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(54) Title: SIGHT MOUNT

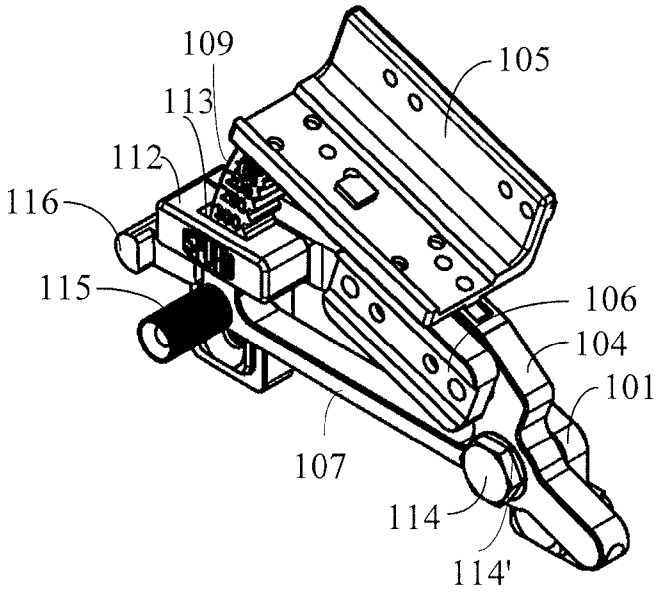



FIG. 1B

(57) Abstract: A sight mount for firearms, comprising an elongate base module (101;201) adapted to be mounted on a firearm and an elongate trajectory module (104;204) in the form a frame pivotally connected to the base module (101;201). The trajectory module (104;204) is adapted to support at least one sight and to be pivoted between different biased positions upwards and downwards relative to the base module (101;201), corresponding to different shooting distances, wherein the trajectory module (104) is adapted to be releasably mounted on either side of the base module (101).

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# SIGHT MOUNT

## Field of the Invention

The present invention relates to a sight mount for firearms, and in particular to a sight mount for firearms having a high or very high trajectory.

## Technical Background

To aim a recoilless rifle or another weapon with very high trajectory towards a target requires that the user has skill and experience regarding the weapon in question and regarding the projectile trajectory for various shooting distances. The weapon is therefore provided with a mechanical or optical sight arranged on the weapon by means of a sight mount having distance indicators adapted for various shooting distances for the weapon and projectile in question.

A firearm scope mounting apparatus for mounting of scopes onto weapons having a nonlinear trajectory is disclosed in US2003/0051386. The scope mount has a pivot base with a bottom member for connection to the upper side of a firearm, and an top member pivotally arranged on and adjacent to a proximal portion of the bottom member. The scope is arranged onto the scope mounting apparatus using scope connecting means provided on the top member. Elevating means are adapted to be connected to the distal end portion of the pivot base for elevating the top member of the pivot base above the bottom member to increase the distance between the top and bottom members of the pivot base adjacent to the distal end portion of the pivot base. The elevating means includes a base connected to the distal end portion of the pivot base, and a pair of side portions extending upwardly from the base. A transversal pin member is slidably connected with its ends in slots along the side portions between the side portions of the elevation means. Further, the pin is extends through a pin receiving slot in the top member of the pivot base. The transversal pin member is provided, adjacent to the end of the pin member, tension nuts for position the firearm scope mounting apparatus in various angles adapted to various shooting distances.

One drawback of the firearm scope mounting apparatus of US2003/0051386 is that it may slip out position and cause a fired projectile to miss its designated target.

Another gun sight mount is disclosed in US-A-6 662 486. This mount too includes a base for mounting on a weapon, and a universal sight mounting rail pivotally attached to the base. The sight mount is provided with means for quickly adjusting the sight mounting rail in various angles relative to the weapon in predetermined stops for

various distances depending on weapon and ammunition. The sight on the rail is pivotally attached to the base by means of a hinge pin, and is kept in place using a locking mechanism. The locking mechanism is adjusted using a spring biased locking knob, which is retracted and moved between different notches formed on a bae of the locking mechanism. Every notch corresponds to ballistic values of the particular munitions and caliber given. The range adjustments are thus set by moving the lock knob to a particular notch.

A drawback of the sight mount according to US-A-6 662 486 is that the user may loose grip if the locking knob, such that it ends up in a notch corresponding to an undesired shooting distance. This obstructs a quick and secure adjustment of the shooting distance. Frequent use may result in wear which may cause the sight mount to move unintentionally and by mistake between different adjustments without the user knowing about it before firing, resulting in a miss.

From US-A-6 568 118 a grenade launcher sighting assembly is known. The sighting assembly has a mounting module mountable to the barrel, and along the centerline of the barrel, of the grenade launcher. The sighting assembly as provided with an adjustable range gradient pivotally attached to the mounting module, such that the range gradient has selectable a plurality of selectable positions for various shooting distances. The range gradient has a pivot plate designed to be moved along a gradient on a trajectory plate with various range settings observable from a side through a window of the pivot plate when the sighting assembly is mounted on the grenade launcher. The pivot plate is set in various positions for the various shooting distances. A release lever allows for the pivot plate to be moved and set to the various positions. The release lever may assume two positions. In one position the pivot plate is locked to a base plate in a particular position. In the other position the pivot plate is released and may be moved between various settings along the range gradient. A trajectory plate is affixed to the rear of the base plate and is provided with notches corresponding to specific ranges displayed on the range gradient.

Although the sighting assembly has a range gradient for various shooting distances the user has to put down the weapon from an aiming position to be able to read the range settings from the side during adjustment. The release lever is positions in an exposed position and may easily be dented during handling and transportation of the weapon, which may result in that the release lever is inadvertently released whereby the pivot plate is moved from the position set by the user.

Even if grenade launchers/recoilless rifles may be provided with modern red dot sights or laser sights, which as such simplifies for the user to be able to quickly aim the weapon towards the target, the graduated range setting on known sight mounts is difficult to read and to set in a quick fashion. This results in that the user, who often handles the weapon during stressful conditions, may set the wrong shooting distance, resulting in a miss. Further, known sight mounts having graded range settings are sensitive to impacts and other external influence, whereby the sight mount may be moved from its desired setting in regard of the range settings, which also results in a miss.

Summary

It is an object of the present invention to provide a sight mount for firearms with very high trajectory, which sight mount readily and accurately may be positioned for various shooting distances.

One aspect of the present invention is a sight mount for firearms, comprising an elongate base module adapted to be mounted on a firearm and an elongate trajectory module in the form a frame pivotally connected to the base module. The trajectory module is adapted to support at least one sight and to be dialed between different biased positions upwardly and downwardly relative to the base module, corresponding to different shooting distances, wherein the trajectory module is arranged to be releasably mountable on either side of the base module.

This results in a sight mount which may be used for both left hand shooters and right hand shooters.

According to some embodiment of the invention the base module has at least one sight mount plate with through holes for screws or pins for affixing the sight mount to the firearm.

According to a preferred embodiment of the invention the base module has two longitudinal sides, and the trajectory module is adapted to be pivotally and releasably mounted to either one of the two longitudinal sides of the base module.

This results in a sight mount that may be mounted on either side of the firearm.

According to some embodiments of the present invention the trajectory module has an actuator on either of the longitudinal sides of the trajectory module, adapted to be forced backwards and upwards and/or downwards to move the trajectory module in the corresponding direction relative to the base module, which facilitates dialing in of the desired shooting distance.

The actuator is in some embodiments arranged on one side of the trajectory module and extends from the trajectory module.

According to some embodiments of the invention the sight mount has a lock lever pivotally arranged to the rear, lower part of the base module and may be pivoted between a horizontal, locked position in which the lock lever prevents the trajectory module from being pulled backwards relative to the base module, and a vertical, released position in which the trajectory module may be pulled backwards out of engagement from its set position, such that the trajectory module may be dialed upwards and/or downwards to another set position relative to the base module. This means that the sight mount accurately may be dialed in positions corresponding to different shooting distances.

For an accurate and simple dialing of the sight mount the trajectory module has a graduated trajectory portion with a concave surface facing the intended shooting direction and with a number of recesses corresponding to different shooting distances and the base module has a locking member adapted to engage one recess at a time corresponding to a particular shooting distance, for affixing the trajectory module relative to the base module.

In one or more embodiments, the shooting distances are marked on a scale on a surface of the frame, preferably on the graduated trajectory portion, said surface facing away from an intended shooting distance and being readable from behind. This feature may be used as a standalone feature, freely combined with any embodiment of the present invention.

For improvement of accuracy when using the sight mount, the graduated trajectory portion may have a laterally curved shape, such that the graduated trajectory portion will shift laterally as it is moved upwards or downwards relative to the base module. Using a curved shape makes it possible to perfectly compensate for spin-drift, which does not vary in a linear relationship with the shooting distance.

To improve the versatility of an inventive sight it may in one or more embodiments be provided with a graduated trajectory portion which is releasably attached to the trajectory module, such as to be easily replaceable. In yet another embodiment only a portion of the graduated trajectory portion is releasably attached.

According to some embodiments of the invention the sight mount has a spring with a spring pin arranged in a space of the trajectory module, wherein the spring pin is biased towards the shaft by the spring, whereby the recess for the particular shooting distance is forced towards the lock member and the sight mount remains biased in its

position for the particular shooting distance. Hereby the risk of unintentional alteration of the dialed shooting distance, even if the lock lever is in a released position or is missing.

According to a preferred embodiment of the invention the trajectory module is adapted to be releasably mounted on either side of the base module, wherein the sight mount is adapted to be mounted on the left side of a firearm as the trajectory module is mounted on the left side of the base module and wherein the sight mount is adapted to be mounted on the right side of a firearm when the trajectory module is mounted on the right side of the base module.

In order to further simplify mounting of the sight on the left or on the right side of the weapon, the actuator of the sight mount may be releasably mounted on either side of the trajectory module and the locking member and lock lever are releasably mounted on either side of the base module

According to some embodiments a sight may be an iron sight, a red dot sight, a laser sight or an optical sight.

According to some embodiments of the invention the trajectory module has first connection means on top of the trajectory module, adapted to support a first sight and second connection means on either side of the trajectory module, adapted to support a second sight.

The first and second sight may be different types of sights in one or more embodiments.

According to some embodiments the base module is adapted to be mounted on top of the firearm.

The graduations on the scale, representing shooting distances, may advantageously be machined graduations, graduations in a luminous material, or a material visible using light-amplifying goggles.

To further improve the capability of reading a dialed shooting distance from behind one of the shooting distances graduated on the scale may be provided with a tritium lamp indicating a set shooting distance.

Other objectives, properties and advantages of the present invention should be obvious from the following detailed description of a preferred embodiment, from the attached drawings as well as from dependent claims.

Brief Description of the Drawings

The invention will now be described in further detail referring to the attached drawings, of which:

Figs. 1A-1D illustrate a first alternative embodiment of a sight mount for firearms having a high trajectory;

Figs. 2A-2D illustrate a second alternative embodiment of a sight mount for firearms having a high trajectory;

Figs. 3A-3D illustrate various operational positions for the sight mount according to the embodiment shown in Figs. 1A-1D.

Figs. 4A-4B illustrate various operational positions for a sight according to a third alternative embodiment of a sight mount for firearms having a high trajectory.

Fig. 4C is a partial cross section of the sight mount of Fig. 4B.

Detailed Description

Figs. 1A-1D illustrate an embodiment of a sight mount 100 for firearms having a high or a very high trajectory, such as a recoilless rifle, grenade launcher or accessory grenade launcher, weapons for tear gas, weapons for bean bags or pepper pods etc. the sight mount 100 of the illustrated embodiment is adapted to be mounted on the right sight of the weapon and is advantageously adapted for actuation using the right hand.

Referring to Fig. 1A it is shown a view from the right – in an imaginary shooting direction when the sight mount is mounted on the firearm – of the sight mount 100, comprising a base module 101 with attachment plates 102, 103 with holes 102', 103' enabling fixation to the firearm from the side, e.g. by screwing the sight mount in place. A trajectory module 104 in the form of a frame is pivotally arranged in one end of the base module 101 and may be pivoted in a horizontal direction relative to the base module 101.

One or more of the same type or different types of sights may be mounted to the sight mount. The embodiment of Fig. 1A has a first mounting rail 105 for mounting of a first sight on top of the trajectory module 104, and a second mounting rail 106 for mounting of a second side on the side of the trajectory module 104. The mounting rails 105, 106 may be provided by fixedly or releasably attached mounting adapters for specific sights.

The first sight may be, but is not limited to, a mechanical sight, a red dot sight, a laser sight, or an optical sight, and likewise the second sight may be, but is not limited

to, a mechanical sight, a red dot sight, a laser sight, or an optical sight. The first and second sight may be of the same type or of differing types.

In the present embodiment the trajectory module 104 is mainly formed from three portions formed from one piece; a bottom portion 107, a top portion 108 and an essentially vertical graduated trajectory portion 109. The graduated trajectory portion 109 may on its right side be graduated with different shooting distances, such as 50-300 m in increments of e.g. 50 m, on a scale 110. The distances mentioned in the embodiment should not be construed as limiting. The total interval as well as the increments may be longer or shorter.

Referring to Fig. 1B the base module in its rear portion on the right side a laterally extending portion 112 with a vertically thoroughgoing opening 113, through which the graduated trajectory portion 109 may be translated upwards and downwards. The extending portion 112 forms with its opening 113 a boundary which horizontally fixates the graduated trajectory portion laterally (left/right in the shooting direction) as it is passed vertically thought the opening 113. The particular shooting distance may be read from the right in level with the upper edge of the extending portion 112, e.g. by a user taking aim with the firearm.

The trajectory module 104 is pivotally connected with its forward end towards the base module 101 by means of a nut and a shaft or a screw 114 and a spring washer 114'. An actuator, e.g. in the form of a cylindrical grip 115 is used for dialing the sight to different shooting distances by means of the user gripping the cylindrical grip 115 and pulling it backwards and upwards or downwards – depending on whether the sight mount should be dialed to a longer or shorter shooting distance - whereby the trajectory module 104 may be moved vertically relative to the base module 101. The cylindrical grip 115 is arranged on the right side of the trajectory module 104 and extends from the trajectory module where the bottom portion 107 transforms into the graduated trajectory portion 109. A lock lever 116 is pivotally arranged at the rear and lower portion of the base module 101. The lock lever 116 is pivotal between a vertical locked position, in which it prevents voluntary and involuntary change of the setting of the sight mount, and a horizontal released position according to Fig. 1B allowing for the trajectory module 104 to be pulled backwards by means of the cylindrical grip 115. Locking is enabled by means of the eccentric end portion of the lock lever 116.

Fig. 1C is a view from the rear of the sight mount of Fig. 1A, from which it appears that the graduated trajectory portion 109 may have a graduated scale 110' of shooting distances readable from behind in a use position.

Fig. 1D is a perspective view of one embodiment of the sight mount in which the graduated trajectory portion 109 is provided with both the scale 110 readable from the right side and the scale 110' readable from behind.

Fig. 2A-2D illustrate an alternative embodiment of a sight mount 200 for weapons having a very high trajectory. The sight mount 200 is in the illustrated embodiment adapted to be mounted on the left side of a firearm and preferably adapted for actuation using the left hand.

Referring to Fig. 2A it is shown a view from the left – in an imaginary shooting direction when the sight mount is mounted on the firearm – of the sight mount 200, comprising a base module 201 with attachment plates 202, 203 with holes 202', 203' enabling fixation to the firearm from the side, e.g. by screwing the sight mount in place. A trajectory module 204 in the form of a frame is pivotally arranged in one end of the base module 201 and may be pivoted in a horizontal direction relative to the base module 201.

One or more of the same type or different types of sights may be mounted to the sight mount. The embodiment of Fig. 1A has a first mounting rail 105 for mounting of a first sight on top of the trajectory module 204, and a second mounting rail 206 for mounting of a second side on the side of the trajectory module 204. The mounting rails 205, 206 may be provided by fixedly or releasably attached mounting adapters for specific sights.

The first sight may be, but is not limited to, a mechanical sight, a red dot sight, a laser sight, or an optical sight, and likewise the second sight may be, but is not limited to, a mechanical sight, a red dot sight, a laser sight, or an optical sight. The first and second sight may be of the same type or of differing types.

In the present embodiment the trajectory module 204 is mainly formed from three portions formed from one piece; a bottom portion 207, a top portion 208 and an essentially vertical graduated trajectory portion 209. The graduated trajectory portion 209 may on its right side be graduated with different shooting distances, such as 50-300 m in increments of e.g. 50 m, on a scale 210''. The distances mentioned in the embodiment should not be construed as limiting. The total interval as well as the increments may be longer or shorter.

Referring to Fig. 2B the base module in its rear portion on the left side a laterally extending portion 212 with a vertically thoroughgoing opening 213, through which the graduated trajectory portion 209 may be translated upwards and downwards. The extending portion 212 forms with its opening 213 a boundary which horizontally fixates

the graduated trajectory portion laterally (left/right in the shooting direction) as it is passed vertically thought the opening 213. The particular shooting distance may be read from the left in level with the upper edge of the extending portion 212.

The trajectory module 204 is pivotally connected with its forward end towards the base module 201 by means of a nut and a shaft or a screw 214 and a spring washer 214'. An actuator, e.g. in the form of a cylindrical grip 215 is used for dialing the sight to different shooting distances by means of the user gripping the cylindrical grip 215 and pulling it backwards and upwards or downwards – depending on whether the sight mount should be dialed to a longer or shorter shooting distance - whereby the trajectory module 204 may be moved vertically relative to the base module 201. The cylindrical grip 215 is arranged on the right side of the trajectory module 204 and extends from the trajectory module where the bottom portion 207 transforms into the graduated trajectory portion 209. A lock lever 216 is pivotally arranged at the rear and lower portion of the base module 201. The lock lever 216 is pivotal between a vertical locked position, in which it prevents voluntary and involuntary change of the setting of the sight mount according to Fig. 2B, and a horizontal released position allowing for the trajectory module 204 to be pulled backwards by means of the cylindrical grip 215.

Fig. 2C is a view from the rear of the sight mount of Fig. 2A, from which it appears that the graduated trajectory portion 209 may have a graduated scale 210' of shooting distances readable from behind in a use position.

Fig. 2D is a perspective view of one embodiment of the sight mount in which the graduated trajectory portion 109 is provided with both the scale 110 readable from the left side and the scale 210'' readable from behind.

Although Figs. 1A-1D and Figs. 2A-2D has been described as two separate embodiments of an inventive sight mount, Figs. 1A-1D and Figs. 2A-2D may as well describe a single embodiment in which the components are releasably attached to each other enabling them to assembled in accordance with the embodiment of Figs. 1A-1D for mounting on the right side of the firearm, or according to the embodiment of Figs. 2A-2D for mounting on the right side of the firearm. According to such an embodiment all reference numerals 100-116 corresponds to the same elements as the reference numerals 200-216. The graduated trajectory portion 109, 209 is however provided with a scale 110 readable from the right, a scale 110', 210' readable from behind, and a scale 210'' readable from the left, in a use position. The sight mount is not limited to having scales on both the left and the right side, and it may preferably only have a single scale, which may be read from behind.

An advantage of the disclosed embodiment is that the sight may be used by both left-hand shooters and right-hand shooters, and that the sight may be mounted on either the left or the right side of the weapon.

Referring to Figs. 3A-3D the various operative positions of the sight mount 100, 200, i.e. a locked position and a released position. In the locked position the mount is fixed for firing and may not be redialed, and in the released position the mount may be redialed between different shooting distances. The description of the operative positions is as applicable to the embodiment of the sight mount 200 and to the embodiment of releasably mounted components.

Fig. 3A is a sectional view of the sight mount, along the line A-A of Fig. 3B, and illustrates the sight mount in the locked position. The graduated trajectory portion 109 may have a concave surface with a plurality of recesses 117 on the side facing forwards when the weapon is mounted on a firearm. A series of recesses, grooves or slits 117, one for each dialable shooting distance on the scale 110'. In accordance with the description above in reference to the description of the embodiments of the sight mount 100 the trajectory module 104 is pivotally attached with its forward portion to the base module 101 with a nut and a shaft or a screw 114. The recess corresponding to the particular dialed shooting distance is in engagement with a locking element, which in this embodiment corresponds to a cylindrical locking pin 118 arranged in the extending portion 112. A spring 119 with a spring pin 120 is arranged in a space 121 of the trajectory module 104. The spring pin 120 is biased towards the shaft 114 by the spring 119, whereby the recess 117 for the particular shooting distance is forced towards the cylindrical pin 118 and the sight mount is biased in its position for the particular shooting distance. The lock lever 116 is in its vertically locked position and it the user by accident should grip the actuator 115 and try to redial the shooting distance the trajectory module is prevented from moving sideways and backwards towards the shooter, wherein the cylindrical pin 118 remains in engagement with the particular recess in the series of recesses 117.

Fig. 3C is a sectional view of the sight mount along the line B-B of Fig. 3D, and it illustrates the sight mount in the released position, i.e. with the lock lever 116 in its horizontal, release position. The shooter may in this position grip the actuator 115, 215 and pull it towards himself, whereby the spring pin 120 compresses the spring 119. The trajectory module is then released from its dialed position and may be moved upwards or downwards to a desired position for a particular shooting distance. When the trajectory module has been dialed to the desired shooting distance on the scale the

shooter lets go of the trajectory module, whereby the spring 119 expands slightly while still exerting a pressure onto the spring pin 120. The cylindrical spring pin 118 is brought into engagement with the recess corresponding to the desired shooting distance according to what is illustrated in Fig. 3A.

The lock lever 116 may subsequently be pivoted down to its locked, vertical position. Even if the shooter would forget to reposition the lock lever to the locked position the sight remains dialed to its particular setting since the spring pin 120 is biased towards the shaft 114 by the spring 119, wherein the recess 117 for the particular shooting distance is forced to engagement with the cylindrical pin 118 and the sight mount remains biased in its position for the particular shooting distance.

Frequent redialing of the sight mount between different shooting distances may result in wear of the cylindrical lock pin 118 and of the recesses 117. This may advantageously be avoided by ringing the cylindrical locking pin 118 a slightly greater radius than the grooves or recesses 117. The lock pin 118 may e.g. have a radius of 1.5 mm while the recesses have a radius of 1.0 mm. This enables for a certain degree of wear of the recesses to occur without causing play in the construction, wherein the desired wear compensation is achieved. The dimensions mentioned regarding radii and relationships between radii should only be construed as exemplifying, and they may therefore have other values or relationships within the scope of the present embodiment.

The sight mount may be manufactured from, but is not limited to, a suitable torsionally rigid material, such as steel, aluminum or other metal; hard plastic or other suitable synthetic material. Different materials may be combined. By way of example the base module and the trajectory module may be manufactured from one material, while the mount adapter/adapters may be manufactured from another material.

Although the sight mount has been described in reference to specific embodiments, these are not to be construed as limiting for the present invention but simply as exemplifying embodiments. The sight mount may therefore be provided in various embodiments and is only limited by the scope of the appended claims.

The sight mount may e.g. be adapted for mounting on top of the weapon.

In an alternative embodiment the cylindrical locking pin may be a spring-loaded ball arranged in the extending portion. The recess corresponding to the particular shooting distances may then engage with the ball.

The laterally extending portion of the base module may in an alternative embodiment have an open design in which it is only provided by the lock element, or by the lock element with a stabilizing fitting, along which the graduated trajectory portion

may be moved upwards and downwards. The graduated trajectory portion is in this embodiment only supported from one side of the base module as it is dialed upwards or downwards between different settings for shooting distances.

One or more of the scales may be, but are not limited to be, provided with machined graduations, graduations in a luminescent material or a material visible through light-enhancement goggles. Tritium lamps may e.g. be used to improve readability. In such an embodiment a tritium lamp may be arranged in the middle zero of every graduated hundreds digit. This results in that the shooter may read the dialed shooting distance during poor light conditions or in darkness. There may be no tritium lamp for the 50 m shooting distance mark, one visible tritium lamp for the 100 m shooting distance mark, two visible tritium lamps for the 200 m shooting distance mark, and so forth.

According to one further embodiment, shown in Fig. 4A-4C the graduated trajectory portion 309 has a laterally curved shape for compensation of spin drift of the projectile used. The curve shape follows a progressive curvature and in this way the sight mount may be used to "automatically" calibrate sight, for each shooting distance possible to dial. In Figs 4A-4C the same reference numerals (incremented by 200 or 100) has been used as in the previous Figs. A sight mount according to the present embodiment provides a significant advantage as compared to known techniques where an inclined rectilinear scale is used. Such a simplified shape makes the sight used perfectly calibrated for one and only one specific shooting distance, and the quality of the calibration will decrease as the distance from that particular shooting distance increases. The function of a sight according to this embodiment is readily understandable from observing FIGS. 4A-4C , since dialing of the graduated trajectory portion 309 upwards or downwards will also result in a lateral shift following the curvature of the graduated trajectory portion, which curvature in turn may calibrated to a particular ammunition. In the partial cross section of Fig. 4C the curved shape of the graduated trajectory portion 309 is clearly visible.

Much as in the previous embodiments the forward end of the trajectory module 304 is pivotally attached to the base module 301, yet for the present embodiment the pivot point allows for enough flexibility perpendicular to the normal pivot direction during dialing of the trajectory module to allow for the small shift caused by the curved graduated trajectory portion. The pivot point is preferably biased towards contact with the base portion 301 in order to provide a rigid contact point, benefitting precision and accuracy when using the sight mount.

In another embodiment the graduated trajectory portion is releasably attached to the trajectory module, such that it is easily replaceable. In this way an individual user may carry a plurality of replaceable trajectory portions, each corresponding to particular munitions having a particular trajectory.

# CLAIMS

1. A sight mount for firearms, comprising an elongate base module (101;201) adapted to be mounted on a firearm and an elongate trajectory module (104;204) in the form of a frame pivotally connected to the base module (101;201), wherein the trajectory module (104;204) is adapted to support at least one sight and to be pivoted between different biased positions upwardly and downwardly relative to the base module (101;201), corresponding to different shooting distances, wherein the trajectory module (104) is adapted to be releasably mounted on either side of the base module (101).

2. The sight mount of claim 1, wherein the base module (101;201) has at least one sight mount plate (102,103;202,203) with through holes (102',103';202',203') for screws or pins for affixing the sight mount to the firearm.

3. The sight mount of claim 1 or 2, wherein the base module has two longitudinal sides, and the trajectory module (104;204) is adapted to be pivotally and releasably mounted to either one of the two longitudinal sides of the base module (101;201).

4. The sight mount of any preceding claim, wherein the base module (101;201) is adapted for mounting on a side of the firearm.

5. The sight mount of any preceding claim, wherein the trajectory module (104;204) has an actuator (115;215) on either of the longitudinal sides of the trajectory module, extending laterally from the trajectory module and being adapted to be forced backwards and upwards and/or downwards to move the trajectory module (104;204) in the corresponding direction relative to the base module (101;201).

6. The sight mount of any preceding claim, wherein a lock lever (116; 216) is pivotally arranged to the rear, lower part of the base module (101;201) and may be pivoted between a horizontal, locked position in which the lock lever (116; 216) prevents the trajectory module from being pulled backwards relative to the base module, and a vertical, released position in which the trajectory module (104;204) may be pulled

backwards out of engagement from its set position, such that the trajectory module may be dialed upwards and/or downwards to another set position relative to the base module.

7. The sight mount of any preceding claim, wherein the trajectory module (104) has a graduated trajectory portion (109) with a concave surface facing the intended shooting direction and with a number of recesses (117) corresponding to different shooting distances and the base module (101) has a lock member (118) adapted to engage one recess at a time corresponding to a particular shooting distance, for affixing the trajectory module (104) relative to the base module (101).

8. The sight mount of claim 7, wherein the graduated trajectory portion (309) of the trajectory module (104;204;304) has a laterally curved shape, such that the graduated trajectory portion will shift laterally as it is moved upwards or downwards relative to the base module (101;201;301).

9. The sight mount of claim 7 or 8, wherein the graduated trajectory portion (409) is releasably attached to the trajectory module (404), such as to be easily replaceable.

10. The sight mount of any preceding claim, wherein a spring (119) with a spring pin (120) is arranged in a space (121) of the trajectory module (104), wherein the spring pin (120) is biased towards a shaft (114) by the spring (129), whereby the recess (117) for the particular shooting distance is forced towards the lock member (118) and the sight mount remains biased in its position for the particular shooting distance.

11. The sight mount of any preceding claim, wherein the trajectory module (104;204) is adapted to be releasably mounted on either side of the base module (101;201), wherein the sight mount is adapted to be mounted on the left side of a firearm as the trajectory module is mounted on the left side of the base module and wherein the sight mount is adapted to be mounted on the right side of a firearm when the trajectory module is mounted on the right side of the base module.

12. The sight mount of claim 11, wherein the actuator (115;215) is releasably mountable on either side of the trajectory module (104;204), and the lock member (118)

and lock lever (116;216) is releasably mounted on either side of the base module (101;201).

13. The sight mount of any preceding claim, wherein, said at least one sight is an iron sight, a red dot sight, a laser sight or an optical sight.

14. The sight mount of any preceding claim, wherein the trajectory module (104) has first connection means on top of the trajectory module (104;204), adapted to support a first sight and second connection means on either side of the trajectory module (104;204), adapted to support a second sight.

15. The sight mount of any preceding claims, wherein the shooting distances are marked on a scale on a surface of the frame, said surface facing away from an intended shooting distance and being readable from behind.

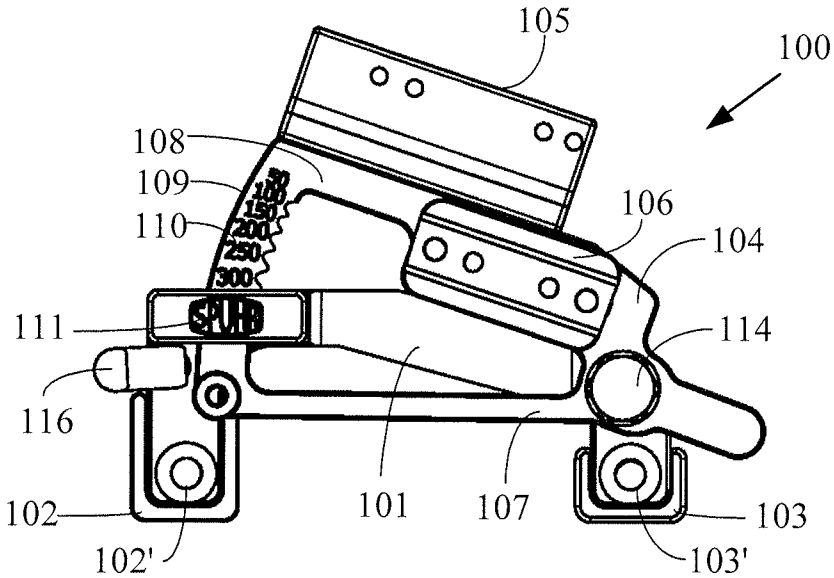

105
100
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110
111
116
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102'
101
107
106
104
114
103
103'

FIG. 1A

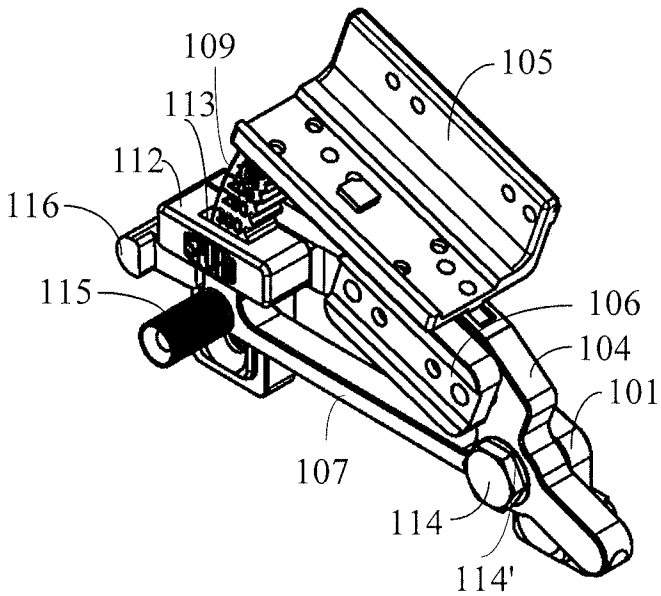

109
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115
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101
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114'

FIG. 1B

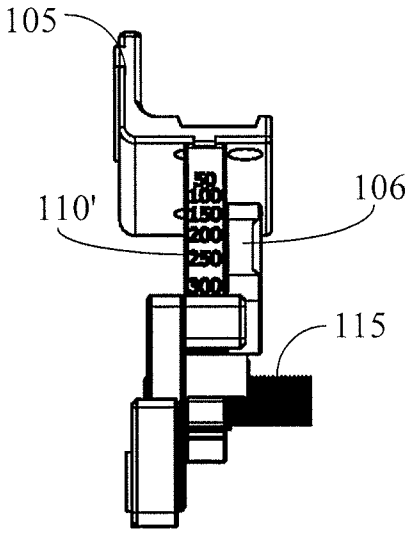



FIG. 1C

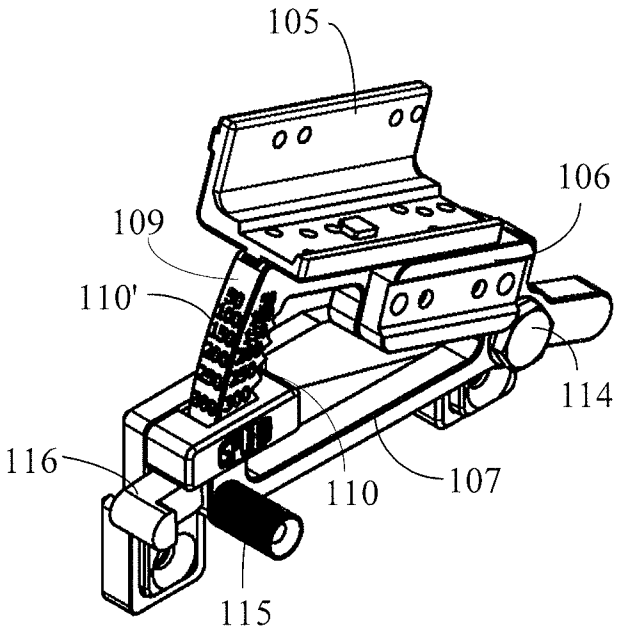



FIG. 1D

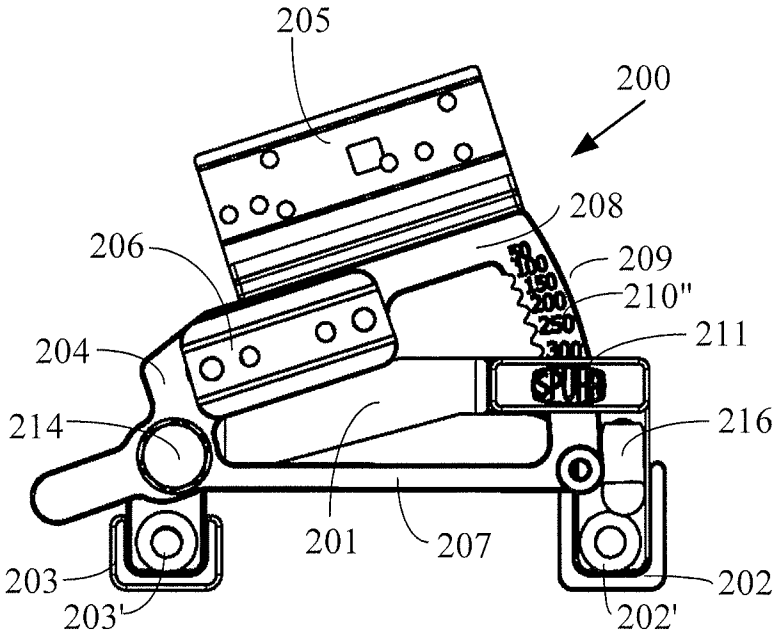

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210"
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FIG. 2A

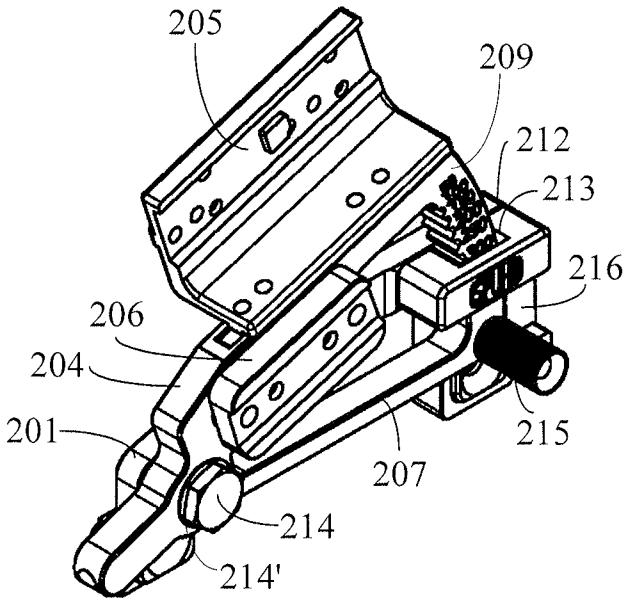

205
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212
213
216
206
204
201
215
207
214
214'

FIG. 2B

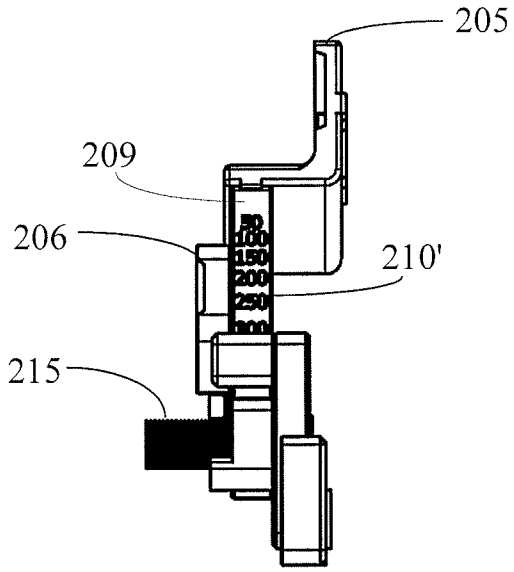



FIG. 2C

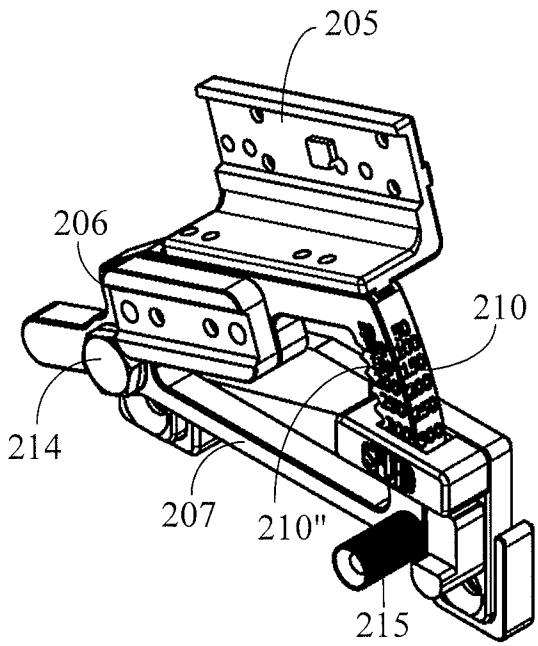



FIG. 2D

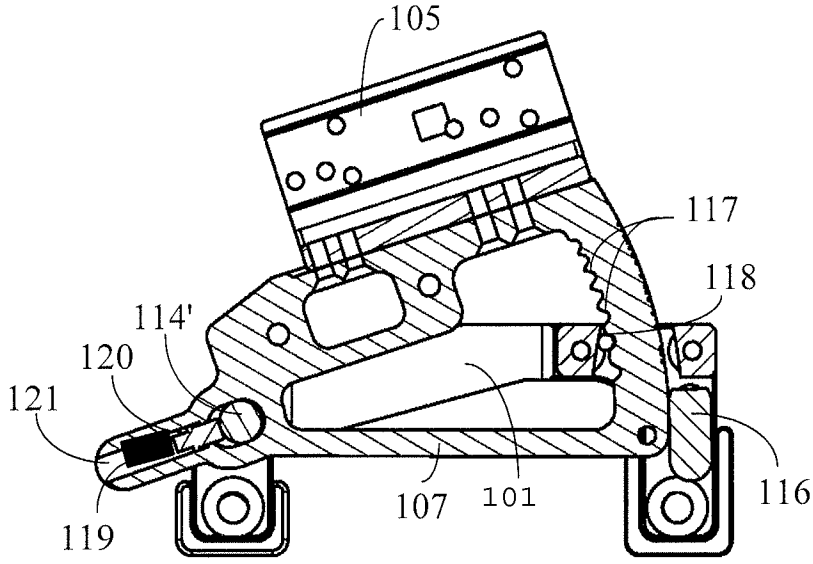



FIG. 3A

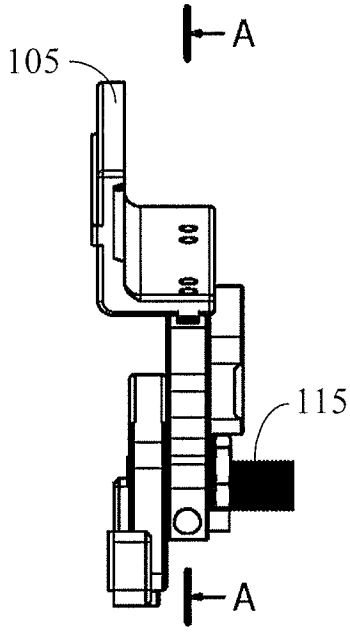



FIG. 3B

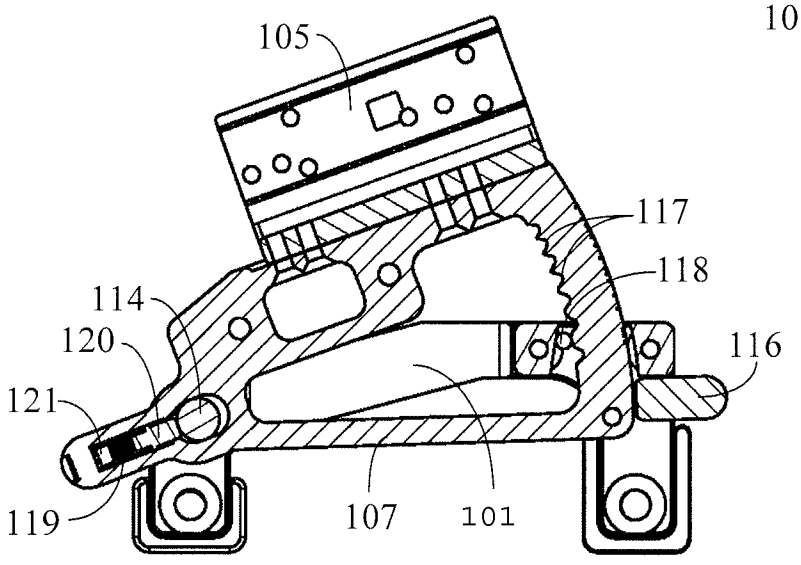



FIG. 3C

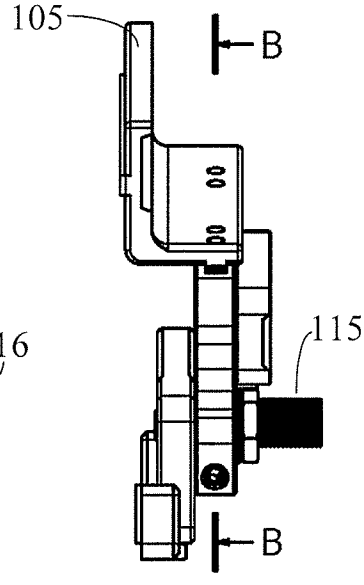



FIG. 3D

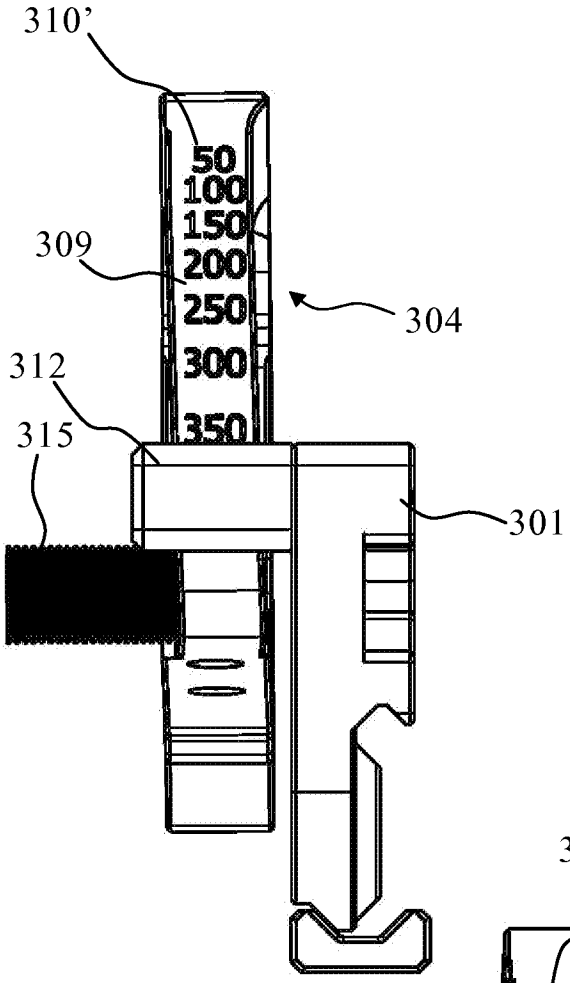



FIG. 4A

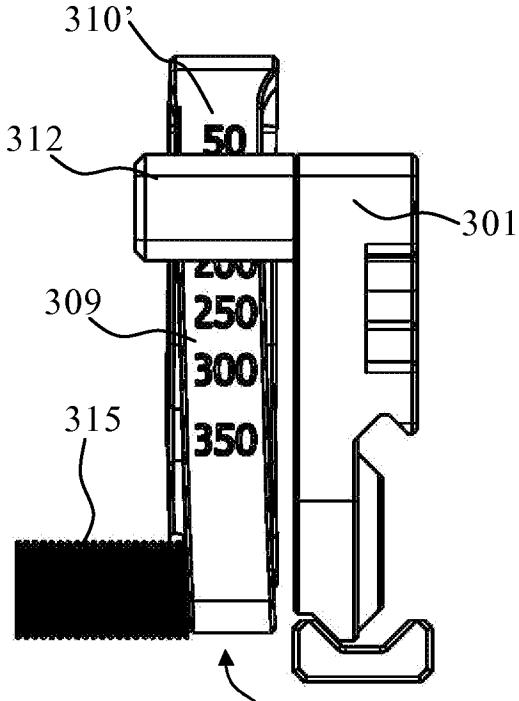



FIG. 4B

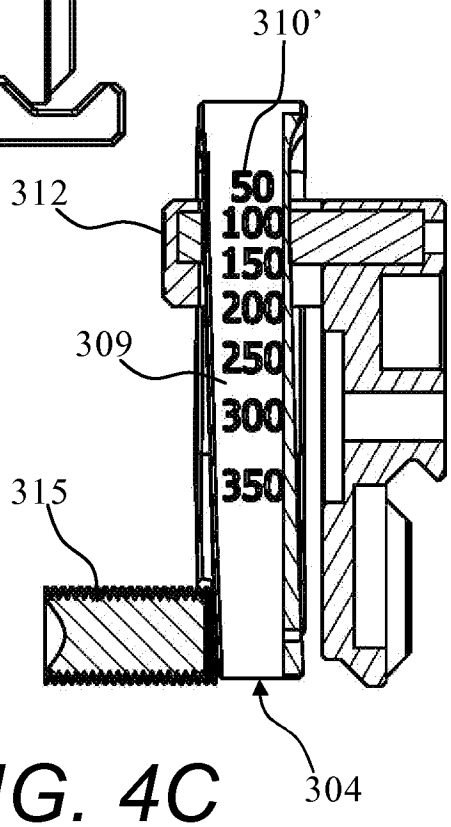



FIG. 4C

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2010/050693

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: F41G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| A | DE 38900 C (SCHLATTER L.), 2 April 1887 (02.04.1887), the whole document<br>--- | 1 |
| A | US 937244 A (KENNEDY J.A.), 19 October 1909 (19.10.1909), the whole document<br>--- | 1 |
| A | FR 419003 A (RHEINISCHE METALLWAAREN- & MASCHINENFABRIK), 24 December 1910 (24.12.1910), the whole document<br>--- | 1 |
| A | US 6568118 B1 (TEETZEL J.W.), 27 May 2003 (27.05.2003), the whole document<br>--- | 1 |

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

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| Date of the actual completion of the international search | Date of mailing of the international search report |
|---|---|
| 28 Sept 2010 | 28 -09- 2010 |
| Name and mailing address of the ISA/<br>Swedish Patent Office<br>Box 5055, S-102 42 STOCKHOLM<br>Facsimile No. +46 8 666 02 86 | Authorized officer<br>Erik Lundell/ELY<br>Telephone No. +46 8 782 25 00 |

**INTERNATIONAL SEARCH REPORT**

International application No.
PCT/SE2010/050693

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| A | US 541559 A (LYMAN W.), 25 June 1895 (25.06.1895), the whole document<br>--- | 1 |
| A | US 592740 A (KENNEDY J.A.), 26 October 1897 (26.10.1897), the whole document<br>---<br>-------- | 1 |

**INTERNATIONAL SEARCH REPORT**

International application No.
PCT/SE2010/050693

**International patent classification (IPC)**

***F41G 1/18*** (2006.01)

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Cited literature, if any, will be enclosed in paper form.

| | | | | |
|---|---|---|---|---|
| DE | 38900 | C | 1818 | NONE |
| US | 937244 | A | 19/10/1909 | NONE |
| FR | 419003 | A | 24/12/1910 | NONE |
| US | 6568118 | B1 | 27/05/2003 | NONE |
| US | 541559 | A | 1818 | NONE |
| US | 592740 | A | 1818 | NONE |