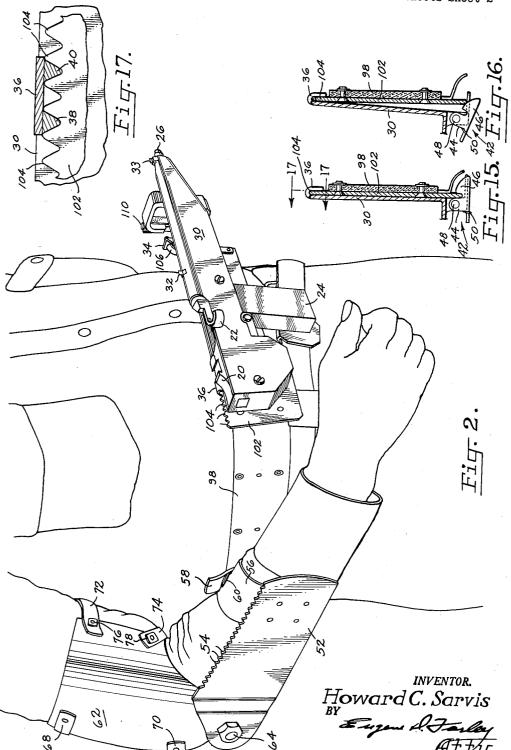
FOREARM GUN Filed Oct. 10, 1955 4 Sheets-Sheet 1 Howard C. Sarvis FOREARM GUN

Filed Oct. 10, 1955

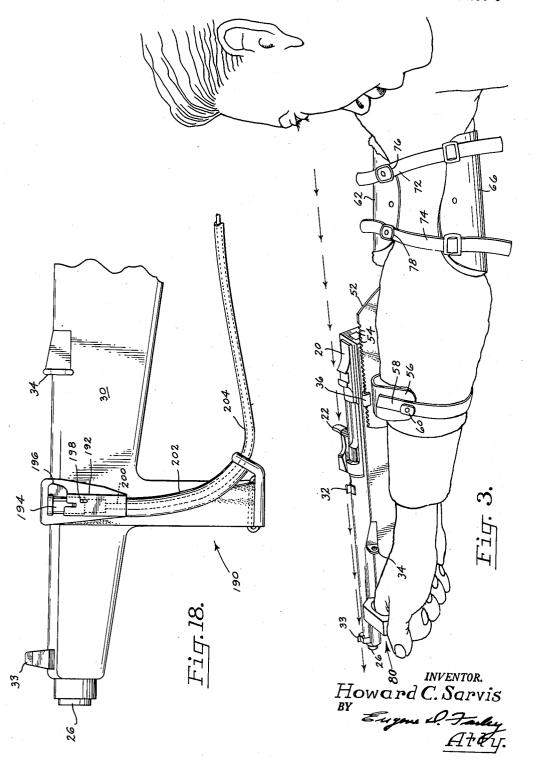
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FOREARM GUN

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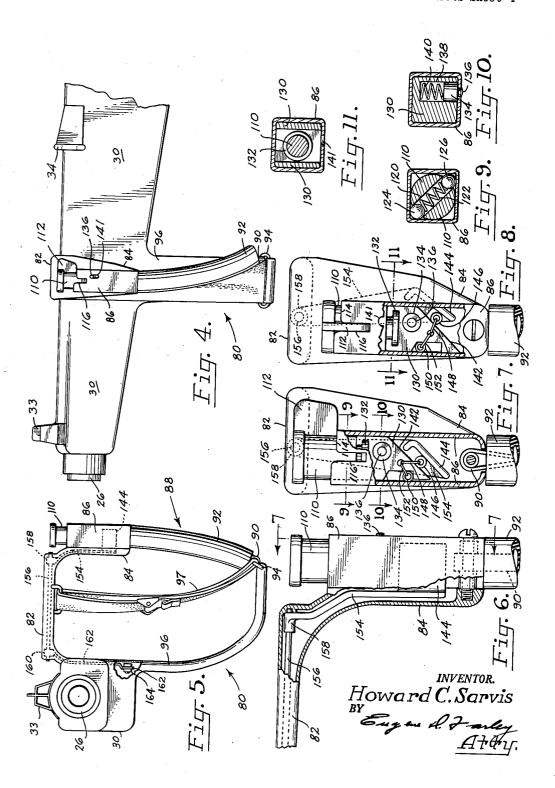
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FOREARM GUN

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## 2,977,703 FOREARM GUN

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This invention relates to guns of the class adapted for 15 mounting on the forearm and for shooting when thus

There are many instances in which armed guards, police officers, armored car operators and military personnel are under the necessity of working with their hands in the 20 performance of various tasks where an instantaneous need may arise for use of a gun. Such instances are particularly common in warfare, in the case of personnel not primarily rifle men, such as raiders, vehicle operators, artillery men, bazooka and mortar men, technical personnel, officers, etc. These classes of individuals have many tasks to perform requiring the full use of both hands, yet they often work sufficiently close to the front to be subject to enemy surprise and hence require the instant use of a personal weapon of defense. In these situations the guns 30 which are currently available, including holster weapons. carbines and sub-machine guns, are unsatisfactory because of the delay experienced in mounting and firing them.

Accordingly it is the general object of the present invention to provide a gun which may be carried on the forearm and fired instantaneously while thus carried, without materially hampering the use of the hands and arms of the wearer for other tasks.

The advantages of the forearm gun provided by the present invention thus include the following:

(1) It can be worn comfortably over long periods of time without cutting off the circulation, irritating the nerves, or pinching the skin.

(2) It may be mounted upon and demounted from the forearm substantially instantaneously.

(3) It is instantaneously and automatically adjustable for use upon forearms of varying lengths and thickness.

(4) It is mountable readily upon a belt worn about the waist when it is not urgently needed.

(5) It may be fired when mounted on the forearm, on 50 the belt, or when it is held in the hands.

(6) When mounted on the forearm it is stable and may be sighted and fired accurately.

(7) It is mounted on the forearm in such a manner that its recoil is not offensive or a problem.

(8) It has a positive triggering action which is durable and does not require lubrication.

(9) It is provided with a reliable safety catch which may be operated rapidly and easily.

(10) It may be mounted and fired even when wearing heavy gloves or mittens and other items of heavy clothing in cold weather.

(11) Its inner mechanism is protected from access of

not slip or fall off even during vigorous use of the arm.

(13) It will not roll around the arm and thus get out of firing position even during active use of the arm.

(14) It may be shot accurately.

The manner in which the foregoing and other objects and advantages of this invention are accomplished, and the construction of the forearm gun incorporating them,

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will be apparent from the accompanying specification and claims considered together with the drawings, wherein:

Fig. 1 is a perspective view of the herein described forearm gun mounted in operative position on the forearm of the wearer;

Fig. 2 is a perspective view similar to Fig. 1 but illustrating the herein described forearm gun mounted on the belt of the wearer;

Fig. 3 is a perspective view similar to Figs. 1 and 2 10 illustrating the herein described forearm gun in shooting position for aimed shots;

Fig. 4 is a fragmentary view in side elevation of the forward portion of the herein described forearm gun including a general view of the trigger mechanism;

Fig. 5 is a view in front elevation of the herein described forearm gun illustrating further the trigger mechanism and also illustrating in part the manner of mounting the gun on the forearm;

Fig. 6 is a detail view, partly in section illustrating further the trigger mechanism;

Fig. 7 is a sectional view of the trigger mechanism taken along line 7-7 of Fig. 6; with the trigger in its position of rest, with the safety "on."

Fig. 8 is a sectional view in elevation similar to Fig. 7 but illustrating the trigger mechanism in the actuated position which it assumes when the safety is thrown "off" and the gun is fired;

Fig. 9 is a transverse sectional view taken along line 9—9 of Fig. 7 and illustrating the means of positioning accurately the safety mechanism in safety and firing posi-

Fig. 10 is a transverse sectional view taken along line 10-10 of Fig. 7 and illustrating the means of retaining the trigger mechanism and also of limiting its stroke;

Fig. 11 is a transverse sectional view taken along line 11-11 of Fig. 8 and illustrating the manner of mounting the safety catch;

Fig. 12 is a fragmentary view in side elevation, partly in section, illustrating the manner of attaching the triggeractuating mechanism to the gun trigger;

Fig. 13 is a fragmentary sectional view in front elevation, taken along line 13—13 of Fig. 12, further illustrating the means employed for connecting the trigger actuator to the trigger;

Fig. 14 is a sectional view taken along line 14—14 of Fig. 13 and illustrating an adjustment provided for adjusting the connection between the trigger actuating mechanism and the trigger to accommodate various classes of gun types in the herein described forearm gun and also to increase the sensitivity of the trigger action;

Figs. 15 and 16 are detail sectional views in elevation illustrating the manner of attaching the herein described forearm gun to the belt of the wearer, Fig. 15 illustrating the gun locked on the belt and Fig. 16 illustrating it being released from the belt;

Fig. 17 is a detail sectional view taken along line 17-17 of Fig. 15 and illustrating the manner of adjustably connecting the herein described forearm gun to the belt and also to the forearm; and

Fig. 18 is a fragmentary view in side elevation of the muzzle portion of the gun illustrating an alternate trigger actuating mechanism.

Generally stated, the forearm gun of this invention com-(12) It is securely mounted on the forearm and will 65 prises a gun body of suitable dimensions for mounting on the forearm, means for releasably securing the rear terminal portion of the gun body to the forearm and upper arm, and means for releasably securing the forward terminal portion of the gun body to the hand. Means also are provided for mounting the gun on a belt worn about the waist when this is desired; for accommodating guns of various lengths on the mounting means on the

arm and on the belt; and for triggering the gun positively and safely.

Considering the foregoing in greater detail and with particular reference to the drawings:

#### The gun

The general character of the forearm gun described herein and of the mount employed for it is apparent from Figs. 1, 2 and 3. The gun 20 may be of any type having dimensions suitable for mounting on the forearm. Thus it may be specially designed, or it may comprise a modified or unmodified standard gun type such as a .45 caliber hand gun, or particularly, a modified U.S. Army M-1 or M-2 carbine.

A carbine type gun is shown in the illustration. As shown, the stock has been removed and the barrel shortened. Otherwise it includes the usual mechanical elements associated with guns of this class including bolt, slide and cocking hook assembly 22, cartridge clip 24,

trigger 25, and muzzle 26.

### The gun mounting assembly

The gun mounting and firing elements of the herein described assembly may be attached directly to the gun body, particularly where the latter is designed and dimensioned especially for use as a forearm gun. However, where a standard carbine or other gun is adapted for such use, it may be mounted in a casing indicated generally at 30 to shield the mechanism and hot barrel. This casing conforms generally to the contour of the gun and is provided with suitable openings for loading and

firing the gun.

Means are provided for mounting the gun or the gun casing, as the case may be, on the forearm of the user. The means employed for this purpose comprise broadly a harness for mounting the rear terminal portion of the gun on the forearm and upper arm, and a grip for mounting the muzzle portion of the gun on the hand. A rear sight 32 then is mounted in an appropriate position on the upper surface of the casing for use in conjunction with front sight 33. Also, a perforated bracket 34 extends laterally from the side of the casing for mounting the gun on the belt as will be explained hereinafter.

For mounting the rear terminal portion of the gun on the forearm there is provided, on the upper inner side edge of the casing, a hook 36 having in its upper under surface a pair of spaced apart projections or dogs 38, 40 (Figs. 15-17). This hook cooperates with a clip indicated generally at 42 and stationed on the lower inside edge of the casing preferably in substantial vertical align-

ment with hook 36.

Although clip 42 may be variously constructed, in the illustrated form it comprises a shank portion 44 and a clip or latch portion 46. The shank portion is pivotally attached to an extension of casing 30 by means of pin 48. A resilient means such as spring 50 is provided for maintaining the clip normally in its advanced, operative

Hook 36 and clip 42 are designed and dimensioned for attachment to a harness assembly by means of which the rear terminal portion of the gun is mounted on and supported by the forearm and upper arm of the user. This assembly includes a first plate 52 having along its upper edge a plurality of serrations 54, the spacing of which corresponds to the spacing between projections 38, 40 on clip 36. The length of the serrated surface of the plate is sufficient to enable mounting of gun bodies of varying length on forearms of varying length.

The forward portion of plate 52 carries a laterally extending second plate 56. This plate preferably is arcuate in contour to conform to the contour of the upper forearm surface which it engages. It may be padded with sheepskin or other suitable material for comfort and 75 of plate 52. This completes the mounting operation in

safety. It is connectible to an adjustable strap 58, the lower end of which is affixed to the lower edge portion of plate 52, and the upper end of which is provided with a snap fastener 60 for releasable attachment to plate 56.

Plate 52 is articulated with a third plate 62 by means of a pin 64 which penetrates overlapped extensions of the two plates. It is to be noted particularly that plates 52 and 62 are proportioned and positioned in such a manner that pin 64 is aligned with the elbow joint. Accordingly as the forearm is raised and lowered in a normal manner, plate 52 follows this motion without impeding or hinder-

ing it.

Plate 62 is generally arcuate in contour to conform to the upper surface of the upper arm. A cooperating fourth plate 66 is arcuate to conform to the contour of the lower surface of the upper arm. The two plates are interconnected by suitable means such as adjustable straps 68, 70 interconnecting one pair of opposite side edges of the two plates, and adjustable straps 72, 74 interconnecting the other pair of opposite side edges of the plates. Suitable means such as snap fasteners 76, 78 may be provided for releasably attaching the ends of straps 72, 74 to one or the other of the plates, preferably plate 62. Thus the supporting harness including plate 52 may be mounted on the arm easily and rapidly by the simple expedient of closing snap fasteners 60, 76 and 78.

As indicated above, the forward or muzzle portion of the gun is supported by the hand of the user. For this purpose, there is provided on the forward portion of the inner side of casing 30, or of the gun body if a casing is not employed, a grip assembly indicated generally

The construction of a suitable form of such an assembly is illustrated particularly in Figs. 5 and 6. Thus it may comprise a rigid, yoke-shaped, hollow, horizontal cross piece 82, one end of which is attached to the upper edge of the forward portion of casing 30. The outer edge of cross piece 82 connects with a vertical bracket 84 which also is hollow. It carries a housing 86 which preferably is substantially square in cross section and which contains the trigger actuating mechanism, as will be explained more fully below.

Attached to the lower end of bracket 84, or of housing 86, is a flexible link member indicated generally by the numeral 88 and including preferably a flexible metal strap 90 (Fig. 7) contained in a flexible tube 92.

The lower end of strap 90 is attached through a pin 94 to the lower outer end of a rigid cross piece 96. upper end of this cross piece is attached to or integral with the lower inside edge of the forward portion of casing 30 or to the lower front portion of the gun body as the case may be.

An adjustable strap 97 interconnects the central portion of upper cross piece 82 and the lower portion of flexible connector 88. Thus, as is particularly apparent in Figs. 1 and 5, strap 97 forms with bracket 84 and connector 88 a loop through which the fingers and the forward portion of the palm of the hand may be inserted. Since this opening is adjustable, the mount is adaptable for use by persons having different sized hands, and also by persons wearing heavy gloves in cold weather.

From the foregoing it will be evident that the herein described forearm gun may readily be mounted on the arm. This is accomplished simply by placing the fingers of the hand through the opening formed by strap 97, bracket 84 and connector 88 until a comfortable operating position is attained. The rearward portion of the gun then is placed adjacent plate 52 on the arm harness. Thereupon hook 36 may be slipped over serrated edge 54 70 of the plate, where it automatically will engage appropriate ones of the serrations. This makes possible automatic and immediate adjustment of the assembly for use

by persons having forearms of different lengths. Clip 42 then may be snapped under the lower edge

circumstances wherein it is desired to have the gun in readiness for immediate use.

Alternate mounting means are provided, however, for mounting the gun at the waist of the wearer where the need for use is not so urgent. A suitable belt mounting means for this purpose is illustrated in Figs. 1, 2, 15 and 16.

It includes an adjustable belt 98 to the front of which is attached an elongated plate 100. Attached to plate 100, or formed integrally therewith, is a second 10 plate 102 having a serrated edge 104. The dimensions of these serrations are identical with those of the serrations 54 on plate 52. Hence they are adapted for the reception of projections 38, 40 on hook 36 of the gun casing.

Also provided on plate 100 is a belt hook or dog 106. This member is dimensioned for reception in the opening in bracket 34 on the gun casing referred to hereinabove. As a consequence, the front portion of the gun may be rapidly mounted on the belt by inserting belt hook 106 in the opening in bracket 34. The rear portion of the gun then may be connected to the plate by slipping hook 36 over the serrations 104, on the top edge of plate 102, and snapping clip 42 over the bottom edge thereof.

When the gun is thus mounted at the waist, it may be carried comfortably and securely for long periods. However, it is ready for immediate attachment to the forearm, or may even be aimed with an appropriate swinging motion of the body and fired from the waist, using the left hand to pull the trigger.

# The triggering mechanism

As is apparent from a consideration of Figs. 6-14, the gun trigger preferably is actuated by means of the right thumb. This makes possible firing the gun even though heavy mittens or gloves are being worn. It also minimizes flinching of the marksman when the gun is fired.

Accordingly the trigger actuating mechanism is mounted in part in housing 86 which, as has been indicated above, is connected to bracket 84 of grip 80. As will be seen from Figs. 1 and 3, this places the trigger actuator directly adjacent the thumb when the fingers of the hand are inserted through the grip.

In the illustrated form, the trigger actuator comprises 45 a button 110 having thereon a laterally extending wing 112. The latter element serves as a safety for the gun. For this purpose the upper surface of housing 86 is formed with a cut away portion 114 and a communicating vertical slot 116.

When button 110 is in the position of Fig. 7, wing 112 abuts against the edge of cut away portion 114 of housing 86. Accordingly the button can not be depressed and the gun is in locked or safety position. However, when button 110 is rotated through 90° and assumes the position of Fig. 8, wing 112 registers with slot 116. The button then can be depressed, and the gun will be in firing position.

To make the rotary movement of button 110 between its safety and firing positions more positive, and to insure that it will not stop at an intermediate position, positioning means illustrated particularly in Fig. 9 are provided. For this purpose the shank of button 110 contains a central transverse opening 120. A compression spring 122 is seated in this opening. Balls 124, 126 are seated in the terminal portions of the opening in resilient contact with the ends of the spring.

Since housing 86 is square in cross section, it will be evident that when wing 112 is in the safety position of Fig. 7, balls 124, 126 will nest partly in opening 120 through the button and partly in the corners of the housing. Then as the button is rotated through 90°, the balls will be depressed further into the opening until

122 will force them out into the other opposed pair of corners of the housing. This positions the safety very accurately in on and off positions.

Button 110 is connected to a plunger 130. Unlike the button, which is circular in cross section, plunger 130 is square in cross section and is in sliding engagement with the inner side walls of housing 86. It is releasably connected to the lower end of the button by interengaging a flange 132 on the latter with a correspondingly dimensioned slot in the head of the plunger.

Vertical sliding movement of plunger 130 is restricted by means of a spring pressed stop 134. This stop is formed with a projecting head 136 and is mounted in a recess 138 in a side wall of the plunger. The stop is backed up by a compression spring 140 which normally urges it outwardly with head 136 extending through a slot 141 of restricted dimensions in housing 86. As a result, button 110 and plunger 130 can be moved vertically to an extent determined by the dimensions of slot 141. Also, if it is desired to remove the plunger and button from the housing, the head of the stop may be depressed until it clears the inner side wall of the housing. Thereafter the plunger and button may be easily extracted.

The lower surface 142 of plunger 130 is angled as is evident particularly in Figs. 7 and 8. This makes possible exertion of a camming action which can be used to actuate the gun trigger. Accordingly there is provided a cam 144 having a slope corresponding to that of sur-30 face 142 of the plunger. A roller 146 rotatably mounted on a bail 148, or other suitable means, is interposed between plunger surface 142 and cam 144. As a result, when the plunger is depressed, the thrust is conveyed through the roller to the cam without friction or requirement of lubrication, from the position of Fig. 7 to the position of Fig. 8. If a foreign substance, such as mud or snow, is introduced, the roller removes the obstruction in one stroke without roughening any of the surfaces, as might be the case with a metal-to-metal sliding cam. The bail does not function as a hub for the roller, but merely to loosely retain it in approximately correct position, from which it might be thrust by dirt or vibration.

Movement of the plunger and cam is facilitated by antifriction means comprising a roller 150 rotatably attached by means of bail 152 to plunger 130. This roller is mounted in a recessed portion of the side wall of the plunger which is opposite the cam surface. Hence as the plunger is depressed, the side thrust of the operation is exerted against roller 150 which moves to the position 50 of Fig. 8. This makes possible smooth operation of the plunger; eliminates sticking; and eliminates the necessity of lubrication.

The motion of cam 144 is translated into the angular motion of a vertically mounted lever 154 (Fig. 5). The 55 upper end of this lever is connected through collar 158 to a shaft 156 which is journaled in opposite end walls of hollow cross piece 82. The inner end of shaft 156 is connected through collar 160 to a vertically arranged lever 162. The lower end of this lever in turn is connected through clevis member 164 to a tubular link member 166 which extends substantially the length of the gun body and is mounted for longitudinal movement.

Means are provided for interconnecting tubular link 166 with trigger 25 of the gun. Such means include means for compensating for slight variations in trigger position such as are characteristic of different guns which may be integrated with the assembly. This construction is illustrated in Figs. 12-14.

As is apparent from these views, link 166 extends into a longitudinal recess 172 centrally located in a slide member 174. The latter member is in the form of a T, the cross bar 176 of which is in sliding engagement with a side wall of casing 30.

The other segment 178 of the T shaped slide extends the 90° angle has been completed. Thereupon spring 75 into the interior of the casing. Its terminal portion is

formed with a jaw 180 which releasably receives the end of trigger 25. Accordingly, when link 166 is moved to the left as viewed in Fig. 12, it moves the trigger to firing position. However, when pressure is released on button 110, the trigger spring of the gun forces the link, and the

button, back to their normal positions.

A means which may be employed for adjusting the connection between slide 174 and link 166 is illustrated in Fig. 14. To achieve the desired adjustment, a screw 182 is threaded into the end of the recess 172 opposite the 10 end of link 166. The head of the screw is aligned with an opening 184 in casing 30. This makes possible turning the screw with a screw driver until it just engages the end of the link, thereby insuring that depression of button 110 will instantaneously move the trigger and fire the gun.

An alternate construction for the trigger actuating means is illustrated in Fig. 18. In this construction a hand grip 190 corresponding in function to hand grip 80 of the previously described embodiment is mounted on the forward portion of casing 30. A housing 192 is 20 rigidly mounted on the outer vertical face of the grip. A button 194 provided with a locking wing 196 is mounted for vertical reciprocation in the housing in a manner analogous to that in which button 110 is mounted in housing 86. The movement of button 194 is limited by pin 198.

A flexible cable 200 is connected to the lower portion of button 194. It passes through a first tube 202 which is of substantial construction and part of the hand grip. It then passes through a flexible tube 204 rearwardly where it is connected to the trigger in the manner described above in connection with slide 174. Accordingly, depression of button 194 trips the trigger, but against the force exerted by the trigger spring. Then when pressure is released on the button, the trigger spring returns it to its elevated position.

Operation

The operation of the herein described forearm gun is as follows:

First, forearm plate 52 is mounted on the forearm by means of strap 58 and snap fastener 60. Then upper arm plates 62, 66 are put in place and fastened by means of straps 72, 74 and fasteners 76, 78. The position of these three plates relative to the arm is such that pin 64 which interconnects plates 52, 62 is in direct alignment with the elbow joint. As a result, the forearm may be moved in normal manner without binding or restriction.

Next, belt 98 is placed about the waist with plates 100 50 and 102 toward the front.

To mount the gun on the forearm, it is grasped in the left hand and swung out over the right forearm and the fingers of the right hand slipped through grip 80 between strap 97 and connector 88. This places the right 55 thumb in a natural position adjacent or above trigger button 110.

Next, hook 36 on the rear portion of the gun casing is slipped over the upper edge of plate 52 whereupon dogs 38, 40 on the underside of the hook engage the adjacent serrations 54 on the upper edge of the plate. In this manner adjustment is made automatically for variations due to use of gloves or heavy clothing, or for individual variation of forearm length. After the dogs 38, 40 engage serrations 54, the gun is released by the left hand and its weight causes latch portion 46 of clip 42 to close over the lower edge of plate 52, thus locking the gun securely to the arm.

The gun is now in the position of Fig. 1. It may be fired by pointing from the hip, or sight-aimed in the 70

manner indicated in Fig. 3.

Before shooting, the safety catch comprising wing 112 on button 110 is moved from the position of Fig. 7 to that of Fig. 8. This movement is accompanied by a 90° shift in the position of balls 124, 126 (Fig. 9) from the 75 means for mounting the forward portion of the casing

indicated position to that in which they occupy the other corners formed by the side walls of housing 86. This makes positive the adjustment of the safety between on

and off positions.

Button 110 may be depressed when the safety is in its off position. This in turn depresses plunger 130 to the position of Fig. 8, the lower limit of depression being determined by the engagement of spring pressed stop 136 with the bottom edge of slot 141. As plunger 130 moves downwardly it moves cam 144 to the right as viewed in Figs. 7 and 8, the interposed roller 146 facilitating this motion. Also, the action of roller 150 interposed between the side walls of plunger 130 and housing 86 takes the side thrust exerted by this motion so that 15 the movement of the plunger is free and substantially frictionless, even without the benefit of lubrication.

The sideways movement of cam 144 induces angular movement in lever 154 to which the cam is connected. This in turn moves lever arm 162 in casing 30 (Fig. 5) in the same direction. As a result, link 166 is moved to the left as viewed in Fig. 12. This causes slide 174 to move to the left and accordingly actuates trigger 25 against the force exerted by the trigger spring of the gun. This fires the gun, after which the trigger spring 25 forces link 166 and button 110 back to their former

positions.

When the gun is fired, recoil is transmitted painlessly to the arm by the articulated and padded arm plates. These are so shaped as to bridge all major blood vessels and nerves and to impose the weight substantially on the skeleton of the wearer, rather than upon flesh and muscles. As a result the weapon can be carried on the arm for long periods with little fatigue or discomfort, permitting free use of both hands for practically any task, yet ready for instantaneous firing should need arise. In addition, desirable effects noted from experimental firing include remarkable freedom from flinching while using the thumb trigger, as compared to the finger trigger of a conventional gun; and a feeling of great comfort and stability in aiming, either from the hip or by means of the sights, due to the fact that the major part of the weight of the gun and ammunition is supported near the elbow, rather than extending beyond the end of the hand, as with a conventional pistol.

Where the need for use of the gun is not likely to be acute, it may be mounted at the waist in the manner indicated in Fig. 2. In this position, belt hook 106 is inserted in the perforation in bracket 34 on the gun casing. Hook 36 on the latter then is slipped over the serrated portion of plate 102 whereupon dogs 38, 40 are instantaneously received in the adjacent ones of serrations 104. Clip 42 then may be snapped under the lower edge of the plate to anchor the gun on the belt.

If need should arise to shoot the gun while it is being worn at the waist, this may be done without the necessity of removing it from the belt. Thus the body may be turned to aim the gun and button 110 depressed with the thumb of the left hand. Also, if desired or necessary, the gun may be fired while being held in the hand, somewhat in the fashion of shooting a conventional rifle, except that triggering is performed with the left thumb.

Having thus described my invention in preferred em-

bodiments, I claim:

1. A forearm gun mount comprising a casing adapted to receive a gun, means on the forward portion of said casing for mounting said forward portion of the casing on the hand, means for mounting the rearward portion of the casing pivotally on the upper arm whereby to permit freedom of articulation of the arm and yet effect transmittal of recoil directly to the upper arm, and trigger operating means adjacent the hand for firing the gun upon actuation thereof.

2. The forearm gun mount of claim 1 wherein the

on the hand comprise a side grip dimensioned to receive the fingers of the hand with the gun and casing positioned on the outer side of the forearm.

3. The forearm gun mount of claim 1 wherein the means for mounting the rearward portion of the casing on the upper arm comprise a plate, pivot means interengaging the casing and the plate, and means for mounting the plate on the upper arm of the wearer.

4. The forearm gun mount of claim 1 wherein the means for mounting the rearward portion of the casing on 10 the upper arm comprise a first plate, latch means for releasably attaching the casing to the first plate, flexible means attached to the first plate for mounting the latter on the forearm of the wearer, a second plate pivotally connected to the first plate and positioned for overlying the upper arm, and flexible means for mounting the second plate on the upper arm.

5. The forearm gun mount of claim 1 wherein the mounting means for mounting the rear portion of the casing on the upper arm comprises a first support mem- 20 ber, means for attaching the casing to the first support member, flexible means attached to the forward end of the first support member for mounting the latter on the forearm, a second support member dimensioned to overlie the upper arm, means for pivotally attaching the second 25 support member to the first support member, a third support member adapted to overlie the upper arm on the

side opposite the second support member, and flexible means interconnecting the second and third support members for mounting the same on the upper arm.

6. The forearm gun mount of claim 1 wherein the means for mounting the rearward portion of the casing comprise a plate having a serrated longitudinal edge thereon, means for attaching the plate to the arm, hook means adapted to overlie the serrated edge of the plate and to engage 35 the serrations thereon, and clip means on the casing adapted to engage the longitudinal edge of the plate opposite the serrated edge thereof.

7. The forearm gun mount of claim 1 wherein the trigger operating means comprises finger operated plunger means 40 mounted adjacent the means for mounting the forward portion of the casing on the hand, cam means actuatable by the plunger means, and link means for interconnecting the cam means and the gun trigger for actuating the same.

8. The forearm gun mount of claim 1 wherein the trigger operating means comprises a housing which is square in cross section, a plunger having an inclined lower surface slidably mounted within the housing, cam means stationed below the plunger, a first roller interposed between the plunger and the cam, a bail connected to the first roller for retaining and positioning the same, a second roller interposed between the plunger and the housing opposite the cam means, a bail connected to the second roller for retaining and positioning the same, and link means interconnecting the cam means and the gun trigger.

9. The forearm gun mount of claim 1 wherein the trigger operating means includes a housing which is substantially square in cross section, a plunger slidably mounted in the housing, a button rotatably mounted within the housing above and in contact with the plunger, the button having an opening transversely therethrough, a pair of balls seated in the ends of the opening, resilient means for urging the balls resiliently into opposite corners of the housing, and link means for interconnecting the plunger and the trigger of the gun.

10. A forearm gun comprising a gun body, grip means on the gun body for mounting the same on the hand, a first support member, means for mounting the first 70 support member along the forearm, a second support member, means for mounting the second support member at the waist, and complementary engaging means on the gun body and on the first and second support members, respectively, for selectively supporting the gun body 75

on the first support member and the second support member, respectively.

11. The forearm gun assembly of claim 10, wherein the first and second support members include plates having serrated longitudinal edges and wherein complementary engaging means are provided on the gun body for releasably engaging the serrated edges of the plates.

12. A gun assembly comprising a gun body, a hand grip on the muzzle portion of the gun for supporting said muzzle portion on the hand, support means adapted for mounting on the upper arm, pivot means interengaging the support means and a rearward portion of the gun body adjacent the elbow of the wearer, whereby to permit freedom of articulation of the arm and yet effect transmittal of recoil directly to the upper arm, and trigger operating means adjacent the hand grip for firing the gun upon actuation thereof.

13. The gun assembly of claim 12 wherein the pivot means includes a plate, and adjustable interengaging means on the plate and gun body for releasably securing said plate and gun body together for longitudinal adjustment.

14. The gun assembly of claim 12 wherein the trigger operating means comprises plunger means mounted on the hand grip, and link means interconnecting the plunger means and the gun trigger.

15. The gun assembly of claim 12 wherein the trigger operating means includes a housing which is substantially square in cross section, a plunger slidably mounted in the housing, a button rotatably mounted within the housing above and in contact with the plunger, the button having an opening transversely therethrough, a pair of balls seated in the ends of the opening, resilient means for urging the balls resiliently into opposite corners of the housing, and link means interconnecting the plunger and the gun trigger.

16. The gun assembly of claim 12 wherein the trigger operating means comprises a housing, a plunger having an inclined lower surface slidably mounted within the housing, cam means stationed below the plunger, a first roller interposed between the plunger and the cam means, a second roller interposed between the plunger and the housing opposite the cam means, and link means interconnecting the cam means and the gun trigger.

17. In a gun assembly, a remote gun trigger operator including cam means, link means for pivotally interconnecting the cam means and a gun trigger, and plunger means for actuating the cam means and having an inclined surface arranged adjacent said cam means: a roller interposed between the inclined surface of the plunger means and cam means, and a bail pivotally interconnecting the roller and one of said cam and plunger means.

18. In a gun assembly, a remote gun trigger operator comprising a housing, a plunger having an inclined lower surface slidably mounted within the housing, cam means stationed below the plunger, a first roller interposed between the plunger and the cam means, a first bail interconnecting the first roller and one of said plunger and cam means, a second roller interposed between the plunger and the housing opposite the cam means, a second bail interconnecting the second roller and one of said plunger and housing, and link means interconnecting the cam means and the gun trigger.

# References Cited in the file of this patent

#### UNITED STATES PATENTS 805,189 Dubert \_\_\_\_\_ Nov. 21, 1905 1,314,951 Drews \_\_\_\_ Sept. 2, 1919 Palla \_\_\_\_\_ May 2, 1933 Neal \_\_\_\_ Feb. 17, 1948 1,906,870 2,436,175 2,651,872 Salardi \_\_\_\_\_ Sept. 15, 1953 FOREIGN PATENTS 113,443

377,879

Germany \_\_\_\_\_ Sept. 21, 1900

Germany \_\_\_\_\_ June 28, 1923