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(54) **FOREARM-GRIPPING STABILIZING ATTACHMENT FOR A HANDGUN**

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F41C 23/10	(2006.01)
F41C 33/00	(2006.01)
F41C 23/12	(2006.01)

(52) **U.S. Cl.**
CPC ***F41C 23/12*** (2013.01); ***F41C 23/10*** (2013.01); ***F41C 33/001*** (2013.01)

(58) **Field of Classification Search**
CPC F41C 33/001; F41C 23/10; F41C 23/12
USPC 42/1.11, 1.12, 1.16, 52, 741.01, 71.02, 42/94; 135/71, 75
See application file for complete search history.

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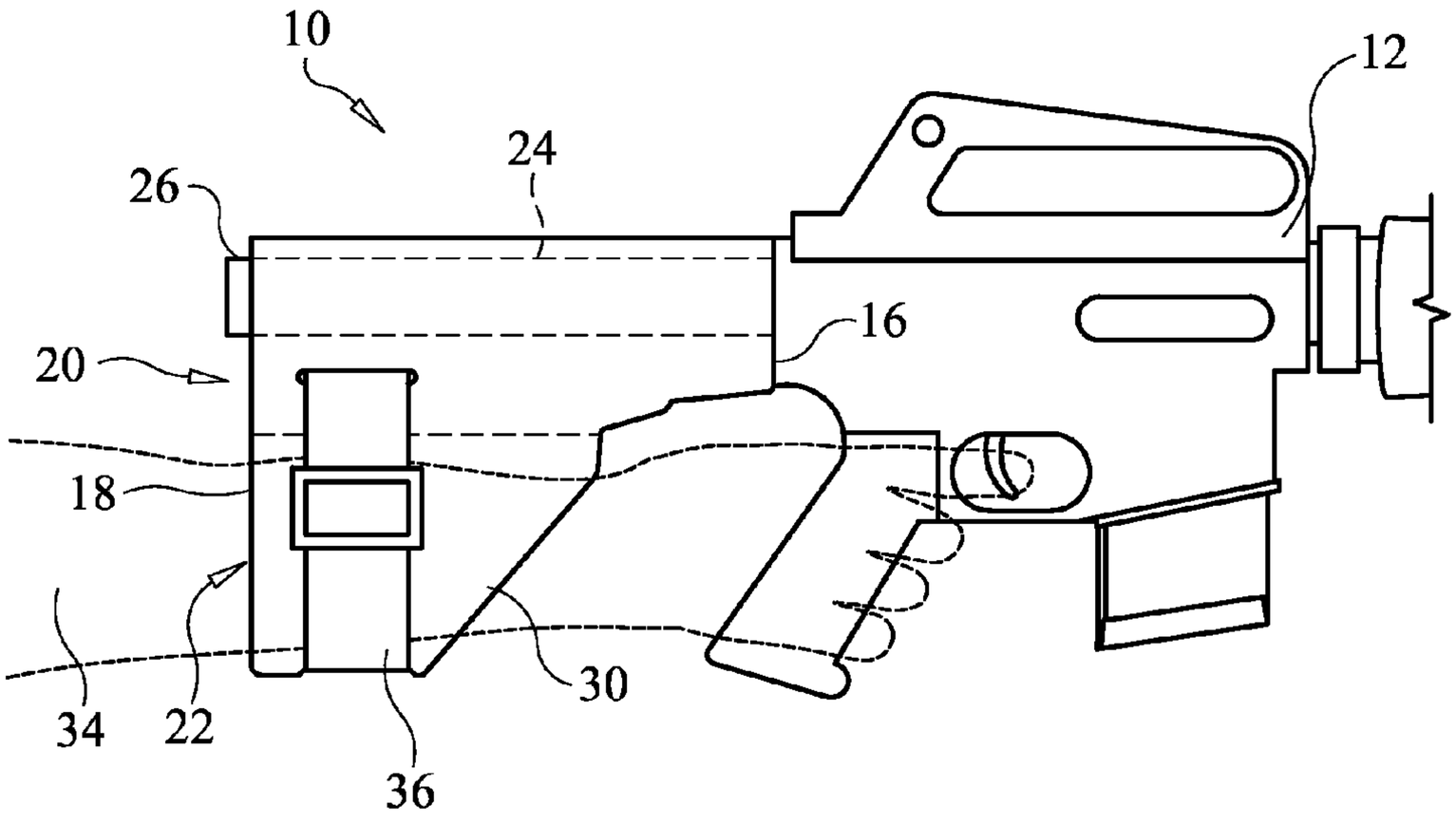
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(57) **ABSTRACT**

A forearm-gripping stabilizing attachment for a handgun that has a support structure extending rearwardly from the rear end of the handgun is disclosed. The forearm-gripping stabilizing attachment includes a body having a longitudinally extending passage into which the support structure of the handgun is received to secure the attachment to the handgun. The body also includes at least one flexible flap and a strap connected to the body that secures a user's forearm to the at least one flexible flap.

5 Claims, 3 Drawing Sheets



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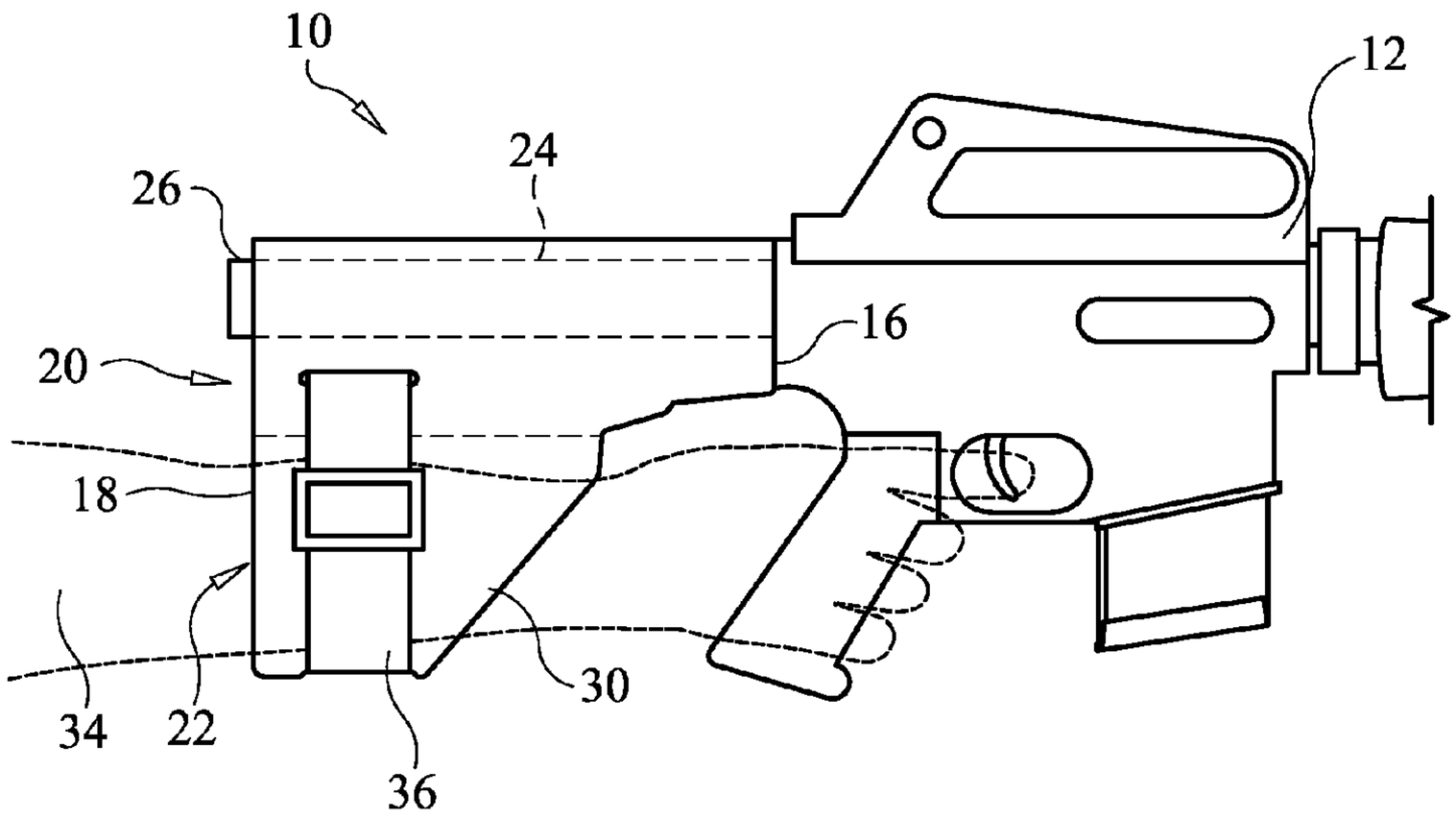


FIG. 1

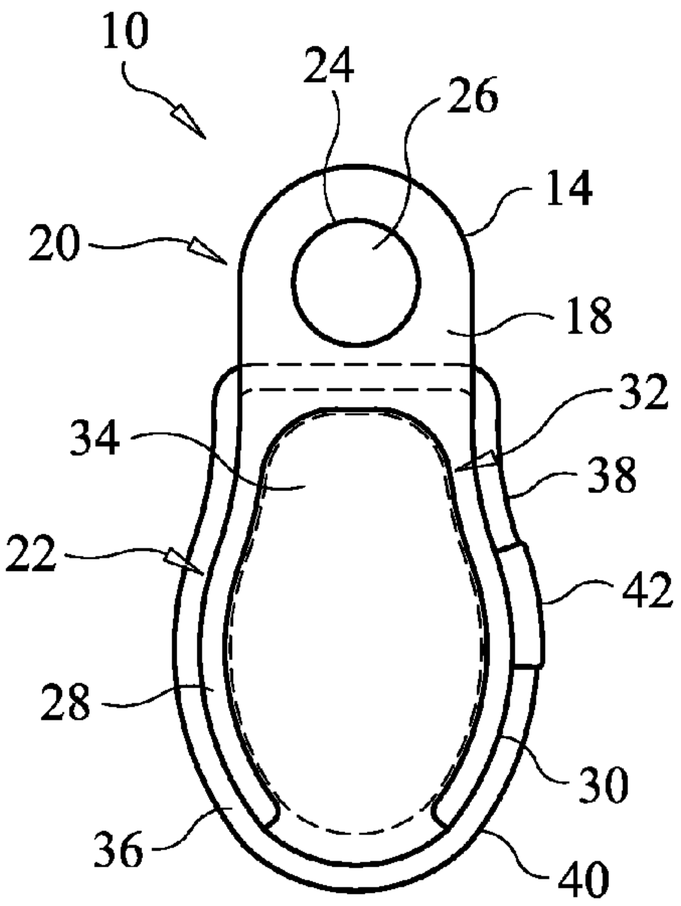


FIG. 2

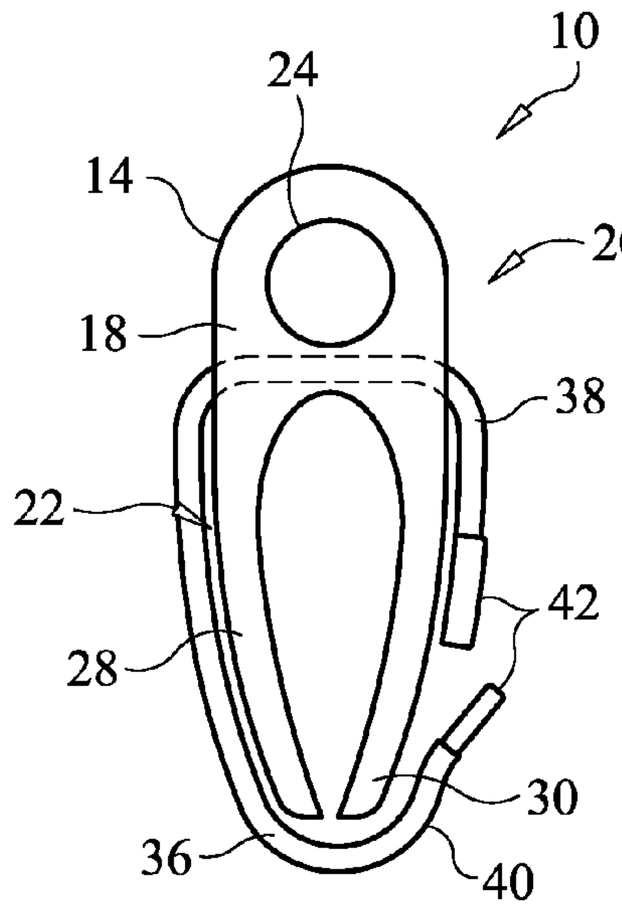


FIG. 3

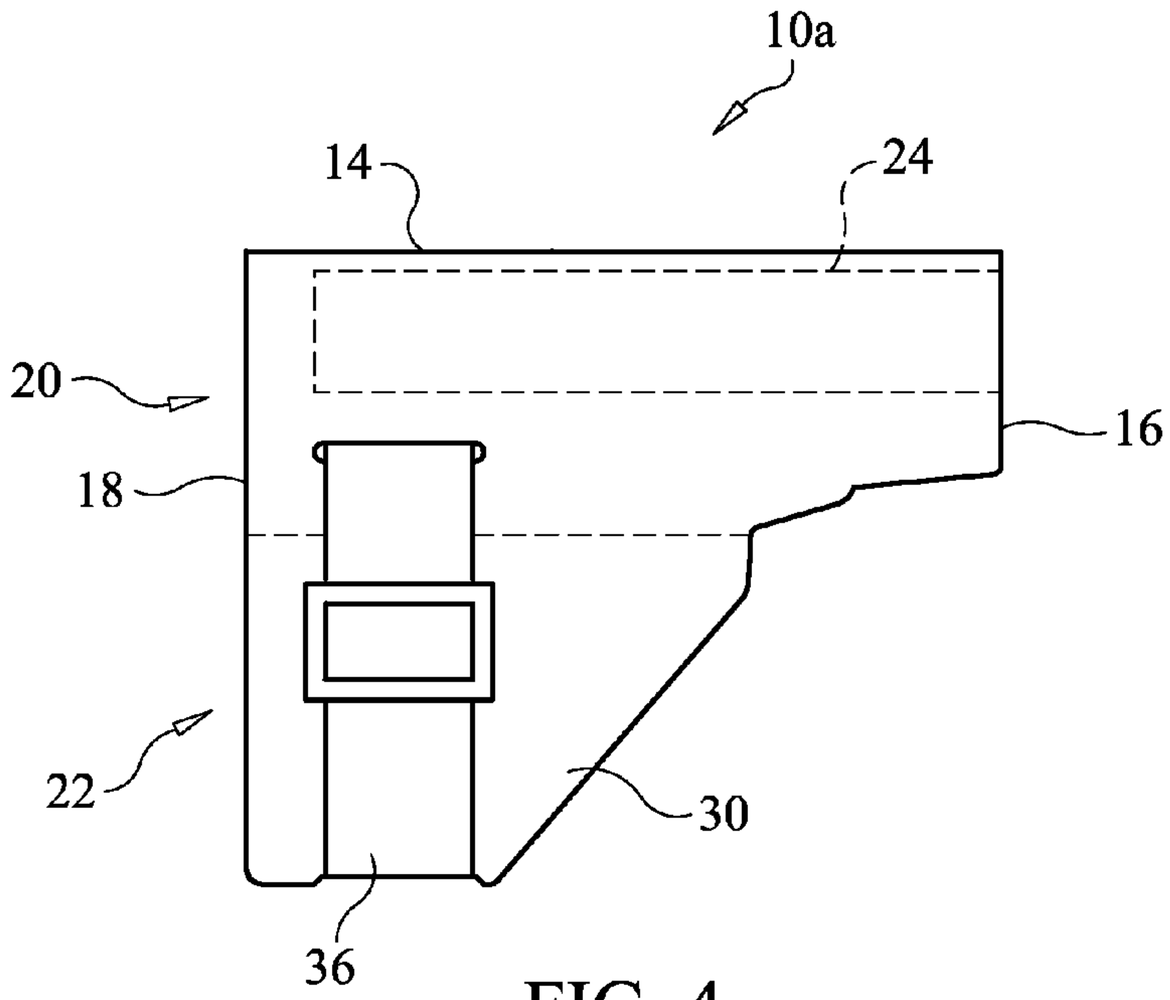


FIG. 4

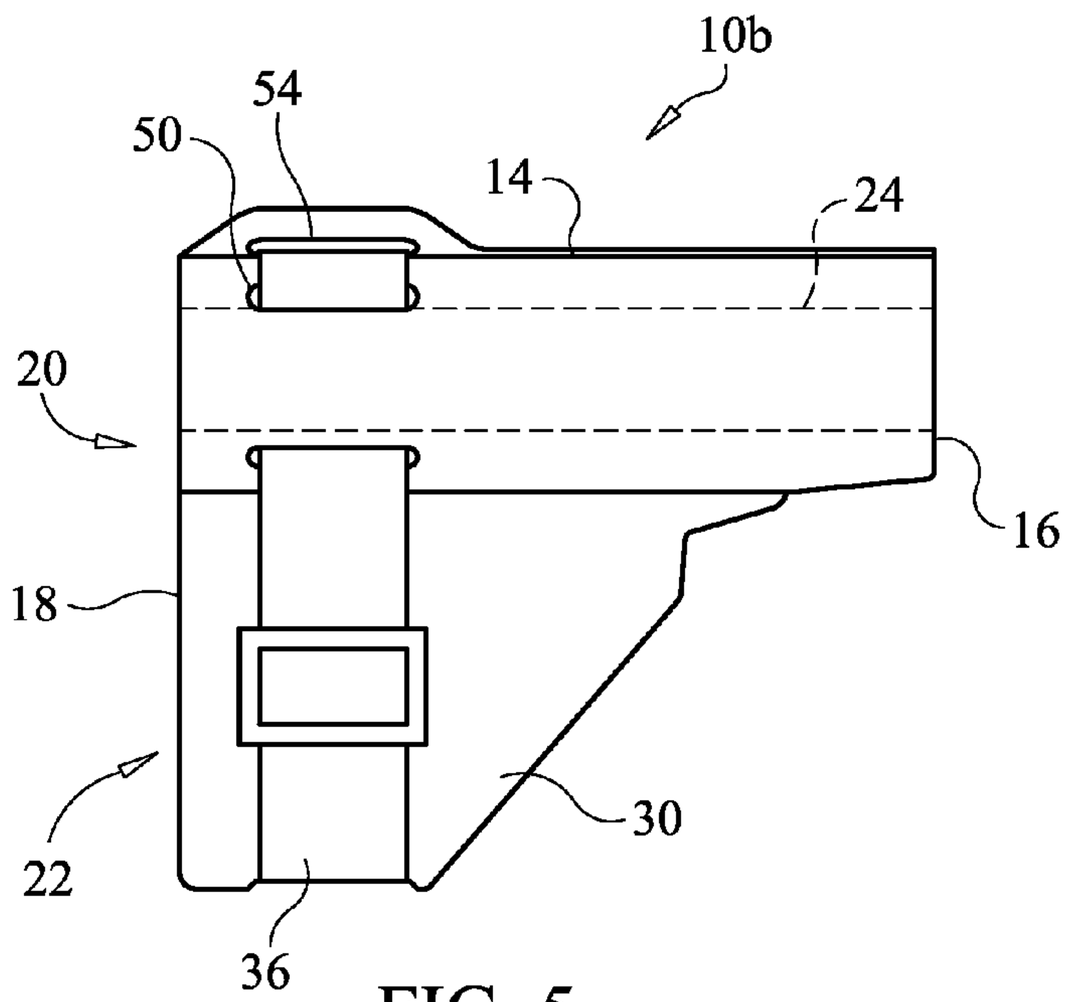


FIG. 5

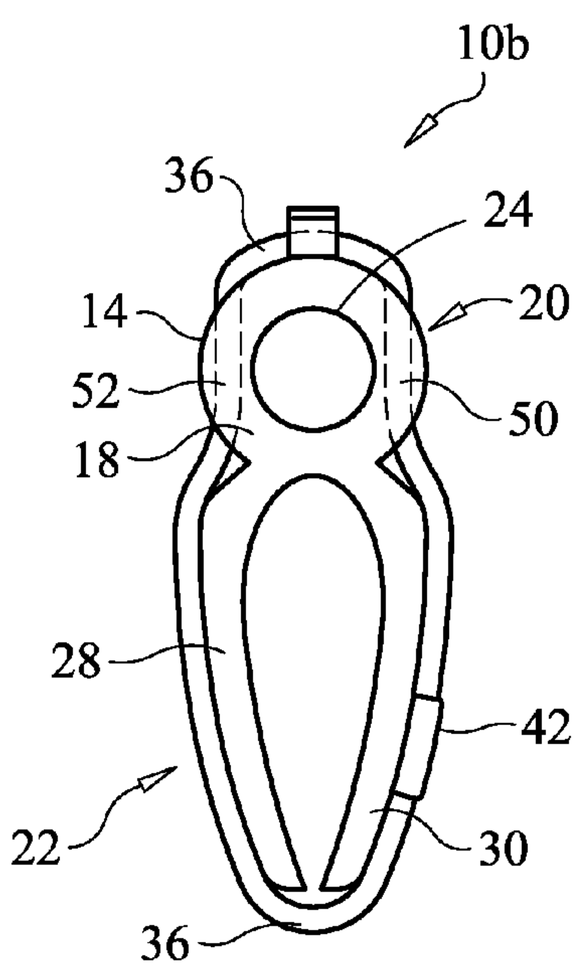


FIG. 6

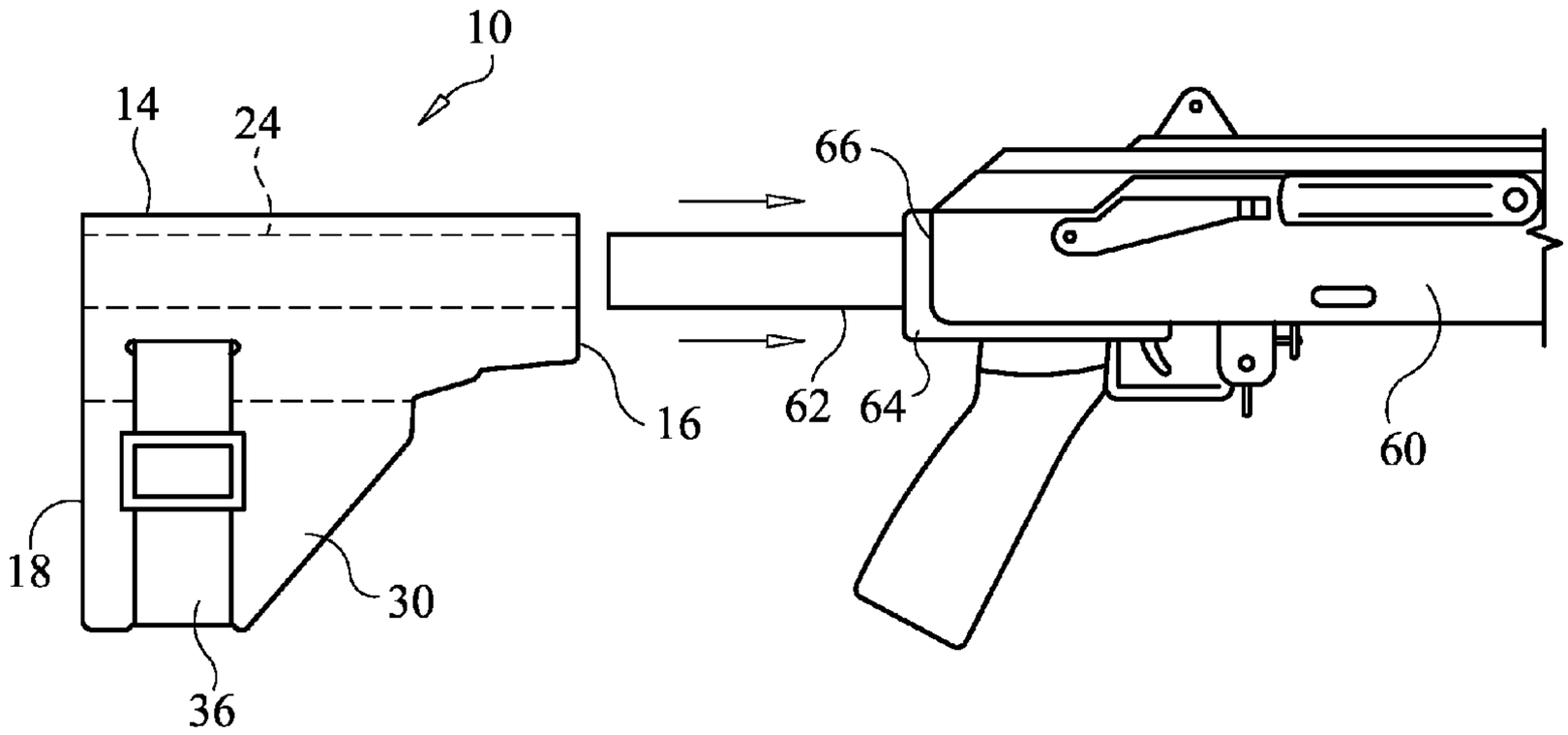


FIG. 7

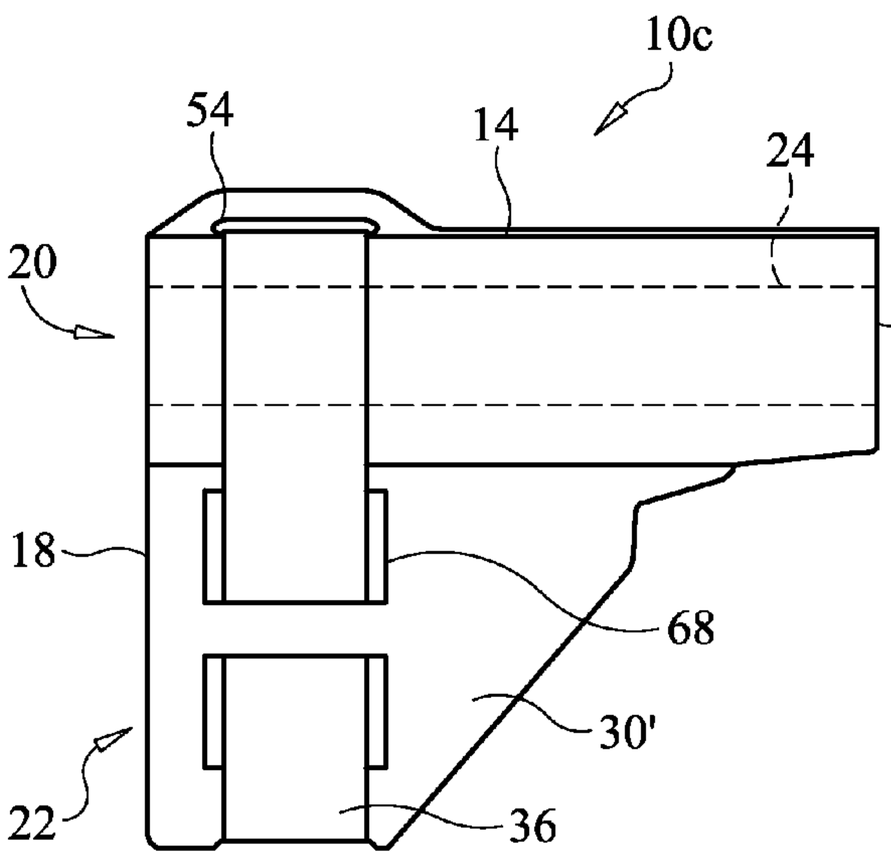


FIG. 8

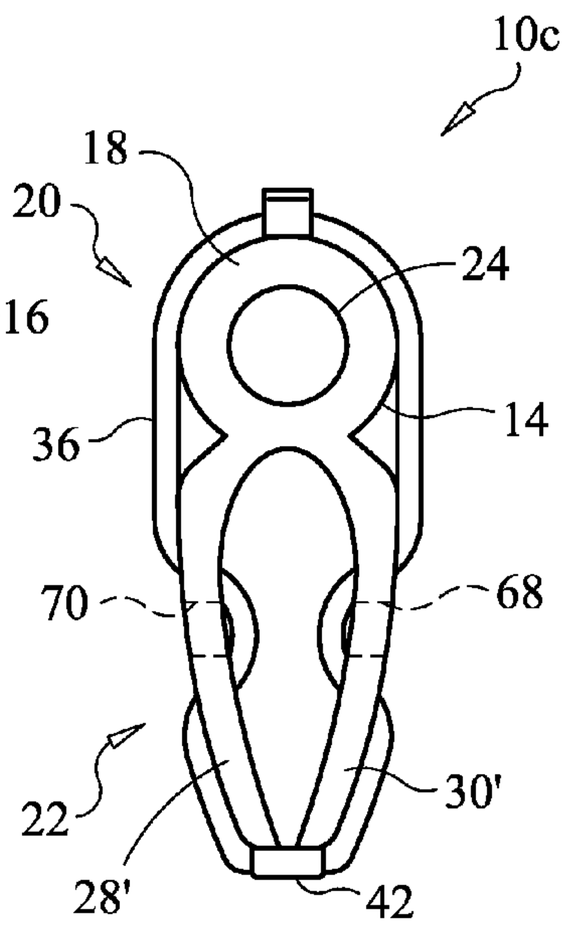


FIG. 9

FOREARM-GRIPPING STABILIZING ATTACHMENT FOR A HANDGUN

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 14/169,523, filed Jan. 31, 2014, which is a continuation of U.S. patent application Ser. No. 13/775,760, filed Feb. 25, 2013, which claims the benefit of provisional patent application Ser. No. 61/730,077, filed Nov. 27, 2012, the entirety of each are incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates generally to a stabilizing attachment for a handgun and, more particularly, to a forearm-gripping stabilizing attachment for a handgun that secures to a rearward end of the handgun frame and engages a user's forearm.

BACKGROUND OF THE INVENTION

The accuracy and proficiency of firing a handgun greatly depends upon the user's ability to hold the handgun in a steady position while firing, which becomes more difficult in one handed operation. Holding a handgun in a steady position can be a difficult challenge to person having a physical disability that prevents that person from being able to firmly grip the handgun or steady the handgun for any appreciable length of time to permit accurate firing. This becomes an even further challenge when the weight of the handgun is concentrated forwardly of the pistol grip and causes the handgun to want to dip forwardly and, thus, require the user to compensate for this imbalance by continuously applying an upwardly force upon the grip to bring the handgun into a correct firing position.

There exist a number of devices that attach to firearms and, particularly, handguns to aid a person in holding and stabilizing the handgun during firing. While these devices meet their respective requirements and objectives, there exists a need for an improved stabilizing attachment for a handgun.

SUMMARY OF THE INVENTION

Embodiments of the present invention addresses this need by providing a new and specially designed stabilizing attachment that secures to the rearward end of a handgun and which grips a user's forearm via a pair of oppositely disposed and resilient flap members that apply a gripping force upon a user's forearm that is positioned between the flap members.

In general, in one aspect, a forearm-gripping stabilizing attachment for a handgun, the handgun having a support structure extending rearwardly from the rear end of the handgun, is provided. The forearm-gripping stabilizing attachment includes a body having a front end, a rear end, an upper portion, a lower portion, and a passage longitudinally extending within the upper portion and at least through the front end of the body. The support structure of the handgun is telescopically receivable by the passage. The lower portion has at least one flexible flap extending from the upper portion. A strap is connected to the body and secures the at least one flexible flap to a user's forearm when the stabilizing attachment is secured to a user's forearm.

In general, in another aspect, a combination of a forearm-gripping stabilizing attachment and a handgun is provided. The combination includes a support structure extending rearwardly outward from the handgun. And the forearm-gripping stabilizing attachment includes a body having a front end, a rear end, an upper portion, a lower portion, and a passage longitudinally extending within the upper portion and at least through the front end of the body. The support structure of the handgun is received by the passage. The lower portion has at least one flexible flap extending from the upper portion. A strap is connected to the body and secures a user's forearm to the at least one flexible flap.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood and in order that the present contribution to the art may be better appreciated.

Numerous objects, features and advantages of the present invention will be readily apparent to those of ordinary skill in the art upon a reading of the following detailed description of present, but nonetheless illustrative, embodiments of the present invention when taken in conjunction with the accompanying drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of descriptions and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated an embodiment of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The following drawings illustrate by way of example and are included to provide further understanding of the invention for the purpose of illustrative discussion of the embodiments of the invention. No attempt is made to show structural details of the embodiments in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice. Identical reference numerals do not necessarily indicate an identical structure. Rather, the same reference numeral may be used to indicate a similar feature of a feature with similar functionality. In the drawings:

FIG. **1** is a side elevation view of the forearm-gripping stabilizing attachment for a handgun constructed in accordance with the principles of an embodiment of the present invention, illustrating the stabilizing attachment in use and attached to a handgun;

FIG. **2** is a partial rear elevation view of the forearm-gripping stabilizing attachment for a handgun of FIG. **1**, illustrating the stabilizing attachments engagement with a user's forearm;

FIG. **3** is a rear elevation view of the forearm-gripping stabilizing attachment for a handgun constructed in accordance with the principles of an embodiment of the present invention, illustrating the stabilizing attachment in a non-use configuration;

FIG. **4** is side elevation view of a forearm-gripping stabilizing attachment for a handgun constructed in accordance with the principles of an alternative embodiment of the present invention;

FIG. **5** is a side elevation view of a forearm-gripping stabilizing attachment for a handgun constructed in accordance with the principles of an alternative embodiment of the present invention;

FIG. **6** is a rear elevation view of the forearm-gripping stabilizing attachment of FIG. **5**;

FIG. **7** is a side elevation view of a forearm-gripping stabilizing attachment for a handgun constructed in accordance with the principles of an alternative embodiment of the present invention;

FIG. **8** is a rear elevation view of the forearm-gripping stabilizing attachment of FIG. **7**; and

FIG. **9** is a side elevation view of a forearm-gripping stabilizing attachment constructed in accordance with the principles of the present invention in use with a handgun of an alternative configuration of the handgun illustrated in FIG. **1**.

DETAILED DESCRIPTION OF THE INVENTION

As a preliminary matter, it should be noted that in this document directional terms, such as "above", "below", "upper", "lower", etc., are used for convenience in referring to the accompanying drawings.

In FIGS. **1** through **3**, there is representatively illustrated a specially designed stabilizing attachment **10**, for mounting to a handgun **12**, that permits a user to handle and support a handgun without straining the user's arm, hand, or wrist. Stabilizing attachment **10** is particularly advantageous for a person having a physical disability that would prevent the person from handling and supporting the handgun for an appreciable amount of time. Stabilizing attachment **10** is also particularly useful with handguns having a large portion of its weight located forwardly of the pistol grip that causes a user to strain to properly hold the handgun in a correct firing position.

Stabilizing attachment **10** comprises body **14**, which in an embodiment, is made substantially of a semi-rigid, elastomeric material. As a non-limiting example, body **14** could be made of rubber, foam-rubber or the like material. Body **14** includes a forward end **16**, a rearward end **18**, an elongated upper body portion **20** that extends between the forward and rearward ends, and a lower body portion **22** that extends from the rearward end towards the forward end and terminates prior to the forward end. Body **14** is unitary and generally tapers from narrow to wide in a direction from the forward end **16** towards the rearward end **18**. The body **14** has a swept design that generally conforms to the angle between the user's forearm and the handgun when the user grips the handgun.

The upper body portion **20** includes a longitudinal passage **24** that extends completely through the body **14** between the forward and rearward ends **16** and **18**. Passage **24** provides for the telescopic insertion of a portion of the handgun **12** therein to secure or mount the stabilizing attachment **10** to the handgun. As illustrated here, and in an embodiment, handgun **12** includes a buffer tube **26** or the like that extends rearwardly from the handgun. The stabilizing attachment **10** is mounted or secured to the handgun **12** by inserting the buffer tube **16** completely through passage **24** with the forward end **16** of body **14** first. It is preferred that body **14** is sized such that when the buffer tube **26** is fully inserted through passage **24** it partially extends outwardly from the passage and beyond the rearward end **18** of the body. This is desired in order to prevent improper use of the stabilizing attachment **10** where a user may be inclined to improperly shoulder the stabilizing attachment. In an embodiment, buffer tube **16** is frictionally retained within passage **24**; however, other means of restraining the withdrawal of the buffer tube from the passage could be employed.

Lower body portion **22** is longitudinally bi-furcated and includes downwardly depending opposed flaps **28** and **30**. Flaps **28** and **30** are laterally spaced and form a gap **32** therebetween into which is positioned the forearm **34** of a user with the flaps disposed on opposite lateral sides of the user's forearm, as best seen in FIG. **2**. Flaps **28** and **30**, being of the semi-rigid elastomeric material, conform to the user's forearm **34**. Flaps **28** and **30** may be formed in a manner such that they apply oppositely directed inward forces upon the user's forearm **34** to grip the forearm and prevent the forearm from slipping outward from between the flaps.

Stabilizing attachment **10** may also include a securement strap **36** that encircles the flaps **28** and **30**, and the user's forearm when the forearm is disposed between the flaps. Securement strap **36** may be of any suitable strap that is capable of being cinched about the flaps and the user's forearm. In the illustrated embodiment, securement strap **36** is laterally threaded through body **14** between passage **24** and gap **32**. Opposite ends **38** and **40** of the strap **36** are secured together by a suitable buckle or clasp **42**. One of ordinary skill in the art will readily appreciate the function of strap **36** and recognize many suitable arrangements for the purpose of securing the body **14** about a user's forearm.

Alternative embodiments are possible and within the scope of the invention. For example, while the body **14** has been described as being formed entirely of a resilient material, it is possible to form the body such that various components of the body are of different materials. As a non-limiting example, the upper portion **20** could be formed of a rigid or non-elastomeric material and the lower portion **22** could be formed of a resilient material that could be over molded or otherwise joined with the upper portion. Other constructions are possible that remain within the scope of the invention so long as the opposed flaps **28** and **30** at least partially conform to a user's forearm.

With reference to FIG. **4** there is representatively illustrated an alternative embodiment of a stabilizing brace **10***a* and wherein like reference numbers refer to similar elements of previously disclosed embodiments. In stabilizing brace **10***a*, passage **24***a* is substituted for passage **24**. Passage **24***a*, unlike passage **24**, does not fully extend through the body **14** between the forward and rearward ends **16** and **18**. And rather passage **24***a* terminates within the body, such as, for example, approximate to end **18**. In other words, passage **24***a* is a blind passage extending through end **16** and terminating at position within body **14** prior to end **18**.

In this instance, the buffer tube **26** or other suitable tubular support structure extending rearwardly from the handgun is received within passage **24***a* but does not extend beyond end **18** as in stabilizing attachment **10**. While, as discussed above, this may not be a preferred embodiment, it is a possible alternative that is within the scope of the present invention.

Now with reference to FIGS. **5** and **6** there is representatively illustrated stabilizing brace **10***b* constructed in accordance with another embodiment of the present invention, wherein all like reference numbers refer to similar elements of previously disclosed embodiments. Stabilizing brace **10***b* further includes a pair of slots **50** and **52** vertically extending through the upper portion **22** of the body **14** and on opposite sides of passage **24**. Stabilizing brace **10***b* may also further include a third slot **54** disposed above passage **24**. Secure-

ment strap **36** is thread through slots **50**, **52** and **54** so as to encircle passage **24** and flap portions **28** and **30** alike. It is contemplated that this securement strap arrangement of stabilizing brace **10***b*, that encircles passage **24**, may provide a more secure attachment of the stabilizing brace to the forearm of a user over the previously disclosed embodiments where the securement strap only encircles flap portions **28** and **30**.

With reference now to FIGS. **7** and **8** there is representatively illustrated stabilizing brace **10***c* constructed in accordance with another embodiment of the present invention, wherein all like reference numbers refer to similar elements of previously disclosed embodiments. Stabilizing brace **10***c* includes flap portions **28'** and **30'** that further include slots **68** and **70**, respectively, through which the strap **36** is threaded. This strap configuration of stabilizing brace **10***c* illustrates yet another exemplary configuration that is within the scope of the invention.

With reference now to FIG. **9**, stabilizing brace **10** (or alternative embodiments) is representatively illustrated in connection with hand gun **60** that has a different configuration from hand gun **12** (seen in FIG. **1**). Particularly, hand gun **12** includes an integral buffer tube **26** that provides a suitable support upon which the stabilizing brace **10** may be attached by telescopically receiving the buffer tube within passage **24**. But not every hand gun is provided with a suitable tubular support or similar structure that rearwardly extends from the hand gun to which the stabilizing brace **10** may be attached. Thus it is contemplated that a suitable attachment structure, such as, tubular member **62** or the like may be provided for attachment to a hand gun that otherwise is devoid of a suitable structure to which the stabilizing brace **10** may be attached.

In the exemplary illustration, tubular member **62** is secured to a bracket **64** that is secured to the hand gun **60**, thereby attaching tubular member to the hand gun such that the tubular member **62** extends rearwardly outward from the butt end or rear end **66** of the hand gun. To this end, the tubular member **62** is securely attached to the hand gun **60** and thus provides a suitable support to which the stabilizing brace **10** may be attached by telescopically receiving the tubular member within passage **24**. There are numerous possible bracket configurations that could be employed to complement various hand gun structures. Thus impracticable to disclose the myriad of possibilities and one of ordinary skill in the art will readily appreciate that providing a suitable support structure for attachment to a hand gun by some sort of bracket mount is the important aspect of the invention and not the actual configuration of the bracket.

While not illustrated, it is contemplated that the flap portions **28** and **30** could be constructed to be hinged so as to conform to the users forearm and provide gripping of the forearm. In this configuration, the flap portions **28** and **30** may be made of a resilient material or may be made of a more rigid material, such as, but not limited to plastics, metal, alloys, and the like.

Further, one of ordinary skill in the art and a user will readily appreciate the many benefits of using the forearm-gripping stabilizing attachment of this invention for one handed firing of a handgun. Particularly, the weight of the handgun is more evenly distributed through the user's hand, wrist, and forearm. Additionally, the handgun becomes an extension of the user's forearm wherein the user may actually release his or her grip from the handgun to relax the user's hand between firing while still maintaining proper control of the handgun at all times. Additionally yet, a user will tend to have better accuracy and aim when firing a handgun while utilizing the invention.

A number of embodiments of the present invention have been described. Nevertheless, it will be understood that various modifications may be made without departing from the spirit and scope of the invention and the following claims.

What is claimed is:

1. A forearm-gripping stabilizing attachment for a handgun, the handgun having a support structure extending rearwardly from the rear end of the handgun, the forearm-gripping stabilizing attachment, comprising:

a body having a front end, a rear end, an upper portion, a lower portion, and a passage longitudinally extending within said upper portion and at least through said front end of said body, the support structure of the handgun being telescopically receivable by said passage;

said lower portion having at least one flap extending from said upper portion;

a strap connected to said body, said strap securing said at least one flap to a user's forearm when the stabilizing attachment is secured to a user's forearm; and

wherein said passage extends entirely through said body between said front end and said rear end of said body.

2. The forearm-gripping stabilizing attachment of claim **1**, wherein said at least one flap is constructed of an elastomeric material.

3. In combination a forearm-gripping stabilizing attachment and a handgun, the combination comprising:

a support structure extending rearwardly outward from the handgun;

the forearm-gripping stabilizing attachment comprising:

a body having a front end, a rear end, an upper portion, a lower portion, and a passage longitudinally extending within said upper portion and at least through said front end of said body, said support structure of the handgun received by said passage;

said lower portion having at least one flap extending from said upper portion;

a strap connected to said body, said strap securing a user's forearm to said at least one flap when the stabilizing attachment is secured to a user's forearm; and

wherein said support structure is a buffer tube.

4. The combination of claim **3**, wherein said at least one flap is constructed of an elastomeric material.

5. In combination a forearm-gripping stabilizing attachment and a handgun, the combination comprising:

a support structure extending rearwardly outward from the handgun;

the forearm-gripping stabilizing attachment comprising:

a body having a passage longitudinally extending therewithin and at least one flap, said support structure of the handgun received by said passage;

a strap connected to said body, said strap securing a user's forearm to said at least one flap when the stabilizing attachment is secured to a user's forearm; and

wherein said support structure is a buffer tube.

* * * * *