



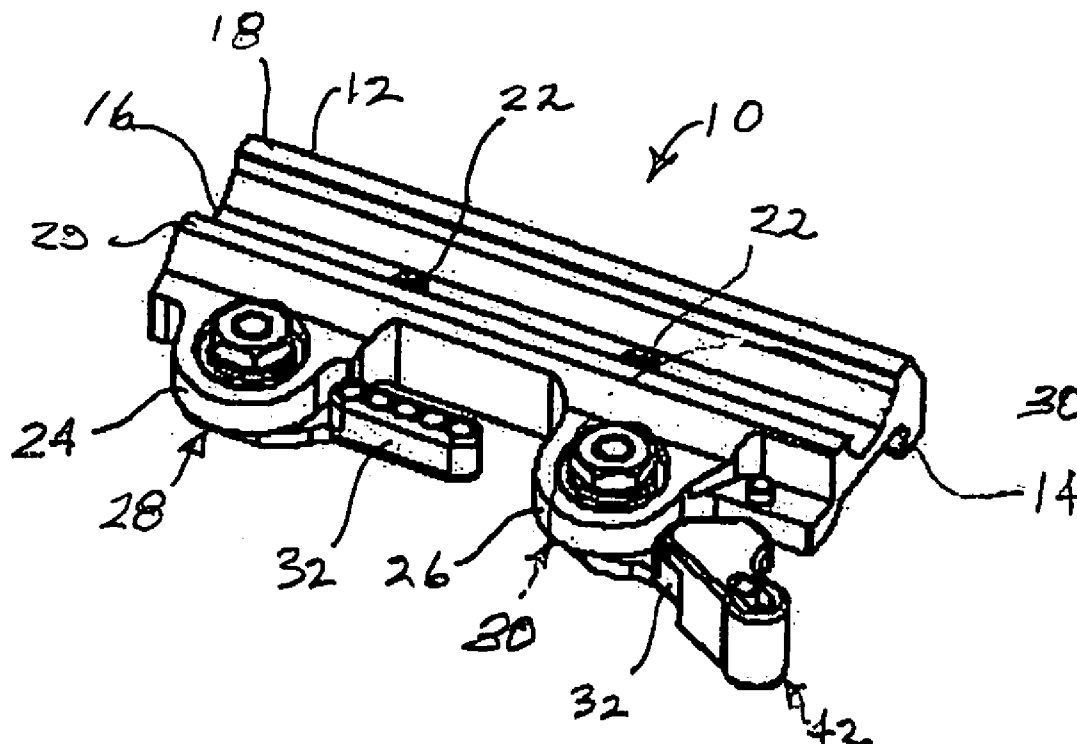
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(19) **United States**(12) **Patent Application Publication****Larue**(10) **Pub. No.: US 2006/0207156 A1**(43) **Pub. Date: Sep. 21, 2006**(54) **MOUNT FOR FIREARM SIGHTING DEVICE  
HAVING THROW-LEVER CLAMP AND  
LEVER SAFETY LATCH****Publication Classification**(51) **Int. Cl.**  
**F41G 1/38** (2006.01)(52) **U.S. Cl.** ..... **42/127**(57) **ABSTRACT**

For firearms, particularly tactical firearms such as the AR-15 tactical rifle, a throw-lever actuated rail clamp is provided for support of various accessories such as optical sighting devices, laser sighting devices, target lighting devices on various part of a firearm to provide for use of the firearm in variable field conditions, during the day or at night. A mount clamp is releasably secured to a firearm rail by a pivotal throw-lever having an eccentric locking component. A safety latch mechanism is mounted for linear movement on the actuating arm of the throw-lever and is moveable to a latched position engaging a latching element of the clamp base to retain the throw-lever at its clamping position. The safety latch is linearly moveable from its latched position to a release position that permits rotational movement of the throw lever toward its release or non-clamping position.

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(21) **Appl. No.: 11/367,057**(22) **Filed: Mar. 3, 2006****Related U.S. Application Data**(60) **Provisional application No. 60/658,865, filed on Mar. 5, 2005.**

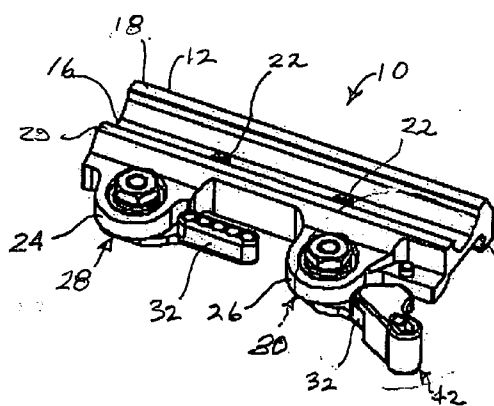


FIG. 1

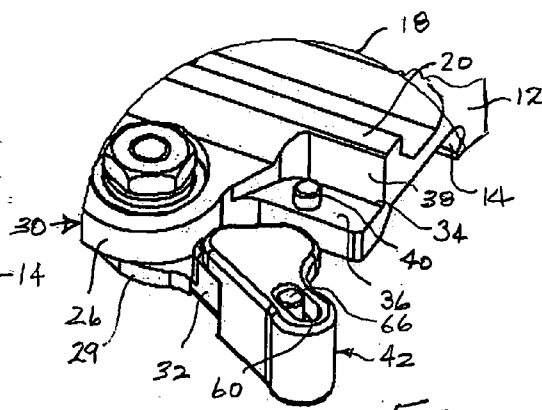


FIG. 2

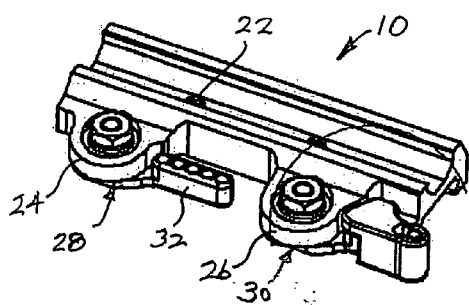


FIG. 3

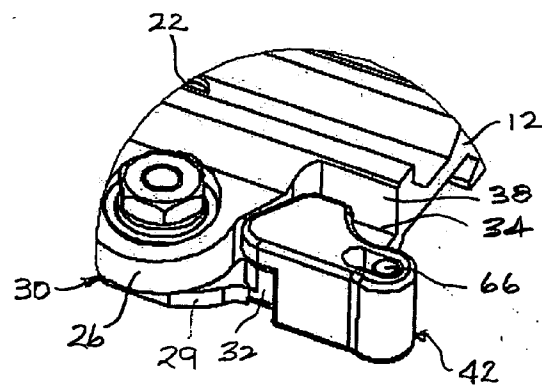


FIG. 4

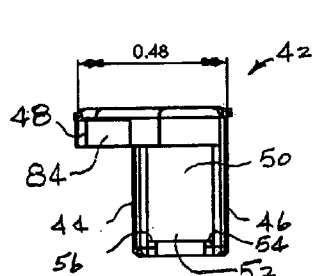


FIG. 5

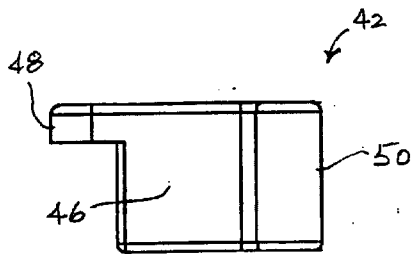


FIG. 6

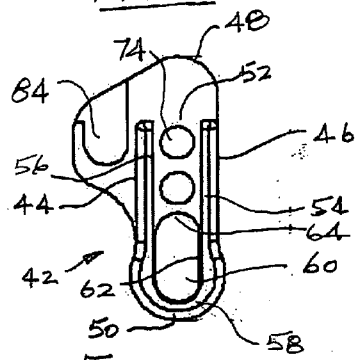


FIG. 7

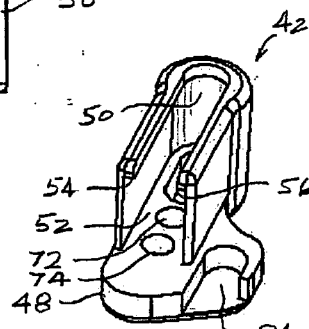


FIG. 8

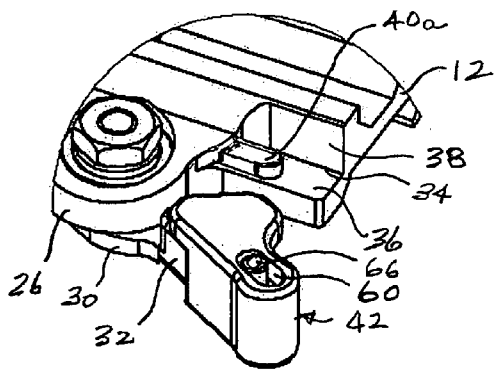


FIG. 9

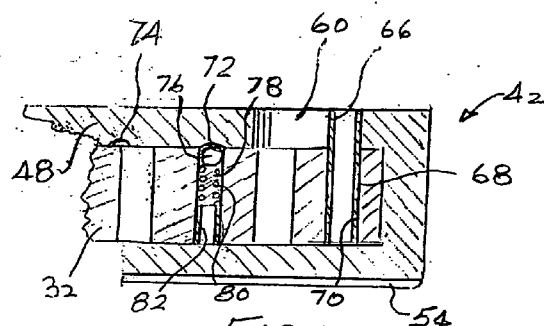


FIG. 10

## **MOUNT FOR FIREARM SIGHTING DEVICE HAVING THROW-LEVER CLAMP AND LEVER SAFETY LATCH**

### **RELATED PROVISIONAL APPLICATION**

[0001] Applicant hereby claims the benefit of U.S. Provisional Patent Application No. 60/658,865, filed on Mar. 5, 2005 by Mark C. LaRue and entitled "Mount For Firearm Sighting Device Having Throw-lever Clamp and Lever Safety Latch".

### **RELATED PATENT APPLICATION**

[0002] The subject matter of the invention set forth herein is related to the subject matter of U.S. patent application Ser. No. 11/008,394, filed by Mark C. LaRue on Dec. 9, 2004 and entitled Adjustable Throw-lever Picatinny Rail Clamp, which Application is incorporated herein by reference for all purposes.

### **BACKGROUND OF THE INVENTION**

#### **[0003] 1. Field of the Invention**

[0004] The present invention generally relates to mount mechanisms for mounting firearm accessories such as telescopic sighting devices, laser sighting devices, lighting devices and the like to firearms, particularly tactical firearms that are used by military and law enforcement personnel. This invention concerns releasable mounts for firearms, especially tactical firearms, wherein sighting devices, light devices and other firearm accessories are releasably mounted to firearm components such as mounting rails to provide users with desired firearm capability to accommodate variable field conditions. The present invention also concerns throw-lever clamping systems for retaining firearm accessory mounts in releasable assembly with the structure of a firearm, enabling sighting devices to be removed from a firearm and replaced without losing the aim-point or zero of the sighting device. More specifically, the present invention concerns locking or latching systems for positively maintaining throw-levers in the closed or clamping positions thereof to prevent inadvertent opening or releasing movement thereof by sustained vibration or shock forces or in the event the throw-levers are contacted in a manner that would otherwise cause releasing rotation thereof during tactical operations. Even more specifically, the present invention concerns locking or latching systems for positively maintaining throw-levers in the closed or clamping positions thereof to prevent inadvertent opening or releasing movement of the throw-levers due to firearm handling in rough field conditions.

#### **[0005] 2. Description of the Prior Art**

[0006] U.S. Pat. No. 4,845,871 of Swan discloses a means for attaching first and second Weaver interface platforms of an optical rifle sight mount using throw-lever actuated clamp-type locking mechanisms. U.S. Pat. No. 6,026,580 of Mark C. LaRue, the inventor of the present invention, discloses a self-centering and self-aligning optical sight mounting system, including front and rear mounting ring assemblies and mounting bases for mounting an optical sighting device on a firearm such as a rifle or on other devices.

[0007] The use of throw-lever type mount clamping mechanisms for releasable mounting of optical sighting

devices, laser sighting devices and target lighting devices provides the users of tactical firearms with a significant advance in the art. Military and law enforcement personnel now have an efficient means for changing out various types of sighting devices, target lighting devices and the like under field conditions without losing the aim-point or zero of the firearm. However, it has also been determined that mechanical clamping devices having throw-levers can become loosened as the firearm is subjected to significant vibration, such as when the firearm is fired rapidly, such as during conditions of sustained rapid fire and has cycled many rounds of ammunition. Sustained vibration and rough use can cause the throw-levers of accessory mount mechanisms to move, i.e., rotate inadvertently to the release position. When this condition exists the sighting device of the firearm, whether optical telescope, laser sighting device or the like can become sufficiently loosened that its aim-point can be lost or the sighting device can become loosened to the extent that it may fall completely away from the firearm. In either case this condition can subject the user of the firearm to considerable danger in the event a firefight is in progress. It is desirable therefore to provide means for positively latching or locking the throw-levers of firearm mounting devices at their clamping positions to prevent and thereby prevent inadvertent rotation of the throw-levers from their latched positions.

[0008] There is a significant need to ensure the availability of throw-lever actuated clamping mechanisms for releasably attaching sighting devices and other accessories to firearms, and it is equally important to provide positive assurance that the throw-levers are prevented from becoming inadvertently rotated from the clamping positions thereof to a loosened or release position by the severe vibration of sustained rapid firing or by rough handling in the field. Thus it is desirable to provide throw-lever type releasable mounts having latch devices that positively secure the throw-levers at their clamping positions and permit sighting devices and other accessories from becoming loose or lose the preset aim-point or zero and to further ensure that sighting devices and other accessories do not come loose and fall from the firearm. It is obvious that either of these disadvantageous conditions, if occurring under tactical field conditions, can be extremely hazardous to the user of the firearm. It is also desirable to provide the user of a firearm with the capability for selectively locking or retaining throw-levers at their clamping positions, thereby minimizing the potential that a sighting device or other clamp supported device might become loose or can fall away from the firearm even under conditions of excessive prolonged vibration or by rough handling in field conditions.

### **SUMMARY OF THE INVENTION**

[0009] It is a principal feature of the present invention to provide a throw-lever actuated mount for firearms wherein one or more of the throw-levers of an accessory mount can be secured at its locked or latched condition and will be retained in the latched condition even when subjected to rough handling and/or when subjected to the vibration of sustained rapid firing of the firearm.

[0010] It is another feature of the present invention to provide a throw-lever actuated mount for firearms wherein a throw-lever of a clamp type firearm accessory mount employs a rotatable throw-lever clamping plate having a

lever arm extending therefrom and wherein a latch mechanism is carried by the lever arm and is moveable to a latched position and a release position as desired by the user of the firearm.

[0011] It is also a feature of the present invention to provide a novel mechanism for securing the throw levers of throw-lever type firearm mounts in the locked or clamping position thereof and when desired, to permit simple and efficient release of throw-lever retention, thus permitting manual actuation of the throw-levers even during conditions of darkness and without the need for any special tools, thus enabling the user of the firearm to make accessory changes when desired and yet ensuring that the accessories will remain in place even when the firearm is handled during rough conditions or is subjected to sustained vibration for extended periods of time.

[0012] Briefly, the various objects and features of the present invention are realized through the provision of a releasable clamp type mount mechanism for sighting devices, target lighting devices and other firearm accessories, the mount mechanism having one or more rotatably mounted throw-levers for rotational movement between clamping and releasing positions with respect to the mounting rail system of a firearm. The mount of the present invention is applicable for releasable attachment to Picatinny or Weaver rail systems that are typically fixed to the receivers of tactical firearms, particularly rifles carried by military, tactical or law enforcement personnel. The releasable clamp-type mounts permit various firearm accessories such as sighting devices, lighting devices, etc to be firmly and immovably, but releasably mounted to a mounting rail firearm and also permit the user of the firearm to have the capability for manually releasing and/or installing an accessory mount without the need for tools of any kind.

[0013] The sight mount device incorporates a mount body structure that defines one or more laterally projecting platforms each providing rotatable support for a throw-lever. The mount body structure defines a recess adjacent at least one of the laterally projecting platforms within which is fixed a latch post or projection that is typically defined by a latch pin that is press-fitted into a latch post receptacle drilled or otherwise formed in the mount body structure. Alternatively, the mount base may be provided with an integral latch projection of any suitable geometry. A keeper or latch member is received by a lever arm projection of a throw-lever and is moveable linearly thereon between latched and released positions. The latch member defines a latch receptacle within which the latch post or latch projection is received when the latch member is positioned at its latched position. In the latched position the keeper or latch member is secured against inadvertent linear releasing movement relative to the lever structure by a spring-loaded detent in the lever arm that engages a detent recess of the latch member. The keeper or latch member is moved linearly by manual force that is sufficient to overcome the resistance of the spring-loaded detent. Thus, no tools or special equipment are needed to move the latch member between its latched and released positions on the lever structure.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0014] So that the manner in which the above recited features, advantages and objects of the present invention are

attained and can be understood in detail, a more particular description of the invention, briefly summarized above, may be had by reference to the preferred embodiment thereof which is illustrated in the appended drawings, which drawings are incorporated as a part hereof.

[0015] It is to be noted however, that the appended drawings illustrate only a typical embodiment of this invention and are therefore not to be considered limiting of its scope, for the invention may admit to other equally effective embodiments.

[0016] In the Drawings:

[0017] **FIG. 1** is an isometric illustration showing a sight mount clamp body having front and rear throw-levers and showing the throw-lever latch mechanism of the present invention in the release position thereof;

[0018] **FIG. 2** is a partial isometric illustration showing a latch recess in the clamp body and showing the latch mechanism in its release position, exposing the latch post and further showing the throw-lever rotatably moved to its release or non-clamping position;

[0019] **FIG. 3** is an isometric illustration showing the sight mount clamp body of **FIGS. 1 and 2** and showing the throw-lever latch mechanism of the present invention at the latched position thereof;

[0020] **FIG. 4** is a partial isometric illustration showing a latch recess in the clamp body and showing the latch mechanism in its latched position

[0021] **FIG. 5** is a rear elevational view of the throw-lever latch or keeper mechanism of the present invention;

[0022] **FIG. 6** is a side elevational view of the throw-lever latch or keeper mechanism of the present invention;

[0023] **FIG. 7** is a bottom view of the throw-lever latch or keeper mechanism of the present invention;

[0024] **FIG. 8** is an isometric illustration showing a bottom view of the throw-lever safety latch or keeper mechanism of the present invention as seen from its forward end;

[0025] **FIG. 9** is a partial plan view of an alternative embodiment showing the throw-lever and safety latch member unlocked and at an intermediate position between the un-latch and latched positions and with the safety latch retracted to its release position; and

[0026] **FIG. 10** is a partial sectional view showing the locked position of the safety latch member.

#### DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0027] Referring now to the drawings and first to **FIGS. 1 and 2**, a clamp type firearm accessory mount mechanism is shown generally at **10** which comprises a clamp or mount base **12** having an elongate clamp member **14** provided thereon. The clamp member **14** maybe integrally formed with the clamp or mount base is desired or it may be fixed to the base member in any suitable fashion and is undercut so as to define an angulated upwardly facing clamping surface for clamping engagement with a correspondingly angulated, but downwardly facing angulated surface of a firearm mounting rail. A mounting rail may be formed integrally with a firearm component, such as a receiver or

handguard, or may be fixed to a specified part of a firearm by means of retainer screws or by means of any other suitable fastening device. The mount base 12 has an elongate trough 16 that is defined by parallel flanges 18 and 20. Retainer screws, such as shown at 22 extend through the mounting base if desired to positively fix the mount base at a desired position along the mounting rail of a firearm. As will be explained in more detail below the mount base will typically be provided with one or more locator keys that engage within a selected one or more of the spaces that are defined by a plurality of equally spaced transverse locator slots extending transversely of the mounting rail of the firearm. The locator key or keys project from the bottom or inner portion of the mount base. The multiplicity of parallel lateral spaces or slots of the mounting rail of a firearm provide a locator function permitting a firearm accessory to be located at any desired position along the length of the mounting rail. The multiple spaces or slots also minimize the weight of the mounting rail without detracting from its structural integrity, thus ensuring that the firearm is of lightweight construction.

[0028] The mounting base 12 is provided with at least one throw-lever mount platform 24 that projects laterally. The particular mount base that is shown in FIGS. 1 and 2 is provided with two throw-lever mount platforms 24 and 26 that are formed integrally with the mount base structure. Throw-lever mechanisms shown generally at 28 and 30 are mounted to the respective throw-lever mount platforms for pivotal movement to clamping and release positions as is discussed in detail in U.S. patent application Ser. No. 11/008,394, filed by Mark C. LaRue on Dec. 9, 2004 and entitled Adjustable Throw-lever Picatinny Rail Clamp, which application is incorporated by reference herein for all purposes. Each throw-lever mechanism has a throw-lever plate 29 from which a lever arm 32 extends, each lever arm being moveable through an arc of substantially 90° between the locking position shown at the left portion of FIG. 1 and a release position. At the right portion of FIGS. 1 and 2 the throw-lever mechanism is shown partially rotated to an intermediate position between the locking and release positions thereof.

[0029] The mount base 12, adjacent the throw lever mount platform 26, defines an open sided and open ended recess 34 which is defined in part by recess surfaces 36 and 38 which are disposed in angulated intersecting relation. It should be borne in mind that the recess geometry shown and described herein is not intended to be restrictive of the spirit and scope of the present invention. In fact, depending on the structure of the throw-lever and mount base system, a recess may not be needed. From the recess surface 36 projects a latch engaging projection 40, which may conveniently take the form of a post that is press-fitted or otherwise fixed to the mounting base at recess surface 36. In the alternative the latch engaging projection may be formed integrally with the mount base structure and may project from the recess surface 36, such, for example as is shown at 40a in FIG. 10.

[0030] With reference particularly to FIGS. 5-8, a throw-lever latch member shown generally at 42 is an integral structural member having generally parallel side walls 44 and 46 that extend from a top wall 48. A closed end wall 50, preferably of curved configuration also extends from the top wall 48 and merges with the parallel side walls 44 and 46 and cooperates with the top wall and side walls to define an

elongate receptacle or pocket 52 within which a significant portion of the lever arm 32 of a throw-lever plate 29 is received for linear movement. The elongate receptacle or pocket is defined in part by retainer flanges 54 and 56 that serve to retain the latch or keeper member 42 in assembly with the lever arm of the throw-lever. A curved retainer flange 58 extends from the side wall retainer flanges 54 and 56 and further serves to retain an end portion of the lever arm 32 and to provide a guiding function as the throw-lever latch is moved linearly to its latched and released positions relative to the lever arm.

[0031] The top wall 48 of the latch member 42 defines an elongate linear movement control opening 60 of generally oval configuration, being defined in part by straight side walls 62 and curved end walls 64. Within the elongate opening 60 is received an end portion 66 of a movement control pin member 68 which is press fitted or otherwise fixed within a passage or pin opening 70 of the lever arm 32, as is shown in detail in the partial sectional view of FIG. 10. This feature permits the latch or catch member 42 to be moved linearly within limits defined by the length of the elongate opening 60, this linear movement defining the latched and release positions of the latch member 42 relative to the lever arm 32 of the throw-lever clamp plate member 29. The top wall 48 also defines spaced recesses 72 and 74 that are engageable by a detent 76 that is moveable within a passage 78 of the lever arm 32. The detent, which may be a ball detent as shown in FIG. 11 is urged toward the recesses 72 and 74 by a compression spring 80 that is also located within the passage 78. The compression spring is maintained within the passage by a retainer element 82 which may be press-fitted or otherwise fixed within the passage 78. The spring urged detent 76 will engage within one of the recesses 72 or 74, depending on the position of the latch member 42, and will retain the latch member against linear movement until such time as a manual force of a predetermined magnitude has been reached. When this manual force is sufficient to move the detent fully into its passage against the biasing force of the compression spring, the latch member will be moved via a snap action to the desired latched or release position.

[0032] As shown in FIG. 8, the top wall 48 of the throw-lever latch member 42 also defines a latch pin recess 84 within which the latch engaging pin 40 or projection 40a is received when the latch member is moved linearly to its closed or latched position after the lever arm 32 and clamp plate have been rotated manually to the closed or clamping position. As shown in FIGS. 3 and 4 the throw-lever latch member 42 is shown at its latched position, with its engagement with the latch engaging projection or pin 40 located within the latch pin recess 84 preventing the throw-lever from being rotated from its closed or locked clamping position. When it is desired to rotate the throw-lever from its closed or locking position the user of the firearm will apply a pulling force to the throw-lever latch member 42. When this pulling force becomes sufficiently great to overcome the bias of the compression spring 80 and move the detent member 76 from the recess 72 or 74 and completely into the passage 78, the latch member 42 will be moved suddenly or "snapped" to its release position. When the latch member 42 has been moved to its release position a rotation force is manually applied to the latch member and throw-lever which rotates the throw-lever from its clamping position to its release position as is shown in progress in FIGS. 1, 2 and

9, thus permitting the accessory mount mechanism 10 to be removed from the mount rail of the firearm.

[0033] To assemble the accessory mount to the mount rail of a firearm, the latch mechanism of the throw-lever will be at its release position as shown in FIGS. 1, 2 and 9 and the lever arm 32 of the clamping plate 29 will be oriented essentially in transverse relation with the clamp member 14 of the mount base 12. The accessory mount is placed at the desired position on the mount rail of the firearm and the throw-lever will be rotated to its closed or clamping position. During this closing movement of the throw-lever, the latch member of the lever arm 32 will be located at its release position, thus permitting the latch receptacle 84 to be oriented in registry with, but separated from the latch pin or projection 40 or 40a as the case may be. The latch mechanism is then moved linearly to its latched position by linear movement of the safety latch 42, thus causing the latch receptacle 84 to receive the latch engaging projection 40 and causing the detent 76 to engage within the detent recess 72 as shown in FIG. 10. The safety latch mechanism will then remain in this latched position until it is subsequently moved to its release position by manual force. Thus, the detent and detent recess arrangement causes the safety latch to be maintained at either its latched or released position until it is moved by a manually applied force.

[0034] As shown in FIG. 9, it should be borne in mind that the latch engaging projection may take the form of a structural member 40a that is formed integrally with the clamp base member 12. The latch engaging projection may have any other suitable form without departing from the spirit and scope of the present invention. For example, the latch projection may conveniently take the form of a latch pin that is press-fitted or otherwise seated within a pin receptacle of the mount base so that it is maintained in fixed relation with the structure of the mount base. And it is not necessary that there be provided a latch pin or projection recess 34 within the mount base. In fact the latch and latch projection may be of different geometry depending on the needs of firearm users. However, for tactical firearms, location of the latch mechanism within a recess at its latched position tends to further minimize the potential that the latch might be contacted by an object during use of the firearm and might otherwise be inadvertently moved toward its release position.

[0035] The present invention minimizes the potential inadvertent release of any firearm rail mounted clamp device in the event the throw-levers are contacted in a manner that could otherwise cause releasing rotation thereof during tactical operations, such as by sustained vibration or shock forces or in the event the throw-levers are contacted in a manner that would otherwise cause releasing rotation thereof during tactical operations.

[0036] In view of the foregoing it is evident that the present invention is one well adapted to attain all of the objects and features hereinabove set forth, together with other objects and features which are inherent in the apparatus disclosed herein.

[0037] As will be readily apparent to those skilled in the art, the present invention may easily be produced in other specific forms without departing from its spirit or essential characteristics. The present embodiment is, therefore, to be considered as merely illustrative and not restrictive, the

scope of the invention being indicated by the claims rather than the foregoing description, and all changes which come within the meaning and range of equivalence of the claims are therefore intended to be embraced therein.

I claim:

1. An accessory mount for releasable attachment to the mount rail of a firearm, comprising:

a mount base having a rail engaging clamp member;

at least one throw-lever mechanism having a clamping plate being mounted to said rail engaging clamp member and being rotatable to a clamping position establishing clamping engagement with the mount rail and to a release position releasing clamping engagement with the mount rail;

a lever arm projecting from said throw-lever mechanism;

a latch projection being provided on said mount base; and

a safety latch selectively engaging said latch projection when said throw-lever mechanism is at said clamping position and securing said throw-lever against rotation from said clamping position and being selectively separated from said latch projection permitting rotation of said throw-lever from said clamping position.

2. The accessory mount mechanism of claim 1, comprising:

said safety latch being mounted on said lever arm and having a latch receptacle receiving said latch projection therein when said throw-lever mechanism is at said clamping position and being separated from said latch projection when said safety latch is moved from said clamping position.

3. The accessory mount mechanism of claim 1, comprising:

said safety latch being mounted on said lever arm and being linearly moveable to latched and release positions relative to said lever arm, said safety latch having a latch receptacle receiving said latch projection therein when said throw-lever mechanism is at said clamping position and said latch receptacle being separated from said latch projection when said safety latch is moved linearly from said latched position to said release position.

4. The accessory mount mechanism of claim 1, comprising:

said safety latch defining a receptacle receiving said lever arm in linearly moveable guided relation therein; and

said safety latch and said lever arm establishing latch movement control and limiting linear movement of said safety latch relative to said lever arm to said latched and released positions of said safety latch.

5. The accessory mount mechanism of claim 4, comprising:

said safety latch defining an elongate movement control slot of defined length; and

a movement control member being fixed to said lever arm and being received within said elongate movement control slot and being linearly moveable within said elongate movement control slot within limits established by said defined length.

6. The accessory mount mechanism of claim 5, comprising:

said movement control member being a movement control pin projecting from said lever arm and being engaged within said elongate movement control slot, said movement control pin limiting linear movement of said safety latch and establishing said latched and released positions thereof.

7. An accessory mount for releasable attachment to the mount rail of a firearm, comprising:

a mount base having a rail engaging clamp member;

at least one throw-lever mechanism being mounted to said mount base and being moveable to a clamping position establishing clamping engagement with the mount rail and to a release position releasing clamping engagement with the mount rail; and

safety latch means being positionable at a latched position securing said throw-lever mechanism at said clamping position and being positionable at a release position permitting rotation of said throw-lever from said clamping position.

8. The accessory mount mechanism of claim 7, comprising:

said throw-lever mechanism having a clamping plate being mounted on said mount base for rotation to a clamping position for clamping said mount base to said mount rail and being rotatable to a release position permitting separation of said mount base from said mount rail;

a lever arm projecting from said clamping plate; and

said safety latch means being a safety latch member having a latched position securing said lever arm at said clamping position and having a release position permitting rotational movement of said lever arm and said throw-lever from said clamping position.

9. The accessory mount mechanism of claim 8, comprising:

said safety latch member being supported by said lever arm and being linearly moveable to said latched and release positions relative to said lever arm;

a latch projection being located on said mount base; and

said safety latch member defining a latch projection receptacle receiving said latch projection therein at said latched position and being clear of said latch projection at said release position.

10. The accessory mount mechanism of claim 7, comprising:

said safety latch being mounted on said lever arm and being linearly moveable to latched and release positions relative to said lever arm, said safety latch having a latch receptacle receiving said latch projection therein when said throw-lever mechanism is at said clamping position and said latch receptacle being separated from said latch projection when said safety latch is moved linearly from said latched position to said release position.

11. The accessory mount mechanism of claim 7, comprising:

said safety latch defining a receptacle receiving said lever arm in linearly moveable guided relation therein; and

said safety latch and said lever arm establishing latch movement control and limiting linear movement of said safety latch relative to said lever arm to said latched and released positions of said safety latch.

12. The accessory mount mechanism of claim 11, comprising:

said safety latch defining an elongate movement control slot of defined length; and

a movement control member being fixed to said lever arm and being received within said elongate movement control slot and being linearly moveable within said elongate movement control slot within limits established by said defined length.

13. The accessory mount mechanism of claim 12, comprising:

said movement control member being a movement control pin projecting from said lever arm and being engaged within said elongate movement control slot, said movement control pin limiting linear movement of said safety latch and establishing said latched and release positions thereof.

14. An accessory mount for releasable attachment to the mount rail of a firearm, comprising:

a mount base having a rail engaging clamp member;

at least one throw-lever mechanism being mounted to said mount base and being moveable to a clamping position establishing clamping engagement with the mount rail and to a release position releasing clamping engagement with the mount rail; and

a safety latch having a latched position securing said throw-lever mechanism at said clamping position and having a release position permitting rotation of said throw-lever from said clamping position.

15. The accessory mount mechanism of claim 14, comprising:

said throw-lever mechanism having a clamping plate being mounted on said mount base for rotation to a clamping position for clamping said mount base to said mount rail and being rotatable to a release position permitting separation of said mount base from said mount rail;

a lever arm projecting from said clamping plate; and

said safety latch member having a latched position securing said lever arm at said clamping position and having a release position permitting rotational movement of said lever arm and said throw-lever from said clamping position.

16. The accessory mount mechanism of claim 15, comprising:

said safety latch member being supported by said lever arm and being linearly moveable to said latched and release positions relative to said lever arm;

a latch projection being located on said mount base; and



said safety latch member defining a latch projection receptacle receiving said latch projection therein at said latched position and being clear of said latch projection at said release position.

**17.** The accessory mount mechanism of claim 15, comprising:

said safety latch being mounted on said lever arm and being linearly moveable to latched and release positions relative to said lever arm, said safety latch having a latch receptacle receiving said latch projection therein when said throw-lever mechanism is at said clamping position and said latch receptacle being separated from said latch projection when said safety latch is moved linearly from said latched position to said release position.

**18.** The accessory mount mechanism of claim 15, comprising:

said safety latch defining a receptacle receiving said lever arm in linearly moveable guided relation therein; and

said safety latch and said lever arm establishing latch movement control and limiting linear movement of said

safety latch relative to said lever arm to said latched and released positions of said safety latch.

**19.** The accessory mount mechanism of claim 15, comprising:

said safety latch defining an elongate movement control slot of defined length; and

a movement control member being fixed to said lever arm and being received within said elongate movement control slot, said safety latch being linearly moveable relative to said lever arm within limits established by said defined length of said elongate movement control slot.

**20.** The accessory mount mechanism of claim 19, comprising:

said movement control member being a movement control pin projecting from said lever arm and being engaged within said elongate movement control slot, said movement control pin limiting linear movement of said safety latch and establishing said latched and released positions thereof.

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