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(54) **REMOVABLE HAND PROTECTOR FOR SEMI
AUTOMATIC PISTOLS**

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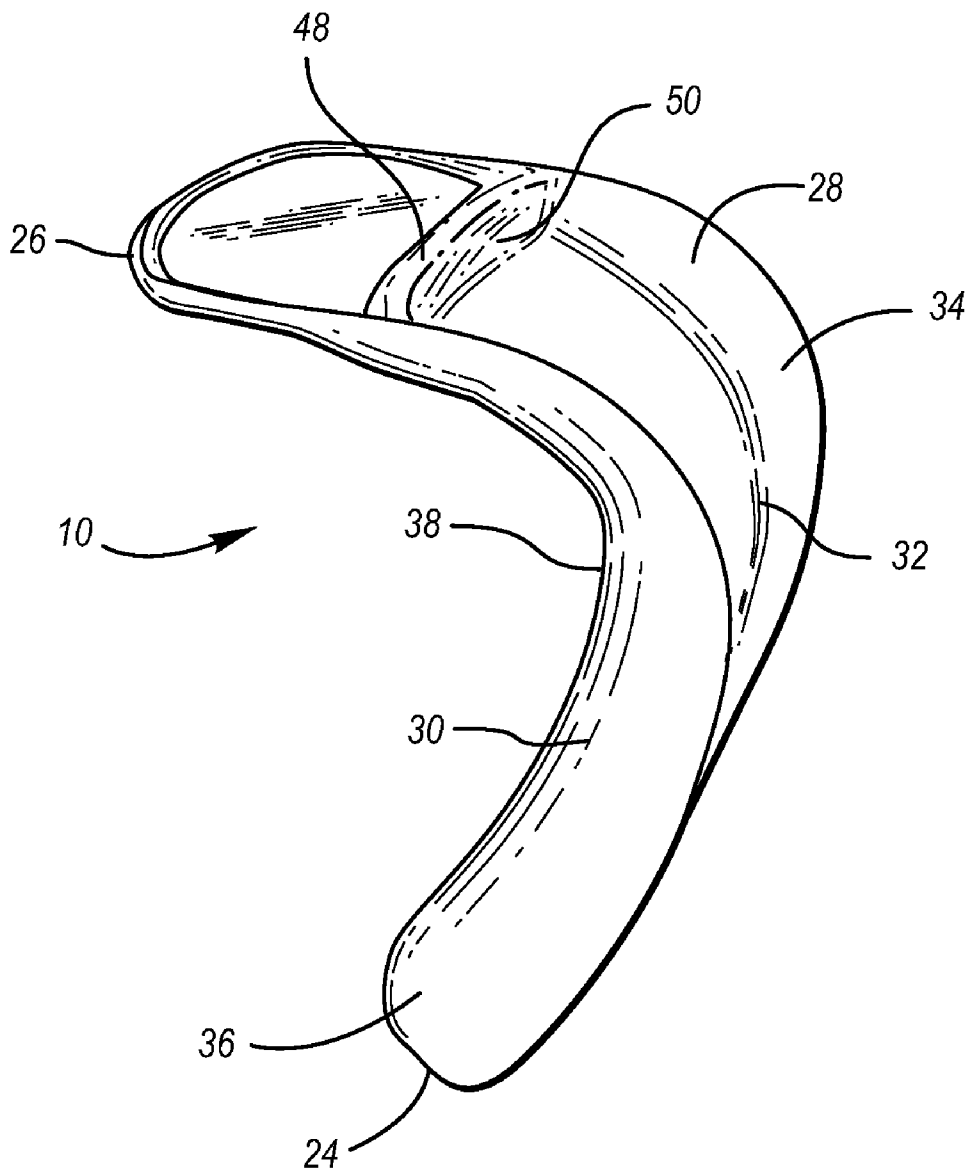
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(57) **ABSTRACT**

The device is an attachment for pistols for extending the rear
of the grip or handle of the pistol, so that a user's hand or
hands are not able to come into contact with the bottom of the
slide of the handgun.

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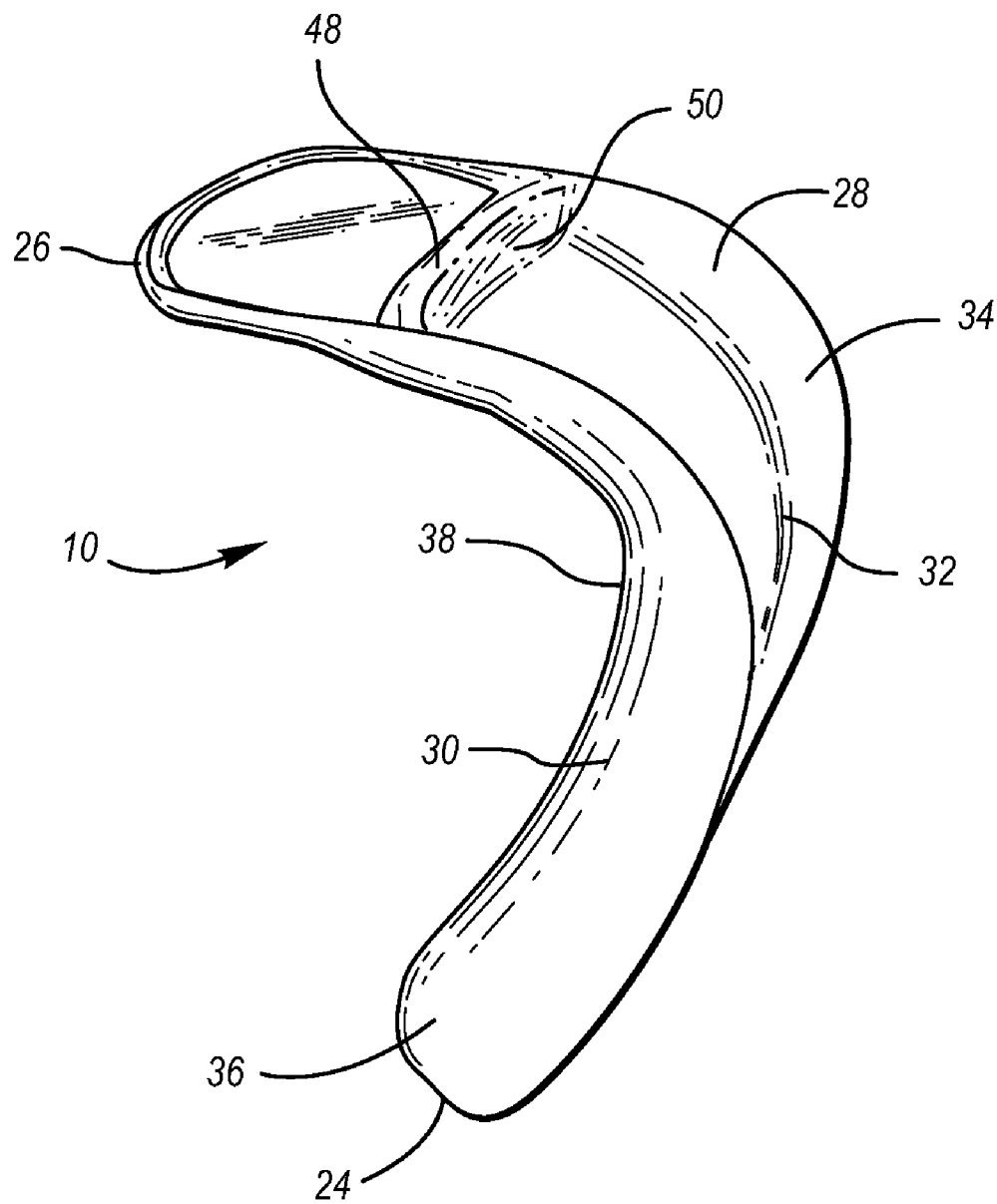


Fig. 1

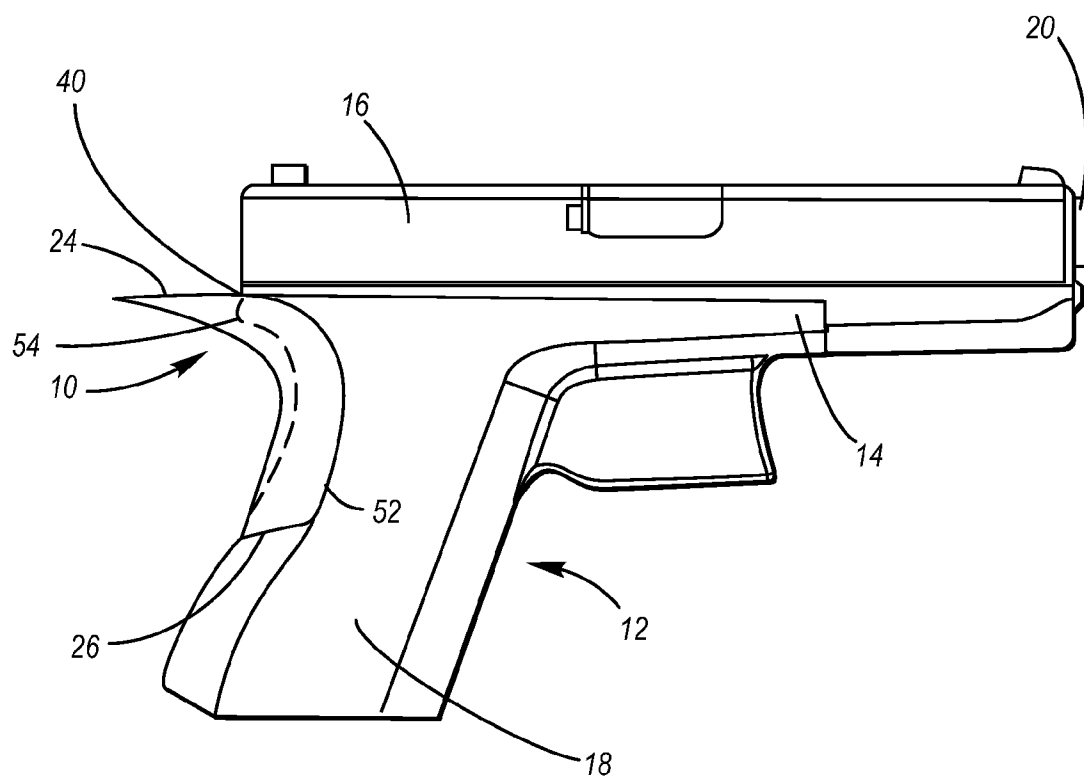


Fig. 2

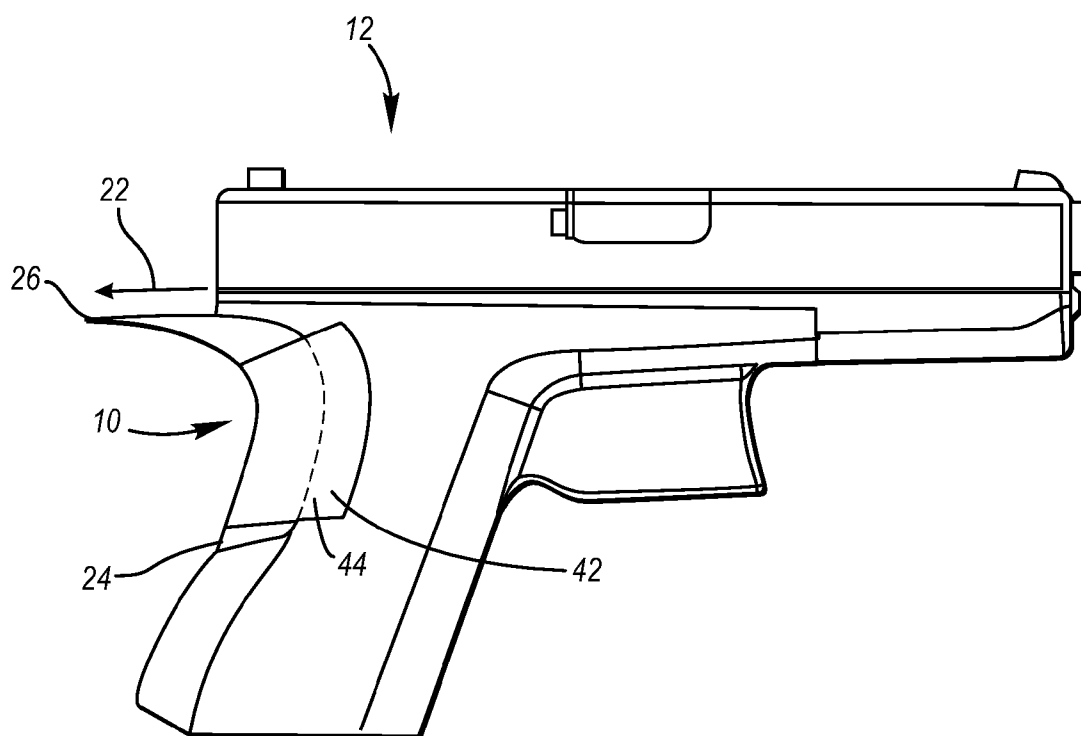


Fig. 3

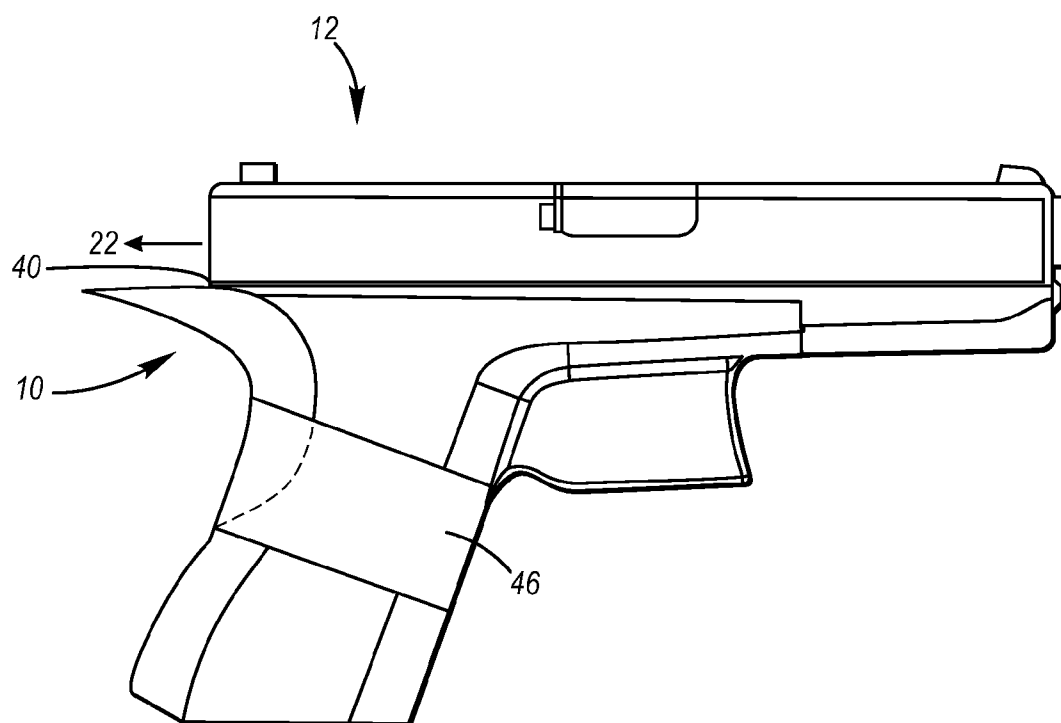


Fig. 4

REMOVABLE HAND PROTECTOR FOR SEMI AUTOMATIC PISTOLS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the priority date of the provisional application entitled REMOVABLE HAND PROTECTOR FOR SEMI AUTOMATIC PISTOLS filed by Mike Gibson Manufacturing Inc. on Jan. 9, 2007, with application Ser. No. 60/879,643.

FIELD OF THE INVENTION

[0002] The invention relates to generally to an apparatus for use with a handgun, and more particularly to safety device for attachment to a handgun grip for use with semi-automatic pistols.

BACKGROUND OF THE INVENTION

[0003] Semi-automatic pistols (herein after referred to simply as “pistols”) have an inherent danger related to how they are held when they are fired. Without coaching as to the proper way to grip a pistol, it is entirely possible that the inexperienced shooter will be injured the first time they fire the pistol.

[0004] More specifically, a pistol is comprised of three primary components:

[0005] 1. The Frame (which includes the grip portion of the pistol),

[0006] 2. the Barrel, and

[0007] 3. The Slide.

[0008] The frame does not move, and the barrel only moves a very minimal amount, but the slide moves back and forth over the top of the frame. At the extreme point of movement, the slide extends past the back of the grip approximately 2 inches. This 2" dimension varies between manufacturers, models, and calibers, but in all cases it is enough to cut two slices in the top of the shooters weak hand thumb.

[0009] Pistols are often held incorrectly by beginning and inexperienced shooters, and there are two primary methods of doing it wrong.

[0010] 1. The strong hand (holding the grip) is cradled in the other hand, much like a tea cup on a saucer (Teacup Grip);

[0011] 2. The weak hand grasps the strong hand, with the weak thumb crossing the strong thumb. (Overlap Grip).

[0012] The safety issue occurs in the second scenario. As the slide activates, (which occurs in about 0.15 seconds), it moves back from the frame very quickly, and then quickly returns to its default position on the frame, being back by the impact of the firing cartridge, and being driven forward by a spring. This reciprocating action causes the rails on the bottom of the slide to make two quick slashes across the top of the weak hand thumb. Depending on how high up the weak thumb was, at the least, first aid will be required, and in the worst case, professional medical attention will be required.

[0013] Many pistols now come from the factory with a device commonly known as a “beavertail”, which minimizes the possibility of injury resulting from holding the pistol incorrectly. In the case of Glock brand pistols, the integral beavertail is minimal, but it does help to a small extent. If the shooter has particularly large hands, or is a competitive shooter, the risk of injury is still great, and in some cases, it is certain, if the shooter isn’t always cognizant of exactly how

the pistol is being held. This poses a danger for competitive shooters also, since they tend to hold the pistol “higher”, which increases the possibility and likelihood of the injury.

SUMMARY OF THE INVENTION

[0014] The pistol attachment of the invention may be applied to many different brands of pistols, and serves to extend to the rearward the factory grip shape of pistols by ½" to ¾", to the point that any slide related injury is a virtual impossibility.

[0015] The device is a removable device, most commonly injection molded plastic, (or hand molded plastic), and is held on the pistol grip with adhesive grip tape, or with a piece of rubber tube. With this removable feature, if the user doesn’t like it, it can easily be removed with no damage to the original pistol configuration. It could also be manufactured of metal or other material, and it could be permanently applied, if that is what the user wanted.

[0016] The shooting aid of the invention is generally v-shaped, with a first end and a second end. The two ends of the “v” do not have to be the same length. The device includes a first side and a second side. The first side forms the outside surface of the “v,” and is generally concave in shape. It is shaped to form a close engagement with the back of the handle or grip of a handgun, and would have surface details congruent with a particular handgun. The second side forms the inside surface of the “v” and is designed for engagement by a user’s hand. The second side of the pistol attachment is generally convex and generally parallels the concave surface of the first side. The device is configured to be placed on the back side of the pistol grip of a handgun, with the first end of the attachment extending partially down the pistol grip, and with the second end of the “v” being positioned generally parallel to and below the path of the slide of the pistol. The first end forms an acute angle with the second end.

[0017] The device is attached to the grip of the pistol preferably by a tape which is adhesive on one side, and provides a good gripping surface on the other side. A sandpaper type surface may be used, or the gripping surface of the tape can also be a rubberized surface that has a good grip to the user, or any surface which provides good adhesion to the grip of the handgun as well as the desired feel by the user can be used at part of the tape.

[0018] Other forms of attachment can be used, such as by a wide rubber loop, One or more smaller diameter rubber loops, a layer of adhesive, or by screws.

[0019] The device is preferably made of an injection molded plastic such as Kydex, or other high impact or high density plastics. The device can also be made of other materials such as metal, including aluminum, steel, titanium, or other metals which have the required characteristics of rigidity.

[0020] The first end of the device is designed to extend from two-thirds to one-half of the distance of the length of the grip handle.

[0021] The purpose of the Abstract is to enable the public, and especially the scientists, engineers, and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection, the nature and essence of the technical disclosure of the application. The Abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

[0022] Still other features and advantages of the present invention will become readily apparent to those skilled in this art from the following detailed description describing preferred embodiments of the invention, simply by way of illustration of the best mode contemplated by carrying out my invention. As will be realized, the invention is capable of modification in various obvious respects all without departing from the invention. Accordingly, the drawings and description of the preferred embodiments are to be regarded as illustrative in nature, and not as restrictive in nature.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] FIG. 1 is a perspective view of the device.

[0024] FIG. 2 is a side view of the device with a pistol.

[0025] FIG. 3 is a side view of the device with a pistol and adhesive tape for attachment.

[0026] FIG. 4 is a side view of the device with a pistol and an elastic band for attachment.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0027] While the invention is susceptible of various modifications and alternative constructions, certain illustrated embodiments thereof have been shown in the drawings and will be described below in detail. It should be understood, however, that there is no intention to limit the invention to the specific form disclosed, but, on the contrary, the invention is to cover all modifications, alternative constructions, and equivalents falling within the spirit and scope of the invention as defined in the claims.

[0028] In the following description and in the figures, like elements are identified with like reference numerals. The use of "or" indicates a non-exclusive alternative without limitation unless otherwise noted. The use of "including" means "including, but not limited to," unless otherwise noted.

[0029] FIGS. 1-4 show several preferred embodiments of the invention. FIG. 1 shows the shooting aid 10 of the device. The device 10 is generally V-shaped with the outside surface of the "V" shown as 34 in FIG. 1, with the inside surface of the "V" shown as 38. The outside surface of the "V" 34 is a concave surface 32 and the inside surface of the "V" is a convex surface 36. Shown in FIG. 1 is the first end 24, the second end 26, the first side 28, and the second side 30. The first end 24 is made to be mounted adjacent to the rear of the handle or grip of a selected handgun. The second end 26 is configured so that when the device is mounted on a handgun, the first side 28 adjacent to the second end 26 will be generally parallel to the bottom of the underside of the handgun slide 40. When mounted in this configuration, the device will prevent a user's hands from intersecting the path of movement 22 of the slide 16 of a handgun. Shown in FIG. 1 is a positioning wall, 48 which includes a pocket, 50. The positioning wall 48 and the pocket 50 are configured to fit onto the rear profile of a handgun such as a Glock 40 caliber or other handguns. FIG. 1 shows the pocket, 50, and FIG. 2 shows, in dotted line, where the rear feature 54 of the handgun 12 fits into the pocket 50 of the handgun.

[0030] FIG. 2 shows the device 10 mounted on a handgun 12. The handgun includes a frame 14, a slide 16, a grip 18, and a barrel 20. The path of movement 22 of the handgun is shown in FIG. 4. Returning to FIG. 2, the shooting aid 10 is shown

with one possible type of attachment, by use of an adhesive layer 52 between the grip of the handgun and the shooting aid 10.

[0031] FIG. 3 shows an embodiment of the invention in which the device 10 is attached to the handgun 12 by attachment means 42 which in this case is tape 44. This tape is preferably adhesive on one side and has a gripping surface on the other side. The gripping surface can be in the form of something like sandpaper, or can also be in the form of a rubberized surface which has good gripping characteristics.

[0032] FIG. 4 shows the device 10 using an attachment means 42, a band of elastic 46. Other attachment means can include use of screws or bonding to the material of the pistol grip, such as by sonic bonding, use of an epoxy or other hardening material, or other conventional attachment means.

[0033] The device of the invention is configured so that it extends the tail end of the handgun frame rearward from the grip about three-quarters to one inch. The first side of the device is made to cover from one-half to three-quarters of the backside of the pistol grip, and to have the concave surface of the first side have a close and accurate contact with the rear of the handgun.

[0034] One type of adhesive tape which can be utilized is tape which is utilized to affix a sandpaper-like gripping surface to objects such as skateboards.

[0035] While there is shown and described the present preferred embodiment of the invention, it is to be distinctly understood that this invention is not limited thereto but may be variously embodied to practice within the scope of the following claims. From the foregoing description, it will be apparent that various changes may be made without departing from the spirit and scope of the invention as defined by the following claims.

What is claimed is:

1. A shooting aid for use with a pistol, said pistol comprising a frame, a slide, a grip, and a barrel, and with said slide having a path of movement in relation to said frame and grip, said shooting aid comprising:

a generally V shaped pistol attachment, with a first end and a second end, and a first side and a second side, with first side forming an outside surface of said V, and d having a generally concave surface configured for engagement and attachment to the rear portion of said pistol grip, and with said second side forming an inside surface of said V, and having a generally convex surface configured for engagement by a user's hand, with said first end configured for placement on a back side of said pistol grip and with said second end configured for placement on a pistol grip generally parallel with an underside of said pistol slide, with said second end forming an acute angle with said first end, and with said second end forming a protective barrier to keep said user's hand from intersecting a path of movement of said slide; and

an attachment means for attaching said pistol attachment to a back side of said pistol grip.

2. The shooting aid of claim 1 in which said pistol attachment includes a positioning wall on said second end of said attachment, on said first side of said device, which extends from one side of said device to an opposite side in said concavity of said first side, with said positioning wall configured for mounting adjacent to a feature at the rear of said handgun grip.

3. The shooting aid of claim 1 in which said device on the first side of the second end includes a region at the tip which is generally flat, with the remainder of said first side being concave.

4. The shooting aid of claim 3 in which said generally flat region includes a pocket at the edge of the concave area, with said pocket configured to engage a pistol feature at the back of said grip.

5. The shooting aid of claim 1 in which said attachment means further comprises an adhesive layer for securing said shooting aid to said back side of said grip.

6. The shooting aid of claim 1 in which said attachment means further comprises a tape with adhesive on one side and a gripping surface on an opposite side, with said tape configured to extend partially over said pistol grip on either side of said shooting aid.

7. The shooting aid of claim 1 in which said attachment means further comprises one or more elastic bands.

8. The shooting aid of claim 1 in which first end is configured to extend over approximately $\frac{1}{2}$ to $\frac{3}{4}$ of the length of said handgun grip.

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