This invention relates to improvements in mounts employed for removably supporting telescope sights on firearms. In firearms employing telescope sights, it is frequently desirable and necessary to remove the sight for cleaning, storage, or other purposes. It is most important that the mounts be of such form and construction that they support the sight in a fixed relationship to the firearm and that when removed, the sight may be remounted in each instance in identical relationship to the firearm so as to eliminate the necessity for retargeting the firearm upon re-mounting of the sight thereon. To meet this important requirement, most mounts require relatively accurate machining and precise fitting of parts which necessarily entails comparatively expensive and relatively complicated constructions.

Furthermore, there has developed a growing demand for the use of telescope sights on relatively inexpensive firearms, even including pellet or so-called “B.B.” guns. Obviously, for guns of this character, the desirability of sights and mounts which are relatively inexpensive is indicated. Nevertheless, it is also desirable that a mount be provided which retains the advantages of more expensive equipment, while providing a simple, low cost mount which will permit the sight to be removed and re-mounted with the same maintained accuracy as in the case of the more expensive mounts.

Accordingly, it is a primary object of the present invention to provide a form of telescope sight mount which is exceptionally simple in design and cheap to construct, but which provides a support which will accurately position the sight on the firearm and permit removal and re-mounting of the sight without disturbing the established aiming relation of the sight to the firearm.

In accordance with a preferred embodiment of this invention, the mount is constructed entirely from a single continuous length or strip of a suitable material, preferably metal, such as steel, formed to provide an arcuate body portion which is adapted to extend about a major portion of the sight barrel, the ends of the arcuate portion being turned outwardly at an angle to the body portion to form a pair of spaced-apart mounting legs. The latter terminate at their free ends in turned toe portions shaped to be received in clamping mounting grooves conventionally provided on the upper portion of a firearm, such as the barrel or receiver. The mount employs a single clamping screw extending transversely between the mounting legs and is operable to draw the legs toward each other. When the legs are drawn together the angular relation of the mounting legs to the arcuate body portion and the natural resiliency of the strip metal, will cause the arcuate body portion to be clamped about the sight barrel and maintained in tight clamping engagement therewith while permitting a limited degree of additional lateral movement of the mounting legs relative to each other in order either to release the toe portions from the clamping grooves or to reengage them within the grooves without disturbing the tight engagement of the arcuate portion about the sight barrel.

The mount structure, in accordance with this invention, may be in the form of a single longitudinally spaced mounts or may be in the form of a single elongate body in which a section of the arcuate body portion is cut away to provide longitudinally spaced, relatively narrow bands for enclosing the sight barrel.

Other and more specific objects and advantages of this invention will become more readily apparent from the following detailed description when read in conjunction with the accompanying drawing which illustrates two useful embodiments in accordance with this invention.

In the drawing:

FIG. 1 is an elevational view of one side of the mount structure in accordance with one embodiment of this invention showing the mount in place on a firearm, the telescope sight being shown in broken outline in the position it normally occupies in the mount;

FIG. 2 is an end view, partly in section, showing the mount disposed about a sight barrel, but before being secured thereto;

FIG. 3 is a view generally similar to FIG. 2, showing the mount positioned on the firearm barrel and about the sight barrel, the parts being shown in the position at which the arcuate portion is tightly engaged about the sight barrel while the mounting legs are not fully secured to the grooves in the firearm;

FIG. 4 is a view similar to FIG. 3, showing the mount fully actuated with the mounting legs tightly secured in the grooves of the firearm;

FIG. 5 is a side elevational view similar to FIG. 1, but illustrating another embodiment in accordance with this invention;

FIG. 6 is a side elevational view of the opposite side of the mount structure shown in FIG. 5; and

FIG. 7 is a cross-sectional view taken generally along line 7—7 of FIG. 5, illustrating the mount fully secured to the sight barrel and the firearm.

Referring to the drawing and to FIGS. 1 to 4, the mount comprises a pair of identical brackets 10—10 adapted to encircle and grip the barrel of a generally conventional telescope sight, shown in broken lines in FIG. 1 and designated generally by the numeral 11. The brackets are adapted to be supported in parallel grooves 12—12, generally triangular in cross section, which are conventionally provided at a standard spacing on the upper surface of the barrel 13 of a firearm. It will be understood that the grooves 12 instead of being provided on the barrel of the firearm, may be provided on the receiver of a firearm, which is quite conventional.

Each of the brackets 10 is constructed from a single continuous strip of sheet metal, preferably steel, having any suitable width, such as is conventionally used for sight mount brackets; for example, one-half to three-quarters of an inch in width being a common size. The strip of sheet metal is formed to provide a central body portion 15 of arcuate shape, which is generally circular, having a nominal inside diameter which will approximate the external diameter of the sight barrel. The end portions of body portion 15 are bent outwardly from the circumference thereof at angles 21 opposite points P—P1 on the inner periphery of body portion 15 to form a pair of spaced-apart mounting legs 16. The latter terminate at their free ends in inwardly turned toe portions 17—17 having inwardly and downwardly sloping inner faces 18 which merge at the ends of the toe portions with flat bottom surfaces 19 and define therewith the generally triangular toes 20 at the junction of surfaces 18 and 19. One of legs 16 is provided with a transverse opening 22 which registers with a threaded opening 23 in the opposite leg 16. A clamping screw 24 having a head 25 extends through opening 22 and is provided with a threaded end 26 which is threadedly received in opening 23. It will be seen that as clamping screw 24 is rotated in one direction legs 16 will be drawn toward each other, and as the screw is rotated in the opposite direction the legs will spring...
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3. Apart by the natural resiliency of the material from which the bracket is formed. As shown particularly in FIG. 2, brackets 10 will initially have a nominal internal diameter somewhat greater than the external diameter of sight barrel 11 to permit the brackets to be slipped easily about the sight barrel. Then, as best seen in FIG. 3, as clamping screw 24 is made up, legs 16 will be drawn toward each other. However, the spring action which will be produced in body portion 15 will be first exerted at the center of the body portion because of its greater distance from the point from which the pressure is applied and will result in body portion 15 being pulled around the sight barrel until body portion 15 is tightly engaged therewithout its arcuate length to the points P—P, opposite angles 21.

The spacing between toes 20—20 of the mounting legs will be pre-determined, as by selection of an appropriate angle 21, so that when the body portion has been brought to tight clamping engagement about the sight barrel throughout its length between the points P—P by tightening-up of screw 24, the spacing between toes 20 will be slightly greater than that between the apaxes of grooves 12. This will permit toes 20 to enter grooves 12, but toes 20 will not have been drawn closely enough to each other to bring faces 18 into tight engagement with the upper walls 12a of grooves 12. The resulting clearance between toe portions 17 and the upper walls of grooves 12 will permit the brackets, carrying sight 11, to be mounted on the body portion longitudinally along the grooves 12. When the mounting structure and sight have been moved to the proper position along grooves 12, screws 24 will be made up further, as by an additional turn or part thereof, until toes 20 and surfaces 18 are tightly seated in grooves 12 and engaged with the upper and lower walls of grooves 12, as best seen in FIG. 4. It will be evident that as this additional drawing together of legs 16 occurs, body portion 15 of the bracket will be tightened still further about sight barrel 11.

When it becomes necessary to remove the sight from the firearm, a reverse rotation of screw 24, for a fraction of a thread or for one or more whole threads as the case may be, depending on the pitch of threads 26, legs 16 will spring back to the position illustrated in FIG. 3 without releasing the gripping engagement of body portion 15 about the sight barrel. When the legs have retracted to the position shown in FIG. 3, the structure can be removed bodily from the firearm without disturbing the tight engagement between the bracket and the sight barrel, so that when re-mounted the sight will occupy the identical position it occupied when first adjusted and mounted.

FIGS. 5 to 7 illustrate a modification in which both brackets are formed from a single strip of sheet metal having a length to provide the desired spacing between the sige-engaging portions 25—25. As will be evident, this can be accomplished merely by using a wide strip of sheet metal, forming it to exactly the same shape as illustrated in FIGS. 1 to 3, and cutting out an intermediate section of the arcuate portion. Thus, the mounting legs 26, bent at angles 33, are made elongate to extend throughout the full length of the mount and are integral with both brackets. Otherwise the structure is shaped and functions in exactly the same manner as the separate bracket arrangement illustrated in FIGS. 1 to 4. In the embodiment of FIGS. 5 to 7 the mounting legs 26 terminate in the interrupted toe portions 27 having the triangular toes 28 and inner sloping faces 29. The mounting legs are connected by means of two of the clamping screws 24 disposed beneath the respective portions 25 and function exactly as in the previously described embodiment.

As shown in FIGS. 5 to 7. Instead of providing grooves 12 in the top of the firearm barrel or receiver, a mounting plate 30 is secured to the top of the firearm barrel or receiver having inwardly sloping longitudinal edges 31 defining with the exterior of the firearm barrel or receiver, dovetail grooves 32 for receiving the toe portions of the mounting legs.

In operation, this embodiment functions exactly in the same manner as the separate mounting brackets previously described.

In order that the desired operation can be effected, that is, mounting the arcuate body portion in clamping engagement about the sight barrel while permitting a limited degree of additional independent relative movement between the mounting legs as described, it is necessary that the arcuate length of body portion 15 be somewhat greater than 180° and preferably in the range from about 210° to about 300°. Angles 21 will then be varied accordingly so as to provide an initially greater spacing between toes 20—20 than the transverse distance between the bottoms of grooves 12, or of grooves 32 in the case of the embodiment of FIGS. 5 to 7.

It will be evident that many types and grades of material, particularly various metals, will be found suitable for constructing the mount in accordance with this invention. One material entirely suitable is one-sixteenth inch SAE 1020 steel strips at the ends of said legs.

It will be understood that reference herein and in the claims to the location of grooves 12 as disposed on the upper portion of a firearm, includes grooves located either in the barrel or receiver or formed by a mounting base plate positioned on top of the barrel or receiver.

Furthermore, it will be observed that grooves are located directly in the firearm barrel or receiver, or are defined by the longitudinal edges of a separate plate, like mounting plate 30, each modification provides a pair of spaced apart longitudinally extending shoulders having downwardly and inwardly sloping edge surfaces. The interrupted toe portions 17 and 27 have surfaces 18 and 29, respectively, which, when extended beneath and engage the sloping shoulders when the clamping screws are actuated. It will be understood, therefore, that the toe portions may assume various shapes suitable for engaging about the shoulders, as described.

From the foregoing, it will be evident that this invention provides an exceptionally simple mount structure which fulfills the important objects of this invention, as set forth above.

It will be understood that various changes and modifications may be made in the details of the illustrative embodiments within the scope of the appended claims but without departing from the spirit of this invention.

What I claim and desire to secure by Letters Patent is:

1. For use with firearm having a pair of spaced apart longitudinally extending grooves disposed on an upper portion thereof, a telescope sight mount removably attachable to said firearm, comprising, a sight-supporting bracket member formed from a continuous strip of sheet metal, said bracket member including an arcuate body portion shaped to encircle more than one-half the circumference of the barrel of a telescope sight, the ends of said body portion being turned outwardly at angles to said body portion to define a pair of spaced apart legs, interrupted toe portions at the free ends of said legs receivable in said grooves, a screw member extending transversely between said legs intermediate the free ends of said legs and said body portion and spaced from the firearm and the sight barrel adapted to draw said legs toward each other whereby to clamp said arcuate body portion about the sight barrel and to urge said toe portions into clamping engagement in said grooves, said screw being selected to provide a spacing between the legs such as to permit a limited degree of relative movement between the legs while the body portion remains tightly clamped about the sight barrel.

2. A sight mount according to claim 1 wherein said toe portions are substantially triangular in cross-section.

3. A sight mount according to claim 1 wherein the arcuate length of said body portion is in the range of from about 210° to about 300°.
4. For use with a firearm having a pair of spaced apart longitudinally extending grooves disposed on an upper portion thereof, a telescope sight mount removably attachable to said firearm, comprising, a sight-supporting bracket member formed from a single continuous strip of sheet metal, said bracket member including an arcuate body portion shaped to encircle more than one-half the circumference of the barrel of a telescope sight, the ends of said body portion being turned outwardly at angles to said body portion to define a pair of spaced-apart legs, intertwined toe portions at the free ends of said legs receivable in said grooves, a screw member extending transversely between said legs intermediate the free ends of said legs and said body portion and spaced from the firearm and the sight barrel adapted to draw said legs toward each other whereby to clamp said arcuate body portion about the sight barrel and to urge said toe portions into clamping engagement in said grooves, said angles being so-selected to provide a spacing between the legs such as to permit a limited degree of relative movement between the legs after the body portion has been tightly clamped about the sight barrel, said arcuate body portion having an intermediate section removed to define a pair of longitudinally spaced bonds at the opposite ends of said bracket member for encircling the sight barrel.

5. For use in a firearm having a pair of spaced apart longitudinally extending grooves disposed on an upper portion thereof, a telescope sight mount removably attachable to said firearm, comprising, a sight-supporting bracket member formed from sheet metal, said bracket member including an arcuate body portion shaped to encircle more than one-half the circumference of the barrel of a telescope sight, the ends of said body portion being turned outwardly from the body portion to define a pair of spaced apart legs integral with the body portion, intertwined toe portions at the free ends of said legs receivable in said grooves, retractable means engageable with said legs intermediate the free ends of said legs and said body portion and spaced from the firearm and the sight barrel operable to urge said legs toward each other whereby to clamp said body portion about the sight barrel and to urge said toe portions into clamping engagement in said grooves, the initial spacing between the toe portions being selected to permit a limited degree of relative movement between said legs in response to operation of said retractable means while the body portion remains tightly clamped about the sight barrel.

6. For use in a firearm having a pair of spaced apart longitudinally extending grooves disposed on an upper portion thereof, a telescope sight mount removably attachable to said firearm, comprising, a sight-supporting bracket member including an arcuate body portion shaped to encircle more than one-half the circumference of the barrel of a telescope sight, a pair of spaced apart legs integral with and extending outwardly adjacent the ends of the body portion, intertwined toe portions at the free ends of said legs receivable in said grooves, retractable means engageable with said legs intermediate the free ends of said legs and said body portion and spaced from the firearm and the sight barrel operable to urge said legs toward each other whereby to clamp said body portion about the sight barrel and to urge said toe portions into clamping engagement in said grooves, the initial spacing between the toe portions being selected to permit a limited degree of relative movement between said legs in response to operation of said retractable means while the body portion remains tightly clamped about the sight barrel.

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