



US 20050188587A1

(19) **United States**

(12) **Patent Application Publication**

**Danas**

(10) **Pub. No.: US 2005/0188587 A1**

(43) **Pub. Date: Sep. 1, 2005**

(54) **TARGET GRIP APPARATUS FOR A FIREARM**

(52) **U.S. Cl. .... 42/72**

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(57) **ABSTRACT**

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(21) **Appl. No.: 10/932,655**

A target grip for a firearm comprising fixed and removable trigger finger extenders for a side panel of the firearm for enabling the distal portion of a user's trigger finger to contact a trigger at an angle approximately perpendicular to the trigger for more shooting accuracy and consistency. Various size target grip trigger finger extenders are provided for the side panel of the firearm until the proper size extender is found by a user. In one embodiment, the target grip extender is secured by a locking device positioned within the extender. In another embodiment, the trigger finger extender is an integral part of the side panel. The side panel may be attached to the side of a firearm by screws or by an adhesive. In a further embodiment, the trigger finger extender is an integral part of a sleeve that slips over the frame of the firearm.

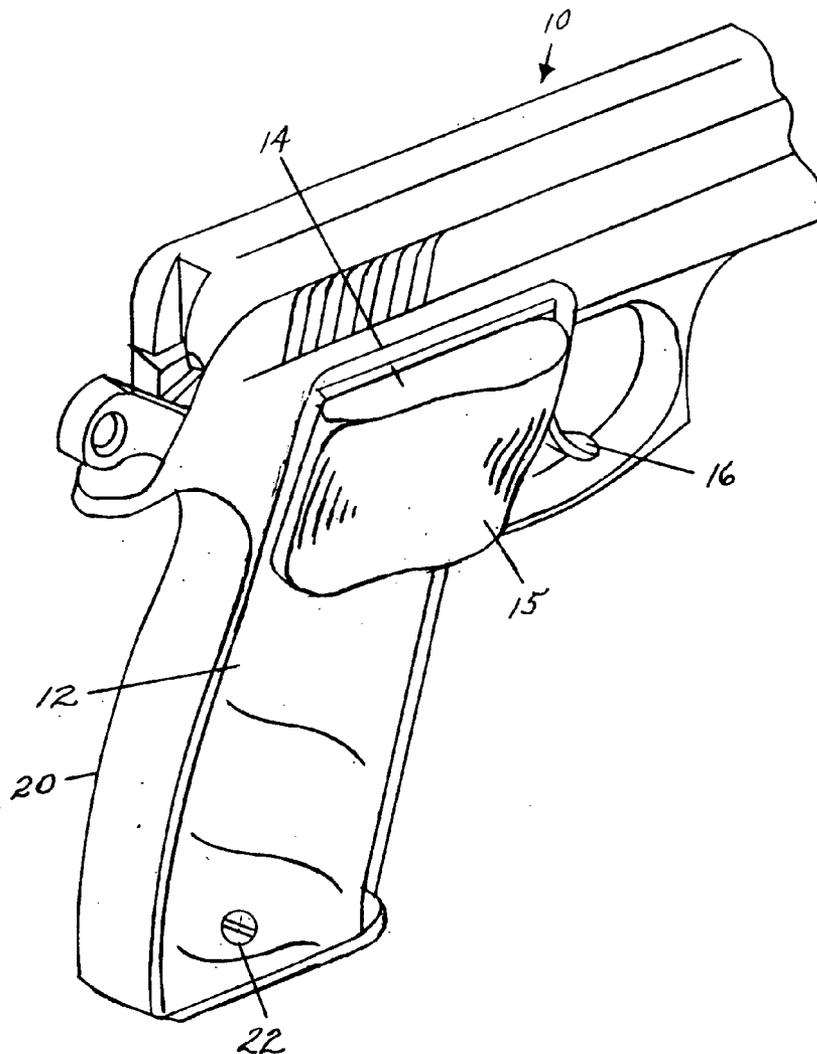
(22) **Filed: Sep. 2, 2004**

**Related U.S. Application Data**

(63) **Continuation-in-part of application No. 10/404,930, filed on Apr. 1, 2003, now Pat. No. 6,802,148.**

**Publication Classification**

(51) **Int. Cl.<sup>7</sup> ..... F41A 19/00**



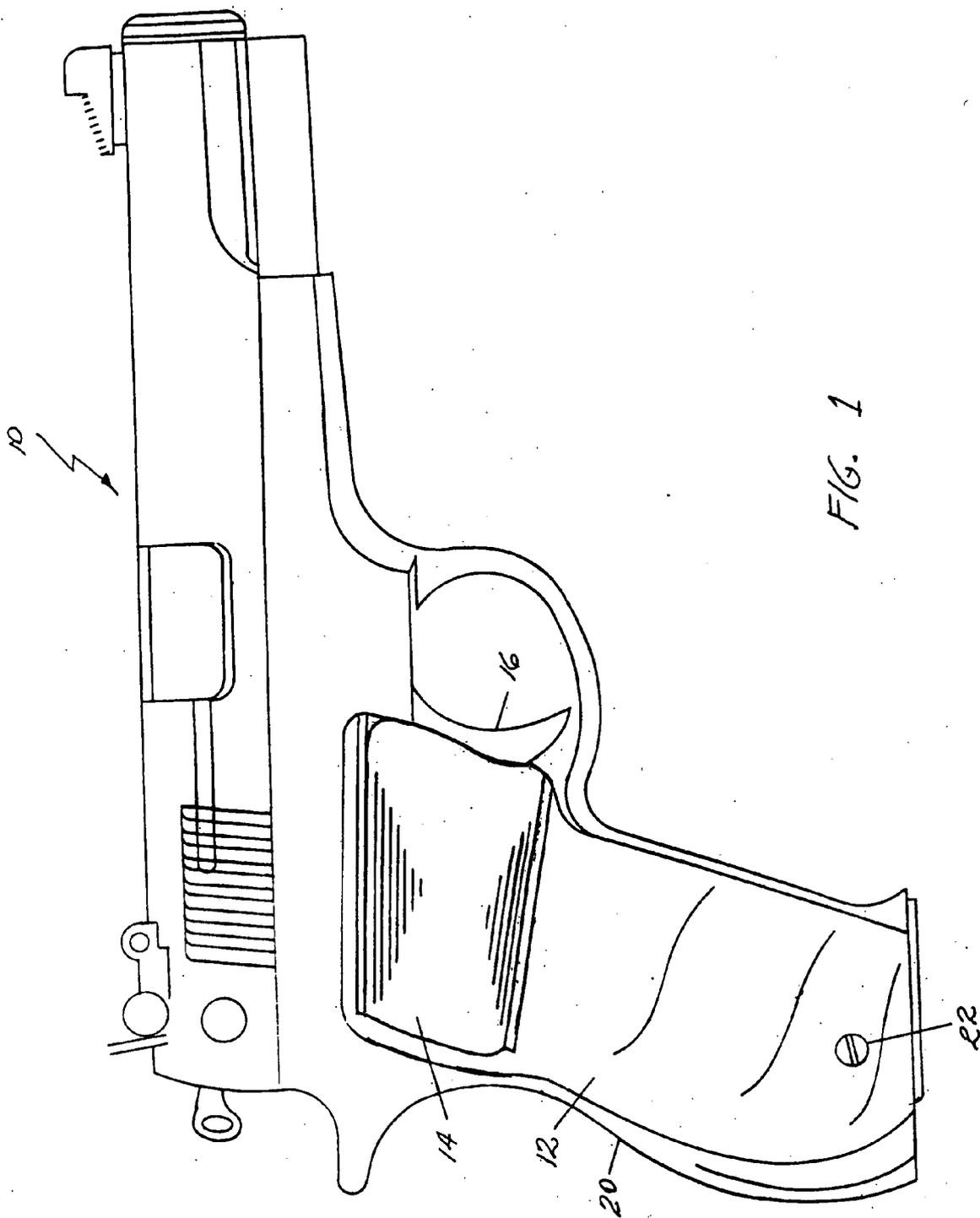


FIG. 1

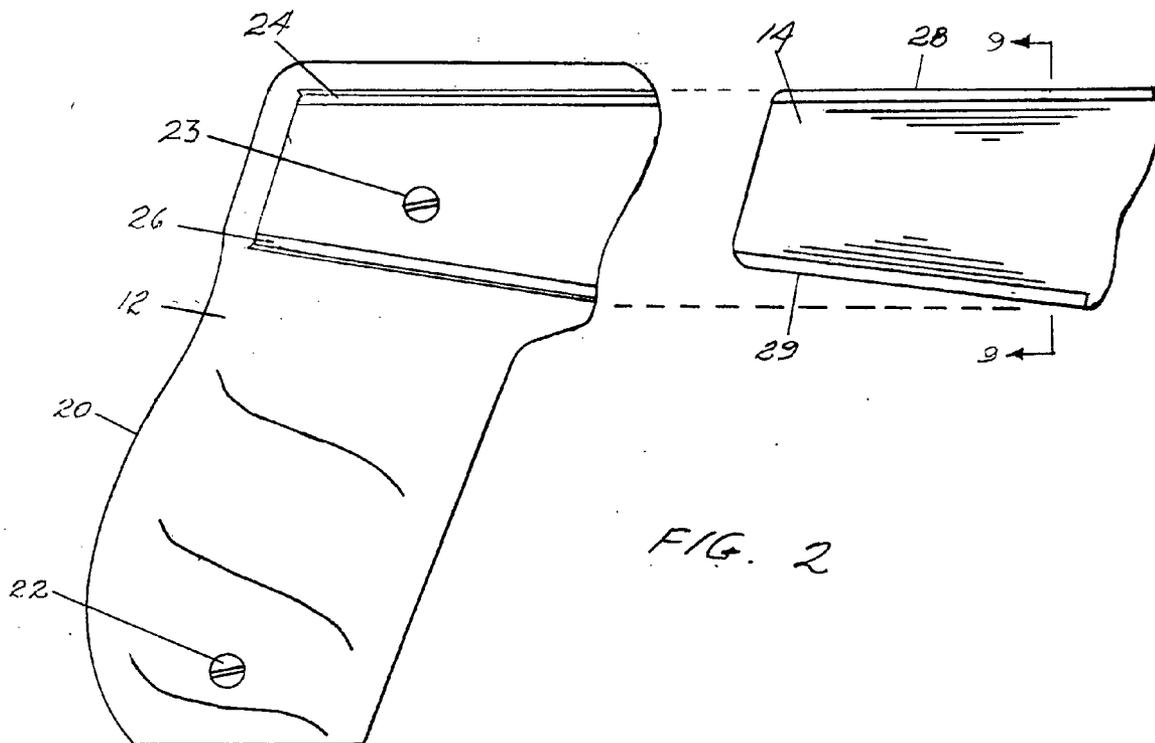


FIG. 2

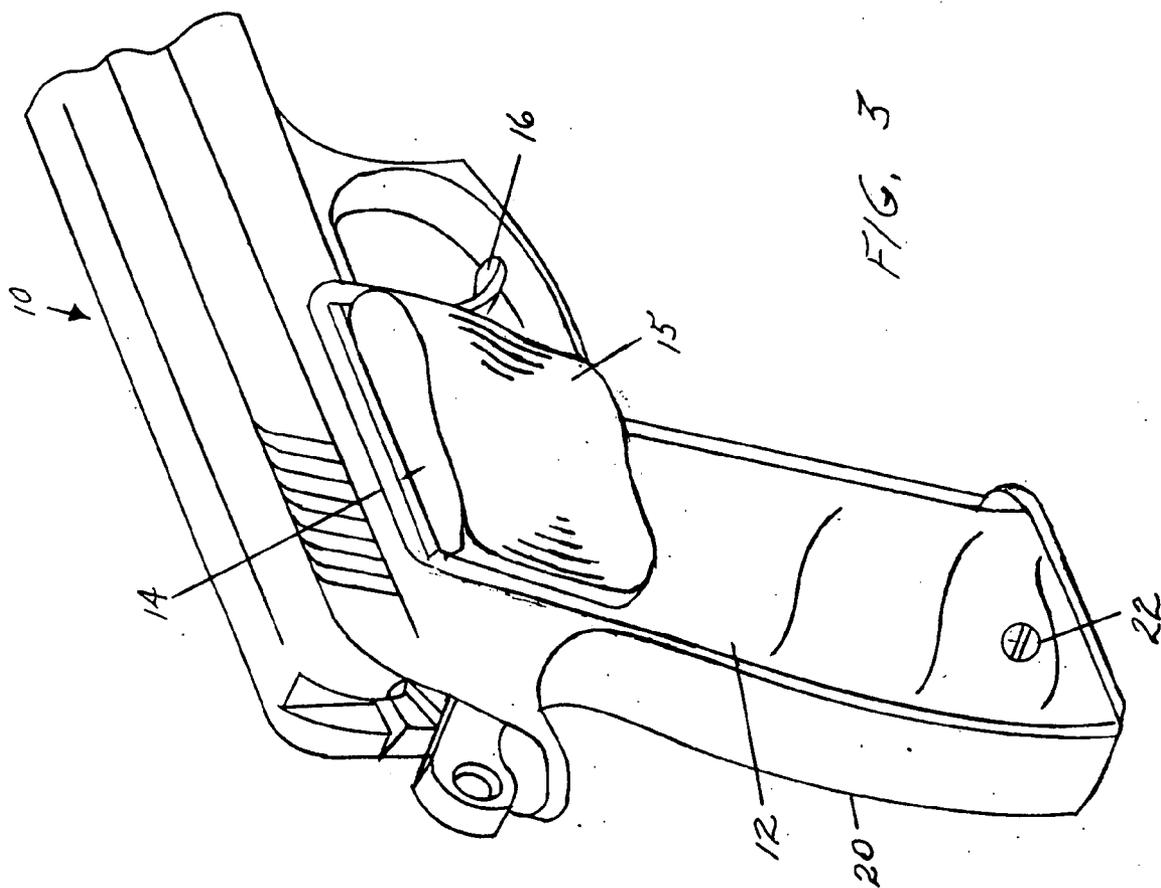
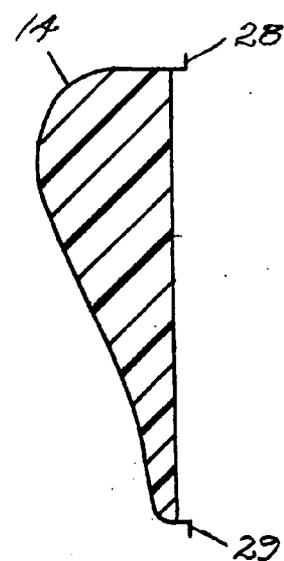
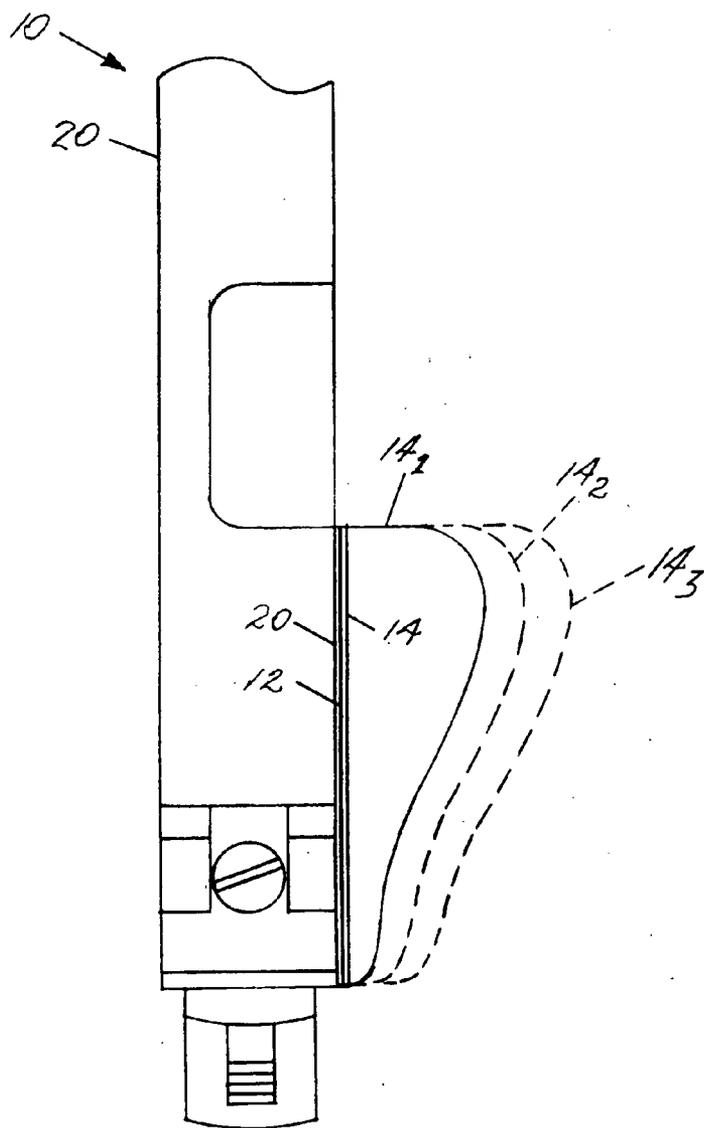


FIG. 3



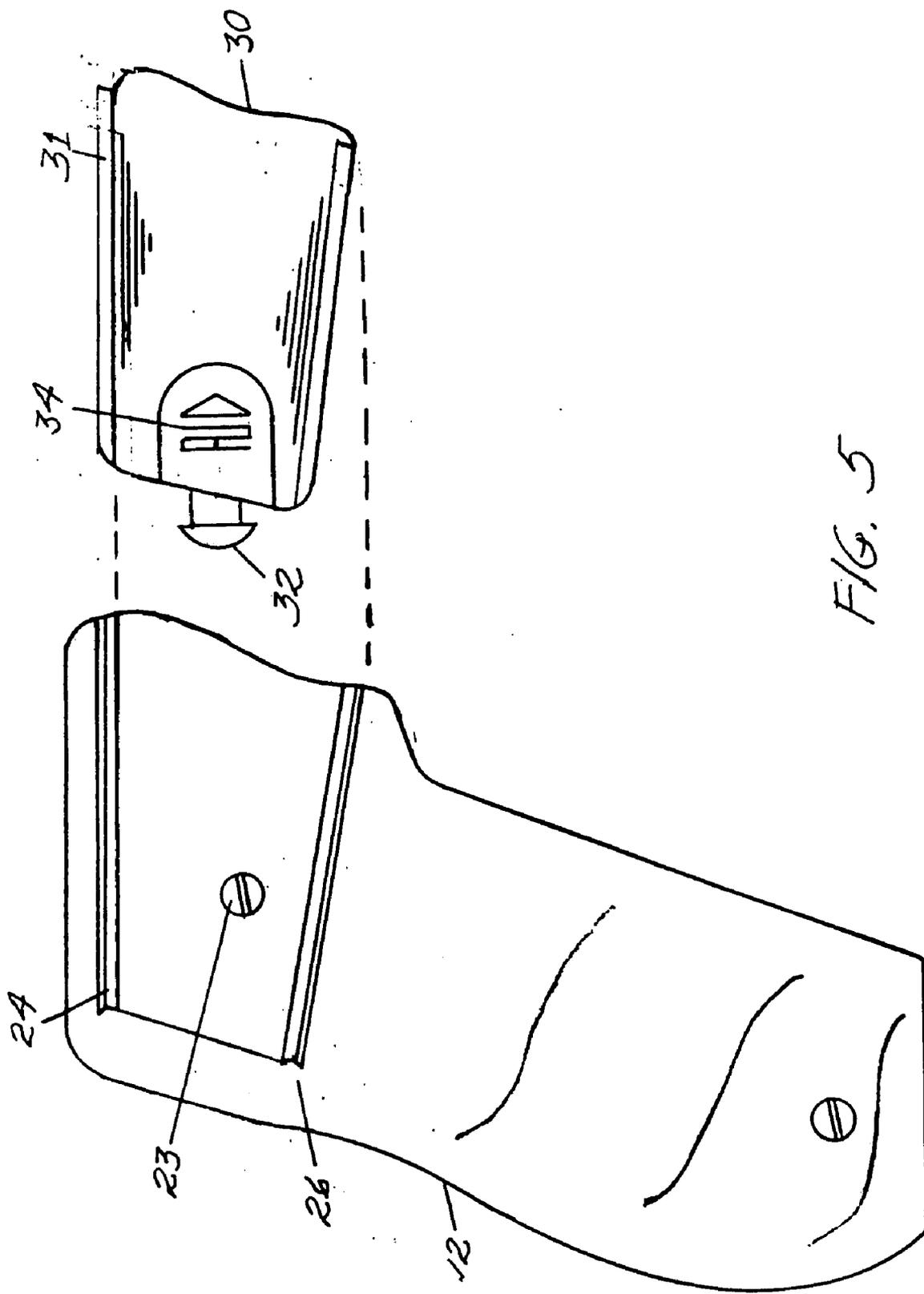
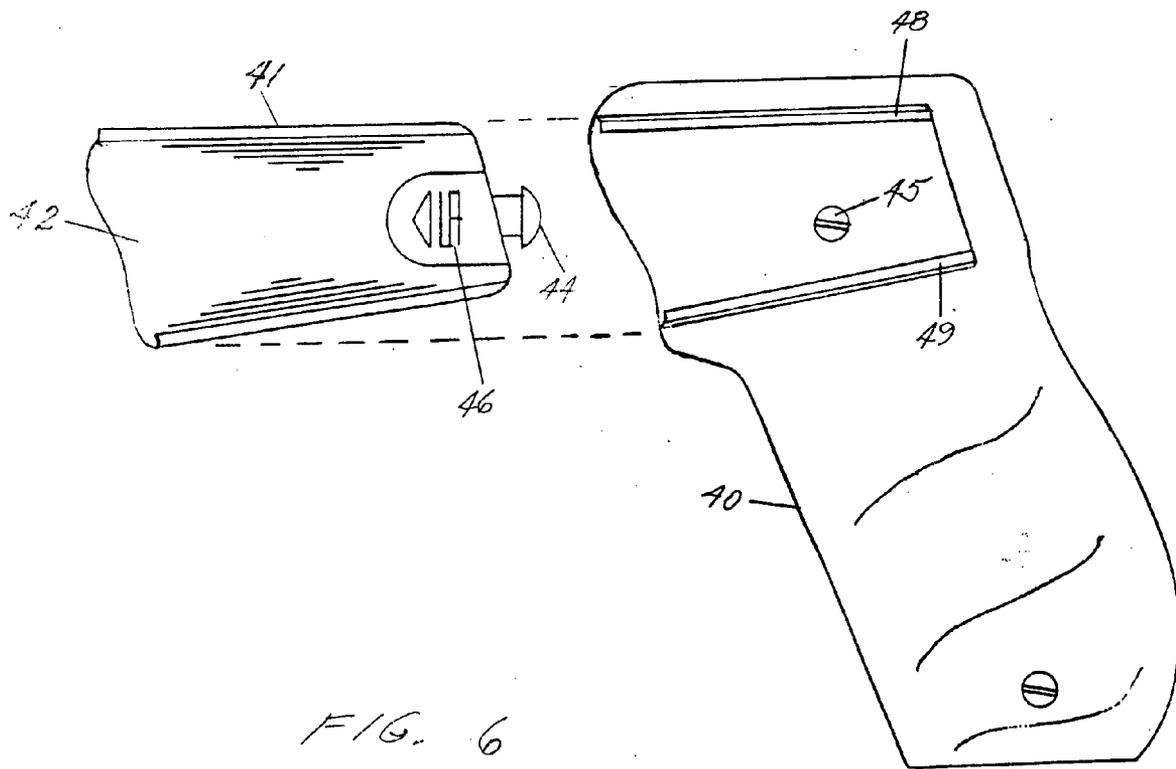


FIG. 5



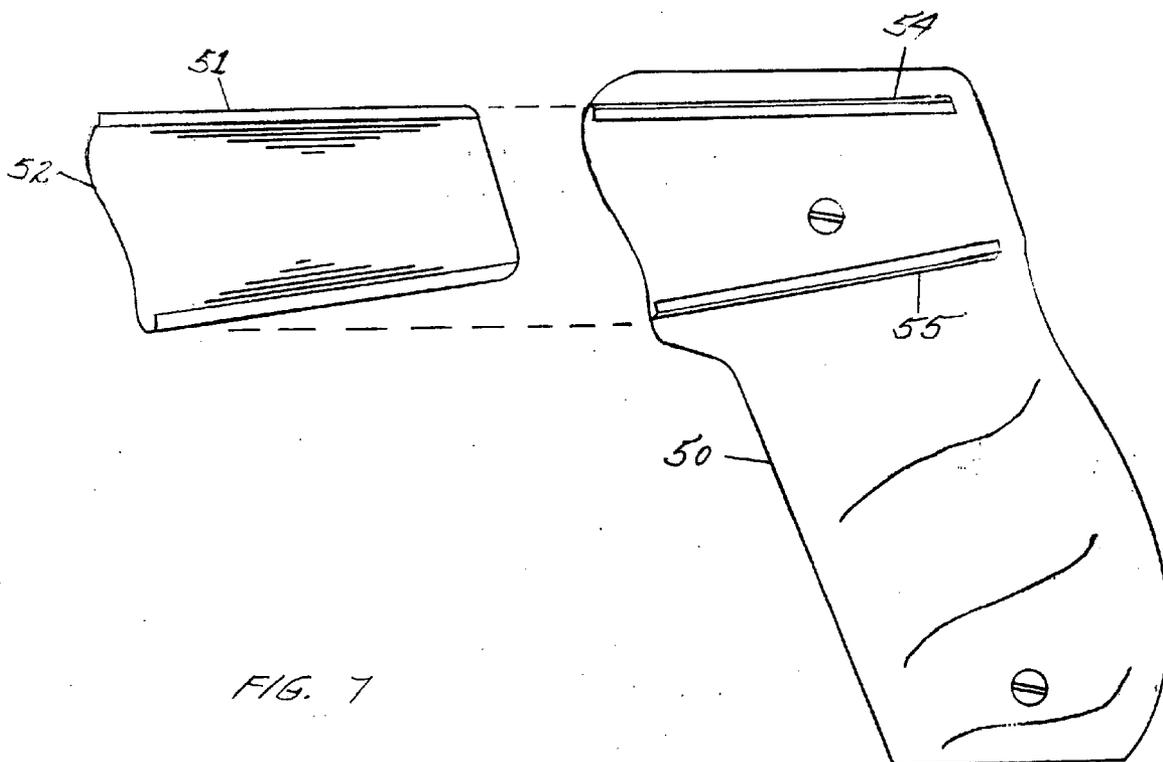


FIG. 7

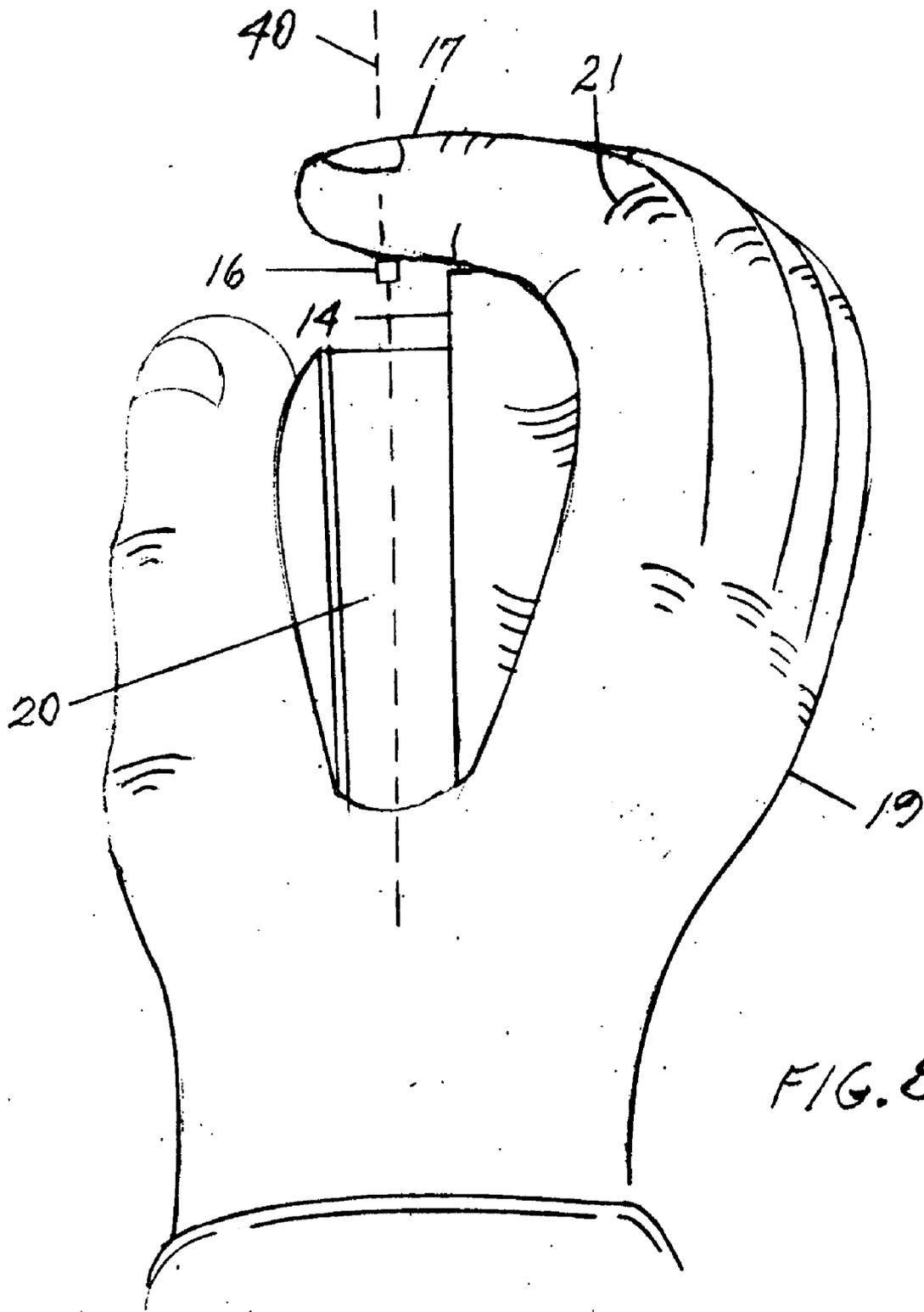


FIG. 8

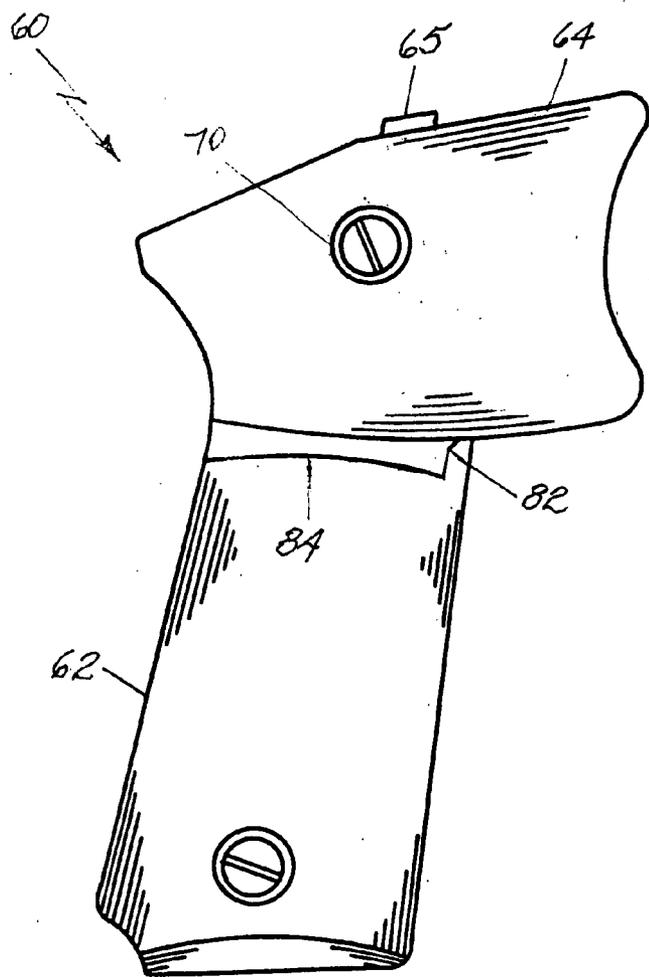


FIG. 10

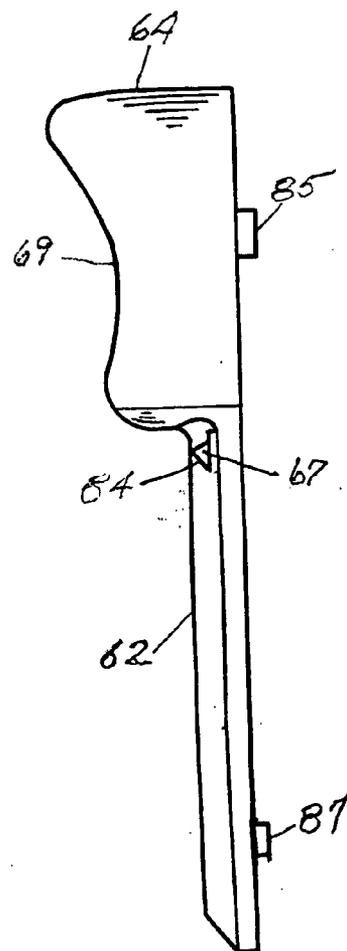


FIG. 11

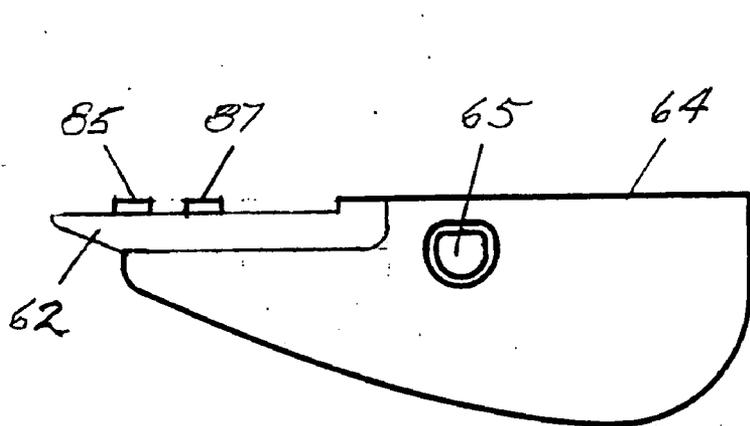


FIG. 12A

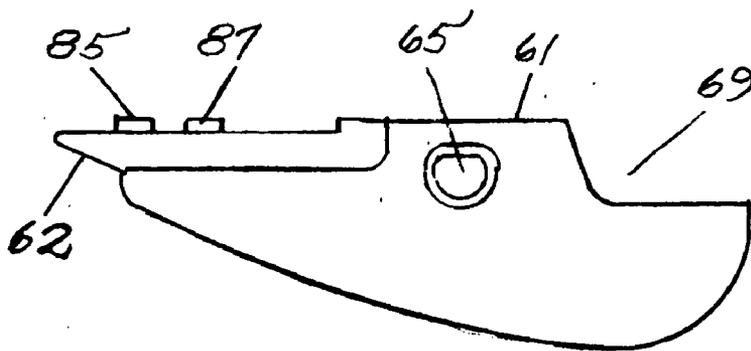


FIG. 12B

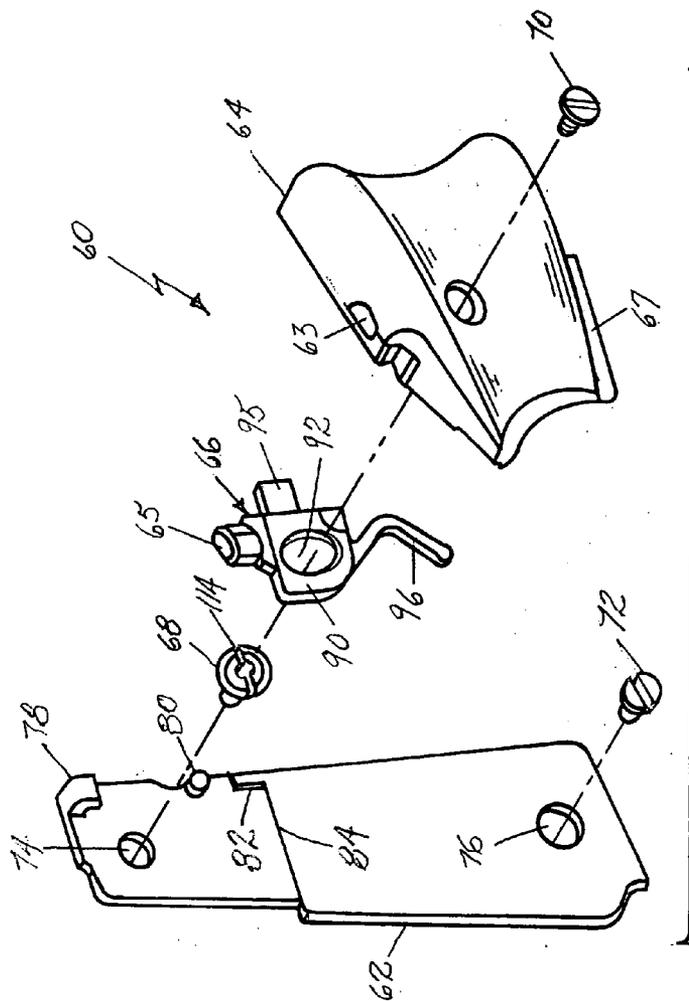


FIG. 13

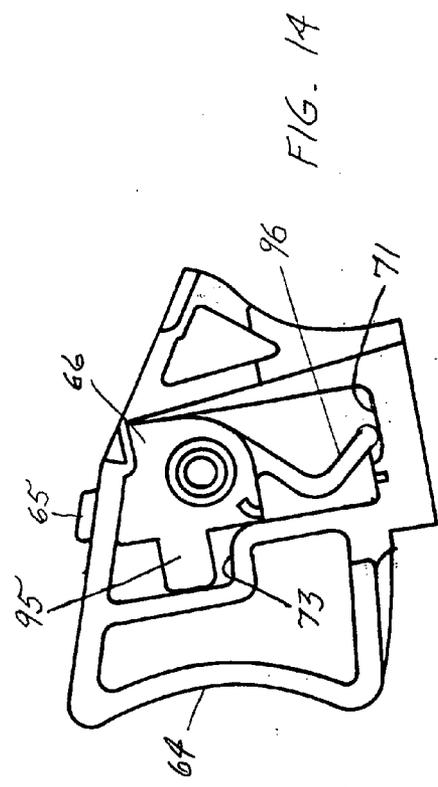


FIG. 14

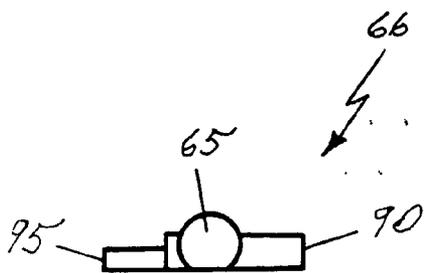


FIG. 15C

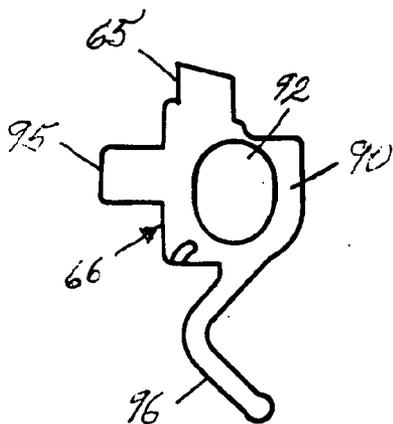


FIG. 15A

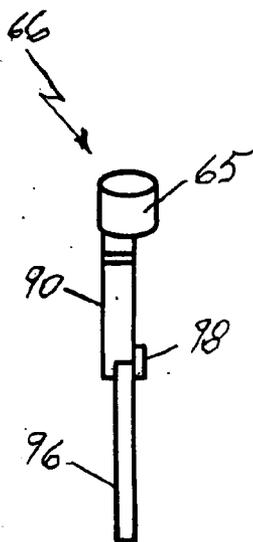


FIG. 15B

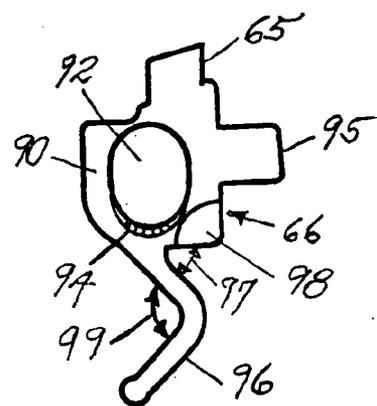


FIG. 15D

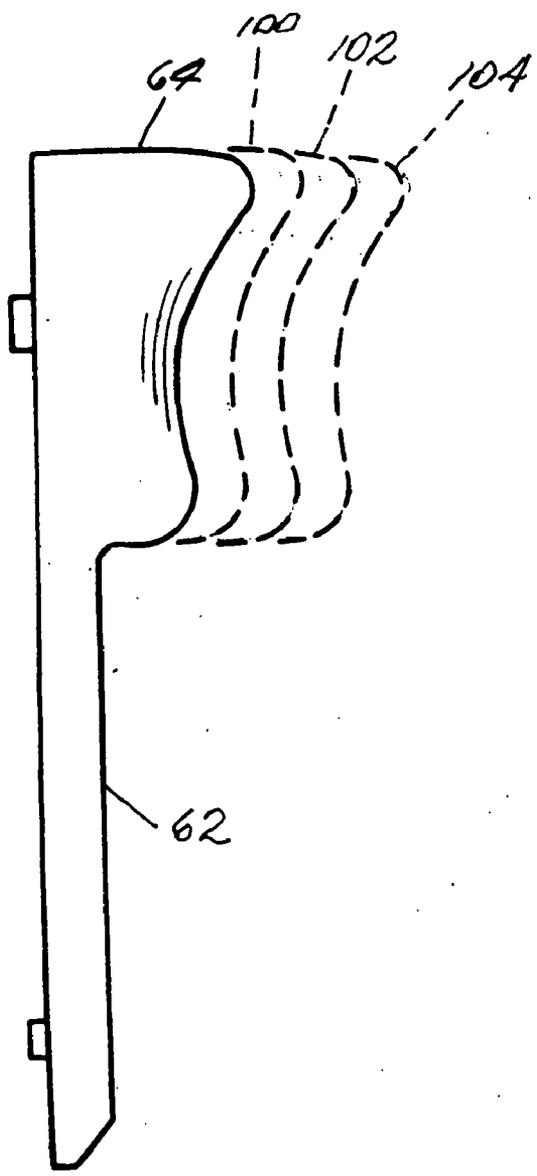


FIG. 17

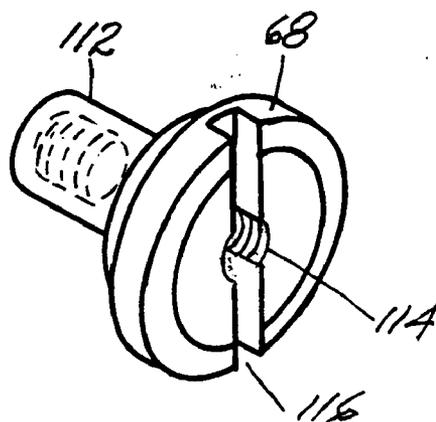


FIG. 16A

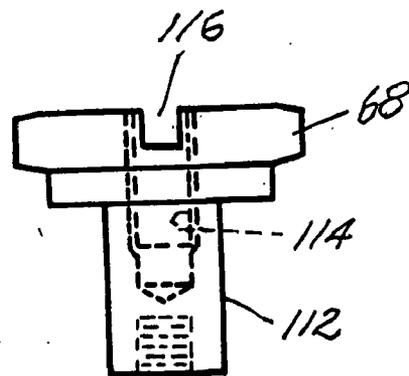


FIG. 16B

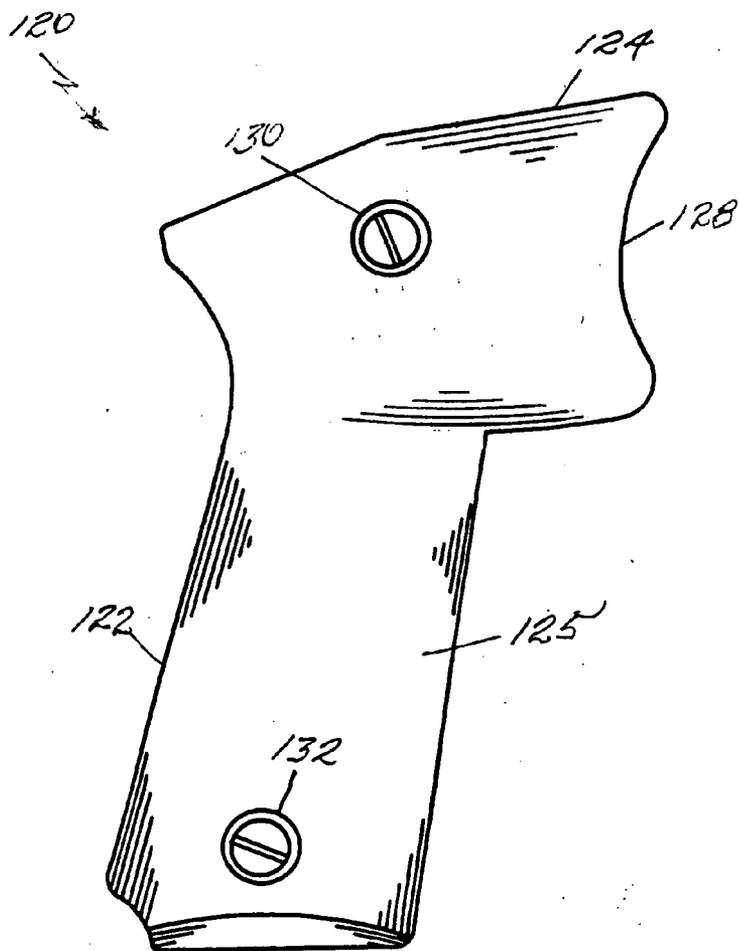


FIG. 18

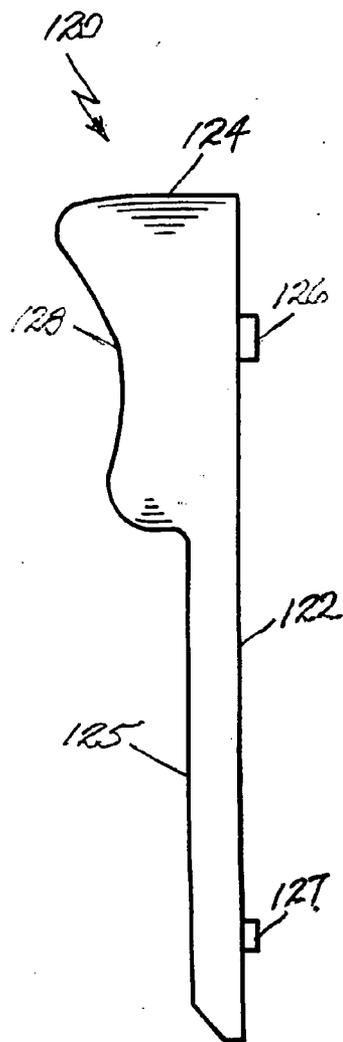


FIG. 19

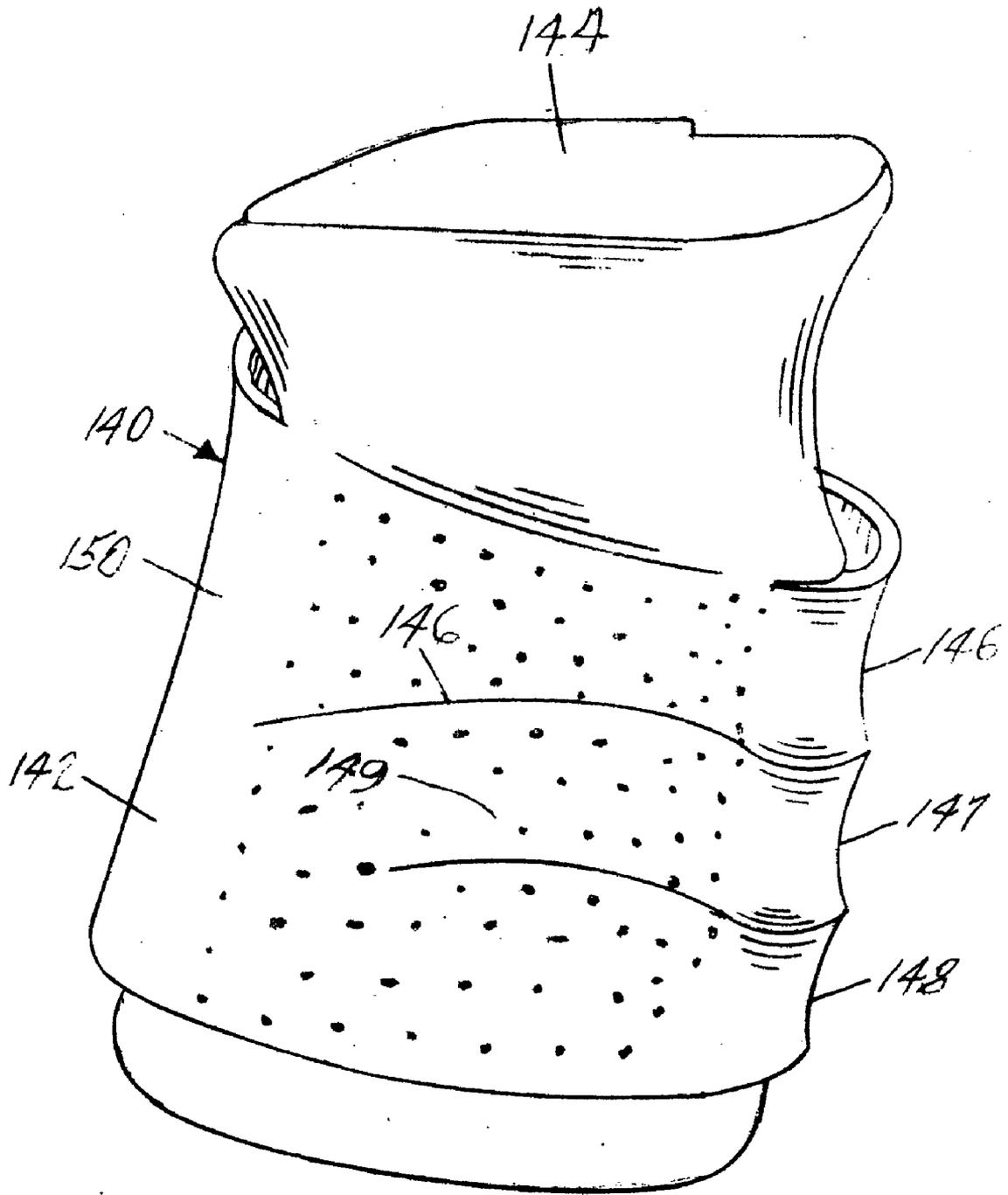


FIG. 20

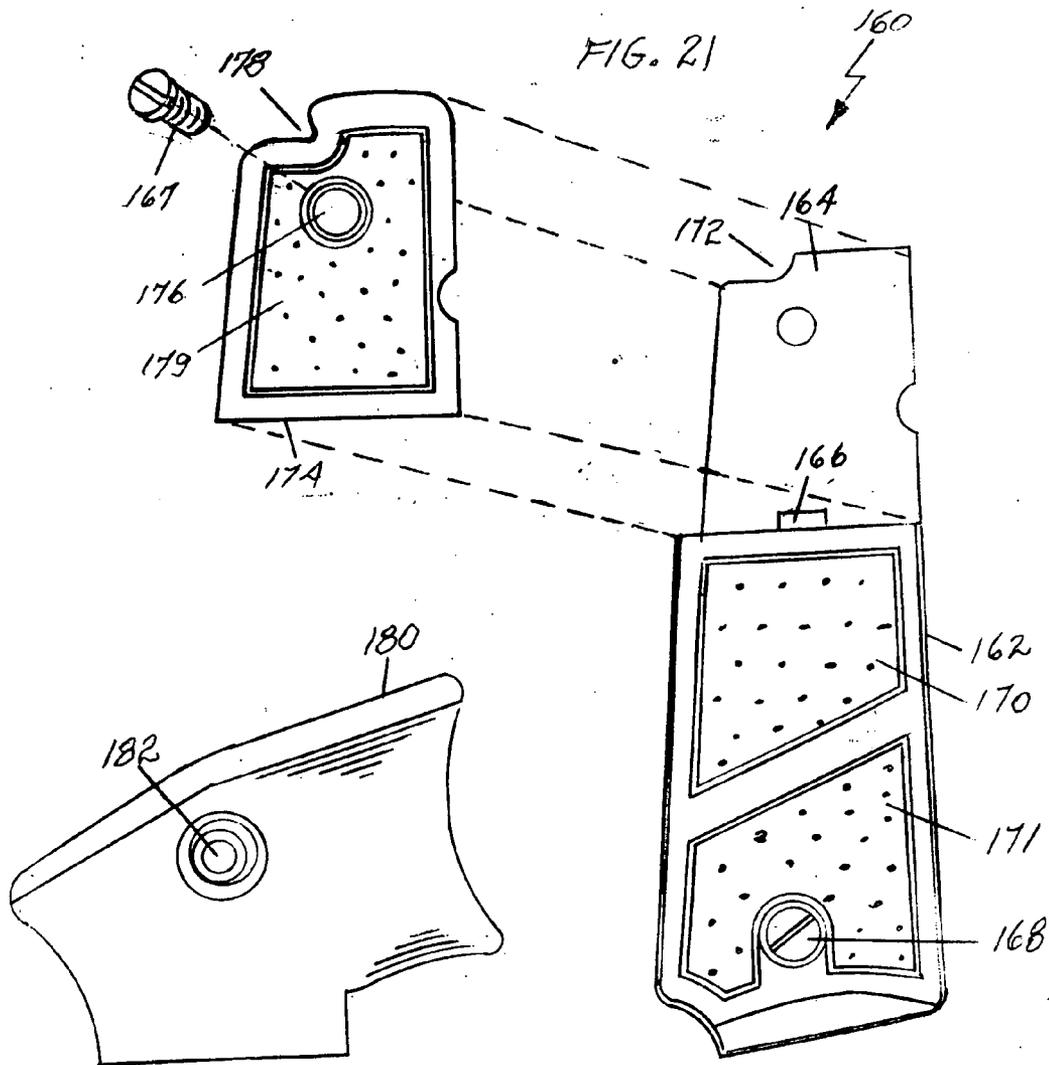


FIG. 22

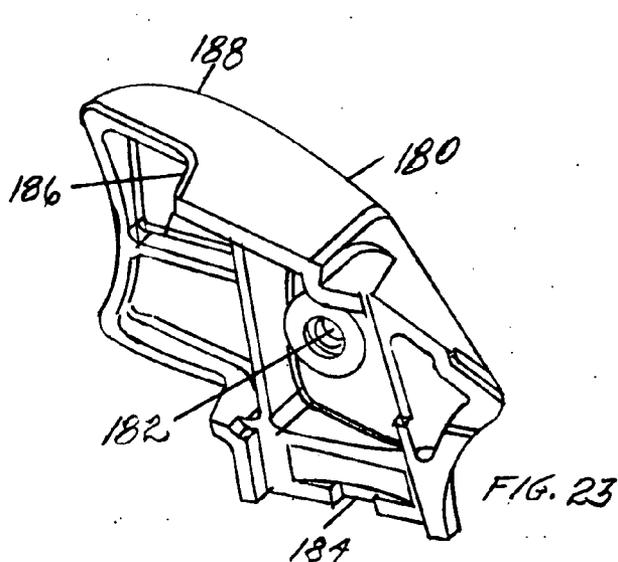


FIG. 23

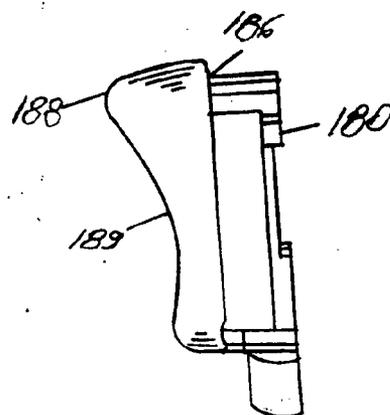


FIG. 24

## TARGET GRIP APPARATUS FOR A FIREARM

### CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a Continuation-In-Part of prior application Ser. No. 10/404,930, filed Apr. 1, 2003, now pending.

### BACKGROUND OF THE INVENTION

#### [0002] 1. Field of the Invention

[0003] This invention relates to a firearm grip and in particular to a pistol target grip comprising fixed and removable trigger finger extenders on a side panel of the body of the firearm grip.

#### [0004] 2. Description of Related Art

[0005] Many types of grips have been devised for attachment to firearms or pistols enabling a user to better hold and aim a firearm, or to reduce recoil or otherwise improve the comfort when the firearm is held and fired to achieve consistent accuracy. The use of elastomers in the grip assembly provides for a better "feel" in the user's hand and may provide a certain amount of bulk or sizing to otherwise standard factory produced grips. The following listed U.S. patents are examples of firearm grips.

[0006] U.S. Pat. No. 5,621,997 issued Apr. 22, 1997 to R. Lane Pearce and assigned to Pearce Grip, Inc. discloses a handgun grip enhancer for use with side panel grip type handguns. The grip enhancer includes a forward grip cushioning element or cross strap and right and left hand wing members forming side plates which fit under the regular handgun side panel grip elements. However, the handgun grip does not provide for the adjustment or positioning of the distal portion of the trigger finger, nor does it provide for the desired positioning of a right angle of the trigger finger to the trigger.

[0007] U.S. Pat. No. 6,112,446 issued Sep. 5, 2000 to Theobald Förster et al. and assigned to SIG Arms International AG, discloses a weapon grip comprising a grip body and grip shell having an approximately U-shaped cross section and being releasably and replaceably inserted on the grip body. However, the weapon grip does not provide for the adjustable placement of a trigger finger, relative to the size of a user's hand and ultimately achieving consistent finger placement repeatability.

[0008] U.S. Pat. No. 5,231,237 issued Jul. 27, 1993 to Carl J. Cupp and assigned to Pachmayr Ltd., of Monrovia, Calif., describes a cushioning grip assembly for a hand gun. The grip assembly includes a main body or chassis and two grip elements having outer surfaces formed of neoprene rubber or other deformable elastomeric material for providing cushioned contact with a user's hand in holding and firing the gun. One grip element is a forward grip unit and the second grip element is a back strap attachable to the body. However, this grip does not provide adjustment for positioning a trigger finger of a user.

[0009] U.S. Pat. No. 4,936,036 issued Jun. 26, 1990 to Bary A. Sniezak et al. and assigned to Smith & Wesson Corp. of Springfield, Mass. discloses an integral grip for the handle of a handgun frame molded from a resilient, flexible, synthetic plastic material. The grip is of generally U-shaped

configuration including a curved rear wall and two spaced opposed sidewall portions. However, this integral grip does not address the necessity of consistent finger positioning of a user's trigger finger to the trigger.

[0010] None of the above patents disclose the structural features of the present invention, which is intended to be an after-market attachment replacing one of the standard factory side panels of a firearm to improve proper placement of the trigger finger on the trigger.

### SUMMARY OF THE INVENTION

[0011] Accordingly, it is therefore an object of this invention to provide various size contoured grips attached to the frame of a firearm, enabling the user to improve target accuracy and consistency.

[0012] It is another object of this invention to provide a trigger finger extender on a left or right side of a firearm having a contoured outward extension to guide a trigger finger of a user to bend at approximately a right angle at a first joint in order to position a distal portion of the user's trigger finger in front of the trigger and perpendicular to the trigger.

[0013] It is a further object of this invention to provide a removable contoured outward extension with a locking device on a side panel of a firearm to enable the trigger finger to rest on the trigger from a direction approximately perpendicular to the trigger.

[0014] It is another object of this invention to provide a plurality of side panels for a firearm, each of the side panels having a different size trigger finger extender with a contoured outward extension to enable the trigger finger to rest on the trigger from a direction approximately perpendicular to the trigger.

[0015] It is yet another object of the invention to provide one of a plurality of different sizes of removable trigger finger extenders on a side panel for a pistol, each of the extenders having a different size contoured outward extension for custom fitting the user's finger length and particularly positioning the distal portion of the trigger finger of the user to be approximately perpendicular to the trigger.

[0016] These and other objects are accomplished by a firearm having a target grip, the target grip comprising a contoured outward extension increasing in depth from a back edge to a front edge for an inside of a user's trigger finger to rest on wherein the front edge enables a first joint of the trigger finger to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger. The target grip comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger. The target grip comprises a notch in an inside front corner extending from top to bottom for receiving an edge of a holster.

[0017] The objects are further accomplished by a trigger finger extender for attaching to a firearm comprising a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately

perpendicular to the trigger. The trigger finger extender comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger. The trigger finger extender comprises a notch in an inside front corner extending from top to bottom for receiving an edge of a holster.

[0018] The objects are further accomplished by a side panel for a firearm comprising a base section for attaching to a frame of the firearm, a trigger finger extender for removably attaching to the base section, a locking device positioned within the trigger finger extender having a button protruding through the extender for unlocking and removing the extender portion. The base section comprises an opening for receiving a screw for securing the base section and the extender. The extender portion comprises a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger. The locking device comprises an opening in a main body of the locking device for positioning the locking device on a retaining screw, and a flexible leg extending downward from the main body for flexing when the button is pressed to unlock and remove the trigger finger extender. The trigger finger extender portion comprises a contoured outward extension increasing in depth from a back edge to a front edge for an inside of a user's trigger finger to rest on wherein the front edge enables a first joint of the trigger finger to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger. The side panel comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger. The trigger finger extender comprises a notch in an inside front corner extending from top to bottom for receiving an edge of a holster.

[0019] The objects are further accomplished by a side panel for attaching to a firearm comprising an upper portion of the side panel having a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger, and a lower portion of the panel having a surface for receiving other fingers of the user to enable the user to securely hold the firearm. The side panel comprises a first opening in the upper portion and a second opening in the lower portion for receiving a screw in each opening for attaching the side panel to a firearm. Alternatively, the side panel comprises an adhesive on an inner surface of the side panel for securing the side panel to the side of a firearm. Each side panel comprises one of a plurality of different sizes of the contoured outward extension to accommodate different lengths of a user's trigger finger. The upper portion of the side panel may include a cut-out running the height of the upper portion and in the front surface of the upper portion for receiving an edge of a holster.

[0020] The objects are further accomplished by a target grip extender sleeve for a firearm comprising a flexible base portion having an opening for receiving the frame of the firearm by sliding the target grip sleeve onto the frame, and

an upper portion of the sleeve comprising a trigger finger extender on one side having a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger. The flexible base portion comprises a stretchable rubber material. The flexible base portion comprises at least two finger grooves on a front end of the extender sleeve. The trigger finger extender comprises an outward extension increasing in depth from a back edge to a front edge for an inside of a user's trigger finger at a first joint to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger. The trigger finger extender comprises a concave side surface from an upper edge to a lower edge along the outward extension as the side surface increases in depth from a back edge to a front edge. The sleeve comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger.

[0021] The objects are further accomplished by a side panel for attaching to a firearm comprising a base section having a pair of spaced apart holes for receiving means for fastening the base section to the firearm, and an upper panel section removably attached to an upper portion of the base section by the fastening means. The base section comprises means for preventing side movement when the upper panel section is positioned on the base section. An outer surface of the base section and an outer surface of the upper panel section comprises a textured surface. Alternatively, the upper panel section comprises a removably attached trigger finger extender. The trigger finger extender comprises a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger. The upper panel section of the base section comprises a notch in an inside front corner extending from top to bottom of the upper portion. The upper panel section comprises one of a plurality of different sizes of the contoured outward extension to accommodate different lengths of a user's trigger finger.

[0022] Additional objects, features and advantages of the invention will become apparent to those skilled in the art upon consideration of the following detailed description of the preferred embodiment exemplifying the best mode of carrying out the invention as presently perceived.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0023] The appended claims particularly point out and distinctly claim the subject matter of this invention. The various objects, advantages and novel features of this invention will be more fully apparent from a reading of the following detailed description in conjunction with the accompanying drawings in which like reference numerals refer to like parts, and in which:

[0024] FIG. 1 is a side elevational view of a firearm target grip according to the present invention including a contoured trigger finger target grip extender insert for custom fitting of a user's trigger finger;

[0025] FIG. 2 is an exploded view of a first embodiment of a firearm right side panel having a trigger finger target grip extender insert;

[0026] FIG. 3 is an isometric view of the trigger finger target grip having the extender insert on a side panel for positioning a right hand trigger finger approximately perpendicular to a trigger;

[0027] FIG. 4 is a top view of the firearm showing various size trigger finger target grip extender inserts for custom fitting of a user's right hand trigger finger;

[0028] FIG. 5 is an exploded view of a second embodiment of a firearm right side panel having a trigger finger target grip extender insert;

[0029] FIG. 6 is an exploded view of a third embodiment of a firearm left side panel having a trigger finger target grip extender insert;

[0030] FIG. 7 is an exploded view of a fourth embodiment of a firearm left side panel having a trigger finger target grip extender insert;

[0031] FIG. 8 is a top view of a section of the firearm having a contoured trigger finger target grip extender insert in a right side panel and showing the trigger finger of a user's hand positioned perpendicular to the trigger;

[0032] FIG. 9 is a cross-section of the trigger finger target grip extender insert of FIG. 2;

[0033] FIG. 10 is a side elevational view of a fifth alternate embodiment according to the present invention of a firearm side panel assembly having a removable trigger finger extender;

[0034] FIG. 11 is a front end elevational view of the fifth alternate embodiment according to the present invention of a firearm side panel assembly having a removable trigger finger extender;

[0035] FIG. 12A is a top view of the fifth alternate embodiment of the firearm side panel assembly;

[0036] FIG. 12B is a top view of an alternate embodiment of the removable trigger finger extender of FIG. 12A having a holster notch on an inside front corner;

[0037] FIG. 13 is an exploded side perspective view of the fifth alternate embodiment of a firearm side panel assembly having a removable trigger finger extender;

[0038] FIG. 14 is a side elevational view of the inside of the removable trigger finger extender;

[0039] FIG. 15A is an inner side elevational view of a locking device of the removable trigger finger extender of FIG. 14;

[0040] FIG. 15B is a rear elevational view of the locking device of FIG. 15A;

[0041] FIG. 15C is a top view of the locking device of FIG. 15A;

[0042] FIG. 15D is an outer side elevational view of the locking device of FIG. 15A;

[0043] FIG. 16A is a perspective view of a double-sided threaded screw for securing a side panel with a removable

trigger finger extender on a firearm and for receiving a standard side panel screw of FIG. 13;

[0044] FIG. 16B is a side elevational view of the double threaded screw of FIG. 16A;

[0045] FIG. 17 is a rear view of the fifth embodiment according to the present invention of the side panel assembly having a removable trigger finger extender on the right side of the side panel and representations in phantom of various sizes of trigger finger extenders that may be attached to the side panel of the firearm for proper fitting of a user's right hand trigger finger on a trigger;

[0046] FIG. 18 is a side elevational view of a sixth alternate embodiment according to the present invention of an integrated side panel with trigger finger extender that is not removable;

[0047] FIG. 19 is a front end elevational view of the sixth alternate embodiment of an integrated side panel with a non-removable trigger finger extender;

[0048] FIG. 20 is an enlarged perspective view of a seventh alternate embodiment according to the present invention of a target grip sleeve with a trigger finger extender;

[0049] FIG. 21 is an exploded view of an eighth embodiment according to the present invention of a firearm side panel having a removable upper section;

[0050] FIG. 22 is a side elevational view of a trigger finger extender for attaching to the side panel of FIG. 21;

[0051] FIG. 23 is a rear perspective view of the trigger finger extender of FIG. 22; and

[0052] FIG. 24 is a front elevational view of the trigger finger extender of FIG. 23.

#### DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

[0053] Referring to FIG. 1, a side elevational view of a firearm 10 according to the present invention is shown comprising a frame 20 having a side panel 12 with a trigger finger target grip extender insert 14 for custom fitting of a user's trigger finger approximately perpendicular to a trigger 16. The side panel 12 with the trigger finger target grip extender insert is intended to replace a standard factory side panel of a firearm to improve placement of the user's trigger finger directly in front of the trigger 16. Several trigger finger target grip extender inserts 14 are provided with each side panel 12 to vary the placement of the distal end of a user's trigger finger and to enable the trigger finger to be placed in front of the trigger approximately perpendicular to the side of the trigger 16 of the firearm 10. The present invention may be used on handguns, revolvers, semiautomatic handguns, rifles, shotguns and any other firearm having a side panel 12 for receiving trigger finger target grip extender inserts 14.

[0054] Referring to FIG. 2, an exploded view of a first embodiment of the side panel 12 with trigger finger target grip extender insert 14 is shown comprising wings 28, 29 on the top and bottom edges of the insert 14 for mating with receiving channels 24, 26 on the side panel 12 and for guiding the insert 14 in and out of the side panel 12 and for securing the trigger finger target extender insert 14 within

the side panel 12. The right side panel 12 is retained on the side of the frame 20 by two screws 22, 23.

[0055] Referring to FIG. 9, a cross-sectional view is shown of the trigger finger target grip extender insert 14 with wings 28, 29 for mating with the receiving channels 24, 26 within the side panel 12.

[0056] Referring to FIG. 3, an isometric view of the side panel 12 is shown having the trigger finger target grip extender insert 14 for positioning a right hand trigger finger on the trigger 16. The side extension 15 is shown extending outward and toward the trigger 16 to enable the distal portion of the user's trigger finger to arrive at approximately a right angle to the side of the trigger 16 and in front of the trigger 16.

[0057] Referring to FIG. 4, a top view of the firearm 10 is shown indicating various size trigger finger target grip extender inserts 14<sub>1</sub>, 14<sub>2</sub>, 14<sub>3</sub>, are provided for custom fitting a user's right hand trigger finger distal portion to arrive at approximately a right angle to the side of the trigger 16 and in front of the trigger 16. In practice, each extender insert 14<sub>1</sub>, 14<sub>2</sub>, 14<sub>3</sub>, is tried by the user until the correct fit is found until the distal portion of the trigger finger is perpendicular to and in front of the trigger 16.

[0058] Referring now to FIG. 5, an exploded view is shown of a second embodiment of a right side panel 12 having a target trigger grip extender insert 30 which comprises a clip 32 at one side and wings 31, 33 on the top and bottom of the extender insert 30 for insertion into channels 24, 26 of the side panel 12. The insert 30 slides from right to left and the clip 32 is secured within the side panel 12. Pressing on an embossed area 34 of the insert 30 causes the insert 30 to slide out for removal.

[0059] Referring to FIG. 6, an exploded view is shown of a third embodiment of a left side panel 40 having a target grip extender insert 42 which comprises a clip 44 at one side and wings 41, 43 on the top and bottom of the extender insert 42 for insertion into channels 48, 49. The insert 42 slides from left to right and the clip 44 is secured within the side panel 40. Pressing on an embossed area 46 of the insert 42 causes the insert 42 to slide out for removal.

[0060] Referring to FIG. 7, an exploded view is shown of a fourth embodiment of a left side panel 50 having a target trigger grip extender insert 52 comprising wings 51, 53 on the top and bottom edges of the insert 52 for mating with receiving channels 54, 55 on the side panel 50, for guiding insert 52 in and out of the side panel 50, and for securing the extender insert 52 within the side panel 50.

[0061] Referring to FIG. 8, a top view of a section of the frame 20, having a contoured target trigger grip extender insert 14 attached to the right side of frame 20, shows the trigger finger 17 supported by the extender insert 14 and the distal portion of the trigger finger 17 positioned perpendicular to the side of trigger 16 and in front of the trigger 16.

[0062] Referring to FIGS. 10-13, a fifth alternate embodiment of the present invention is shown of a firearm side panel assembly 60 having a removable trigger finger extender 64. FIG. 10 is a side elevational view of the firearm side panel 62 with the removable trigger finger extender 64 which is removed by pressing a top button 65 of a locking device 66 (FIG. 13) extending through the top of the trigger

finger extender 64. FIG. 11 is a front end elevational view of the firearm side panel assembly 60 with the removable trigger finger extender 64. The bottom edge 67 of the extender 64 is chamfered in a downward direction at an angle of approximately forty-five degrees. The side panel 62 comprises a corresponding 45 degree chamfered edge 84 for the bottom edge 67 of the extender 64 to mate with and become securely attached to the side panel 62. Two positioning tabs 85, 87 are provided on the back side of side panel 62 for positioning the side panel on the firearm frame 20 (FIG. 1). The contour 69 of the trigger finger extender is similar to the contour of the extender insert 14 of FIG. 9. The main object of the extender 64 is to cause the trigger finger to be moved away from the trigger 16 so as to cause the distal portion of the user's trigger finger to arrive at approximately a right angle relative to the side of the trigger 16 and in front of the trigger 16. This is best accomplished when the extender 64 presses against the first inside joint 21 (FIG. 8) of the trigger finger 17 causing the trigger finger 17 to move easily from the right angle position, and multiple sizes of the removable extenders 64 are provided to accomplish the best fit for the particular user's trigger finger 17. FIG. 12A is a top view of the side panel assembly showing the button 65 for removing the trigger finger extender 64 from the side panel 62. FIG. 12B is a top view of an alternate embodiment of the removable trigger finger extender 64 shown in FIG. 12A having a notch 69 in an inside front corner extending from top to bottom for receiving an edge of a holster, when a firearm with the side panel assembly 60 attached, is inserted in a holster.

[0063] Referring to FIG. 13, an exploded side perspective view is shown of the fifth alternate embodiment of the firearm side panel assembly 60 having the removable trigger finger extender 64. The side panel is attached to the frame 20 of the firearm 10 by screws 68 and 72. A spring-like locking device 66 is positioned within the extender 64 having the button 65 portion that protrudes through the opening 63 in the top of the extender 64. A flexible L-shaped leg 96 extends downward from the main body 90 of the locking device 66, and the screw 68 extends into the opening 92 of the main body 90. A slotted binder head screw 70 screws into the threaded hole 114 (FIG. 16A) in the center of screw 68. When the extender 64 is attached to the side panel the over hang bar 78 at the top of the side panel 62 rests on the top of a stop bar 95 of the locking device 66. A post 80 on the side panel 62 acts as a guide for properly positioning the removable extender 64 on the side panel 62.

[0064] Referring to FIG. 14, a side elevational view of the inside of the removable trigger finger extender 64 is shown with the locking device 66 in place. The leg 96 rests on a lower shelf 71 of the extender 64 and the downward motion of the stop bar 95, when button 65 is pushed, is limited by middle ledge 73.

[0065] Referring to FIGS. 15A-15D, FIG. 15A is an inner side elevational view of the locking device 66. FIG. 15B is a rear elevational view of the locking device 66 showing a protrusion 98 on the side surface of the main body 90 for facilitating positioning of the locking device 66. FIG. 15C is a top view of the locking device 66. FIG. 15D is an outer side elevational view of the locking device 66 showing the opening 92 and the chamfer 94 in the lower portion of the opening 92. Also, the upper portion of the leg 96 initially forms an angle 97 of approximately 50 degrees relative to

the main body 90 and the lower portion of the leg 96 turns toward the opposite direction forming an angle of approximately 90 degrees with respect to the upper portion of the leg 96. The leg 96 is flexible so that pushing downward on button 65 causes the leg 96 of the locking device to compress enough to release the locking device 66 from being retained by screw 68.

[0066] Referring to FIG. 16A and FIG. 16B, FIG. 16A is a perspective view of the double-sided threaded screw 68 having internal threads within the distal end 112 for attaching to a threaded bushing on the side of the firearm frame 20, and the slotted end 116 of the screw 68 comprises internal thread 114 which matches a standard side panel gun screw. FIG. 16B is a side elevational view of the double threaded screw 68 showing the internal thread 114 for receiving the standard gun screw 70 (FIG. 13).

[0067] Referring to FIG. 17 a rear view of the fifth embodiment of the side panel assembly 66 is shown comprising the removable trigger finger extender 64 on the right side of the side panel 62, and further FIG. 17 shows in phantom various sizes of removable trigger finger extenders 100, 102, 104, each one of which may be attached to the side panel 62 in place of extender 64 for the proper fitting of a user's right hand trigger finger on the trigger 16 of the firearm.

[0068] The components of the side panel assembly 60 including the side panel 62, the removable trigger finger extender 64, and the locking device 66 may be embodied by plastic or rubber materials known to those skilled in the art and are manufactured by tailored molds for minimum cost. The surface of the plastic components may be covered by a rubber material.

[0069] Referring to FIG. 18 and FIG. 19, FIG. 18 is a side elevational view of a sixth alternate embodiment according to the present embodiment. The sixth alternate embodiment comprises an integrated side panel 120 with a trigger finger extender 124 that is not removable positioned on an upper portion of said side panel 120. The lower portion 125 has a slight convex surface or may have proportioned finger grooves for receiving the other fingers of a user's hand to enable the user to securely hold the firearm when the side panel 120 is attached thereto. The firearm side panel 120 is secured to a firearm frame 20 by two screws 130, 132. An alternate way of securing the firearm side panel 12 to the firearm frame is by eliminating screws 130 and 132 in the side panel 120 and the holes in which they are inserted, and instead apply an adhesive commonly known in the art to the inner surface 122 of the side panel 12 for adhering to the frame 20 of the firearm.

[0070] Referring to FIG. 19, FIG. 19 is a front end elevational view of the sixth alternate embodiment of FIG. 18. The tabs 126, 127 extending from the inner side 122 of the side panel 120 provide for positioning the side panel 120 on firearm frame 20. Various side panels 120 may be implemented each having a different size upper portion of trigger finger extender 124 so that the distal portion of the user's trigger finger 17 (FIG. 8) is at approximately a right angle to the side of the trigger 16 and in front of the trigger 16. The outward extension of the extender 124 pushes against the first joint 21 of the trigger finger 17 to enable this right angle position of the trigger finger 17 to occur. The inwardly curved surface 128 of the side of the extender 124

increases in depth from a back edge to a front edge, similar to the embodiment of FIG. 12A, to enable an inside of a user's finger, and in particular, the first joint 21, to rest on the extender 124 for positioning a distal portion of the user's trigger finger adjacent to the trigger of the firearm and approximately perpendicular to the trigger, and thereby providing support for proper vertical positioning of the trigger finger 17 on the side of the extender 124.

[0071] If the embodiment of FIG. 19 when attached to a firearm does not fit into a firearm holster because of the outward extension of the extender 124, then a narrow cut-out (not shown) running the complete height of the extender 124 can be included in the front of the extender 124 to allow an edge of the holster to pass within the cut-out. Such a similar cut-out or notch 69 is shown in FIG. 12B for the removable trigger finger extender 64.

[0072] The integrated side panel 120 comprising the trigger finger extender 124 may be embodied by plastic, wood, or rubber materials known in the art. When plastic and rubber are used to make the integrated side panel 120, tailored molds are used to produce the embodiments.

[0073] Referring now to FIG. 20, an enlarged perspective view of a seventh embodiment according to the present invention of a target grip extender sleeve 140 is shown comprising a base 142 and trigger finger extender 144 positioned on an upper portion of the target grip extender sleeve 140. The base portion 142 of the extender sleeve 140 comprises finger grooves 146, 147, 148 on a front surface and palm mounds 149 on each side adjacent to the middle groove 147 for comfort when a user wraps a hand around the sleeve 140. The sides of the target grip extender sleeve 140 are textured to provide an efficient non-slip stippling pattern. The target grip extender sleeve 140 is molded from durable rubber known to those skilled in the art which is virtually impervious to common oils and solvents found around firearms.

[0074] The trigger finger extender 144 has similar outside features as the extender 124 in FIG. 18 and FIG. 19. The side surface is slightly concave from an upper edge to a lower edge and the outward extension increases in depth from a back edge to a front edge for an inside of a user's trigger finger at a first joint to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger.

[0075] The target grip extender sleeve 140 is slipped over the frame 20 of the firearm 10 as shown in FIG. 1 (without the insert 14). The extender sleeve 140 comprises an inner opening for the frame handle to fit through, but it is a tight fit and considerable force must be used to complete the operation. It may be necessary to do a little at a time; pulling the sleeve upward onto the firearm by alternating right to left and back and forth. The sleeve 140 will fit many models of firearms because of the inherent stretching characteristics of the rubber material.

[0076] Referring now to FIGS. 21 and 22, FIG. 21 is an exploded view of an eighth embodiment according to the present invention of a firearm side panel 160 comprising a base section 162 and a removable upper panel section 174, and two screws 167, 168 are used to secure the side panel 160 to the side of the firearm. The upper panel section 174

is removable by removing the screw 167 so that a trigger finger extender 180, as shown in FIG. 22, can be connected to the base section 162 by screw 167 inserted through hole 182. A small positioning block 166 on the base section 162 secures the upper panel section 174 (or the trigger finger extender 180) from moving sideways, and the screw 167 fastens the upper panel section 174 to the base section 162. The inward side of the upper panel section 174 comprises a notch positioned opposite the block 166 positioned opposite the block 166 for receiving the positioning block 166. The outer surfaces 170, 171 of the base section 162 are textured to provide an efficient non-slip stippling pattern. Likewise, the outer surface 179 of the upper panel section 174 comprises a textured and non-slip stippling pattern for the comfort of the firearm user. An indentation 178 is provided in the left upper corner of the upper panel section 174 to provide clearance for a safety lever on the right side of the firearm.

[0077] Referring to FIG. 23 and FIG. 24, FIG. 23 is a rear perspective view of the trigger finger extender 180, and FIG. 24 is a front elevational view of the trigger finger extender 180. A cut-out 184 is provided on the bottom rear side of extender 180 for receiving the positioning block 166 when the extender 180 is attached to the base section 162. A notch 186 is provided along the inside of the front surface of the trigger finger extender 180. This notch or opening allows for holstering a firearm with the extender 180 attached by providing a space for the edge of a holster to enter the extender 180. In FIG. 24, the concave curvature 189 is shown on the side surface of the extender 180 from an upper edge to a lower edge and the outward extension 188 increases in depth from a back edge to a front edge of the extender 180 for enabling an inside of a user's trigger finger at a first joint to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger.

[0078] The firearm side panel 160 comprising the base section 162, upper panel section 174, and the trigger finger extender 180 may be embodied by plastic or rubber materials known to those skilled in the art, and they are manufactured by tailored molds for minimum cost. The outer surface of the plastic components may be covered by a rubber material.

[0079] This invention has been disclosed in terms of certain embodiments. It will be apparent that many modifications can be made to the disclosed apparatus without departing from the invention. Therefore, it is the intent of the appended claims to cover all such variations and modifications as come within the true spirit and scope of this invention.

What is claimed is:

1. A firearm having a target grip, said target grip comprising:

a contoured outward extension increasing in depth from a back edge to a front edge for an inside of a user's trigger finger to rest on wherein said front edge enables a first joint of said trigger finger to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger.

2. The firearm as recited in claim 1 wherein said target grip comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger.

3. The firearm as recited in claim 1 wherein said target grip comprises a notch in an inside front corner extending from top to bottom for receiving an edge of a holster.

4. A trigger finger extender for attaching to a firearm comprising a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger.

5. The trigger finger extender as recited in claim 4 wherein said trigger finger extender comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger.

6. The trigger finger extender as recited in claim 4 wherein said trigger finger extender comprises a notch in an inside front corner extending from top to bottom for receiving an edge of a holster.

7. A side panel for a firearm comprising:

a base section for attaching to a frame of said firearm;

a trigger finger extender for removably attaching to said base section;

a locking device positioned within said trigger finger extender having a button protruding through said extender for unlocking and removing said extender portion.

8. The side panel as recited in claim 7 wherein said base section comprises an opening for receiving a screw for securing said base section and said extender.

9. The side panel as recited in claim 7 wherein said extender portion comprises a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger.

10. The side panel as recited in claim 7 wherein said locking device comprises:

an opening in a main body of said locking device for positioning said locking device on a retaining screw; and

a flexible leg extending downward from said main body for flexing when said button is pressed to unlock and remove said trigger finger extender.

11. The side panel as recited in claim 7 wherein said trigger finger extender portion comprises a contoured outward extension increasing in depth from a back edge to a front edge for an inside of a user's trigger finger to rest on wherein said front edge enables a first joint of said trigger finger to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger.

12. The side panel as recited in claim 7 wherein said side panel comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger.

13. The side panel as recited in claim 7 wherein said trigger finger extender comprises a notch in an inside front corner extending from top to bottom for receiving an edge of a holster.

14. A side panel for attaching to a firearm comprising:

an upper portion of said side panel having a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger; and

a lower portion of said panel having a surface for receiving other fingers of said user to enable said user to securely hold said firearm.

15. The side panel as recited in claim 14 wherever said side panel comprises a first opening in said upper portion and a second opening in said lower portion for receiving a screw in each opening for attaching said side panel to a firearm.

16. The side panel is recited in claim 14 where said side panel comprises an adhesive on an inner surface of said side panel for securing said side panel to the side of a firearm.

17. The side panel as recited in claim 14 wherein each side panel comprises one of a plurality of different sizes of said contoured outward extension to accommodate different lengths of a user's trigger finger.

18. The side panel as recited in claim 14 wherein said upper portion of said side panel comprises a cut-out running the height of said upper portion and in the front surface of said upper portion for receiving an edge of a holster.

19. A target grip extender sleeve for a firearm comprising:

a flexible base portion having an opening for receiving the frame of said firearm by sliding said target grip sleeve onto said frame; and

an upper portion of said sleeve comprises a trigger finger extender on one side having a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger.

20. The target grip extender sleeve as recited in claim 19 wherein said flexible base portion comprises a stretchable rubber material.

21. The target grip extender sleeve as recited in claim 19 wherein said flexible base portion comprises at least two finger grooves on a front end of said extender sleeve.

22. The target grip extender sleeve as recited in claim 19 wherein said trigger finger extender comprises an outward

extension increasing in depth from a back edge to a front edge for an inside of a user's trigger finger at a first joint to bend at approximately a right angle in order to position a distal portion of the trigger finger directly in front of a trigger of the firearm and approximately perpendicular to the trigger.

23. The target grip extender sleeve as recited in claim 22 wherein said trigger finger extender comprises a concave side surface from an upper edge to a lower edge along said outward extension as said side surface increases in depth from a back edge to a front edge.

24. The target grip extender sleeve as recited in claim 19 wherein said sleeve comprises one of a plurality of different size trigger finger extenders of varying contoured outward extensions to accommodate different lengths of a user's trigger finger.

25. A side panel for attaching to a firearm comprising:

a base section having a pair of spaced apart holes for receiving means for fastening said base section to said firearm; and

an upper panel section removably attached to an upper portion of said base section by said fastening means.

26. The side panel as recited in claim 26 wherein said base section comprises means for preventing side movement when said upper panel section is positioned on said base section.

27. The side panel as recited in claim 26 wherein an outer surface of said base section and an outer surface of said upper panel section comprises a textured surface.

28. The side panel as recited in claim 26 wherein said upper panel section comprises a removably attached trigger finger extender.

29. The side panel as recited in claim 28 wherein said trigger finger extender comprises a varying contoured outward extension for guiding a trigger finger of a user to bend at approximately a right angle in order to position a distal portion of said trigger finger directly in front of a trigger of said firearm and approximately perpendicular to said trigger.

30. The side panel as recited in claim 25 wherein said upper panel section of said base section comprises a notch in an inside front corner extending from top to bottom of said upper portion.

31. The side panel as recited in claim 25 wherein said upper panel section comprises one of a plurality of different sizes of said contoured outward extension to accommodate different lengths of a user's trigger finger.

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