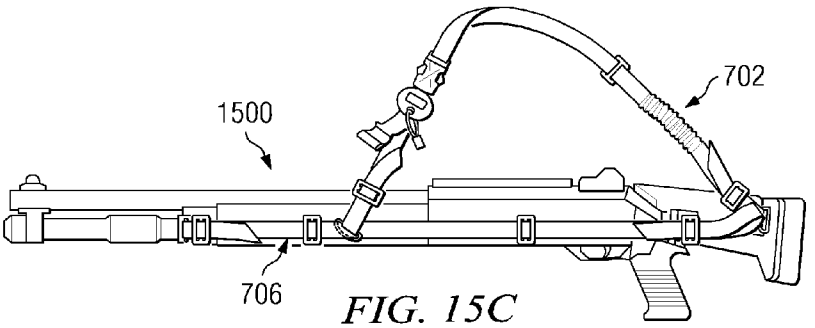


FIG. 15C

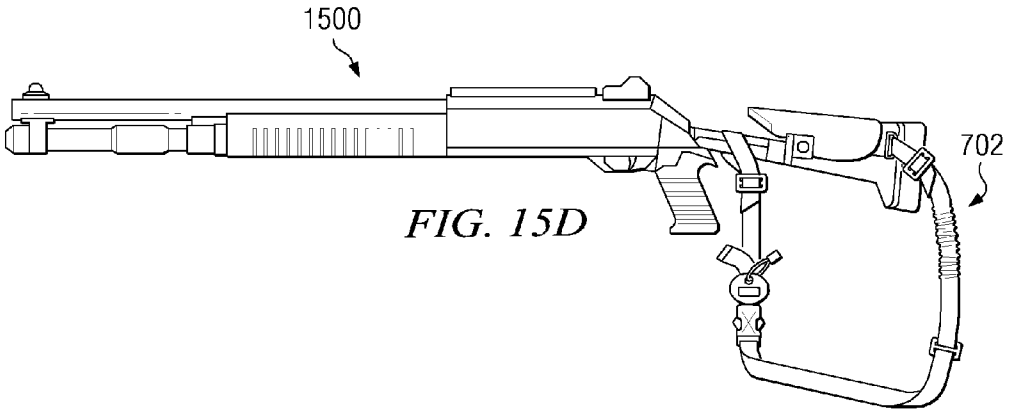


FIG. 15D

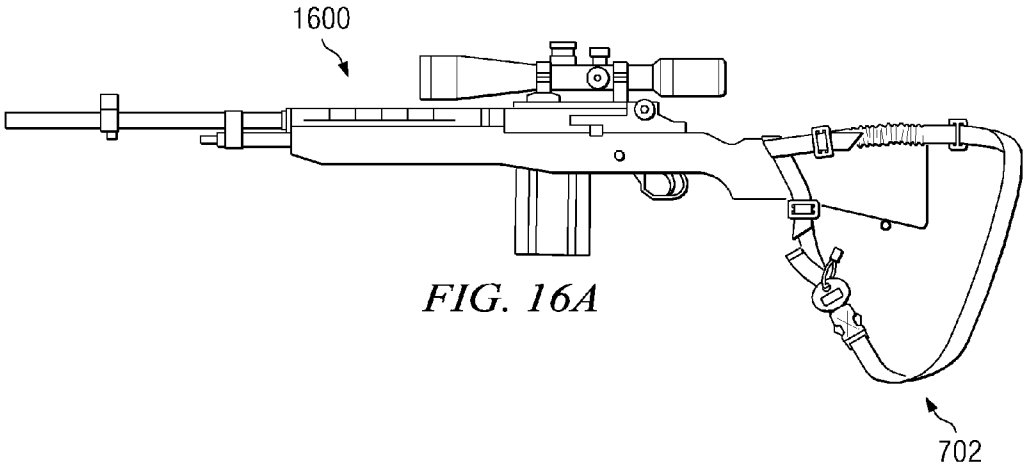


FIG. 16A

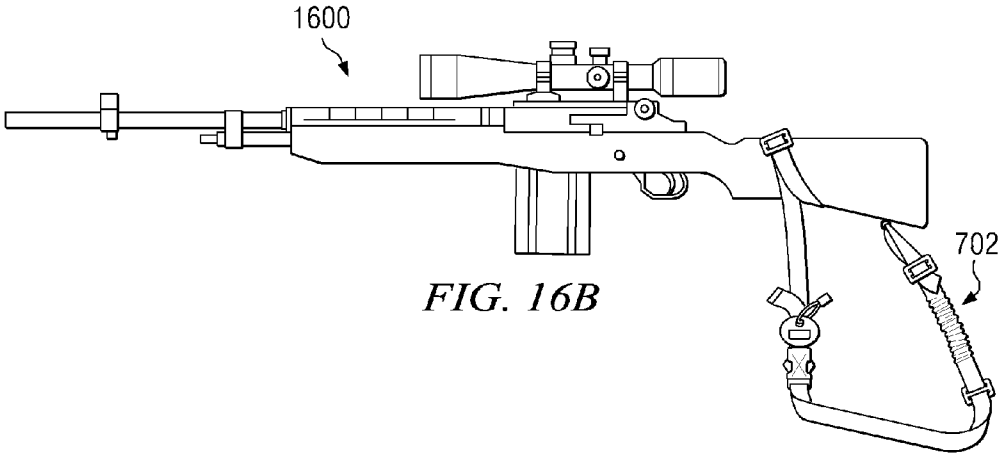


FIG. 16B

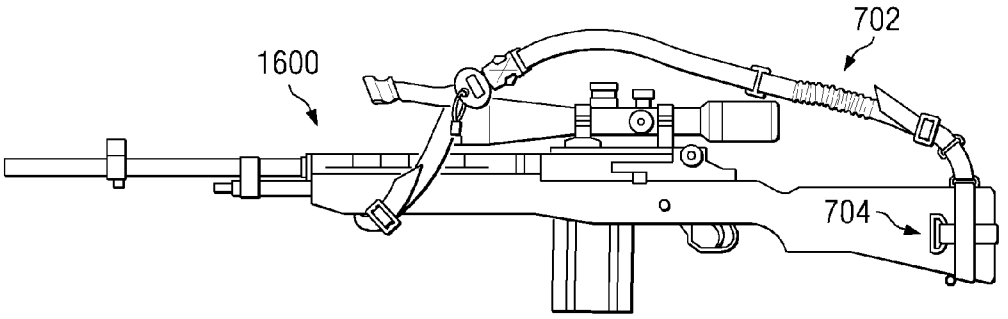


FIG. 16C

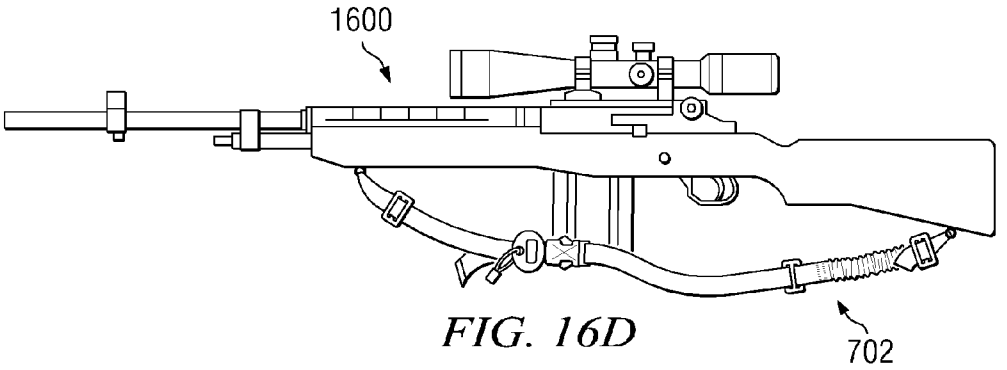


FIG. 16D

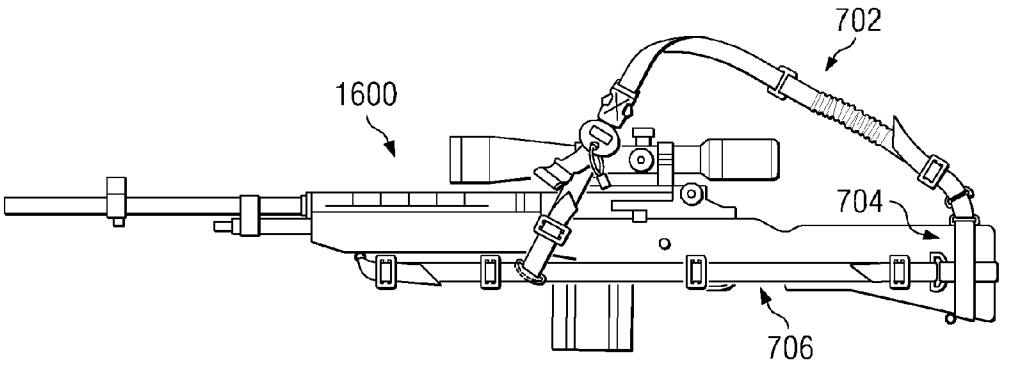


FIG. 16E

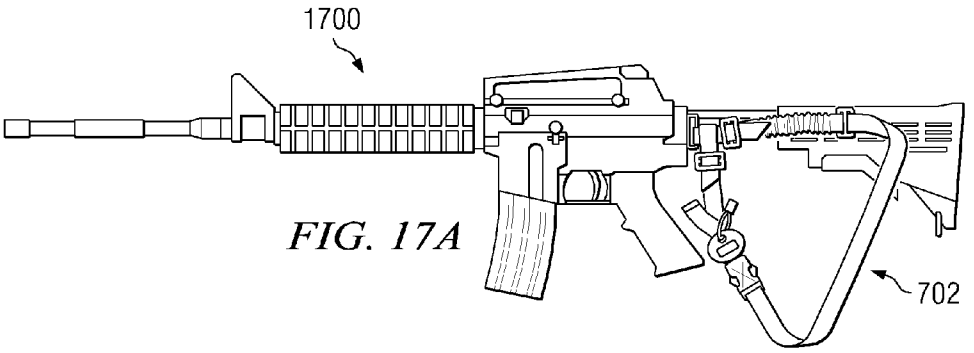


FIG. 17A

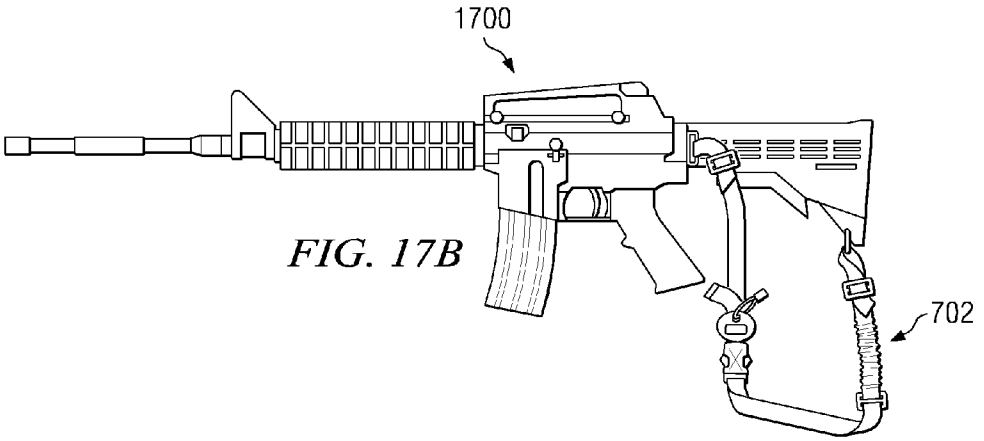


FIG. 17B

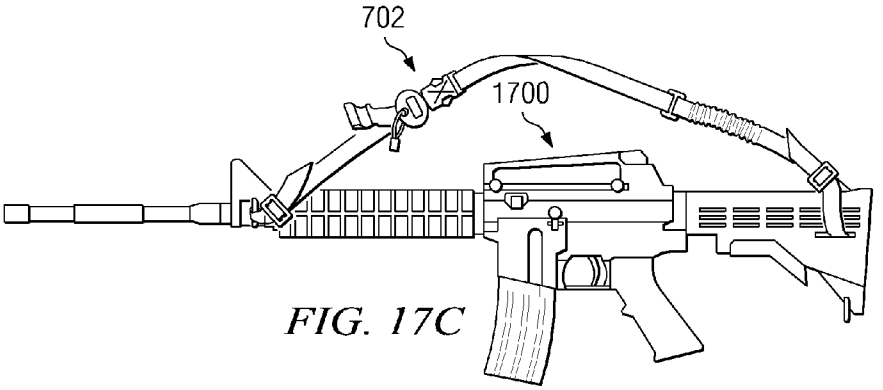


FIG. 17C

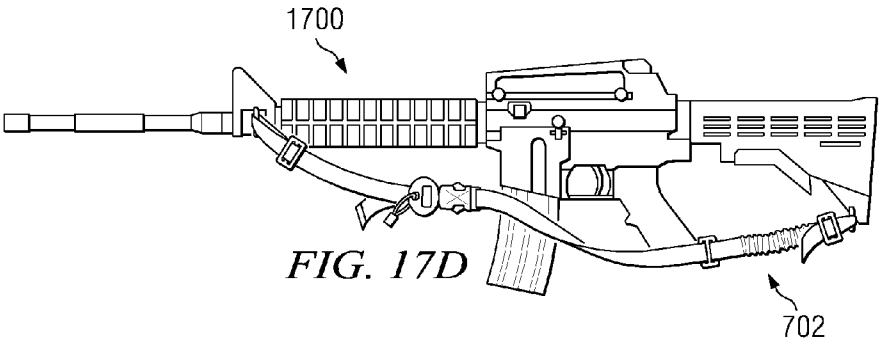


FIG. 17D

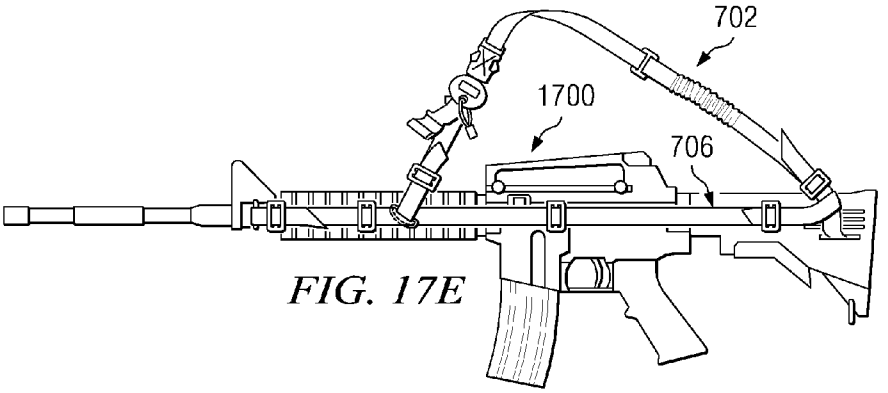


FIG. 17E

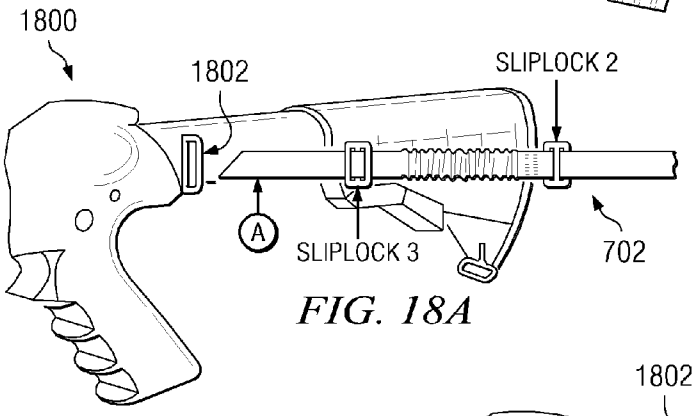


FIG. 18A

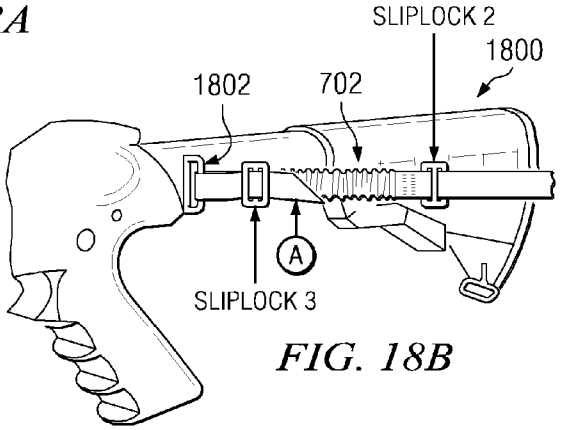


FIG. 18B

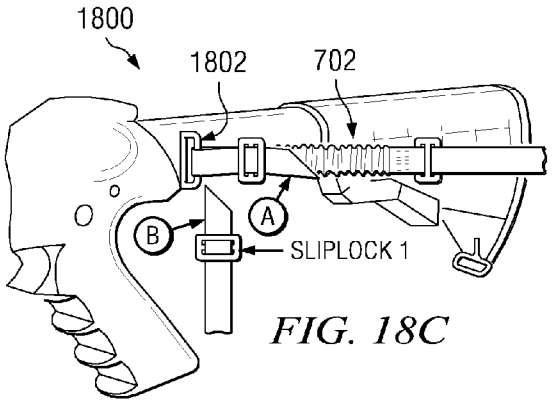


FIG. 18C

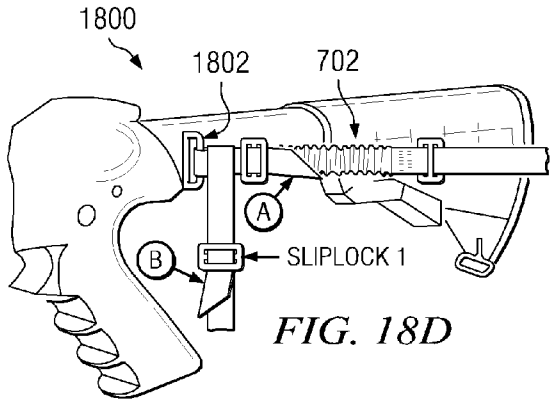


FIG. 18D

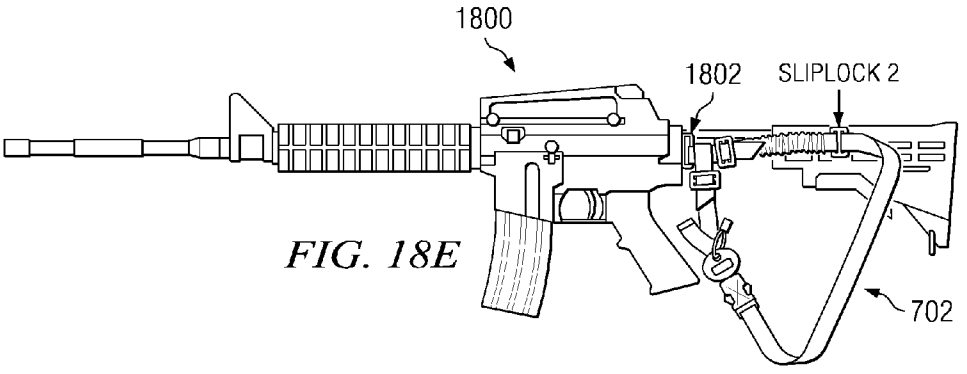


FIG. 18E

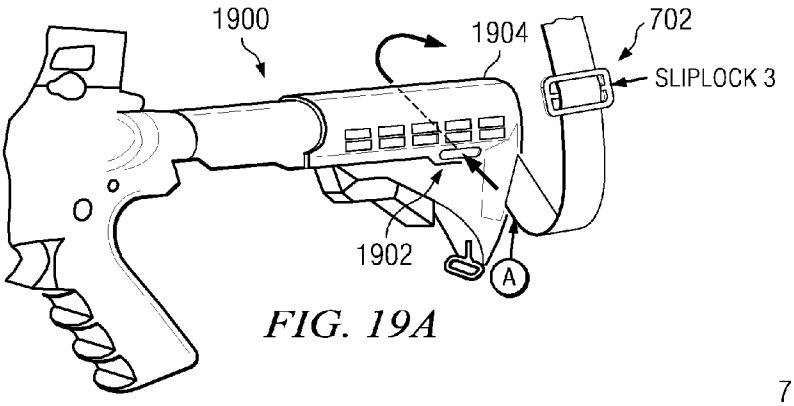


FIG. 19A

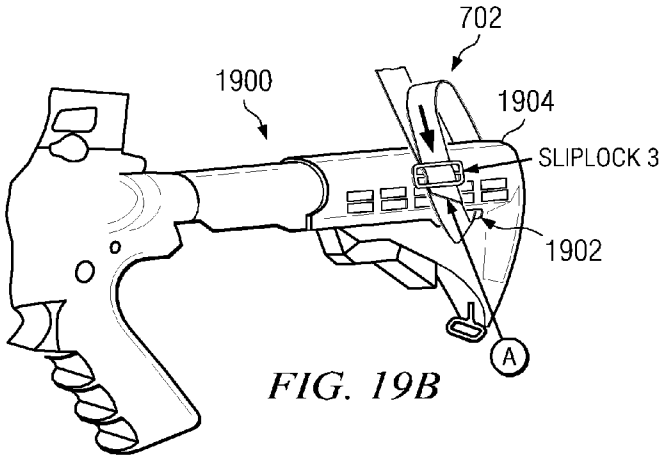


FIG. 19B

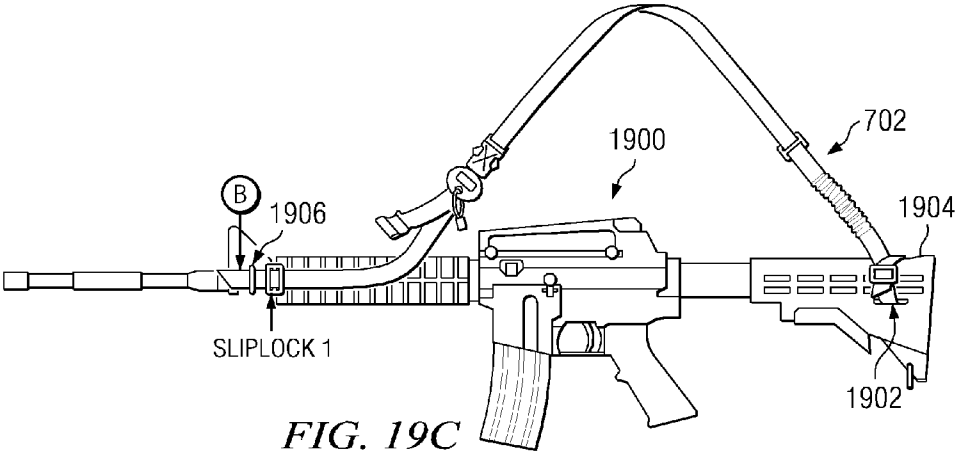


FIG. 19C

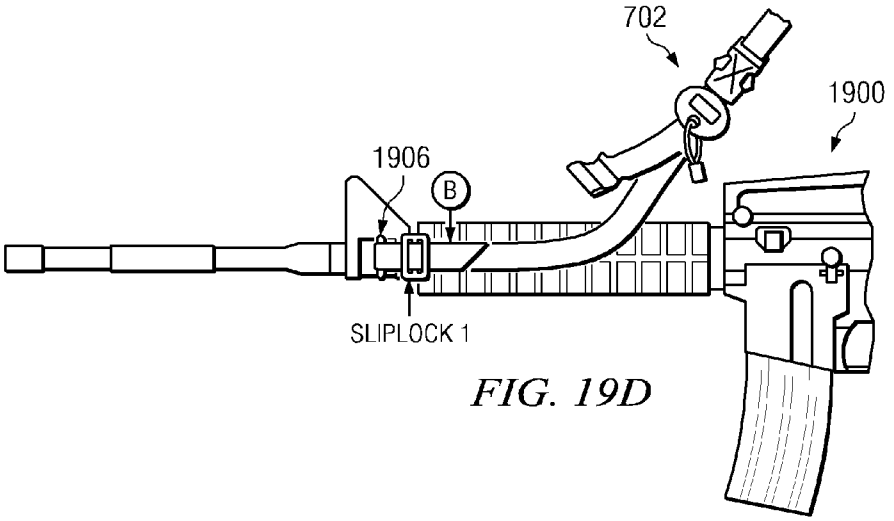


FIG. 19D

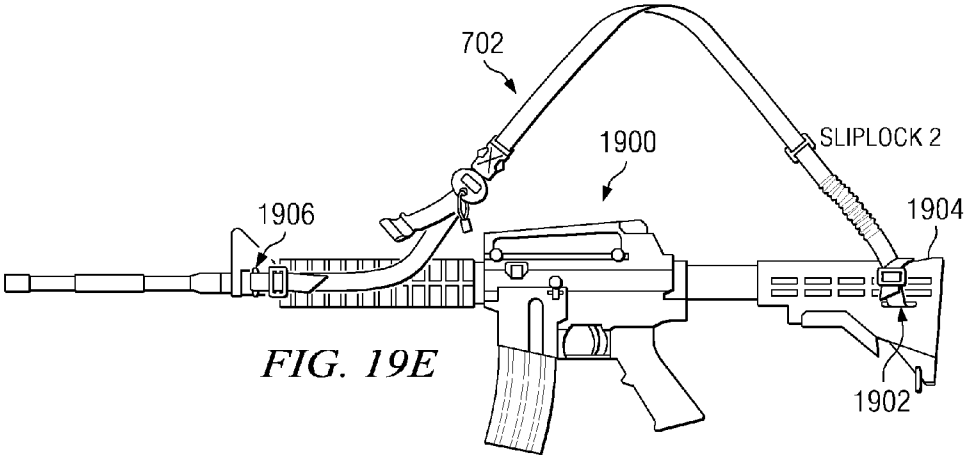


FIG. 19E

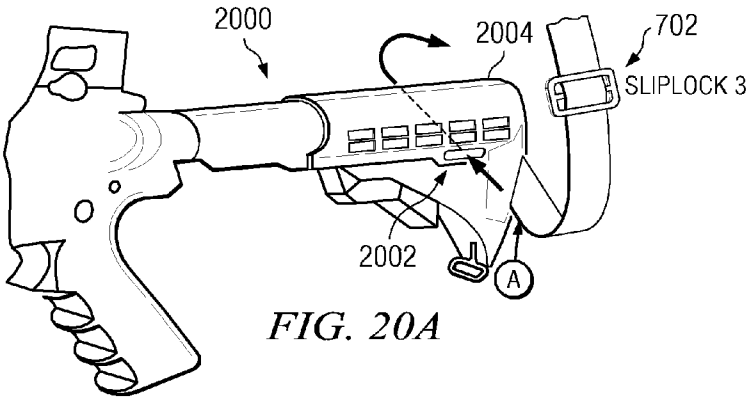


FIG. 20A

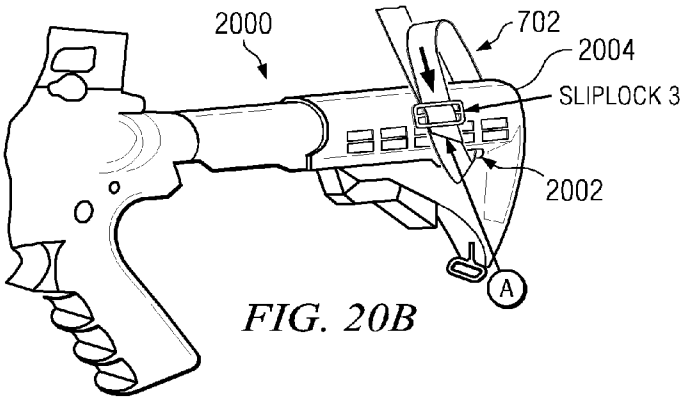


FIG. 20B

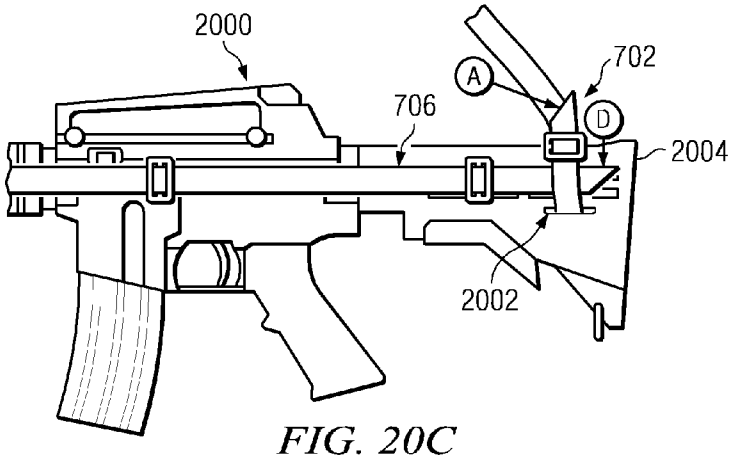


FIG. 20C

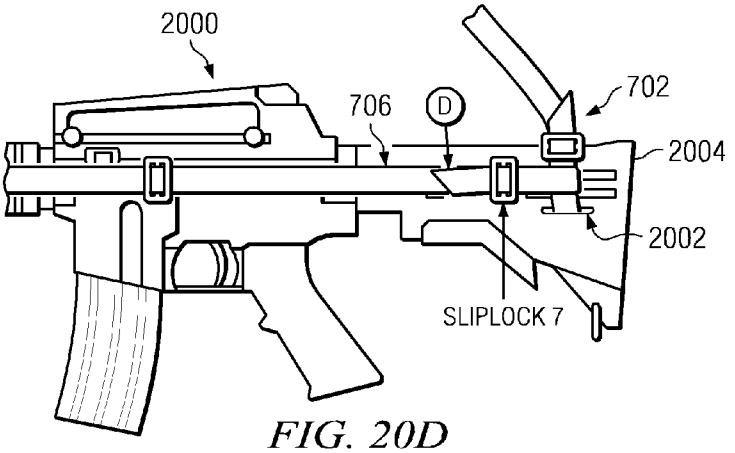


FIG. 20D

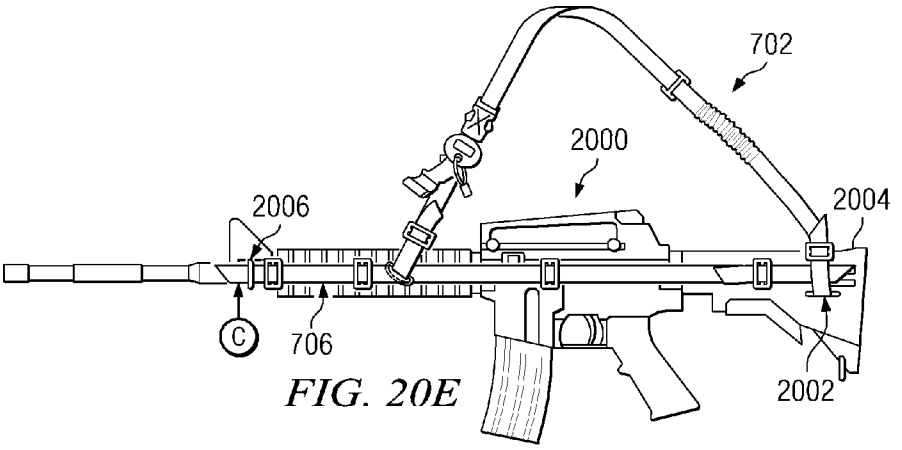


FIG. 20E

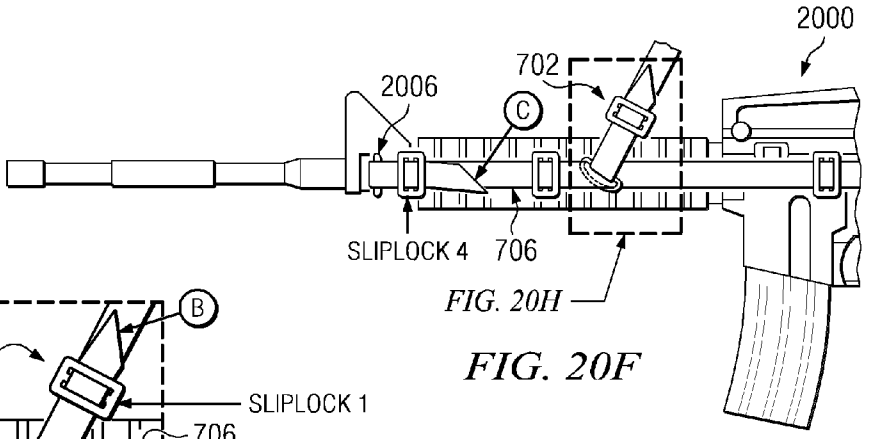


FIG. 20F

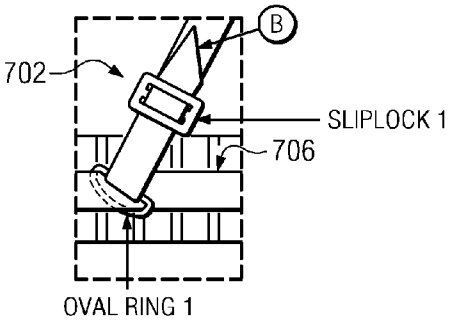


FIG. 20H

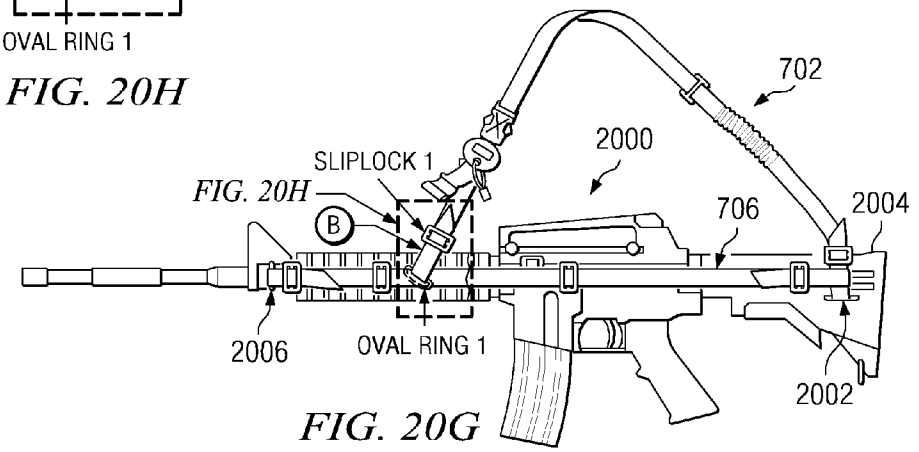


FIG. 20G

UNIVERSAL FIREARM SLING

CROSS REFERENCE TO RELATED APPLICATION

[0001] This applications claims benefit of U.S. Provisional Application for Patent Ser. No. 60/862,023, filed Oct. 18, 2006, entitled UNIVERSAL FIREARM SLING (Atty. Dkt. No. BEST-27,246); and U.S. Provisional Application for Patent Ser. No. 60/953,681, filed Aug. 2, 2007, and entitled UNIVERSAL FIREARM SLING (Atty. Dkt. No. BEST-28, 406), the specifications of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] This disclosure is related to firearms slings, and more particularly, to universal firearms slings fitting a variety of firearms in different configurations.

BACKGROUND

[0003] It is known that having a sling attached to a firearm can increase the utility and usability of the firearm as well as reduce fatigue to the user. Firearm slings perform multiple functions including allowing the user to securely carry a firearm while leaving the hands free to take on other tasks. Traditional shoulder slings, although effective in this regard, require a non-trivial amount of time for de-shouldering, or de-slinging, the weapon (i.e., moving it from the carry position on the shoulder into a firing or ready position). Furthermore, the act of de-shouldering gives the opportunity for mishandling of the firearm, which could lead to accidents, or a failure on the part of the user to have the weapon ready in a sufficient amount of time. In the event that a user were to lengthen a shoulder sling sufficiently to allow the weapon to be comfortably carried in a frontal position in order to decrease the time taken to place the firearm in a ready or firing position, the user would face the problem that the firearm would tend to fall to an "upside down" position when the grip was relaxed since most shoulder slings attach to a sling swivel located on the rear, underside of the firearm's buttstock. The advantages of a shoulder sling include that they are relatively simple to manufacture and a single sling can fit a variety of firearms.

[0004] A variety of combat or tactical slings are currently marketed that allow slinging or carrying of the firearm in an upright, frontal position such that the user can easily shoulder or discharge the weapon with little movement. However, the wide variety of firearms and weapon systems in use today means that a special sling may have to be designed for each firearm. Additionally, a different sling may be required depending upon whether the user wishes to carry the firearm right or left handed. Regarding military applications, this can create logistical problems where a variety of firearms may be employed in the same operating theater. In the commercial or home defense context, a retailer may be required to stock a variety of slings, some of which may not be brisk sellers, in order to satisfy an acceptable customer base.

[0005] Ongoing military and law enforcement operations have demonstrated the advantages of carrying firearms in heretofore unconventional carry orientations, e.g., muzzle down, and in heretofore unconventional sling configurations, e.g., one point on stock, two point on stock, etc. Conventional firearm slings do not provide the flexibility to utilize a single sling assembly to provide multiple carry orientations and multiple sling configurations for a wide variety of firearms. A need therefore exists for a more versatile firearm sling.

SUMMARY

[0006] In one aspect thereof, a sling assembly for attachment to any one of a plurality of firearms for suspending the firearm in an upright, generally horizontal orientation from a shoulder of the user, each of the plurality of firearms having a muzzle at one end, a buttstock at the opposite end, a longitudinal axis extending between the muzzle and the buttstock, and a first sling attachment fixture disposed proximate the muzzle, wherein some of the plurality of firearms, when oriented upright with the longitudinal axis generally horizontal, include a second sling attachment fixture disposed along the lower surface of the buttstock, whereas others of the plurality of firearms, when oriented upright with the longitudinal axis generally horizontal, include a second sling attachment fixture disposed above the lower surface of the buttstock proximate to the longitudinal axis is disclosed. The sling assembly includes a side webbing member having a front side webbing end and a back side webbing end, and a top webbing assembly including a first top webbing member and a second top webbing member. The first top webbing member includes a connector ring disposed at a front end and a first portion of a side release buckle disposed at a back end, the connector ring being removably slidably fitted over the side webbing member between the front side webbing end and the back side webbing end. The second top webbing member includes a front end and a back end, a second portion of a side release buckle being disposed at the front end, the second portion of the side release buckle being selectively connectable to the first portion of the side release buckle. The assembly also includes a buttstock strap assembly including a circumferential webbing member having first and second mating ends and a side webbing attachment fixture, an anchor strap extending laterally from the circumferential webbing member, and a buttstock connector ring connected at a fixed position on the circumferential webbing member. When attached to one of the plurality of firearms that, when oriented upright with the longitudinal axis generally horizontal, includes a second sling attachment fixture disposed along the lower surface of the buttstock, the front side webbing end of the side webbing member is removably connected to the firearm's first sling attachment member, the side webbing member is disposed generally parallel to the firearm's longitudinal axis, and the back side webbing end of the side webbing member is removably connected to the side webbing attachment fixture of the buttstock strap assembly, the circumferential webbing member of the buttstock strap encircles the firearm's buttstock such that the buttstock connector ring is disposed proximate to the top of the buttstock and the first and second mating ends are removably engaged with one another to hold the buttstock strap on the firearm's buttstock, the anchor strap of the buttstock strap assembly is removably connected to firearm's second sling attachment fixture, and the back end of the second top webbing member is removably connected to the buttstock connector ring. When attached to another of the plurality of firearms that, when oriented upright with the longitudinal axis generally horizontal, includes a second sling attachment fixture disposed above the lower surface of the buttstock proximate to the longitudinal axis, the front side webbing end of the side webbing member is removably connected to the firearm's first sling attachment member, the side webbing member is disposed generally parallel to the fire-

arm's longitudinal axis, the back side webbing end of the side webbing member is removably connected to the firearm's second sling attachment fixture, and the back end of the second top webbing member is removably connected to the back side webbing end of the side webbing member.

[0007] In another aspect thereof, an ambidextrous firearm sling having a transverse webbing piece having a first end adapted to removably engage a first sling swivel near a forward end of a firearm and a second end adapted to removably engage a buttloop webbing piece, and a top webbing piece attached at a first end to the transverse piece and adapted to attach at a second end to the buttloop webbing piece is disclosed. The buttloop webbing piece provides first and second mating ends and is adapted to encircle the buttstock of a firearm and engage the buttstock circumferentially by engagement of the first and second mating ends. The buttloop webbing piece is also secured against transverse movement along the length of the buttstock by an attached anchor strap with a hook and loop fastener adapted to removably engage a second sling swivel on the buttstock.

[0008] In another aspect thereof, a universal firearm sling kit for providing a universal firearm sling for attachment to any of a plurality of firearms having a front sling swivel mounted near the front of the firearm including firearms having fixed-length buttstocks and firearms with adjustable-length buttstocks, the firearms having fixed length buttstocks having a rear sling swivel on the buttstock, the firearms with adjustable-length buttstocks having a slot formed through the buttstock is disclosed. The kit includes a buttstock webbing assembly for use with firearms having fixed length buttstocks, the buttstock webbing assembly having an orbital member removably attachable about the circumference of the buttstock and having an attached lateral stabilizer strap removably securable to the buttstock sling swivel, a lower webbing assembly having a transverse webbing piece having an upper webbing piece attachment point and being adapted to attach to the first sling swivel and in the case of a firearm having a fixed length buttstock, to a buttstock strap assembly, and in the case of an firearm having an adjustable-length buttstock, to the slot of the buttstock, and an upper webbing assembly adapted to attach at a first end to the upper webbing piece attachment point and in the case of a firearm with a fixed length buttstock, to the buttstock webbing assembly, and in the case of a firearm with an adjustable length buttstock to the transverse webbing piece proximate the slot formed in the buttstock.

[0009] In another aspect thereof, a sling assembly for attachment to a firearm for suspending the firearm in an upright, generally horizontal orientation from a shoulder of the user, the firearm having a muzzle at one end, a buttstock at the opposite end, a longitudinal axis extending between the muzzle and the buttstock, and a first sling attachment fixture disposed proximate the muzzle is disclosed. The sling assembly has a side webbing member having a front side webbing end and a back side webbing end, and a top webbing assembly including a first top webbing member and a second top webbing member. The first top webbing member includes a connector ring disposed at a front end and a first portion of a side release buckle disposed at a back end, the connector ring being removably slidably fitted over the side webbing member between the front side webbing end and the back side webbing end. The second top webbing member including a front end and a back end, a second portion of a side release buckle being disposed at the front end, the second portion of the side release buckle being selectively connectable to the first portion of the side release buckle. The sling includes a buttstock strap assembly with a self-tightening girthing strap adapted to circumscribe the buttstock horizontally and is anchored a predetermined distance from an end of the buttstock by a buttstock strap forming first and second loops about the girthing strap on opposite sides of the buttstock. The first and second loops also retain first and second D-rings for selective attachment to the side webbing member.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] For a more complete understanding of the present disclosure and the advantages thereof, reference is now made to the following description taken in conjunction with the accompanying Drawings in which:

[0011] FIG. **1**A shows one embodiment of a universal firearm sling in accordance with the present disclosure;

[0012] FIG. **1**B shows a portion of an alternative top webbing assembly for the universal firearm sling of FIG. **1**A;

[0013] FIG. **2**A shows the universal firearm sling of FIG. **1**A attached to a fixed-length buttstock firearm in accordance with the present disclosure;

[0014] FIG. **2**B shows an opposite-side view of a portion of the firearm of FIG. **2**A with the universal sling attached;

[0015] FIG. **3** shows another embodiment of a universal firearm sling attached to a firearm with an adjustable-length buttstock in accordance with the present disclosure;

[0016] FIG. **4** shows another embodiment of a universal firearms sling attached to a firearm with a fixed-length buttstock in accordance with the present disclosure;

[0017] FIG. **5** shows a cross-sectional end view of the attached universal firearm sling of FIG. **4** taken through line **5-5** of FIG. **4**;

[0018] FIG. **6** shows a cross-sectional top view of the attached universal firearm sling of FIG. **4** taken along line **6-6** of FIG. **4**;

[0019] FIGS. **7**A-**7**C illustrate another embodiment of a universal firearm sling in accordance with the present disclosure;

[0020] FIGS. **8**A-**8**G illustrate mounting the universal firearm sling of FIGS. **7**A-**7**C on a firearm in a two-point attachment configuration;

[0021] FIGS. **9**A-**9**J illustrate mounting the universal firearm sling of FIGS. **7**A-**7**C on a firearm in a three-point attachment configuration;

[0022] FIGS. **10**A-**10**E illustrate mounting the universal firearm sling of FIGS. **7**A-**7**C on a firearm in a one-point attachment configuration;

[0023] FIGS. **11**A-**11**E show the universal firearm sling of FIGS. **7**A-**7**C mounted on a fixed-buttstock shotgun in various one-point, two-point and three-point attachment configurations;

[0024] FIGS. **12**A-**12**E show the universal firearm sling of FIGS. **7**A-**7**C mounted on a fixed-buttstock ranch rifle in various one-point, two-point and three-point attachment configurations;

[0025] FIGS. **13**A-**13**C show the universal firearm sling of FIGS. **7**A-**7**C mounted on a fixed-buttstock military-type assault firearm in various two-point and three-point attachment configurations;

[0026] FIGS. **14**A-**14**E show the universal firearm sling of FIGS. **7**A-**7**C mounted on a fixed-buttstock bolt-action rifle in various one-point, two-point and three-point attachment configurations;

[0027] FIGS. **15**A-**15**D show the universal firearm sling of FIGS. **7**A-**7**C mounted on a skeletonized, collapsable-buttstock shotgun in various one-point, two-point and three-point attachment configurations;

[0028] FIGS. **16**A-**16**E show the universal firearm sling of FIGS. **7**A-**7**C mounted on a fixed-buttstock military-type rifle in various one-point, two-point and three-point attachment configurations;

[0029] FIGS. **17**A-**17**E show the universal firearm sling of FIGS. **7**A-**7**C mounted on a collapsable-buttstock military-type carbine in various one-point, two-point and three-point attachment configurations;

[0030] FIGS. **18**A-**18**E illustrate mounting the universal firearm sling of FIGS. **7**A-**7**C in a one-point configuration applied to an M-4 military firearm;

[0031] FIGS. **19**A-**19**E illustrate mounting the universal firearm sling of FIGS. **7**A-**7**C in a two-point configuration applied to an M-4 military firearm; and

[0032] FIGS. **20**A-**20**H illustrate mounting the universal firearm sling of FIGS. **7**A-**7**C in a three-point configuration applied to an M-4 military firearm.

DETAILED DESCRIPTION

[0033] Referring now to the drawings, wherein like reference numbers are used herein to designate like elements throughout the various views, embodiments of the present disclosure are illustrated and described, and other possible embodiments of the present disclosure are described. The figures are not necessarily drawn to scale, and in some instances the drawings have been exaggerated and/or simplified in places for illustrative purposes only. One of ordinary skill in the art will appreciate the many possible applications and variations of the present disclosure based on the following examples of possible embodiments of the present disclosure.

[0034] Referring now to FIG. **1**A, a universal firearm sling **100** in accordance with the present disclosure is illustrated. The universal firearm sling **100** includes two major components, the primary strap assembly **110** and a buttstock strap assembly **180**. As is described in greater detail below, the primary strap assembly includes a side webbing member **120** which extends lengthwise along an axis of a firearm and attaches to a front anchoring point on the firearm. A top webbing assembly **140** of the primary strap assembly **110** is utilized by a user to bear the weight of the firearm. The buttstock strap assembly **180** serves as a second anchor point for the universal firearm sling **100** to anchor to a fixed length buttstock firearm. As used herein, the term "buttstock" refers to the furthermost (reward) portion of the gun supported by the user during firing, including collapsible stocks, folding stocks and pistol grip stocks.

[0035] As stated, the universal firearm sling **100** has two major components, a primary strap assembly **110**, and a buttstock strap assembly **180**. The primary strap assembly **110** includes the side webbing member **120** with front side webbing end **122** and back side webbing end **124**. The side webbing member **120** (as well as the other webbing members described herein) may be standard nylon or ballistic nylon webbing that is commercially available. In a preferred embodiment, the webbing members of the present disclosure will be made from tubular webbing that may be woven as a continuous, seamless tube. The woven webbing may be obtained as flat stock, or in another form. The woven, tubular webbing may comprise high-tenacity fiber nylon or other suitable materials. The strength and thickness of the webbing material may be chosen based on the needs of the user. In other embodiments, the webbing members may be made from leather or another suitable material. In one embodiment, the side webbing member **120** has a number of strap adjusters **130**, **132**, **134**, **136** selectively slidably attached thereto. The strap adjusters **130**, **132**, **134**, **136** (as well as the other strap adjusters described herein) may be standard plastic or polymer strap adjusters sized to fit the associated webbing. In other embodiment, the strap adjusters may be made from steel or another suitable material. Preferably, one or more of the strap adjusters **130**, **132**, **134** and **136** are of a double-framed design (also known as "tri-slides," "tri-glides," or "ladder locks"). Such tri-slide adjusters feature three generally parallel bars arrayed perpendicular to the webbing. The webbing typically threads under the two outer bars and over the center bar (or vice versa) to allow positional adjustment without the use of a separate movable tongue. Such tri-slides adjusters may be equipped with fixed "teeth" or other gripping features that selectively grip the webbing to maintain the adjuster's position when the webbing is placed under tension, but reposition easily when the webbing is not under tension.

[0036] The primary strap assembly **110** also includes a top webbing assembly **140** having a first top webbing member **142** and a second top webbing member **160**. The first top webbing member **142** is slidably attached on a front end **144** to the side webbing member **120** by a D-ring **146** or other sliding connector. The D-ring **146** may be plastic, polymer, steel or another suitable material. In this embodiment, the front end **144** is attached to the D-ring **146** by stitching or bar tacks **148**. In other embodiments, buckles, tri-slides, snaps, brads, buttons, hook and loop fasteners, or other means may substitute for the bar tack connection (as well as the other bar tack connections disclosed herein). The first top webbing member **142** may have a first side release buckle portion **152** attached on a back end **150**. The first side release buckle portion **152** is selectively engageable with a second side release buckle portion **164**. The side release buckle portions **152**, **164** may be plastic or polymer buckles or another suitable fastener. The second top webbing member **160** attaches to the second side release buckle portion **164** on a front end **162**. The front end **162** may attach to the second side release buckle portion **164** by looping through the second slide release buckle portion **164** and attaching to strap adjuster **166** which may then be used for adjusting the length of the top webbing assembly **140**. The front end **162** of the second top webbing member **160** may secure to the strap adjuster **166** by stitching or bar tacks **167**.

[0037] The second top webbing member **160** may also provide a dynamic expansion zone **172** for reducing shock load stress transferred to a wearer during physical motion. In the embodiment of FIG. **1**A, the dynamic expansion zone **172**, shown in partial cutaway, comprises one or more elastic elements **161** positioned within the tubular second top webbing member **160**. In the embodiment illustrated, the elastic elements comprise parallel lengths of elastic elements **161**, however rubber bands, springs or other known elastic elements could be substituted therefor. Further, by separately varying the length and/or stiffness of the elastic members, it is possible to "tune" the response or "feel" of the dynamic expansion zone **172**. In a preferred embodiment, two elastic elements **161** will be used in the dynamic expansion zone **172**. The elastic elements **161** of this preferred embodiment comprise cotton-cased natural rubber bungee. The cotton casing

of the elastic elements **161** protects the natural rubber therein from exposure and from abrasion by the inside of the second top webbing member **160** as the dynamic expansion zone **172** flexes. The tubular second top webbing member **160** may be compressed or crimped and stitched across the ends of the elastic elements **161** with stitching **173** to allow sufficient loaded elongation in the second top webbing member **160**. Furthermore, this configuration allows the second top webbing member **160** to retain substantially all of its load bearing capacity while providing expansion through the dynamic expansion zone **172**. As described in greater detail below, a back end **168** of the second top webbing member **160** may be a free end of webbing material adapted to receivably attach to either a firearm or to the buttstock assembly **180**. A strap adjuster **170** may be provided as an additional adjustment means or as means of securing the free end **168** of the second webbing member **160** to the second webbing member **160** to form an attachment loop.

[0038] Referring now to FIG. **1**B, an alternative top webbing assembly in accordance with another embodiment is illustrated. In this embodiment, the dynamic expansion zone portion **172** of the second top webbing member **160** is selectively removable by means of quick-connect fittings **165** to allow optional dynamic expansion zone portions **163** having different elastic characteristics to be substituted for the original dynamic expansion zone portions (e.g., elastic elements **161**) as desired by the user to accommodate his or her individual shooting style or preference.

[0039] Referring now back to FIG. **1**A, the buttstock strap assembly **180** has a circumferential webbing member **182** with first and second mating ends **184**, **186**, respectively. First mating end **184** has an attached strap adjuster **185** that may be anchored to the first end **184**, e.g., by stitches or bar tacks **188**. A connector ring **190** may be provided either fixed or movably on the circumferential webbing member **182**. The connector ring **190** may be a D-ring or other suitable attachment point for receiving the free end **168** of the second top webbing member **160** as described further below. A passage **192** may be defined through the body of the circumferential webbing member **182**. The passage **192** may be formed directly in the circumferential webbing member **182** or formed from an additional webbing piece sewn or attached to the circumferential webbing member **182**. An anchor strap **195** extends laterally from the circumferential webbing member **182**. The anchor strap **195** is adapted to be affixed to a stationary mounting point such as a rear sling swivel of a firearm as will be described in greater detail below. To provide a secure connection, the anchor strap **195** may be equipped with hook and loop fasteners, buttons, snaps, or other affixment means. The anchor strap **195** may be attached to the circumferential webbing member **182**, e.g., by stitching or bar tacks **197**.

[0040] Referring now to FIG. **2**A, the universal firearm sling **100** is illustrated attached to a firearm **202** in accordance with the present disclosure. In the present figure, the sling **100** is attached to a firearm **202** having a fixed-length buttstock **204**. The front end **122** of the side webbing member **120** has been looped through a front sling swivel **206** of the firearm **202** and threaded securely through strap adjuster **130**. The sling swivel **206** serves as a mounting point to the firearm **202** and may be a standard sling swivel or other suitable anchor point on the firearm **202**.

[0041] Referring now also to FIG. **2**B, the buttstock strap assembly **180** is affixed to the buttstock **204** of the firearm **202**. The circumferential webbing member **182** is first positioned such that the connector ring **190** is positioned at the top of the buttstock and the passage **192** is positioned at the side of the buttstock in line with the side webbing member **120**. Next, the webbing member **182** is fastened about the circumference of the buttstock **204** and fastened securely by insertion of the free end **186** into the strap adjuster **185**. The anchor strap **195** extends toward the rear of the firearm **202** and attaches to a rear sling swivel **208** by a hook and loop fastener. In some embodiments, the front sling swivel **206** and the rear sling swivel **208** will be substantially similar. Adjustments to the strap adjuster **185** and free end **186** of the buttstock assembly **180** and to the side loop **195** of the buttstock assembly **180** allows wide variety of firearms with differing buttstock sizes to be accommodated with the same buttstock strap assembly **180**.

[0042] With the buttstock strap assembly **180** in place, the free end **168** of the second top webbing member **160** is looped through the D-ring **190** and securely fastened through the strap adjuster **170**. The back side webbing end **124** of the side webbing member **120** is looped through the passage **192** and securely fastened in the strap adjuster **136**. In this configuration, the firearm **202** has its center of gravity located below a line connecting the two attachment points, thus it remains upright even when the user is not holding it (other than with the top webbing assembly **140**). This allows the firearm to be worn over the shoulder of a user "hands free" with the firearm **202** in front of the body in a generally upright position. By loosening the tension of the side webbing **120**, the position of the strap adjusters **132**, **134** may be moved along the length of the side webbing member **120** to allow the D-ring **146** the appropriate degree of freedom to slide along the side webbing member **120**. By retensioning the side webbing **120**, the strap adjustors are then locked in place. The total length of the top webbing assembly **140** can be adjusted by movement of the strap adjusters **166** and **170**. The top webbing assembly **140** may be quickly disconnected by disengagement of the side release buckle portions **152**, **164**. The dynamic expansion zone **172** is provided to reduce felt shocks and vibrations when a user is carrying or running with the firearm **202**. The firearm sling **100** is also ambidextrous in that it may be attached such that the firearm **202** may be worn left handed by simply attaching the side webbing member **120** on the opposite side of the firearm **202** and reversing the installation direction of the buttstock strap assembly **180**.

[0043] Referring now to FIG. **3**, a universal firearm sling **100** attached to a firearm having an adjustable-length buttstock is illustrated. The firearm sling **100** is now shown attached to a firearm **202** commonly referred to as an "M4" style, having an adjustable-length buttstock **310** and a built-in high-mount attachment point **312**. The side webbing member **120** attaches to the front sling swivel **206** or other suitable attachment point as before. However, in this embodiment, the buttstock strap assembly **180** is not required, instead the side webbing member **120** back side webbing end **124** attaches directly to the high-mount attachment point **312** of the firearm **202**. The back side webbing end **124** of the side webbing member **120** may be looped through the slot **312** and inserted securely into the strap adjuster **136**. The free end **168** of the second top webbing member may then be looped through the loop formed by the back side webbing end **124** of the side webbing member **120** and securely fastened into strap adjuster **170**. The user may optionally adjust the tension of the side webbing member **120** and the length of the top webbing assembly **140** by adjusting strap adjusters **136** and **170**,

respectively. As before, the sling **100** is ambidextrous in that it may be configured to the firearm **202** to be worn left handed by simply attaching the side webbing member **120** on the opposite side of the firearm **202**.

[0044] Referring now to FIG. **4**, another embodiment of a universal firearm sling **400** attached to a firearm **202** with a fixed-length buttstock **204** in accordance with the present disclosure is shown. The firearm sling **400** is substantially similar, in some respects, to the universal firearm sling **100** of FIGS. **1-3**. However, the universal firearm sling **400** features a different embodiment of a buttstock strap assembly **405**. As can be seen in FIG. **4**, the buttstock strap assembly **405** provides a girthing strap **410** that circumscribes the buttstock **204** in a vertical direction. A D-ring **430** provides partial closure of the girthing strap **410** as will be better appreciated in subsequent drawings. A D-ring **435** provides attachment means for the girthing strap **410** to attach to the top webbing assembly **140**. The D-ring may connect to the girthing strap **410** by bar tacks **436**, or other means. A buttstrap **415** provides anchorage for the buttstock strap assembly **405** to the buttstock **204** to prevent movement in a horizontal direction away from the end of the buttstock **405**. A D-ring **420** provides an anchor point for attachment to the side webbing member **120**. The D-ring **420** may be secured to the buttstrap **415** by bar tacks **425**, or other means. As can be better appreciated from the drawings that follow, the buttstrap **415** is ambidextrous in that it provides the option of mounting the side webbing member **120** on either side of the firearm **202**.

[0045] Referring now to FIG. **5**, a cross-sectional view of the fixed-length buttstock **204** having the universal firearm sling **400** of FIG. **4** attached thereto is shown as taken along the line A-A of FIG. **4**. As can be seen from this drawing, the girthing strap **410** comprises a plurality of continuous sections that interact with the other components of the buttstock strap assembly **400** to provide an adjustable, yet secure, attachment to the buttstock **204**. A D-ring **510** is anchored to the girthing strap **410** by loops **520** and **530** formed from sections of the girthing strap **410**. The loop **520** may not be adjustable and may thus be formed by bar tacks **515** or other non-adjustable means. The loop **520** also provides an anchor for D-ring **430** which, in turn, provides passage and guidance for the girthing strap **410** passing up to the end **168** of the top webbing member **160** via D-ring **435**. D-ring **435** may attach to girthing strap **410** at loop **532** formed by bar tacks **436**, or other fastening means. As the girthing strap **410** forms the loop **520** and circumscribes a portion of the buttstock **204** a first time, an interior strip **525** of the girthing strap is in substantially continuous contact with the buttstock **204**. The interior strip **525** approaches the D-ring **510** and loops therethrough at loop **530** where it passes back around the buttstock **204** a second time forming a second exterior strip **535**. This exterior strip **535** will be substantially in continuous contact with the inner strip **525**. The exterior strip **535** passes through D-ring **430** and on to attach to the top webbing member as described. From this description and from FIG. **5**, it may be appreciated that the girthing strap **410** is self-tightening about the buttstock **204** when the strap **410** is loaded by the weight of the firearm **202**. The loop **530** is free to tighten against the D-ring **510** which attaches to the non-adjustable loop **520**. It will be appreciated that this configuration allows a multitude of firearms with a wide range of sizes of buttstocks to be accommodated by the girthing strap **410**.

[0046] As stated, the webbing used to construct the girthing strap **410** may be high tenacity fiber nylon and may be tubular webbing provided as flat stock. Once the girthing strap is properly fitted and tightened, there will be relatively little abrasion between the buttstock **204** and the girthing strap **410**. In order to facilitate the initial fit of the girthing strap **410**, part or all of the girthing strap **410** may be fitted with a hook-and-loop fastener shown as hook-and-loop fasteners halves **540**, **541**. In one embodiment, the half **540** will be the loop portion of the fastener while the half **541** will be the hook portion although this is not required. As can be seen in the drawings, each of the inner and outer strips **525**, **535** may be fitted with a hook-and-loop fastener half **540**, **541**, respectively. In this manner, the girthing strap **410** may be fitted to the buttstock **204** and the initial fit may tighten with use, as described. Furthermore, the hook-and-loop fastener halves **540**, **541** may serve to prevent any loosening of the girthing strap **410** when the load is removed therefrom. This promotes stability of the girthing strap **410** about the buttstock **204** and also reduces abrasion and movement of the girthing strap **410**. As can be seen from FIG. **4**, the buttstrap **415** passes orthogonally through the plane of the girthing strap **410**. It can be seen that the buttstrap **415** may be split on each side to provide passage or of the girthing strap **410** therethough. In some embodiments (not shown), the girthing strap **410** and the buttstrap **415** may be attached or fastened together at the points where they meet.

[0047] Referring now to FIG. **6** another cross-sectional view taken along the line B-B of FIG. **4** of the fixed-length buttstock **204** having the universal firearm sling **400** of FIG. **4** attached thereto is shown. As may be seen from this view, the buttstrap **415** forms loops **605** on either side of the buttstock **204**. These loops **605** may be secured by bar tacks **615** or other fastening means. The loops **605** provide an anchor points for the D-ring **420** and an opposite D-ring **610**. As can be seen, the D-ring **420** connects the buttstrap **415** to the end **124** of the side webbing member **120**. The D-ring **610** could also be utilized if the side webbing member were attached to the opposite side of the buttstock **204**. Thus both right and left handed mounting options are provided for the firearm sling **400**. It can also be seen from FIG. **6** that the loops **605** provide passage for the girthing strap **410** as well as the associated hook-and-loop fastener halves **540**, **541**. As stated, in some embodiments, the girthing strap **410** and the buttstrap **415** may be fastened together where they pass. In other embodiments, this is not necessary as the various straps and webbing described herein will generally stay in place when tightened without the need for fastening. In either event, the loops **605** will operate to maintain the girthing strap **410** in a fixed relationship relative to the buttstock **204** and prevent the girthing strap **410** from sliding toward the barrel end of the firearm **202**. Repeated adjustments are therefore not needed and the length of the buttstrap **415** may be chosen according to the desired location along the buttstock **204** for the girthing strap **410** to maintain proper balance of the firearm **202** when carried while ensuring that the girthing strap **410** does not interfere during shooting.

[0048] Referring now to FIGS. **7A-7C**, there is illustrated an alternative embodiment of a universal firearm sling in accordance with the present disclosure. The universal firearm sling **700** includes a shoulder strap **702**, a fixed buttstock strap (also known as a UNI-LINK™) **704** and a traversing strap **706**. Except as noted herein, the shoulder strap **702** is substantially similar to the top webbing member **140** described in connection with slings **100** and **400**, the buttstock strap **704** is substantially similar to the fixed buttstock strap assembly **405**

of sling **400**, and the traversing strap **706** is substantially similar to the side webbing member **120** of slings **100** and **400**.

[0049] Referring to FIG. **7**A, the shoulder strap **702** includes structural differences compared to top webbing member **140** of the previous embodiments. First, the front end **144** of the shoulder strap **702** does not have a fixed anchor point comprising a permanently mounted D-ring **146** and bar tacks **148**. Instead, the front end **144** of shoulder strap **702** has a reconfigurable anchor point including a free end **708** and an additional strap adjuster **710** (also called a "sliplock"). This reconfigurable anchor point can be used to form loops of various sizes for connecting the shoulder strap **702** to itself or other components of the sling **700**, directly to the firearm, or both, yielding many new carry and configuration options.

[0050] Another structural difference is the new side-release buckle **712** that connects the first top webbing member **142** of shoulder strap **702** to the second top webbing member **160**. The buckle **712** includes front and back portions **714** and **716**. The front portion **714** has a de-tensioning lanyard **718** attached so as to allow the user to more easily adjust the length of the first top webbing member **142**. This is accomplished by pulling the de-tensioning lanyard **718** back with one hand, then adjusting the webbing length by pulling on free end **150** with the other hand.

[0051] Referring now to FIG. **7**B, the traversing strap **706** includes an oval ring **720** (also known as a "D-ring") disposed on the strap between strap adjustors **132** and **134** (i.e., sliplocks **5** and **6**) that is not present in the previously described slings **100** or **400**. The oval ring **720** provides a "floating" anchor point for attachment of the shoulder strap **702** to the traversing strap **706**, e.g., for a three-point connection. The position of the oval ring **720** can be fixed or restricted by re-positioning strap adjustors **132** and **134** along the traversing strap **706**.

[0052] The firearm sling **700** may be used for all of the three-point carry configurations previously described for slings **100** and **400**. In addition, the sling **700** is capable of supporting the firearm in other orientations, e.g., muzzle down carry, and other mounting configurations, including various one-point and two-point mounts, as further described herein.

[0053] Referring now to FIGS. **8**A-**8**G, the universal firearm sling **700** is illustrated applied to a firearm in a two-point attachment configuration using shoulder strap **702** and fixed buttstock strap **704**. Fixed buttstock strap **704** is mounted to the buttstock **802** of rifle **800**. The straps of the fixed buttstock strap are separated by the hook and loop. The buttstock strap can then be adjusted to fit the buttstock **802** by pulling the oval ring **2**. End A (FIGS. **8**C-**8**D) of the shoulder strap **702** is looped through oval ring **2** and then fed through sliplock buckle **3** of the shoulder strap thereby securing end A. End B (FIGS. **8**E-**8**G) of the shoulder strap looped through the front sling mount of the firearm **800**, and then threaded through the sliplock buckle **1**. Sliplock buckle **2** of the shoulder strap may then be used to adjust the size of the universal firearm sling.

[0054] Referring now to FIGS. **9**A-**9**J, the universal firearm sling **700** is illustrated applied to a firearm in a three-point attachment configuration using shoulder strap **702**, fixed buttstock strap **704** and traversing strap **706**. As described previously, the fixed buttstock strap is fitted and secured to the buttstock **902** of the firearm **900**. Once the fixed buttstock strap is secured to the buttstock, end D (FIGS. **9**C-**9**D) of the traversing strap is looped through oval ring **4** of the buttstock strap, and then fed through sliplock buckle **7** of the traversing strap. End A (FIG. **9**E) of the shoulder strap is looped through oval ring **2** of the buttstock strap, and then fed through sliplock buckle **3** of the shoulder strap. End C (FIG. **9**H) of the traversing strap is lopped through the front sling mount of the firearm **900**, and then fed through sliplock buckle **4** of the traversing strap. End B (FIG. **9**J) of the shoulder strap is looped through oval ring **1** of the traversing strap, and then fed through sliplock buckle **1** of the shoulder strap.

[0055] Referring now to FIGS. **10**A-**10**E, the universal firearm sling **700** is illustrated applied to a firearm **1000** in a one-point attachment configuration using only shoulder strap **702**. End B (FIGS. **10**A-**10**B) of the shoulder strap is threaded around butt-end **1004** of firearm **1000** and then threaded through sliplock buckle **1**. End A (FIGS. **10**C-**10**D) of the shoulder strap is fed through passage **1006**, traveling from the buttstock to the front of the firearm. End A is fed through sliplock buckle **3**.

[0056] Referring now to FIGS. **11**A-**11**E, the universal firearm sling **700** is illustrated applied to a fixed-buttstock shotgun **1100** in various one-point, two-point and three-point attachment configurations. FIG. **11**A shows the universal firearm sling in a two-point configuration applied to a shotgun, using only shoulder strap **702**. As described in FIGS. **10**A-**10**E, end B of the shoulder strap is secured to the butt-end of the firearm. End A is secured to the rear swivel mount of the firearm. FIG. **11**B shows the universal firearm sling in a one-point configuration applied to a shotgun, using only the shoulder strap as previously described in FIGS. **10**A-**10**E. FIG. **11**C shows the universal firearm sling in a two-point confirmation applied to a shotgun using the shoulder strap and the fixed buttstock strap. The fixed buttstock strap and shoulder strap are applied as previously described in FIGS. **8**A-**8**G. FIG. **11**D shows the universal firearm sling in a two-point configuration applied to a shotgun using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **11**E shows the universal firearm sling in a three-point configuration applied to a shotgun using the shoulder strap, the fixed buttstock strap and the traversing strap as described in FIGS. **9**A-**9**J.

[0057] Referring now to FIGS. **12**A-**12**E, the universal firearm sling **700** is illustrated applied to a fixed-buttstock ranch rifle **1200** in various one-point, two-point and three-point attachment configurations. FIG. **12**A shows the universal firearm sling in a one-point configuration applied to a ranch rifle, using only the shoulder strap as previously described in FIGS. **10**A-**10**E. FIG. **12**B shows the universal firearm sling in a two-point configuration applied to a ranch rifle, using only shoulder strap **702**. As described in FIGS. **10**A-**10**E, end B of the shoulder strap is secured to the butt-end of the firearm. In FIG. **12**B, End A is secured to the rear swivel mount of the firearm. FIG. **12**C show the universal firearm sling in a two-point confirmation applied to a ranch rifle using the shoulder strap and the fixed buttstock strap. The fixed buttstock strap and shoulder strap are applied as previously described in FIGS. **8**A-**8**G. FIG. **12**D shows the universal firearm sling in a two-point configuration applied to a ranch rifle using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **12**E shows the universal firearm sling in a three-point

confirmation applied to a ranch rifle using the shoulder strap, the fixed buttstock strap and the traversing strap as described in FIGS. **9**A-**9**J.

[0058] Referring now to FIGS. **13**A-**13**C, the universal firearm sling **700** is illustrated applied to a fixed-buttstock military-type assault firearm **1300** in various two-point and three-point attachment configurations. FIG. **13**A shows the universal firearm sling in a two-point configuration applied to a military-type assault firearm using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **13**B show the universal firearm sling in a two-point confirmation applied to a military-type assault firearm using the shoulder strap and the fixed buttstock strap. The fixed buttstock strap and shoulder strap are applied as previously described in FIGS. **8**A-**8**G. FIG. **13**C shows the universal firearm sling in a three-point confirmation applied to a military-type assault firearm using the shoulder strap, the fixed buttstock strap and the traversing strap as described in FIGS. **9**A-**9**J.

[0059] Referring now to FIGS. **14**A-**14**E, the universal firearm sling **700** is illustrated applied to a fixed-buttstock bolt-action rifle **1400** in various one-point, two-point and three-point attachment configurations. FIG. **14**A shows the universal firearm sling in a one-point configuration applied to a bolt-action rifle, using only the shoulder strap as previously described in FIGS. **10**A-**10**E. FIG. **14**B shows the universal firearm sling in a two-point configuration applied to a bolt-action rifle, using only shoulder strap **702**. As described in FIGS. **10**A-**10**E, end B of the shoulder strap is secured to the butt-end of the firearm. In FIG. **14**B, End A is secured to the rear swivel mount of the firearm. FIG. **14**C shows the universal firearm sling in a two-point confirmation applied to a bolt-action rifle using the shoulder strap and the fixed buttstock strap. The fixed buttstock strap and shoulder strap are applied as previously described in FIGS. **8**A-**8**G. FIG. **14**D shows the universal firearm sling in a two-point configuration applied to a bolt-action rifle using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **14**E shows the universal firearm sling in a three-point confirmation applied to a bolt-action rifle using the shoulder strap, the fixed buttstock strap and the traversing strap as described in FIGS. **9**A-**9**J.

[0060] Referring now to FIGS. **15**A-**15**D, the universal firearm sling **700** is illustrated applied to a collapsable-buttstock firearm **1500** in various one-point, two-point and three-point attachment configurations. FIG. **15**A shows the universal firearm sling in a one-point configuration applied to a collapsable-buttstock firearm, using only the shoulder strap as previously described in FIGS. **10**A-**10**E. FIG. **15**B shows the universal firearm sling in a two-point confirmation applied to a collapsable-buttstock firearm using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **15**C shows the universal firearm sling in a three-point configuration applied to a collapsable-buttstock firearm, using shoulder strap **702** and traversing strap **706**. End D of the traversing strap is fed through the rear mount and fed through sliplock **7**. End A of the shoulder strap is fed through the rear mount and fed back through sliplock **2**. End B of the shoulder strap is then fed through oval ring **1** and fed back through sliplock **1**. FIG. **15**D shows the universal firearm sling in a two-point confirmation applied to a collapsable-buttstock firearm using the shoulder strap as described in FIGS. **10**A-**10**E. In FIG. **15**D, end A is fed through the rear swivel mount and fed back through sliplock buckle **3**.

[0061] Referring now to FIGS. **16**A-**16**E, the universal firearm sling **700** is illustrated applied to another fixed-buttstock military-type assault weapon **1600** in various one-point, two-point and three-point attachment configurations. FIG. **16**A shows the universal firearm sling in a one-point configuration applied to a military-type assault weapon, using only the shoulder strap as previously described in FIGS. **10**A-**10**E. FIG. **16**B shows the universal firearm sling in a two-point configuration applied to a military-type assault weapon, using only shoulder strap **702**. As described in FIGS. **10**A-**10**E, end B of the shoulder strap is secured to the butt-end of the firearm. In FIG. **16**B, End A is secured to the rear swivel mount of the firearm. FIG. **16**C shows the universal firearm sling in a two-point confirmation applied to a military-type assault weapon using the shoulder strap and the fixed buttstock strap. The fixed buttstock strap and shoulder strap are applied as previously described in FIGS. **8**A-**8**G. FIG. **16**D shows the universal firearm sling in a two-point configuration applied to a military-type assault weapon using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **16**E shows the universal firearm sling in a three-point confirmation applied to a military-type assault weapon using the shoulder strap, the fixed buttstock strap and the traversing strap as described in FIGS. **9**A-**9**J.

[0062] Referring now to FIGS. **17**A-**17**E, the universal firearm sling **700** is illustrated applied to a collapsable-buttstock military-type carbine weapon **1700** in various one-point, two-point and three-point attachment configurations. FIG. **17**A shows the universal firearm sling in a one-point configuration applied to a military-type carbine weapon, using only the shoulder strap as previously described in FIGS. **10**A-**10**E. FIG. **17**B shows the universal firearm sling in a two-point confirmation applied to a military-type carbine weapon using the shoulder strap as described in FIGS. **10**A-**10**E. In FIG. **17**B, end A is fed through the rear swivel mount and fed back through sliplock buckle **3**. FIG. **17**C shows the universal firearm sling in a two-point configuration applied to a military-type carbine weapon rifle using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the buttstock slot of the firearm and fed through sliplock buckle **1**. FIG. **17**D shows the universal firearm sling in a two-point configuration applied to a military-type carbine weapon using only the shoulder strap wherein end A is looped through the front swivel end of the firearm and fed through sliplock buckle **3**, and wherein end B is looped through the rear swivel end of the firearm and fed through sliplock buckle **1**. FIG. **17**E shows the universal firearm sling in a three-point configuration applied to a military-type carbine weapon, using shoulder strap **702** and traversing strap **706**. End D of the traversing strap is fed through the rear mount and fed through sliplock **7**. End A of the shoulder strap is fed through the rear mount and fed back

through sliplock **2**. End B of the shoulder strap is then fed through oval ring **1** and fed back through sliplock **1**.

[0063] Referring now to FIGS. **18**A-**18**E, the universal firearm sling **700** is illustrated in a one-point configuration applied to an M-4 military weapon **1800** using only shoulder strap **702**. End A of the shoulder strap is passed through the sling mount and threaded back through sliplock **3**. End B of the shoulder strap is passed through the loop created by end A passing through the sling amount and threading back through sliplock **3**. End B is threaded back through sliplock buckle **1**.

[0064] Referring now to FIGS. **19**A-**19**E, the universal firearm sling **700** is illustrated in a two-point configuration applied to an M-4 military weapon **1900** using only shoulder strap **702**. In FIGS. **19**A-**19**B, end A is passed through a buttstock slot, wrapped around the buttstock, and threaded through sliplock buckle **3**. In FIGS. **19**C-**19**E, end B is passed through the front sling mount and threaded back through sliplock buckle **2**.

[0065] Referring now to FIGS. **20**A-**20**H, the universal firearm sling **700** is illustrated in a three-point configuration applied to an M-4 military weapon **2000** using the shoulder strap and traversing strap. In FIGS. **20**A-**20**B, end A is passed through a buttstock slot, wrapped around the buttstock, and threaded through sliplock buckle **3**. In FIGS. **20**C-**20**D, end D of the traversing strap is passed through the loop created by end A passing through the buttstock slot, and threaded through sliplock buckle **7**. In FIGS. **20**E-**20**H, end C of the traversing strap is passed through the front sling mount and threaded back through sliplock buckle **4**. End B of the shoulder strap is passed through oval ring **1** and threaded back through sliplock buckle **1**.

[0066] It will be appreciated by those skilled in the art having the benefit of this disclosure that a universal, ambidextrous firearm sling is provided. It should be understood that the drawings and detailed description herein are to be regarded in an illustrative rather than a restrictive manner, and are not intended to limit the disclosure to the particular forms and examples disclosed. On the contrary, the disclosure includes any further modifications, changes, rearrangements, substitutions, alternatives, design choices, and embodiments apparent to those of ordinary skill in the art, without departing from the spirit and scope of this disclosure, as defined by the following claims. Thus, it is intended that the following claims be interpreted to embrace all such further modifications, changes, rearrangements, substitutions, alternatives, design choices, and embodiments.

1. A sling assembly for attachment to any one of a plurality of firearms for suspending the firearm, each of the plurality of firearms having a muzzle at one end, a buttstock at the opposite end, a longitudinal axis extending between the muzzle and the buttstock, and a first sling attachment fixture disposed proximate the muzzle, wherein some of the plurality of firearms, when oriented upright with the longitudinal axis generally horizontal, include a second sling attachment fixture disposed along the lower surface of the buttstock, whereas others of the plurality of firearms, when oriented upright with the longitudinal axis generally horizontal, include a second sling attachment fixture disposed above the lower surface of the buttstock proximate to the longitudinal axis, the sling assembly comprising:

a side webbing member having a front side webbing end and a back side webbing end;

a plurality of strap adjusters disposed along the side webbing member including at least first and second strap adjusters adjustably disposed proximate the front side webbing end and the back side webbing end, respectively, and adapted to receive the doubled front side webbing end and back side webbing end respectively, when the sling assembly is attached to a firearm, and third and fourth strap adjusters adjustably disposed between the first and second strap adjusters;

a top webbing assembly including a first top webbing member and a second top webbing member;

the first top webbing member including a connector ring permanently attached at a front end and a first portion of a side release buckle disposed at a back end, the connector ring being removably slidably fitted over the side webbing member between the third and fourth strap adjusters to restrict the movement of the connector ring to a selected portion along the side webbing member;

the second top webbing member including a front end and a back end, a second portion of a side release buckle being disposed at the front end, the second portion of the side release buckle being selectively connectable to the first portion of the side release buckle; and

a buttstock strap assembly including a circumferential webbing member having first and second mating ends and a side webbing attachment fixture, an anchor strap extending laterally from the circumferential webbing member, and a buttstock connector ring connected at a fixed position on the circumferential webbing member;

whereby, when attached to one of the plurality of firearms that, when oriented upright with the longitudinal axis generally horizontal, includes a second sling attachment fixture disposed along the lower surface of the buttstock, the front side webbing end of the side webbing member is removably connected to the firearm's first sling attachment member, the side webbing member is disposed generally parallel to the firearm's longitudinal axis, and the back side webbing end of the side webbing member is removably connected to the side webbing attachment fixture of the buttstock strap assembly, the circumferential webbing member of the buttstock strap encircles the firearm's buttstock such that the buttstock connector ring is disposed proximate to the top of the buttstock and the first and second mating ends are removably engaged with one another to hold the buttstock strap on the firearm's buttstock, the anchor strap of the buttstock strap assembly encircles a portion of the buttstock to limit transverse movement along the buttstock, and the back end of the second top webbing member is removably connected to the buttstock connector ring; and

whereby, when attached to another of the plurality of firearms that, when oriented upright with the longitudinal axis generally horizontal, includes a second sling attachment fixture disposed above the lower surface of the buttstock proximate to the longitudinal axis, the front side webbing end of the side webbing member is removably connected to the firearm's first sling attachment fixture, the side webbing member is disposed generally parallel to the firearm's longitudinal axis, the back side webbing end of the side webbing member is removably connected to the firearm's second sling attachment fixture, and the back end of the second top webbing member is removably connected to the back side webbing end of the side webbing member.

2. The sling assembly of claim 1, further comprising a dynamic expansion zone disposed within a length of the second top webbing member.

3. The sling assembly of claim 2, wherein the dynamic expansion zone includes at least one length of cotton-cased natural rubber bungee cord secured in an interior canal of the second top webbing member.

4. The sling assembly of claim 1, wherein the side webbing member, the first top webbing member, the second top webbing member, and the circumferential webbing member are each made from tubular nylon fiber webbing.

5. The sling assembly of claim 1, wherein the second top webbing member includes at least one strap adjuster for adjusting a length of the second top webbing member.

6. The sling assembly of claim 1, wherein the side webbing member is formed of a continuous strip of tubular nylon webbing.

7. A sling assembly for attachment to any one of a plurality of firearms for suspending the firearm, each of the plurality of firearms having a muzzle at one end, a buttstock at the opposite end, a longitudinal axis extending between the muzzle and the buttstock, and a first sling attachment fixture disposed proximate the muzzle, wherein some of the plurality of firearms, when oriented upright with the longitudinal axis generally horizontal, include a second sling attachment fixture disposed along the lower surface of the buttstock, whereas others of the plurality of firearms, when oriented upright with the longitudinal axis generally horizontal, include a second sling attachment fixture disposed above the lower surface of the buttstock proximate to the longitudinal axis, the sling assembly comprising:

a side webbing member having a front side webbing end and a back side webbing end;

a plurality of strap adjusters disposed along the side webbing member including at least first and second strap adjusters adjustably disposed proximate the front side webbing end and the back side webbing end, respectively, and adapted to receive the doubled front side webbing end and back side webbing end respectively, when the sling assembly is attached to a firearm, and third and fourth strap adjusters adjustably disposed between the first and second strap adjusters;

a connector ring removably slidably fitted over the side webbing member between the third and fourth strap adjusters to restrict the movement of the connector ring to a selected portion along the side webbing member

a top webbing assembly including a first top webbing member and a second top webbing member;

the first top webbing member including a free front end and a first portion of a side release buckle disposed at a back end and a strap adjuster disposed proximate the free front end and adapted to received the doubled free front end;

the second top webbing member including a front end and a back end, a second portion of a side release buckle being disposed at the front end, the second portion of the side release buckle being selectively connectable to the first portion of the side release buckle; and

a buttstock strap assembly including a circumferential webbing member having first and second mating ends and a side webbing attachment fixture, an anchor strap extending laterally from the circumferential webbing member, and a buttstock connector ring connected at a fixed position on the circumferential webbing member;

whereby, when attached to one of the plurality of firearms that, when oriented upright with the longitudinal axis generally horizontal, includes a second sling attachment fixture disposed along the lower surface of the buttstock, the front side webbing end of the side webbing member is removably connected to the firearm's first sling attachment fixture, the side webbing member is disposed generally parallel to the firearm's longitudinal axis, and the back side webbing end of the side webbing member is removably connected to the side webbing attachment fixture of the buttstock strap assembly, the circumferential webbing member of the buttstock strap encircles the firearm's buttstock such that the buttstock connector ring is disposed proximate to the top of the buttstock and the first and second mating ends are removably engaged with one another to hold the buttstock strap on the firearm's buttstock, the anchor strap of the buttstock strap assembly encircles a portion of the buttstock to limit transverse movement along the buttstock, and the back end of the second top webbing member is removably connected to the buttstock connector ring; and

whereby, when attached to another of the plurality of firearms that, when oriented upright with the longitudinal axis generally horizontal, includes a second sling attachment fixture disposed above the lower surface of the buttstock proximate to the longitudinal axis, the front side webbing end of the side webbing member is removably connected to the firearm's first sling attachment fixture, the side webbing member is disposed generally parallel to the firearm's longitudinal axis, the back side webbing end of the side webbing member is removably connected to the firearm's second sling attachment fixture, and the back end of the second top webbing member is removably connected to the back side webbing end of the side webbing member.

8. An ambidextrous firearm sling comprising:

a transverse webbing piece having a first end adapted to removably engage a first sling swivel near a forward end of a firearm and a second end adapted to removably engage a buttloop webbing piece; and

a top webbing piece attached at a first end to the transverse webbing piece and adapted to attach at a second end to the buttloop webbing piece;

wherein the buttloop webbing piece provides first and second mating ends and is adapted to encircle the buttstock of a firearm and engage the buttstock circumferentially by engagement of the first and second mating ends;

wherein the buttloop webbing piece is secured against transverse movement along the length of the buttstock by an attached anchor strap having a hook and loop fastener.

9. The ambidextrous firearm sling of claim 8 further comprising an elastically expandable segment in the top webbing piece adapted to elastically absorb shocks produced when carrying a firearm using the ambidextrous firearm sling.

10. The ambidextrous firearm sling of claim 8 wherein the transverse webbing piece is formed from a single continuous tubular webbing piece having at least two first strap adjusters disposed near opposite ends of the transverse webbing piece and adapted to accept doubled ends of the transverse webbing piece for attaching the transverse webbing piece to the first

sling swivel and buttloop webbing piece and at least two additional strap adjusters disposed between the two first strap adjusters.

11. The ambidextrous firearm sling of claim **8** wherein the transverse webbing piece, the top webbing piece, and the buttloop webbing piece are made from high tenacity fiber nylon tubular webbing.

12. The ambidextrous firearm sling of claim **8** wherein the top webbing piece further comprises first and second top webbing piece members that are selectively detachable from one another via a side release buckle.

13. A universal firearm sling kit for providing a universal firearm sling for attachment to any of a plurality of firearms having a front sling swivel mounted near the front of the firearm including firearms having fixed-length buttstocks and firearms with adjustable-length buttstocks, the firearms having fixed length buttstocks having a rear sling swivel on the buttstock, the firearms with adjustable-length buttstocks having a slot formed through the buttstock, the universal firearm sling kit comprising:

a buttstock webbing assembly for use with firearms having fixed length buttstocks, the buttstock webbing assembly having an encircling member removably attachable about the circumference of the buttstock and having an attached lateral stabilizer strap removably securable around a rear portion of the buttstock;

a lower webbing assembly having a transverse webbing piece having an upper webbing piece attachment point and being adapted to attach to the first sling swivel and in the case of a firearm having a fixed length buttstock, to a buttstock strap assembly, and in the case of an firearm having an adjustable-length buttstock, to the slot of the buttstock; and

an upper webbing assembly adapted to attach at a first end to the upper webbing piece attachment point and in the case of a firearm with a fixed length buttstock, to the buttstock webbing assembly, and in the case of a firearm with an adjustable length buttstock to the transverse webbing piece proximate the slot formed in the buttstock.

14. The universal firearm sling kit of claim **13**, wherein the lower webbing assembly transverse piece is formed of a continuous length of tubular flat stock ballistic nylon.

15. The universal firearm sling kit of claim **13**, wherein the upper webbing piece attachment point comprises a D-ring slidably secured by first and second strap adjusters.

16. The universal firearm sling kit of claim **13** wherein the upper webbing piece is adapted to elastically expand when exposed to shock tensile stress.

17. The universal firearm sling kit of claim **13** wherein the lateral stabilizer strap is removably securable to the buttstock by a hook and loop fastener.

18. A sling assembly for attachment to a firearm for suspending the firearm in an upright, generally horizontal orientation from a shoulder of the user, the firearm having a muzzle at one end, a buttstock at the opposite end, a longitudinal axis extending between the muzzle and the buttstock, and a first sling attachment fixture disposed proximate the muzzle, the sling assembly comprising:

a side webbing member having a front side webbing end and a back side webbing end;

a top webbing assembly including a first top webbing member and a second top webbing member;

the first top webbing member including a connector ring disposed at a front end and a first portion of a side release buckle disposed at a back end, the connector ring being removably slidably fitted over the side webbing member between the front side webbing end and the back side webbing end;

the second top webbing member including a front end and a back end, a second portion of a side release buckle being disposed at the front end, the second portion of the side release buckle being selectively connectable to the first portion of the side release buckle; and

a buttstock strap assembly including a self-tightening girthing strap adapted to circumscribe the buttstock horizontally and being anchored a predetermined distance from an end of the buttstock by a buttstock strap forming first and second loops about the girthing strap on opposite sides of the buttstock;

wherein the first and second loops also retain first and second D-rings for selective attachment to the side webbing member.

19. The sling assembly of claim **18**, further comprising a hook and loop fastener attached to the girthing strap and adapted to retain the girthing strap in a fixed position about the buttstock prior to having a self-tightening load applied to the girthing strap.

20. The sling assembly of claim **19**, wherein the side webbing member, the first and second top webbing members, the girthing strap, and the buttstrap, each comprise a length of high tenacity fiber nylon woven as tubular flat stock.

21. The sling assembly of claim **20**, wherein the second top webbing member further comprises a dynamic expansion zone with at least one length of cotton-cased natural rubber bungee sewn within a crimped portion of the second top webbing member.

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