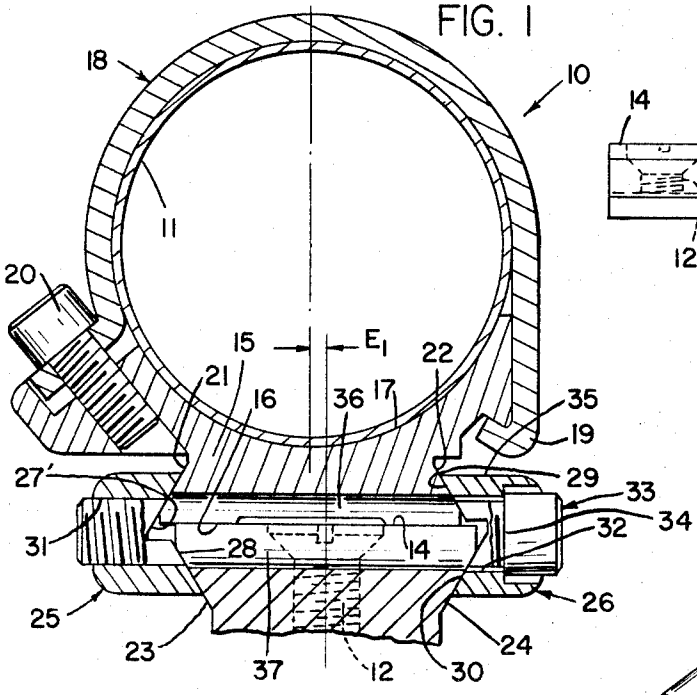
June 4, 1968 C. H. BLOOD ET AL 3,386,695

GUN TELESCOPE MOUNTING HAVING A FIXED LATERAL ADJUSTMENT MEMBER

Filed Nov. 25, 1966

FIG. 1



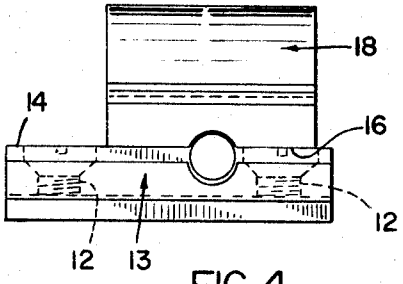


FIG. 4

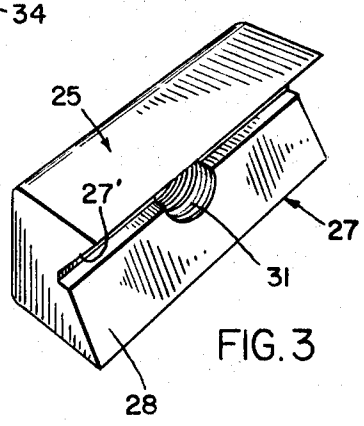


FIG. 3

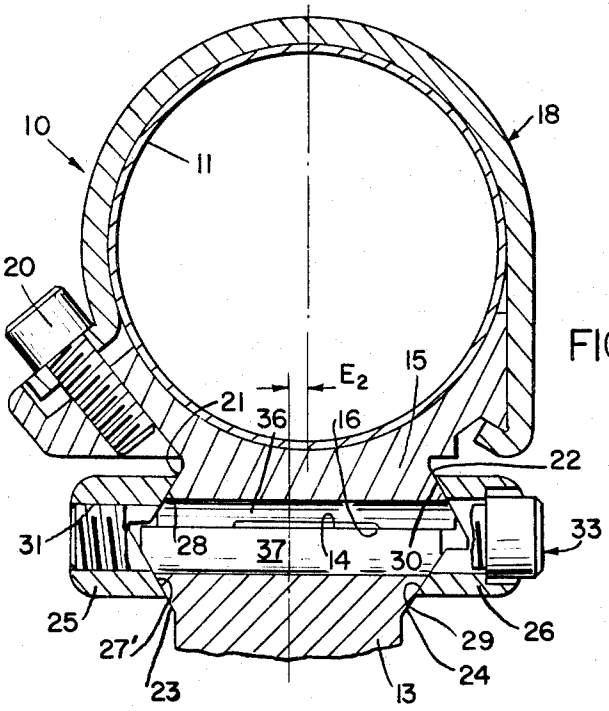


FIG. 2

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GUN TELESCOPE MOUNTING HAVING A FIXED LATERAL ADJUSTMENT MEMBER

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4 Claims. (Cl. 248—229)

ABSTRACT OF THE DISCLOSURE

A mounting for a gun telescope, the clamping mechanism thereof being constructed as a unit to provide a fixed lateral offset between the gun and the telescope axes on either side of center.

The present invention relates generally to gun telescope mountings and more particularly it relates to mounting units having a predetermined amount of lateral relative adjustment of the telescope and gun barrel axes.

Modern gun telescopes are generally classified as the so-called adjustable type for windage and/or elevation changes or else the much simpler fixed type having no adjustment. The adjustable telescope mounting is relatively expensive and has a tendency toward undependable performance, whereas the fixed type of mounting is inadequate for many types of shooting events such as target shooting and game hunting. The gun telescope mountings which are adjustable to some extent and yet are simple enough to be manufacturable at a low cost have good commercial acceptance in the trade.

In view of these facts, it is an object of the present invention to provide a novel gun telescope mounting which is comparatively simple so as to obtain a low manufacturing cost, and additionally can be offset laterally by a given dimension to compensate for offset mounting hole errors in various gun barrels.

It is a further object to provide such a device which provides an accurate lateral adjustment of the telescope in two opposite directions on either side of central position, the holding power of the gun telescope mounting, nevertheless, being secure and reliable in either position of offset.

A still further object is to provide such a device which may afford a fixed relative angular positioning of the telescope axis in case one unit is used, or if two units are used the telescope axis may be offset parallel to the gun barrel axis.

Further objects and advantages of the present invention will be apparent in the details of construction as well as the combination and arrangement of parts therein, reference being had for a full disclosure to the following specification taken in connection with the accompanying drawing, wherein:

FIG. 1 is a sectional view drawn at an enlarged scale to show the general assembly of the parts of the preferred form of the invention;

FIG. 2 is a view similar to FIG. 1 in which the cooperating parts of the gun telescope mounting are shown in a second operative position;

FIG. 3 is a perspective view of one of the clamping members forming a part of the present invention; and

FIG. 4 is a side elevation of certain parts of the mounting mechanism in assembled position.

The invention is incorporated in a front and/or rear mounting which is generally designated by numeral **10**, and it supports a telescope **11** on a gun barrel, not shown.

On the gun barrel is secured in any suitable manner, such as by the screws **12**, a base block **13** whereon there is formed a flat horizontal seating surface **14**. The base block **13** extends along the gun barrel longitudinally and is shaped to the upper curved surface thereof.

Resting on a seating surface **14** is a support bracket **15** having a bottom flat surface **16**, although the bottom surface may be other than flat if the side portions thereof are coplanar. The bracket **15** is substantially coextensive longitudinally with the block **13** and has a longitudinal cylindrical surface **17** formed on the upper side thereof wherein the telescope **11** is seated. To secure the telescope **11** on the surface **17** of the bracket, any preferred clamping means may be used such as the clamp ring **18** which is anchored on one side of the bracket by the hook **19** and at the other side by the screw **20**, as shown in FIGS. 1 and 2.

According to the present invention, the clamping device comprises two inwardly inclined flat clamping surfaces **21** and **22** formed on the lower portion of the bracket **15** and terminating at their lower edges adjacent to the flat surface **16** so as to form a substantially keystone shape. Correspondingly, two inwardly inclined clamping surfaces **23** and **24** are formed on the upper portion of the side faces of the base block **13**, terminating adjacent to the upper flat seating surface **14** so as to form a keystone shaped section. As far as the effectiveness of the invention is concerned, it is possible to form the flat surfaces **21** to **24** other than flat and they conceivably may be formed with a gentle curvature. The dimension of the span across the lower edges of the inclined clamping surface **21**, **22** of the bracket is intended to be substantially the same as the corresponding dimension across the edges of the surfaces **23** and **24** on the base block.

The principal novel feature here disclosed resides in the elongated lock keys generally indicated by numerals **25** and **26**, said keys being formed on their inner sides with a V-shaped recess or notch **27**. The notch **27** in the locking key **25** is formed by the cooperation of the mutually inclined flat faces **27'** and **28**, and the corresponding sides of the notch in the locking key **26** are numbered **29** and **30**. The intersection of the clamping faces of the V groove in each key **25** or **26** occurs off center with respect to clearance holes **31** and **32** formed in the keys **25** and **26** respectively. This is a novel construction and results in the binding effect described hereinafter.

Extending through a key **26** is a clamping bolt **33** having a clamping shoulder **34** formed thereon which engages against a counterbore **35** formed in the key **26**. The shank of the bolt **33** extends through a clearance passage which is formed cooperatively by a half-circular recess **36** formed in the bracket **15** acting in conjunction with a half-circular passage or recess **37** formed in the base block **13**.

It should be pointed out here that the clamping surfaces **27'**, **28**, **29**, **30** formed on the respective keys **25** and **26** may also depart from a strictly flat formation and may in fact be somewhat curved without ill effect regarding the clamping effect desired.

In operation, because of the offset position of the V grooves of the keys **25** and **26** with respect to the openings **31** and **32** formed respectively through the key **25**, clamping forces will be initiated by contact of the clamping surface **28** on surface **23** at the same moment that the clamping surface **29** is engaged with surface **22** on key **26** so that progressive tightening of the bolt **33** will shove the bracket **15** along the seating surface **14** on the block **13** until the clamping surface **27'** on key **25** and the clamping surface **30** on key **26** are engaged as best shown in FIG. 1.

It will be noted from FIG. 1 that when the respective

clamping surfaces have been tightly engaged in clamping position against the bracket and base block respectively the locking keys first of all move the bracket to the left as shown and finally tightly clamp the bracket **15** onto the base block **13**. As shown in FIG. 2, when the locking keys **25** and **26** are turned end for end, the apex of the intersection of the flat clamping surfaces forming the V groove lies on the opposite side of the center line of the clamping bolt **33**. Thereby the clamping surfaces in this position have the effect of moving the bracket **15** laterally in the opposite direction as there shown.

It will be seen in the foregoing description and drawing that there is here provided a simple and effective gun telescope mounting wherein a predetermined amount of lateral misalignment E_1 is provided as shown in FIG. 1 and E_2 as shown in FIG. 2, for the purpose, inter alia, of compensating an inherent aiming error in the gun to which the mounting is applied. It will also be apparent that the keys **25** and **26** may be made up with different off-center E_1 and E_2 dimensions of the apex of the V groove with respect to the bolt holes **31** and **32** so that various mounts of gun aiming error may be corrected. In any case, no element of the mounting mechanism except the clamping keys **25** and **26** need be changed when the change of error is desired.

Although only a preferred form of the invention has been shown and described in detail, other forms are possible and changes may be made in the details of construction and arrangement of parts without departing from the spirit of the invention as defined in the claims herebelow.

We claim:

1. In a gun telescope mount,

the upstanding base block secured longitudinally on a gun barrel,

a first seating surface formed across the top of said base part,

a pair of inwardly inclined clamping surfaces formed parallel to each other along the opposite upper longitudinal side faces of said block,

a support bracket conforming to said telescope body and extending therelong substantially coextensively with said block,

means for clamping said bracket to said body,

a second seating surface formed on the underside of said bracket so as to rest on the first seating surface, at least one of said seating surfaces being flat,

a second pair of inwardly inclined clamping surfaces formed parallel to each other along the opposite longitudinal side faces of said bracket,

a pair of elongated locking keys which are forced into firm contact with said clamping surfaces on both said bracket and said block,

a pair of mutually inclined clamping surfaces forming a V groove on the inner face of each of said keys, said groove being so shaped that it lies in clamping contact with the adjacent clamping surfaces on the bracket and block, the apex of the V groove lying below the level of said flat seating surface for one of said keys and above said surface by the same amount on the other of said keys,

a clamping bolt which extends through clearance openings formed in both of said keys in axially offset misalignment with the apex of said V groove, corresponding clearance openings extending through substantially the bracket and block formed symmetrically with said flat surface, and

a nut member fitted onto said bolt for effecting said clamping, whereby the keys primarily clamp the bracket against the base block to retain the telescope on the gun garrel, and secondarily afford an offset or lateral windage adjustment of a given amount for the aiming axis.

2. A gun telescope mount as set forth in claim **1** wherein said locking keys are constructed as duplicates of each other whereby the construction achieves utmost simplicity.

3. A gun telescope mount as set forth in claim **1** further characterized by all of said clamping surfaces being flat to form a symmetrical keystone cross-sectional shape on both said block and bracket whereby the clamping area is maximized for most effective clamping.

4. A gun telescope mount as set forth in claim **1** further characterized by said clamping bolt extending through said clearance openings so as to intercept the contacting seating surfaces formed on both the bracket and base block whereby relative lonigtudinal displacement of the bracket on the base block is prevented upon firing of the gun.

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